HAKOM

ANNUAL ACTIVITY REPORT

OF THE CROATIAN POST AND ELECTRONIC COMMUNICATIONS AGENCY FOR 2011

Zagreb, June 2012

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INTRODUCTION

The Croatian Post and Electronic Communications Agency (hereinafter: HAKOM) was committed in 2011 to the achievement of regulatory objectives and principles on the markets of electronic communications and postal services, including the promotion of competition and protection of interests of users of services. Special emphasis was placed on the protection of competition, promotion of efficient investments and innovation while ensuring the protection of competition and respect for the principle of non-discrimination, promotion of regulatory predictability, prevention of discrimination in relationships towards operators, ensuring a high level of user protection and efficient governance as well as efficient management of radio-frequency (hereinafter: RF spectrum and the addressing and numbering space.

Through its regulatory activities, HAKOM has managed to achieve the set objectives and ensure stability on the market of electronic communications and postal services in the year in which the majority of operators experienced a drop in revenue resulting from the global crisis. In addition to objectives closely related to market regulation itself, HAKOM also focused on the achievement of tasks such as the fulfilment of the *Strategy for Broadband Development in the Republic of Croatia* (hereinafter: RoC), including the implementation of the *Programme for Internet and Broadband Access Development in Areas of Special State Concern, in Highland Areas and on Islands*, and on the strengthening of its own capacity for the benefit of end users through further development of e-Agency, in-service training and use of European Union pre-accession funds (hereinafter: the EU).

The Report is divided into five chapters.

Chapter 1 provides an overview of the situation on the electronic communications market which comprises the publicly available telephone services in the fixed network, the publicly available telephone services in the mobile network, Internet access service, television (hereinafter: TV) service, network and lines lease service, infrastructure and network access service and building of electronic communications infrastructure (hereinafter: ECI) and other services. An overview and analysis of the situation and tendencies in each area is provided, as well as the comparison with the EU. The implemented regulatory measures for further development of the market in question are also mentioned. And finally, the Chapter contains an outline of the situation and activities related to the management of limited resources: the RF spectrum and the addressing and numbering space.

Chapter 2 gives an overview of the situation on the postal services market which comprises both universal and other postal services. There is an overview and analysis of the situation and tendencies, as well as comparison with the EU and regulatory measures aimed at further development of the postal services market.

Chapter 3 covers consumer protection on the market of electronic communications and postal services. Special attention is dedicated to the protection of children and access of persons with special needs to these services.

Chapter 4 describes the continuation of HAKOM's activities aimed at building its own capacity for market regulation and market development by means of IT introduction into its processes and services, the increase of regulatory competences, the increase of productivity and efficiency and by facilitating access to HAKOM's regulatory activities.

Chapter 5 includes the financial and the final statement for 2011 and the report on revenues, expenditures, an overview of surplus revenue, balance sheet, investment report, and a report on state budget's revenue and audit findings.

1 ELECTRONIC COMMUNICATIONS MARKET

1.1 Market Development

By its regulatory activities in the past years, and in cooperation with other relevant bodies, such as the Ministry of the Sea, Transport and Infrastructure (hereinafter: MSTI), [1]the Croatian Competition Agency (hereinafter: CCA), the Croatian Association for Consumer Protection (hereinafter: CACP), HAKOM has, by adopting a series of decisions and rulings ensured further liberalisation and regulation of the electronic communications market. Information and communication technology and the electronic communications market based thereon are among the fastest growing economic sectors. Regulatory mechanisms direct the development of the electronic communications market in order to achieve the availability of services in accordance with needs and possibilities of citizens, the economy and society in general, including investments into new technologies to ensure continuous availability of services. The EU has been applying and continuously developing a common regulatory framework for electronic communications, which includes general and specific measures for the development and protection of competition among providers of information and communication services. All these impacts of new regulation, in accordance with the EU *acquis*, which have introduced Croatia into a new area of market development and coordination, are already reflected in further development of the market of electronic communication in spite of the economic crisis.

The Croatian electronic communications market was characterised in 2011 by a strong development of broadband services and interactive TV, by a growing demand for internet content and data services and a continuous fall in revenue from phone services in fixed and mobile network in accordance with global trends. On the basis of official data on the market of electronic communications, it may be concluded that the electronic communications market recorded a total fall in revenue amounting to 13.7 percent compared to 2010 (Figure 1.1.).

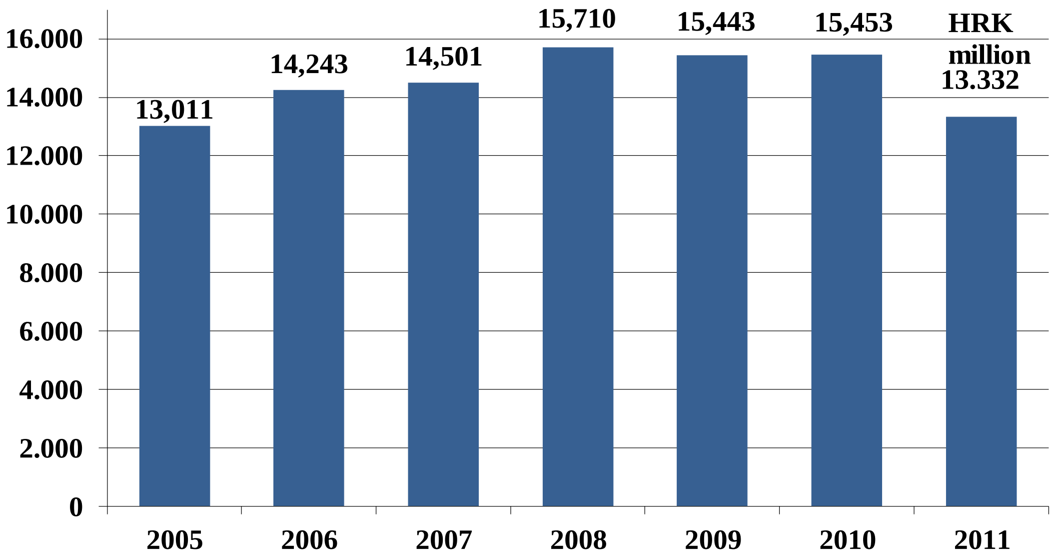


Figure 1.1. Total revenue on the electronic communications market[2]

[1] Legal predecessor of the Ministry of the Sea, Transport and Infrastructure (MMATI)

[2] Total revenue also includes revenue from the retail line rental service which is not covered by individual questionnaires used by HAKOM to collect information about the electronic communications market

Data transfer has been gaining in importance, which is why revenue from internet access services has an increasing share in the total revenue on the electronic communications market. Although the biggest drop in revenue was recorded in the part referring to phone services, the majority of revenue comes precisely from those services (Figure 1.2).

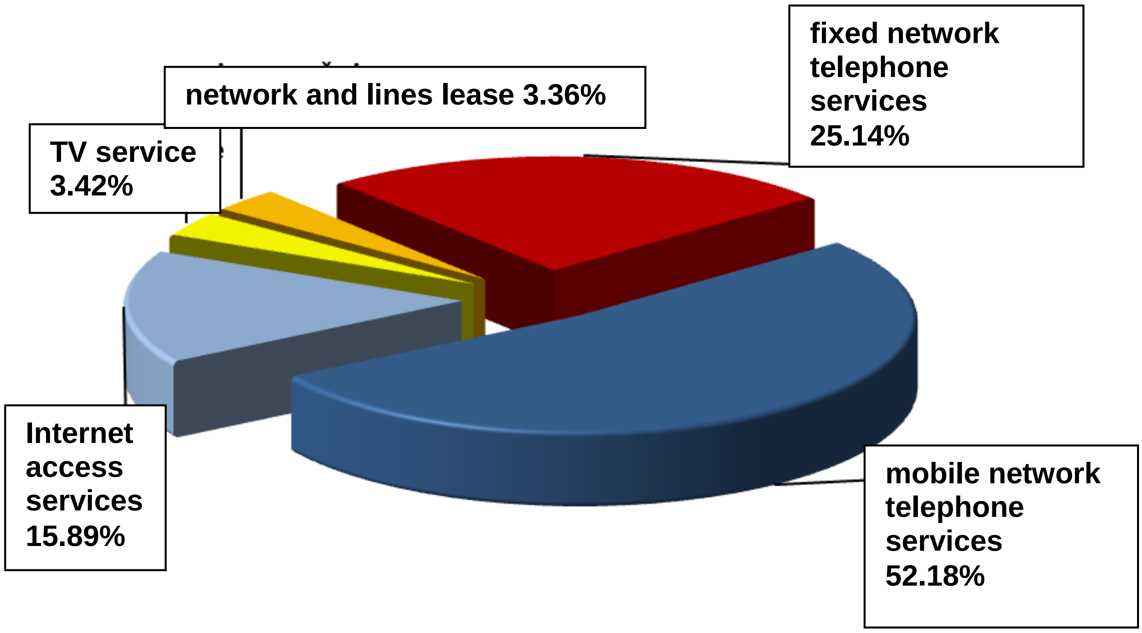


Figure 1.2. Share in total revenue on the electronic communications market

However, regardless of visible negative results, there is still room for further market improvement. Electronic communications in the Republic of Croatia are today undergoing fast changes resulting from technology development and appearance of a series of new services.

In spite of the fact that voice is the basic communication service, it is clear that data and image are increasingly gaining in importance. IP-based technologies represent an upgrade of the traditional approach to voice communication. However, the diversity of services and their price may have a significant impact on the future of the overall electronic communications market. More precisely, user penetration in fixed public communications networks has been stagnant, while revenue from traditional voice services has dropped.

Electronic communications operators have to search for new ways of increasing revenue, which may be found in broadband access and new services. This fact has an impact on the business model of electronic communications operators and encourages them to switch from short-term goals and results to long-term objectives, that is, to innovation and investment into new technologies and new services in order to achieve sustainable growth and development by means of transformation It is not only operators who are facing challenges. In the upcoming period, HAKOM has to continue with intense activities aimed at further development of market and competition.

Table 1.1. Basic data about the electronic communications market

Basic data about the electronic communications market	
Operators providing telephone services in the public fixed electronic communications network[3]	**30**
Operators of mobile public communications networks GSM/DCS	**3**
Operators of mobile public communications networks UMTS	**3**
Number of radio networks	**171**
Number of television networks (digital television)	**7**
Users of telephone services in the fixed network	**1,606,090**
Users of carrier pre-selection services (CPS)	**240,645**
Users of leased line services (WLR)	**111,908**
Users of telephone services in the fixed network	**5,115,140**
Broadband Internet users - *total*	**1,149,229**
via fixed public communications network	***861,276***
via mobile communications network	***287,953***
Number of cable TV connections (KTV)	**143,705**
Number of TV connections based on IPTV	**344,206**
Number of satellite TV connections (SAT TV)	**96,858**
Realised Co-locations	**516**
Realised unbundled local loops	**148,305**
Ported numbers in fixed public communications networks	**599,555**
Ported numbers in mobile public communications networks	**294,555**

1.1.1 Investments

As an independent regulatory authority, HAKOM is responsible for imposing reasonable and justified regulatory obligations depending on strength and market position of each individual operator and for creating effective competition, which is the objective of a liberalized electronic communications market. One of the main regulatory objectives of HAKOM's activities laid down in the Electronic Communications Act (hereinafter: ETA) is to encourage efficient investments into infrastructure and to encourage innovations, while at the same time preventing the distortion and/or limitation of competition. Therefore, when adopting regulatory decisions, HAKOM has to bear in mind that both of the above-mentioned objectives have to be fulfilled, in order to avoid market distortions.

[3] The number of operators who have notified the provision of publicly available telephone service in the fixed electronic communications network

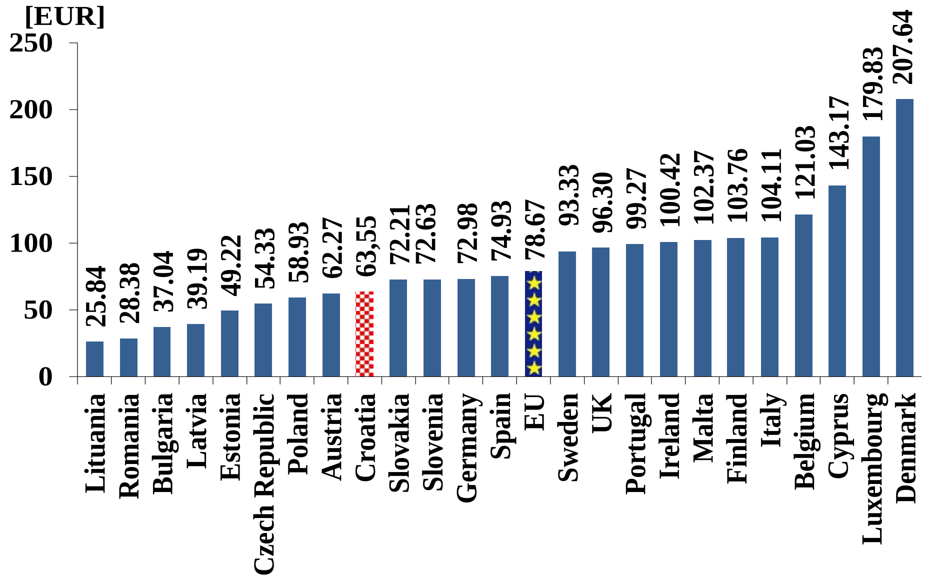


Figure 1.3. The comparison of investments of electronic communications operators per inhabitant between Croatia and the EU in 2009[4]

According to the most recent available data on investments in the EU countries, it is obvious that the Republic of Croatia is lagging behind with a little above EUR 63 per inhabitant compared to the EU average which amounted to EUR 78.67 in 2009. Some of new EU Member States have been investing more into electronic communications per inhabitant.

Taking into account 2010 data available to HAKOM, a total of 1,952,753,210 was invested in that year, out of which 89.90 percent into telecommunications infrastructure and equipment. Therefore, it follows that investments per inhabitant amounted to approximately EUR 59 in 2010, that is, EUR 53 if we take into account only investments into telecommunications infrastructure and equipment. A significant fall in investments was recorded in 2011, by a bit more than 19 percent, that is, a total of 1,569,713,261 was invested. Investments per inhabitant amounted to EUR 47.70 in 2011, which is clearly less than in the previous years.

However, new investments are expected in the upcoming period that will contribute to the development of electronic communications through the introduction of new technologies and by increasing internet access penetration, including the economy in general. It must be borne in mind that the level of investments cannot be predicted because the decision is based on business plans of operators themselves, which must satisfy shareholders' and owners' expectations.

It is expected that investments will be made into fibre access infrastructure, both by the operators and by local self-government. HAKOM does not have insight into operator's (or local government) investment plans, that is, it cannot asses the scope of these investments.

Furthermore, in the course of 2011, operators of public mobile communications tested the LTE technology, that is, they tested fourth generation mobile networks (4G) at 800, 1800 and 2600 MHz, thus showing their intention to implement this technology in the above-mentioned

[4] The most recent European data date from 2009

bands, primarily in 1800 MHz. Last year, operators have purchased sufficient amount of spectrum at 1800MHz for the implementation of LTE technology in this band. The allocation 800MHz (digital dividend) and 2600 MHz bands for use of LTE technology will be allocated in the near future. HAKOM expects investments into infrastructure in the sense of equipment upgrade during 2012. The amount of investments is not known and it depends on individual operator's business policy.

1.2 Telephone services in the fixed network

1.2.1 Market overview

Broadband has become the prevailing way for the provision of services in fixed public communications networks, in the first place as a result of core changes in network architecture brought about by next generation networks (NGN). In accordance with market trends, both in Croatia and at the international level, total revenue from phone services in fixed network is demonstrating a downward trend, and, at the end of 2011, it totalled less than HRK 3.4 billion (Figure 1.4). The fall in revenue results from increased competition and substitution of fixed public communications networks with mobile networks and increased use of broadband services. Operators will have to compensate for the continuing drop in revenue from telephone services in fixed network with broadband access, IPTV service, and telephone services in the fixed network, as well as by new applications and services.

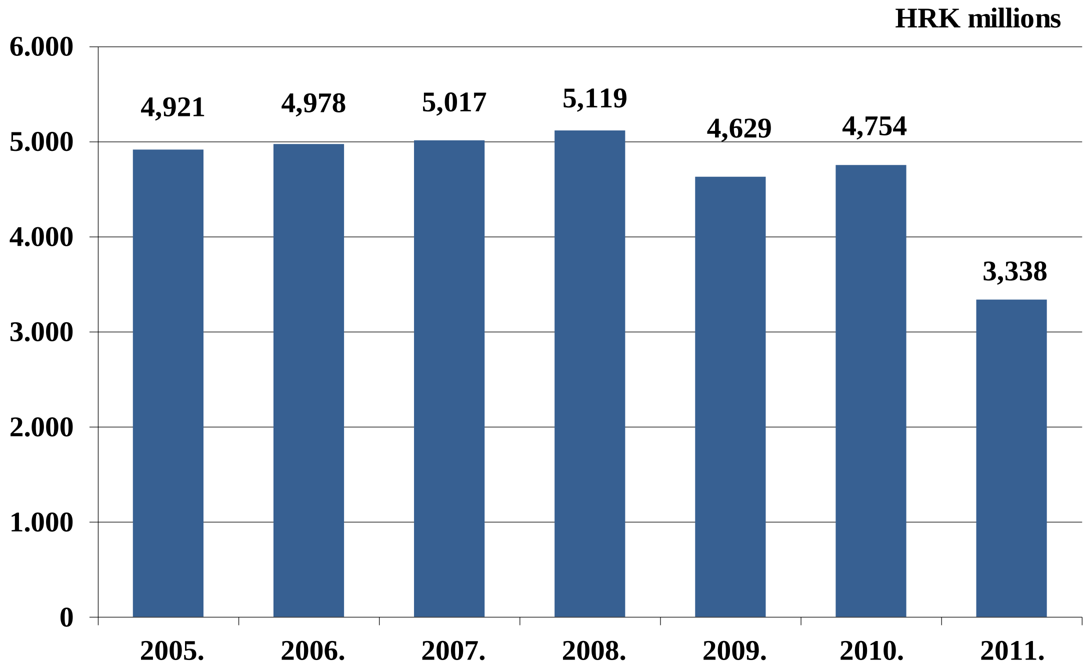


Figure 1.4. Total revenue from telephone services in the fixed network

The number of users of telephone services in the fixed public communications network in the Republic of Croatia has been stagnant (Figure 1.5.) It is to be expected that the number of users of telephone services in the fixed public communications networks will continue to fall, which in the first place depends on the total number of private users of the fixed public communications network..

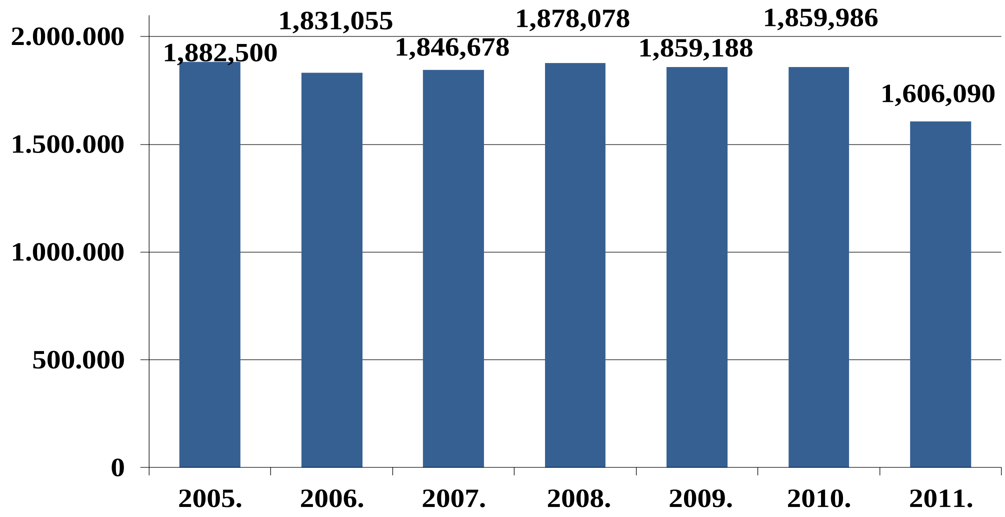


Figure 1.5. Total number of users of telephone services in fixed public communications network[5]

HT kept its leading position in the provision of telephone services in the fixed communications network.

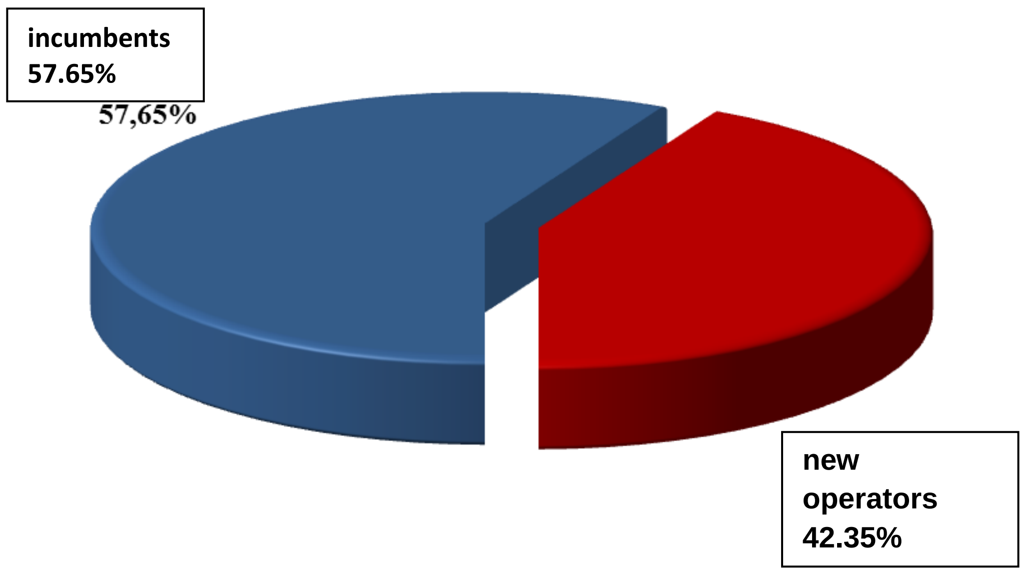


Figure 1.6. Market share of new operators and the incumbent in relation to number of users

On the other hand, the share of new operators (including Iskon Internet) at the end of 2011 increased by more than 35 percent compared to the end of 2010 and in relation to the total number of users of telephone services in fixed network amounts to 42.35 percent (out of which the share of Iskon Internet amounts to 4.35 percent). A new manner of regulation

[5] For years before 2011 HAKOM collected only the number of connections (number of B channels) Since one user may have several phone connections, since 2011 HAKOM has been collecting and showing the number of users of telephone services in the fixed network since in the fixed network since we believe this to be a more realistic indicator.

which introduced in 2011 the first wholesale line rental (WLR) service, which created the conditions for the use of the carrier pre-selection services (CPS) - the most frequently used service, had a positive impact on the number of users of new operators,. Since July 2011, operators have been able to offer to end users additional telephone services with one bill, instead of the former two bills, which makes this service more attractive for end users. In 2011 four operators signed WLR contracts and at the end of the year there were 112,527 active WRLs (Figure 1.7).

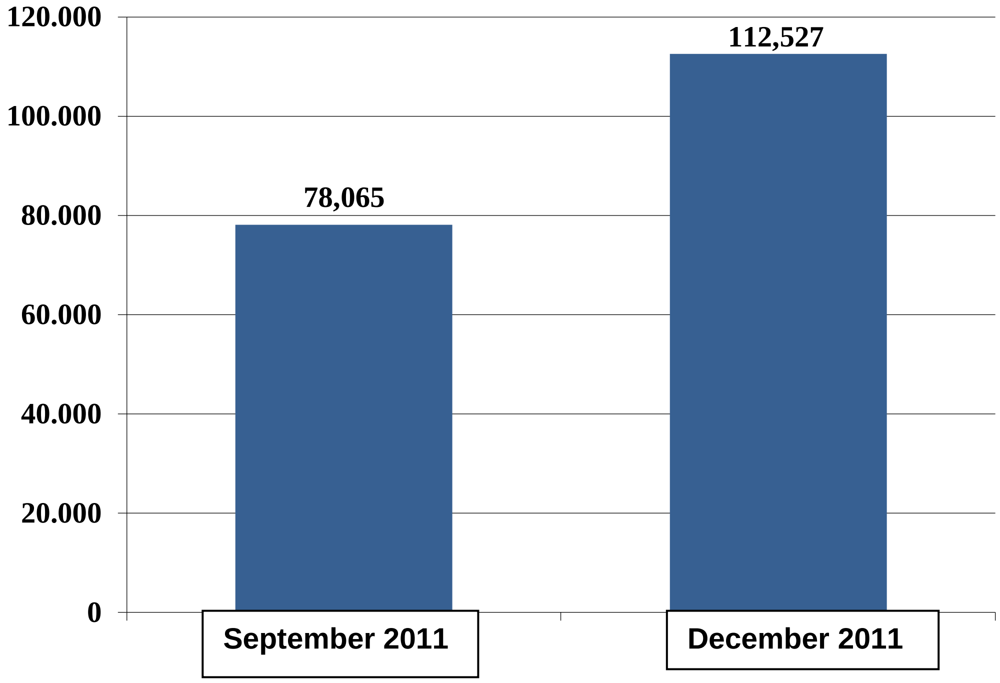


Figure 1.7. Number of users of wholesale line rental service (WLR)

The attractiveness of this service in the form of greater benefits for end users has also reflected on the increased number of users of the CPS service, which showed a slight growth compared to the end of 2010.

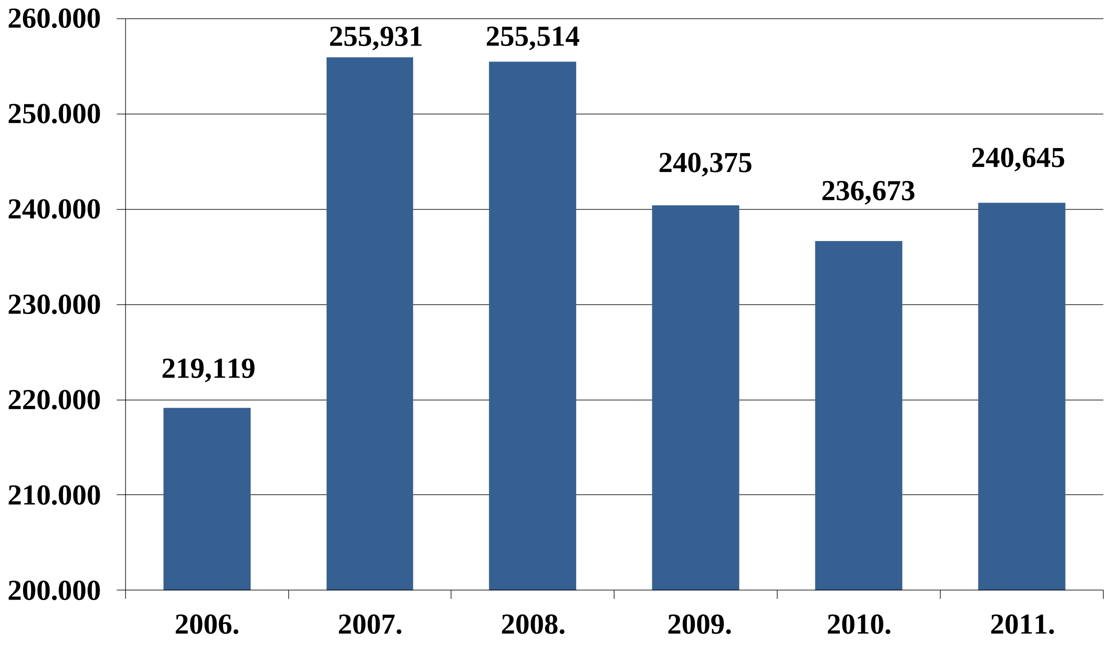


Figure 1.8. Total number of users of CPS service

Increased dynamics of this part of the market is also obvious from the increased number of ported numbers in 2011 by approximately 30 percent compared to the end of 2010 (illustrated in Figure 1.9.) There is a noticeable migration of users from one operator to another which indicates that end users have greater selection. In this manner, users are able to select an operator who is suitable for them in accordance with their needs and habits.

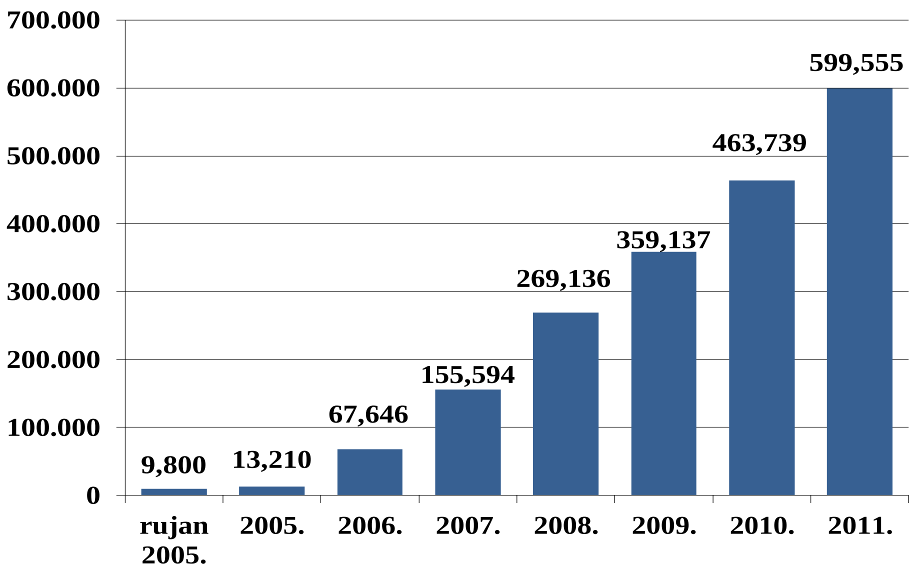


Figure 1.9. Number of ported numbers in fixed network

The disproportion between the share in total revenue and the number of users results primarily from three factors. The first one is that new operators offer lower prices, and are, in the beginning, more attractive for more prudent users.

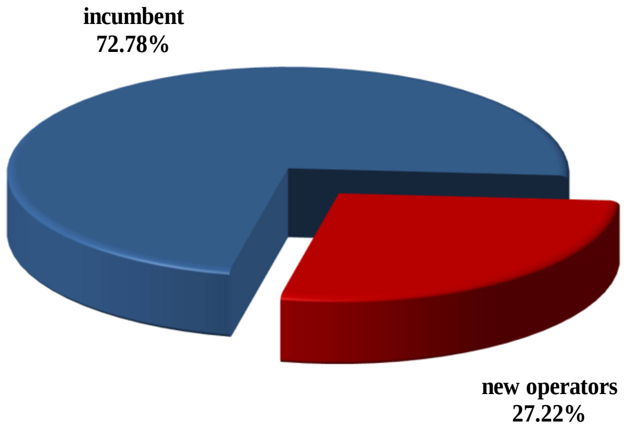


Figure 1.10. Market share of new operators and the incumbent in relation to total revenue

The second factor refers to relatively unfavourable conditions for the performance of new operators, which has been significantly improved through HAKOM's activities. The third factor refers to the number of operators of fixed public communications network on a relatively small market of the Republic of Croatia. It is to be expected that new operators of fixed public communications network in the RoC will consolidate and group in the years to come, which was also the case last year. Vipnet completed its B.net takeover in 2011 and thus additionally strengthened its position in the total value of the electronic communications market. It will now be able to offer to end users a complete portfolio of telecommunications and TV services for private and business users.

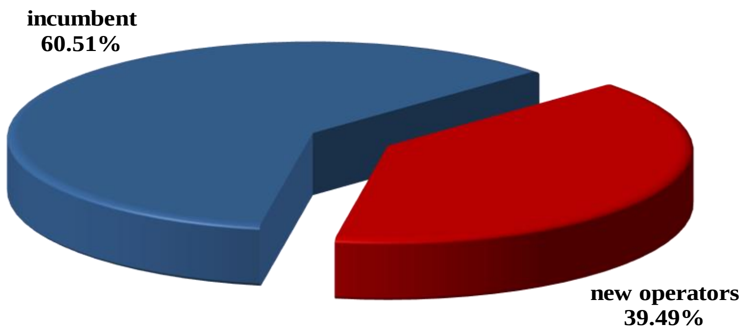


Figure 1.11. Market share of new operators and the incumbent in relation to total outgoing traffic

Figure 1.11. shows the market share of new operators and HT in relation to the total outgoing traffic from fixed networks on the market of electronic communications. Although the share of calls towards other operator's networks is increasing, it is still negligible. The above-mentioned shares indicate that HT has double the traffic on the electronic communications market compared to the new operators, which is to be expected if we take into account their market share in relation to the number of users. Because of the benefits of the economies of scale that may be exploited by HT because it does not have to pay for call termination to other operators but the traffic terminates in its own network, an asymmetric price has been determined for call termination, that is, new operators may charge more than HT for call termination into their network.

1.2.2 Regulatory measures

In 2011, HAKOM completed market analysis initiated in 2010 on the market of access to the public communications network and markets of publicly available telephone services and established the necessary conditions for effective and sustainable competition. On markets on which SMP operators have been identified in July of 2009, HAKOM focused on the monitoring of implementation of the imposed regulatory obligations. A new round of market analyses closely related to telephone services in fixed networks is expected in the course of 2012. The implementation of the project for the development of cost models also started in 2011, which was the only regulatory aspect still not completely aligned with the existing European practice. The completion of the above-mentioned process is expected in 2012.

Market of call origination and call termination on an individual public communications network

As part of its regulatory activities, HAKOM has, by adopting a series of decisions and rulings, ensured further liberalisation and regulation of the electronic communications market. For that reason, activities in 2011 were focused on implementation and supervision of regulatory obligations imposed in market analyses from July 2009 and their amendments in accordance with market interests and further development of competition. In 2009, HAKOM adopted a strategic decision, that is, it defined guidelines for the next three years and in 2011 implemented plans defined in 2009. A clear vision for the period of three years in advance contributed to market stability and business planning of market participants which was of key importance for the development of effective competition.

In early 2011 new wholesale prices for call origination and call termination on HT's public fixed communications network entered into force amounting to 0.039 HRK/min for call origination at local level and 0.059 HRK/min for call origination and call termination at regional level. The premise for the calculation of prices was that prices during low traffic should amount to 50 percent of prices of services in high traffic. In this manner, the price of call origination and call termination at local level was lowered by 18.75 percent, and at the regional level by 12.6 percent, compared to 2010 prices.

More favourable wholesale conditions, that is, lower wholesale interconnection prices, which were applicable in 2011, resulted in more favourable retail conditions. This resulted in more competition and a more users for new operators. In the long run, this will contribute to the development of sustainable competition. This also resulted from the determination of asymmetrical price of call termination service between the incumbent and other operators on the market, which was regarded as justified to facilitate market entry of operators who have their own infrastructure and considering the fact that other operators are not able to achieve the equivalent economies of scale as the former incumbent. For 2011, new operators were imposed the asymmetrical amount of 28 percent on the price of HT's service of regional call termination (in 2010 the asymmetry amounted to 42 percent) which means that new operators charged 0.076 HRK/min for call termination service in 2011.

Due to the specific nature of interconnection in Croatia from the beginning of market liberalization, and in order to protect previous investments of new operators on the market of electronic communications, the price of national call origination and call termination for 2010 was not changed. However, year after year during the analysis, while prices of interconnection services are based on the reference value method, the interconnection services at national level should keep the same ratio in relation to the interconnection prices at regional level.. For that reason, starting from 1 January 2011, the amended price for national call origination amounting to 0.113 HRK/min has been applied, that is, for national call termination amounting to 0.114 HRK/min, which indicates a price decrease of 12.7 percent compared to 2010. The determination of a significant difference in regional and national interconnection prices is aimed at protecting the existing investments of operators and encouraging new operators to invest into their own infrastructure, that is, to join in several points and come closer to the end user.

SMP operators started applying prices defined in analyses of the relevant market in early 2010 and they are obliged to change their prices every year in accordance with the reference value method, that is, they must determine prices at the EU average until HAKOM is able to apply the cost-oriented price as defined in market analyses.

Interconnection prices that will be applied by operators for call origination and call termination in a public fixed communications network were defined in 2011 and will apply from 1 January 2012. The interconnection price of 0.042 HRK/min for the service of call origination and call termination at the local level, and the new price amounting to 0.054 HRK/min for call origination, that is, the new price amounting to 0.062 HRK for call termination at regional level were calculated on the basis of a methodology defined during analyses of relevant markets. The increase in call termination and call origination prices results from the drop in prices in countries which represented outliers in the calculation for 2011 because of which, pursuant to the methodology laid down in the analyses of relevant markets, they were not included in the calculation of the average value. When prices for 2012 were calculated, as a result of lower interconnection prices in the EU Member States, certain countries were included in the calculation of the median value, which resulted in a higher average price. Furthermore, Germany and Denmark are no longer regulating the call termination price, and Denmark is not regulating call origination either. The above-mentioned prices, therefore, were not taken into account in the calculation of average prices, which, in turn, influenced the average prices.

For 2012, new operators were imposed the asymmetrical amount of 14 percent on the price of the service of regional call termination which means that new operators will be charging 0.071 HRK/min for the service of call termination on their network. This contributed to further market development which resulted in more effective competition in relation to new investments by all operators active on the market and the creation of innovative services that will be offered at competitive prices.

The fact that operators have been lowering their prices in order to attract end users also results in more favourable wholesale conditions defined by the analysis of the market of call termination on an individual mobile public communications network. In other words, lower price of the termination service, defined during market analysis, also means lower retail prices for calls from fixed to mobile network. This in the end leads to more attractive packages for end users and to a more competitive market in general.

The analysis of the market of access to public communications network at a fixed location for private and business users

In accordance with the ECA, market analysis started in 2010 on retail access markets the regulation of which is carried out pursuant to the Telecommunications Act, until the completion of the above-mentioned market analyses (hereinafter: TA). These activities continued in 2011 as well. In April 2011, HAKOM's Council adopted a decision on the identification of operators with significant market power and the imposition of regulatory obligations. It identified HT, together with its affiliated company Iskon, as the SMP operator on the market of access to the public communications network at a fixed location for private and business users. HT and Iskon are regarded as one business entity since Iskon is controlled by HT. Taking this into account, and on the basis of obstacles to competition that may appear on the market of access to the public communications network at a fixed location for private and business users, HAKOM's Council imposed appropriate regulatory obligations on HT and its affiliated company Iskon, as the operator with significant market power. The new manner of market regulation brought about in 2011 a new wholesale service that will contribute to further development of effective competition.

The regulatory obligation of access to and use of specific network facilities also includes the service of wholesale line rental. The purpose of introducing the line rental service is the upgrade of the existing carrier pre-selection service (CPS) with the "all calls" profile. This provides additional benefits for users of the mentioned service when using publicly available telephone service provided by the pre-selected operator in the form of a single bill for the service of access and the telephone traffic, which was not possible in the past. One bill for both services (access and telephone traffic) will contribute to the creation of better and more quality conditions for use of the most widespread service - the carrier pre-selection service, that is, to further development of the electronic communications market in the Republic of Croatia.

In relation to the line rental service, HT was imposed the regulatory obligation of transparency, that is, HT was obliged to supplement the existing reference offer for interconnection or to publish a new reference offer for the wholesale line rental service pursuant to which all operators may provide the service of access to the public communications network at a fixed location for private and business users and on the basis of which other operators will not be obliged to pay additional costs which are not necessary for the provision of the requested service. In accordance with a decision adopted by the HAKOM's Council, HT published in July 2011 the Wholesale Line Rental Reference Offer elaborated in accordance with market needs and containing all the necessary time limits, conditions and tariffs.

In the transitional period, pending the definition of cost-oriented prices, price control for the wholesale line rental service was based on the retail minus method. The calculation of percentage X for the reduction of the retail price by 15% was based on all costs incurred by

HT that will no longer be incurred in the provision of the service of access to the public communications network at a fixed location when this service is provided to the end user by the operator of the wholesale line rental service. The purpose of the wholesale line rental service is not to help a beneficiary operator to earn profits from further sale of this service at the retail level but to enable the beneficiary operator to issue a single bill to users to which it provides the carrier pre-selection service, "all calls" profile, thus making the service more attractive for the end users.

Since the majority of private users of HT connected via POTS access are users of packages with certain benefits (regardless of whether these benefits are expressed in terms of traffic or in certain monetary amounts), for the purpose of preventing the discrimination of other beneficiary operators, HT was imposed an additional percentage (to increase X percentage amounting to 15 percent) if, at retail level, HT offers to private users packages which, in addition to access via POTS, include certain benefits at a price which is less than the sum of prices of the independent access service and included benefits in the form of telephone traffic. If several packages satisfy the above-mentioned requirement, HT is obliged to calculate the additional percentage X in relation to the package which provides the most benefits for the users. At the moment, the defined percentage that will enable the beneficiary operator at the wholesale level to replicate retail benefits from HT's user packages amounts to 8 percent.

The reference value method, which was used by HAKOM for the calculation of wholesale prices for interconnection service and services on the market of wholesale (physical) network infrastructure access (including shared and fully unbundled access) at a fixed location, could not be applied to the calculation of prices of wholesale line rental service since this service is not observed separately but in relation to the retail price of access to the public communications network. The retail minus method will ensure the promotion of efficient and sustainable competition and maximize consumer benefits in the part of the period covered by the relevant market analysis.

Analysis of the market of publicly available telephone service

In addition to the analysis of the market of access to the public communications network at a fixed location for private and business users, HAKOM also continued with its activities started in 2010 in relation to markets which are not included in the relevant European Commission Recommendation (hereinafter: EC) on relevant markets susceptible to ex-ante regulation, that is, on the relevant market of *publicly available telephone service in local and/or long-distance traffic provided at a fixed location for private users;* the relevant market of *publicly available telephone service in local and/or long-distance traffic provided at a fixed location for business users,* the relevant market of *publicly available telephone service in international traffic provided at a fixed location for private users, and the* relevant market *of publicly available telephone service in international traffic provided at a fixed location for business users.*

Market of publicly available telephone service in local and/or long-distance traffic provided at a fixed location for private and business users

In April 2011, HAKOM's Council adopted decisions establishing that relevant markets of *publicly available telephone service in local and/or long-distance traffic provided at a fixed location for private users, and the* relevant market of *publicly available telephone service in* *local and/or long-distance traffic provided at a fixed location for business users* are susceptible to ex ante regulation because all three criteria[6] have been cumulatively met, that is, HAKOM's Council identified *t*he presence of high and non-transitory market entry barriers of structural, legal or regulatory nature on these markets, as well market structure which does not aim towards the development of effective competition within a certain time framework and that the application of relevant competition legislation alone does not make possible the elimination of market entry failures concerned.

Consequently, the market analysis procedure was applied on the above-mentioned relevant markets aimed at establishing the existence of effective competition on that market or the existence of one or more operators on that market with single or joint significant market power. During the analysis of the market of publicly available telephone service in local and/or long-distance traffic provided at a fixed location for private and business users and the designation of operators with significant market power, and the imposition of regulatory obligations on SMP operators, HAKOM's Council adopted in July 2011 a decision designating HT and its affiliated company Iskon as operators with significant market power on the above-mentioned relevant markets. In accordance with this decision, the operators in question were imposed the regulatory obligation of retail price control and the prevention of market entry or restriction of competition by setting low prices of services as well as providing unfair advantage to certain end users of services. HT and ISKON are obliged to submit to HAKOM the conditions and prices of their packages 45 days before their publication to verify whether the packages are cost-orientated, that is, to check that they will not distort effective competition.

Market of publicly available telephone service in international traffic provided at a fixed location for private and business users

Following a detailed analysis of collected data and the Three Criteria Test, HAKOM's Council adopted in January 2011 a proposal of a decision establishing that the three criteria have not been cumulatively met on the r*elevant market of publicly available telephone service in international traffic provided at a fixed location for private users* and the r*elevant market of publicly available telephone service in international traffic provided at a fixed location for business users* because of which, the relevant markets are not susceptible to ex ante regulation.

Considering the significant influence that the above-mentioned decision may have on the relevant market, a public consultation was carried out in the period between the end of January 2011 and mid-March 2011 to enable all interested parties to give their opinions, comments and proposals concerning the proposed measures.

The final decision for both relevant markets was adopted in July 2011 and, in accordance with the adopted decision, HAKOM's Council revoked the previously imposed regulatory obligations on HT and ISKON in the part referring to international traffic for private and business users.

[6] The Three Criteria Test

Retail packages in the fixed network

Considering the direct impact on the business operations of new operators, pursuant to the provisions of the TA, the issuing of consent for the prices of retail services concerning the publicly available service in the fixed network to SMP operators (HT and Iskon Internet) was continued up to 15 June, that is 20 July 2011 (when analysis of the market of publicly available telephone service in international, that is local and/or long-distance, traffic was finished by HAKOM Council's decision). The process used the analysis based on operators' traffic data, end user's characteristics, interconnection prices and other associated costs.

By August 2011, HAKOM's Council approved the prices of publicly available telephone services in a total of two tariff options of HT and two Iskon's user packages. More precisely, these are HT's new tariff options: "Business Minute" which is intended for business users and "Super World" intended for private users. The previously mentioned consent was also granted for prices of the publicly available telephone service in the following packages intended for private users of Iskon Internet: „Iskon.DUO Smart“ and „Iskon.DUO Super“.

Furthermore, by August 2011, HAKOM's Council refused to grant consent for prices of additional offers within the existing HT's packages for business users.

After the completion of analysis of the markets of access to public communications network at a fixed location for private and business users and the publicly available telephone service in local and/or long-distance traffic, by the end of 2011, due to the regulatory obligation of retail price control imposed on operators with significant market power, HT and Iskon Internet, HAKOM received notifications about prices of the access service and publicly available telephone service for a total of 15 new user packages and 1 tariff option of HT and ISKON. The number of tariff packages and options for which consent was granted, that is for which notification was received, illustrates market dynamics and confirms that HAKOM's regulation on the electronic communications market is appropriate.

Expert supervision and HAKOM's decisions

Two expert supervisions over HT were carried out in 2011 due to violation/non-compliance with regulatory obligations imposed in the course of analysis of the market of access to public communications market at a fixed location for private and business users. More precisely, by violating the imposed regulatory obligations established by the electronic communications inspector during supervision, HT prevented the availability of the wholesale line rental service on the market within the deadline and in the manner defined in the market analysis thus preventing other operators from providing the access service to their end users to which they were already providing the publicly available telephone service on the basis of the carrier pre-selection service.

With a view to ensuring effective competition and protection of interests of end users, HT was imposed the obligation of introducing the necessary amendments to the wholesale line rental reference offer and to the interconnection reference offer.

Cost models of fixed network operators

Activities related to public procurement for consultancy services for the implementation of the project "Cost Models of Operators with Significant Market Power" were completed in the first half of 2011. The main objective of the project is to create, develop and apply cost models for the calculation of wholesale prices referred to in reference offers of SMP operators who have been imposed the obligation of price control and cost accounting.

For the time being, wholesale prices of services are based on reference value, except for the price for access to ducts which is based on HT costs and price of the fully unbundled local loop which is based on HT's "*top down"* model. Although the comparable value approach and the retail minus method represented a useful transitional method, HAKOM mentioned on several occasions that the introduction of cost models would represent final means for the implementation of the obligation of price control which was imposed on operators with significant market power on the relevant markets in accordance with the ECA.

HAKOM will, therefore, on the basis of the "bottom-up" approach develop and apply a cost model for interconnection and fixed network access, as well as a cost model for the calculation of net costs of the obligation to provide universal services. The determination of the price of regulated services on the basis of cost models represents a final step in the alignment of the electronic communications market with the EU Member States.

Public consultation presenting HAKOM's initial views on development and implementation of cost models was finished in 2011. The implementation of the project will contribute to full transparency, that is, it will increase confidence into financial indicators of SMP operators thus having a positive impact of the development of the interconnection market, and on other relevant markets. A final decision on the definition of the method for the development and implementation of cost models in expected in mid-2012.

1.3 Telephone services in the mobile network

1.3.1 Market overview

Trends observed on the market of mobile communications in the previous years have remained the same in 2011. Taking into account the drop in prices, both in the world and in Croatia, 2011 was characterized by a drop in revenue amounting to 15.18 percent as a result of decreased personal spending of users because of the crisis and new government taxes, including the 6 percent excise duty introduced in August 2009.

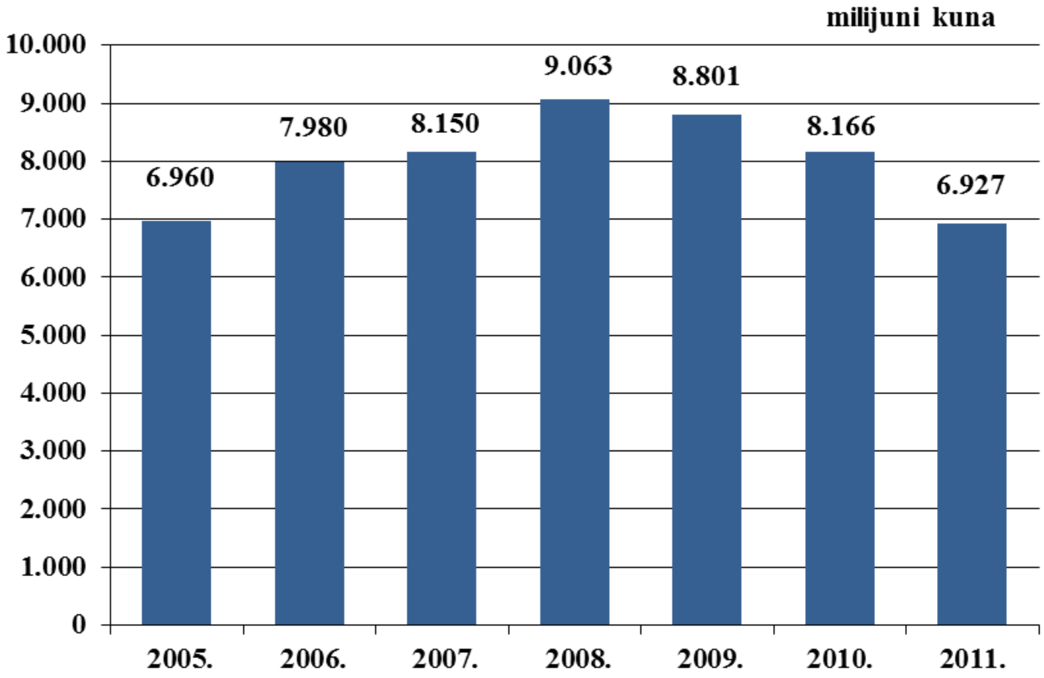


Figure 1.12. Total revenue from telephone services in the mobile network

At the moment, the majority of revenue of operators of public mobile communications networks is based on telephone services. However, in accordance with market trends, both in the world and in the Republic of Croatia, the previous period was characterised by growing demand for broadband Internet access service in mobile networks. It may be concluded that the market of mobile communications is well developed, which does not mean that there is no room for improvements in relation to quality, prices and diversity of services. However, user penetration in mobile public communications networks cannot grow indefinitely. In order to preserve the existing level of revenue, operators will have to offer broadband access and new services in accordance with user demands resulting in the increased number of users and a tendency for increased use of mobile public communications networks in general. In the majority of countries, including the RoC, user penetration is more than 100 percent in relation to the number of inhabitants (Figure 1.13).

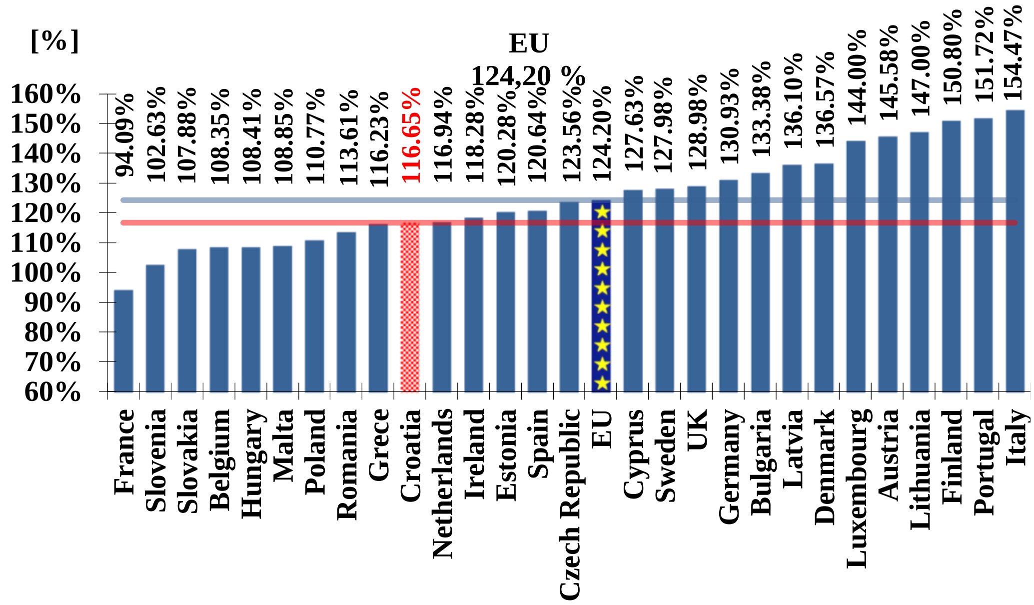


Figure 1.13. Comparison of user penetration in public mobile communications network in the EU[7] and the RoC

Regardless of many former predictions of saturation when penetration reaches 100 percent, the penetration of users of[8] telephone services in the public mobile communications network continues to grow, and in some countries it exceeds 150 percent in relation to the number of inhabitants. Of course, this penetration includes those users who have several telephones and several SIM cards and pre-paid users whose SIM cards still have not expired although have not been used for months. Precisely for this reason, the number of users of telephone services in the mobile network in the Republic of Croatia fell by 19.59 percent between the end of 2010 and end of 2011.

[7] Comparison between the penetration of users of public mobile communications networks in the RoC with the most recent available data in the EU (data refer to October 2010)

[8] The methodology for the collection and presentation of the number of users shows the number of active numbers in mobile networks.

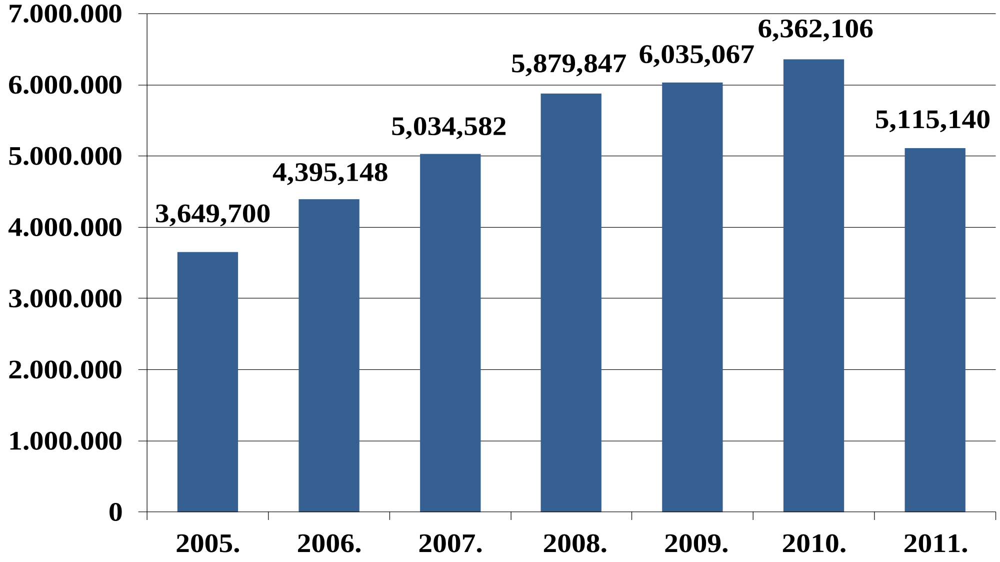


Figure 1.14. Number of users of telephone services in the fixed network

The number of users on the mobile communications market amounted to 5,115,140 at the end of 2011 (Figure 1.14.). Lower number of users results from the change in the manner of collecting data by HAKOM, that is, from a different manner of presenting the number of active users without subscription compared to the previous periods. With a view to obtaining consistent and comparable data for all operators on the market, HAKOM amended the definition of an active user without subscription in such a manner that all operators must deliver a number of those active users without subscription who have used the service in the mobile communications network at least once in the past 90 days or have refilled their account. Until now, depending on the operator, operator data listed as active users those users who used the service in the mobile network or refilled their account in the last 90, 180 or 270 days. This resulted in the decrease in the number of pre-paid users, that is, in the decrease of the number of users of the operator's mobile network in general.

On the basis of the analysis of the share at the retail level in relation to telephone services in the mobile network, HT has managed to maintain its leading position in relation to all three segments (Figures 1.15., 1.16. and 1.17), while the third operator, Tele2, increased its market share in relation to the same period in 2010.

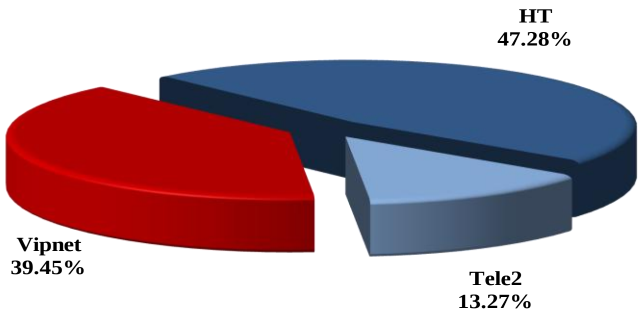


Figure 1.15. Market share in relation to number of users

It is obvious that there are three stable operators on the electronic communications market in the Republic of Croatia who are able to provide high-quality innovative services to their users. The reasons for the development of this market segment include, in the first place, the lowering of prices of telephone services in the mobile network resulting from the appearance of a third operator of mobile communications market, as well as greater use of mobile compared to fixed public communications networks.

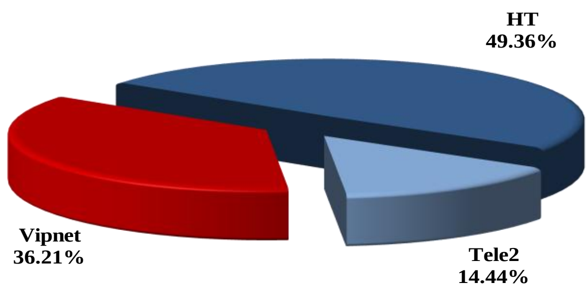


Figure 1.16. Market share in relation to the total revenue from telephone services in the mobile network

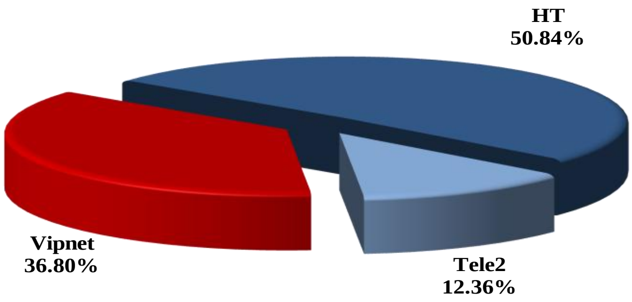
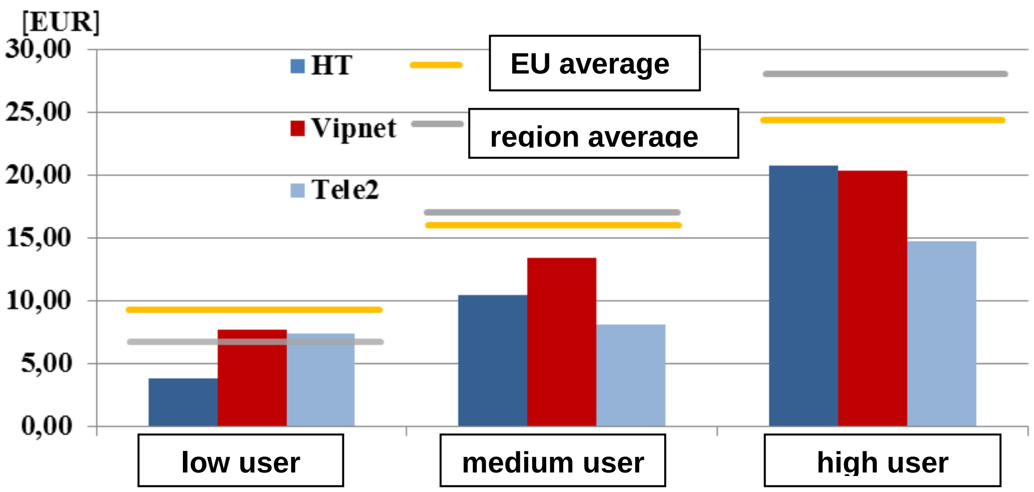


Figure 1.17. Market share in relation to total outgoing telephone traffic

The increase in the third operator's share was influenced by, among other things, HAKOM's regulatory decisions concerning the introduction of asymmetrical prices for call termination on the network of the third operator of the public mobile communication network. Decisions were adopted in order to create a structure aiming towards the development of sustainable competition. By its regulatory activities, HAKOM created such conditions on the associated wholesale markets that operators were able to offer more attractive packages at lower retail prices, in order to attract end users.

Three operators are active on the market of mobile communications in the Republic of Croatia, offering dozens of tariff packages. The comparison of OECD baskets in the RoC (Figure 1.18) shows that they are lower than the EU average[9] or the average of countries in the region aspiring to become EU Member States[10].



[9] Source: European Commission, Digital Agenda Scoreboard 2011-data for 2010
[10] Potential Candidates for EU Membership: Albania, Bosnia and Herzegovina, Montenegro, Kosovo, Macedonia and Serbia.

Figure 1.18. OECD basket of use of mobile communications networks services

1.3.2 Regulatory measures

The monitoring and implementation of regulatory obligations imposed on operators with significant market power (HT, Vipnet and Tele2) in July 2009, on markets closely related to telephone services in the fixed network, continued in 2011 in accordance with market interests and further development of competition. Furthermore, the implementation of a project for the development of cost models for all three mobile network operators has started and this is the only regulatory aspect which currently is not fully aligned with the existing European practice. The completion of the project is expected in 2012. Furthermore, a new round of analysis of the relevant market closely related to telephone services in the mobile network, in accordance with the EU Recommendation on relevant markets susceptible to ex ante regulation is expected in the course of 2012.

Market of call termination on an individual mobile public communications network

Prices for call termination on an individual mobile public communications network, imposed in HAKOM's decision of July 2009, which also includes the document *Analysis of call termination on an individual mobile public communications network*, have been applied since 1 January 2010. SMP operators must change prices for every subsequent year in accordance with the reference value methodology, that is, they must set them at the European average in the manner defined in the market analysis until HAKOM is able to apply a cost-oriented price.

In order to ensure more favourable wholesale conditions and considering significant differences between Tele2 and other two operators, HT and Vipnet, HAKOM determined the price for call termination on the network of operator Tele2 as a percentage amount added to the price for call termination which was imposed on HT and Vipnet. The setting of asymmetrical prices for the service of call termination between operators with a strong market share and operators with lower market share, on a theoretically common call termination market, is a prevailing practice in the EU. It may even be said that asymmetry is a rule, not an exception, in the EU countries.

In accordance with market analysis from 2009, Tele 2 was obliged to apply a lower level of asymmetry since 1 January 2011, that is, a 20 percent asymmetry. However, since Tele 2's market share did not grow sufficiently in 2010, that is, it did not grow to the extent that would enable it to survive the lowering of price of call termination by 35 percent (in accordance with HAKOM's calculations), which would represent the biggest fall in one year, and taking into account the majority of European countries and the fact that the above-mentioned fall would harm Tele2 market share, HAKOM's Council adopted in December 2010 a decision on keeping the asymmetry level of 30 percent by 30 June 2011, that is, at the level from 2010.

Regardless of the degree of asymmetry, new prices for the call termination service for HT and Vipnet entered into force on 1 January 2011, amounting to 0.396 HRK/min, which represents a 29.3 percent price drop. At the same time, the price for the same service provided by Tele 2, with the same 30 percent asymmetry, amounts to 0.515 HRK/min, which is a reduction by the same 29.3 percent compared to 2010. In the period between 1 July 2011 and 31 December 2011, Tele2 applied the wholesale prices for the call terminating service amounting to 0.475 HRK/min since the asymmetry level in that period amounted to 20 percent, as defined in the

2009 analysis of the market of call termination. The increase in market volume and Tele2's market share, which contributes to effectiveness of competition on the market of mobile networks, clearly shows that HAKOM's decision on the introduction of a 30 percent asymmetry for the first half and 20 percent for the second half of 2011 was correct, as well as the decision to set prices at a level where operators will no longer be able to charge for the call termination service above cost.

In accordance with the methodology defined by the analysis of the relevant market, operators with significant market power must set prices for 2012 at the European average in the manner defined in the market analysis, until HAKOM is able to apply cost-oriented prices. The previously mentioned prices remained in force until 31 December 2010. Therefore, the set price for call termination on HT's and Vipnet's network for 2012 amounts to 0.301 HRK/min, and the price for call termination on Tele2's network, due to 10 percent asymmetry determined by the analysis of the relevant market, amounts to 0.331 HRK/min. These new prices are lower by 24 percent for HT and Vipnet compared to 2011, while Tele 2's price was lower by 30.31 percent compared to the second half of 2011.

HAKOM's intention was to lower the prices of services of call termination in mobile public communications networks and thus prevent SMP operators on the relevant markets from abusing their dominant position by charging excessive prices in order to ensure effective and sustainable competition, as the biggest advantages for end users of services.

Retail packages in mobile network

On the market of publicly available telephone service in mobile networks, that is, on the market on which HAKOM monitored the influence of the deregulation decision from 2009, and according to available data, there are currently around 180 different tariff packages for publicly available voice services in mobile networks, which shows that the decision on deregulation of the previously mentioned relevant market was justified, that is, that the market is effectively and sustainably competitive. In this respect it must be mentioned that the fact that shares of operators on the relevant market are changing is not the most important fact, but a certain dynamics of market events which leads towards the development of effective competition within an appropriate time frame is also important.

Cost models of mobile network operators

Activities related to the public procurement procedure for consultancy services for the implementation of the project "Cost models of operators with significant market power" were completed in the first half of 2012. Although the benchmark and the retail minus methods were useful as transitional methods for price regulation, cost models should represent a final means in the implementation of the price control obligation. HAKOM will, therefore, apply the "bottom-up" approach to the development and implementation of cost models, including among others, the cost model for interconnection in mobile network.

The output of cost models for mobile (and fixed) networks is the calculation of unit network costs necessary for the provision of products and services. However, regulated prices of services may not be determined automatically on the basis of unit costs. The issue of the definition of regulated prices on the basis of unit costs is of key importance for national regulatory authorities. Pursuant to 2009 EC Recommendation on the regulation of prices of call termination, HAKOM will use the "bottom-up" model for the determination of call termination charges with a view to encouraging efficient production and use of services and in order to decrease the changes for competition distortion.

Public consultation during which initial HAKOM's views on the development and implementation of cost models were presented and in which HAKOM proposed the modelling of mobile networks of all existing operators - HT, Vipnet and Tele 2 was finished in late 2011. The modelling of existing operators is usually accompanied by the modelling of a generic operator, that is, a hypothetical new operator on the Croatian market. Since symmetrical regulation is a long-term trend in the EU, the modelling of generic operator provide complementary results which are useful in the decision-making process. A final decision on the definition of the method for the development and implementation of cost models in expected in mid-2012.

1.4 Internet access service

1.4.1 Market overview

Internet has been continuously growing worldwide. Its main characteristic is availability of large amounts of information, data and documents at an affordable access price. In relation to broadband development at the EU level, the *Digital Agenda for Europe* for the first time introduces concrete measures and objectives, as well as recommended time limits for the fulfilment of these objectives in order to achieve the greatest benefit from this development for the economy and citizens of the EU. In addition to EC's efforts to promote broadband access development, EU Member States have also been adopting their national plans and broadband development strategies. Following the principles of a knowledge society, free market economy and active EU accession policy, the Government of the Republic of Croatia is also committed to a balanced and clear broadband access and broadband services development policy that will be implemented by competent institutions within the scope of their competences.

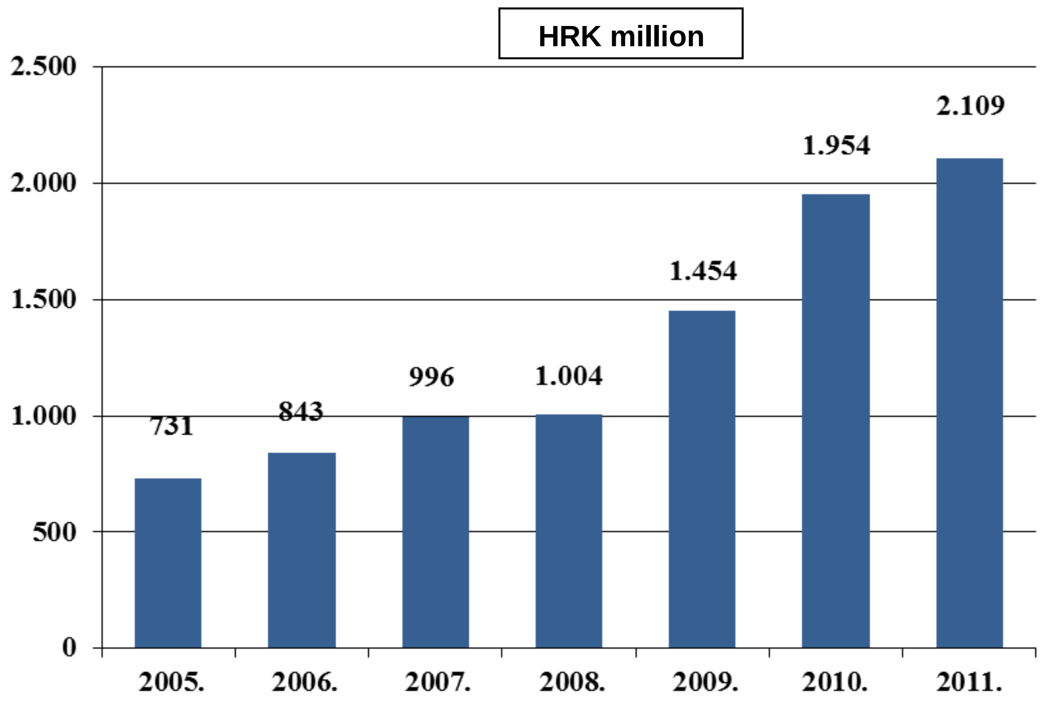


Figure 1.19. Total revenue from the provision of Internet access services

As a result of fast development and use of broadband access, the share of the Internet access service in overall revenue has significantly grown. Revenue from data transfer has been growing year after year and has increased by 8 percent in 2011 compared to 2010.

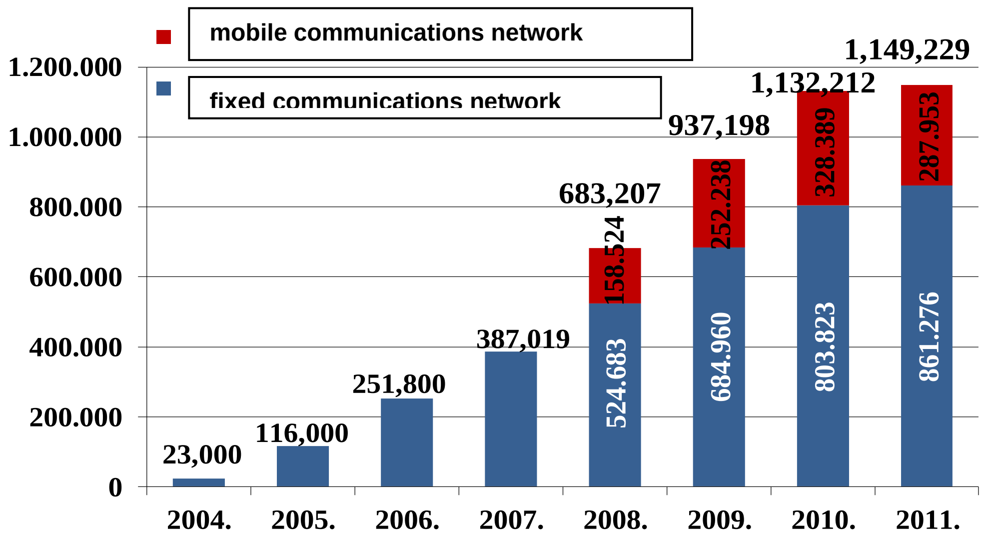


Figure 1.20. Number of broadband connections

The number of broadband connections in fixed networks continues to grow in the RoC and it reached 861,276 connections at the end of 2011, which is 7 percent more than in the same period of the previous year. The increase occurred in almost all counties, which shows that operators have been offering their services in the entire territory of the RoC. However, although to a lesser extent compared to the previous period due to state incentives, the distribution of broadband connection per counties is still uneven, which also refers to the justification of selective incentives for the development of broadband Internet access.

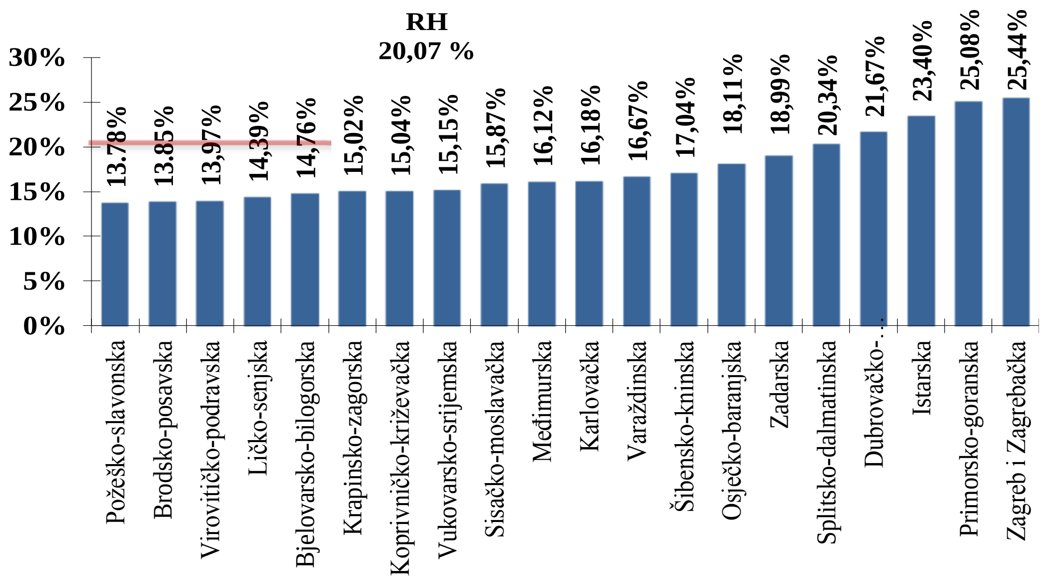


Figure 1.21. Penetration of broadband access connections via the fixed network in the RoC per counties

Because of the global economic crisis, governments of many countries, including the EU, bearing in mind the positive effects of use of broadband access infrastructure to the economy in general, have established special funds or provided special resources for the development of this infrastructure, in particular by building wired and wireless next generation networks in areas without internet access or in areas where such construction is not profitable. The same was done by the RoC and, by the end of 2008, HAKOM granted, on the basis of a tender for granting incentives for the development of broadband infrastructure, more than HRK 16 million for the development of broadband infrastructure in areas lacking sufficient interest for development and investments into broadband access infrastructure. Furthermore, HAKOM launched an assistance programme for the development of broadband in areas of special state concern, in highland areas and on the islands for target groups of users (schools, health care institutions and others). Investments as part of this programme will amount to HRK 100 million.

Broadband services market in the RoC still has a lot of potential for growth since 47.39 percent of Croatian households use broadband access in the fixed network. Compared to the end of 2010, the number of users of broadband access, illustrated in Figure 1.19, increased by 1.5 percent and, according to data for the end of 2011, the number of broadband Internet connections totalled 1,149,229, indicating a penetration of 26.78 percent in both fixed and mobile networks. Broadband internet access via technologies in fixed communications networks reached 20.07 penetration while mobile broadband access reached the penetration of 6.71 percent (Figure 1.21.).

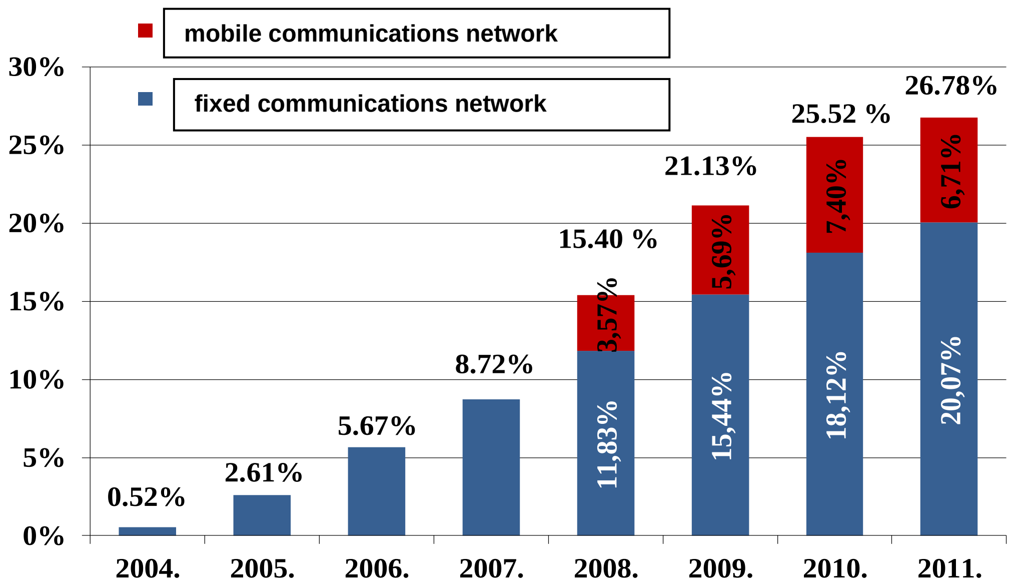


Figure 1.22. Broadband Internet penetration

However, this growth is not satisfactory. The analysis of development of broadband access in the Republic of Croatia shows that it is lagging behind in the number of broadband connections in relation to the average in EU Member States. (Figure 1.23). The Republic of Croatia is among less developed European countries in relation to penetration of broadband termination points. Despite a significant increase in the number of users in the RoC, there are still significant possibilities for growth considering the penetration of 20.07 percent of broadband connections in the fixed public communications network compared to the average 27.16 in the EU Member States[11].

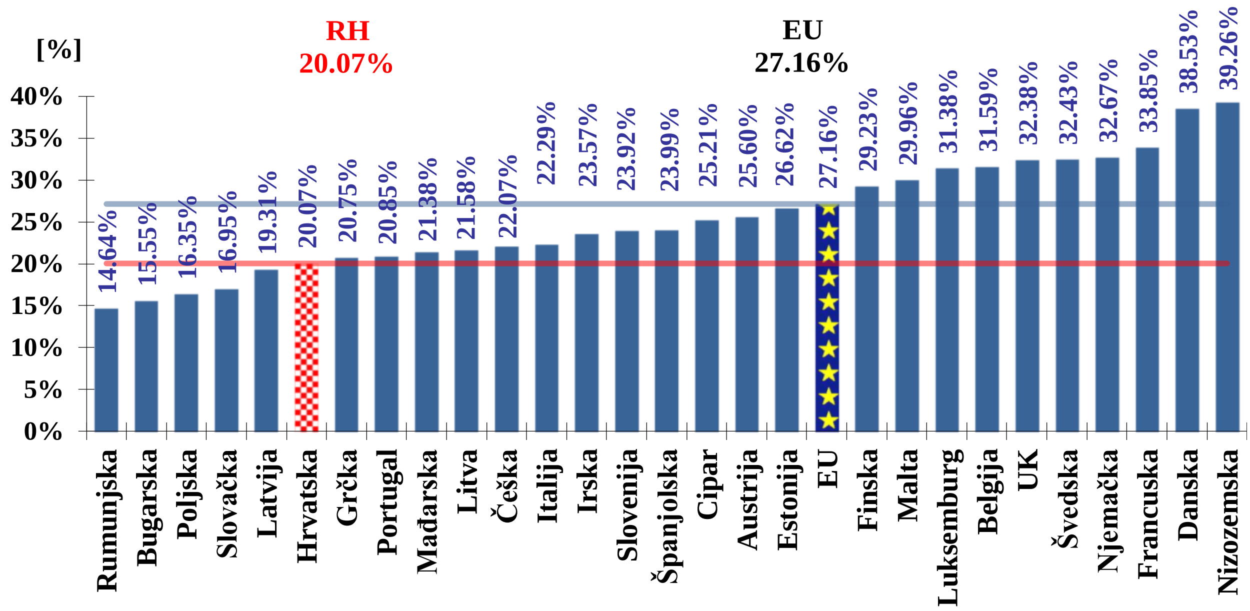
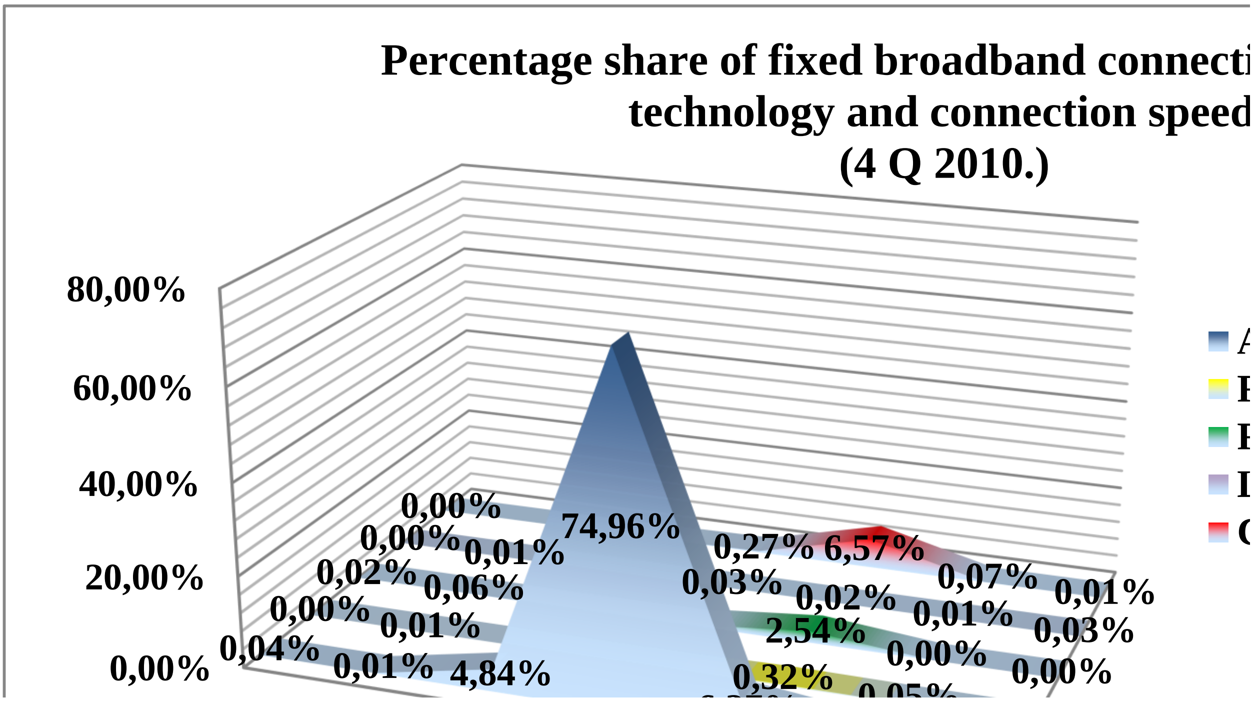


Figure 1.23. Comparison of broadband penetration between EU and Croatia

Broadband Internet access may be achieved by means of different access technologies and access media. The analysis of current penetration of technology indicates domination of one type of access related to the existing copper network, which satisfies the existing capacity but does not permit progress in broadband availability and access speed.



[11] Source. European Commission: Digital Agenda Scoreboard 2011 – data for June 2011

Figure 1.24. Percentage share of broadband access points according to access technology and connection speed

The majority of operators provide internet access via ADSL technology (Figure 1.24). The most prevailing access technology in relation to distribution of the number of access points for broadband Internet access in fixed communications network in the Republic of Croatia is ADSL, which is represented by 87.43 percent. Out of all other access technologies, the most widespread is access over cable networks with 8.31 percent.

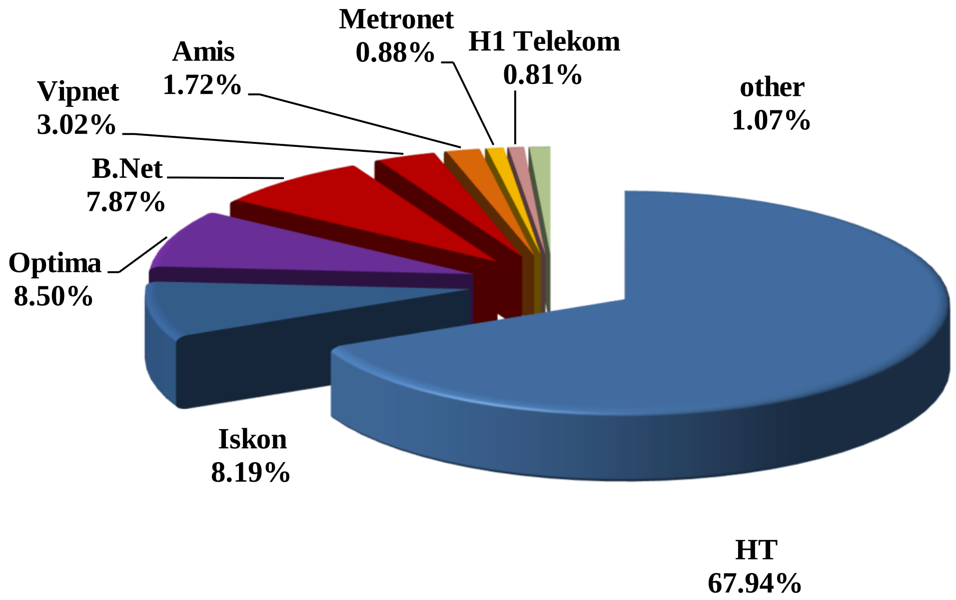


Figure 1.25. Distribution of the number of broadband connections in fixed public communications network (per operators)[12]

HT and Iskon have a high market share, which was to a large extent influenced by the fact that HT is the incumbent and Iskon is 100 percent owned by HT. Although HT and Iskon have lost a part of their market share in the previous period, this did not have a significant influence on the position of operators on the market, that is, on their market strength since HT and Iskon had the biggest market share at the end of 2010 which amounted to 79.28 percent according to collected data, while market share of other operators amounted to 20.72 percent.

A decreasing trend in relation to HT and Iskon's market share shows that the market is gradually becoming more competitive. However, it is also obvious that HT and its affiliated company, Iskon, still have significant market power. Moreover, regardless of the fact that in some parts of Croatia end users have several operators to choose from, it is HAKOM's opinion that the power of the above-mentioned operators does not permit effective competition. This is also supported by the fact that, in addition to a high and stable market share, HT and Iskon have been abusing their market position by means of tariff changes, that is, by implementing appropriate price policies they are able to distort the existing market situation and prevent its effective development. According to HAKOM, the slight downward trend for the HT and its affiliated company's market share will continue in the forthcoming period but there will be no significant fall in market share as it was recognized in the analysis of the retail broadband access market carried out by HAKOM in 2011.

[12] Iskon is 100%-owned by HT.

In September 2011, on the basis of the three criteria test[13], HAKOM established the need for ex ante regulation on the retail broadband access market because all three criteria referred to in Article 53, paragraph 2 of the ECA were cumulatively met. After having identified that the relevant market is susceptible to ex ante regulation , HAKOM has, on the basis of the criteria necessary for the assessment of significant market power of operators as laid down in Article 55, paragraph 3 of the ECA, designated HT and ISKON, as operators with significant market power on the retail broadband access market and imposed the corresponding regulatory obligations, which will be discussed in HAKOM's Activity Report for 2012.

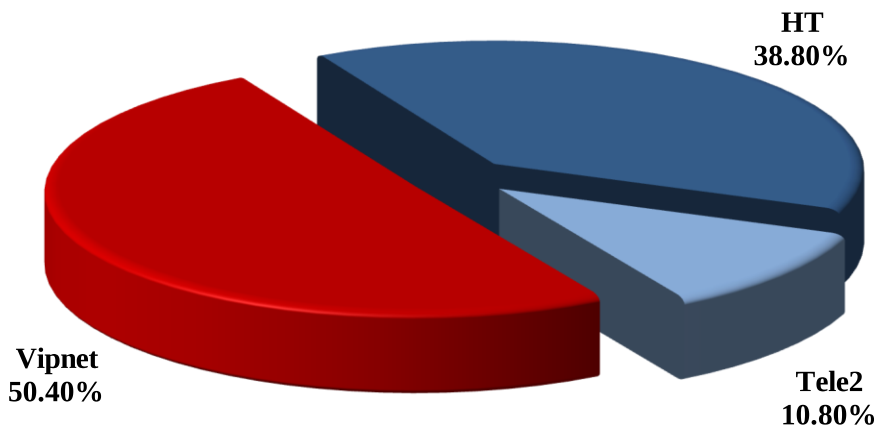


Figure 1.26. Distribution of the number of broadband connections in mobile public communications network (per operators)

[13] Moreover, although the above-mentioned market is not a part of the relevant European Commission Recommendation on relevant markets susceptible to ex-ante regulation, national regulatory authorities of Member States are authorised to determine on their own that certain markets, different from those on the list of markets in the valid Recommendation, are susceptible to ex ante regulation, depending on the situation in each individual country provided that they prove that three criteria have been cumulatively met on these markets (The Three Criteria Test).

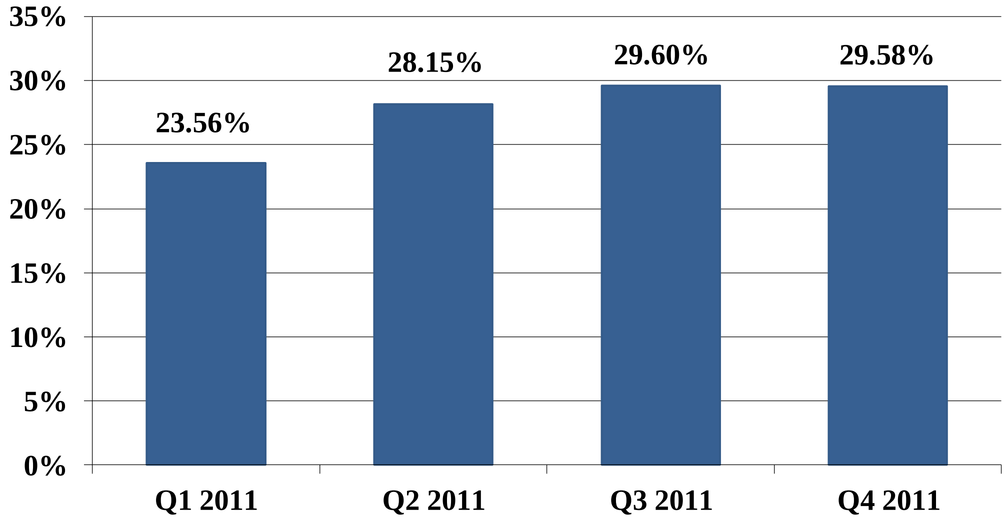


Figure 1.27. Share of the number of users of service packages in the number of fixed broadband connections per quarter

Operators nowadays usually use service packages (2D, 3D, 4D), single access, that is, voice, data and TV in a single package. Since 2011, HAKOM has been gathering data about the number of packages of services and, according to the most recent data, the total number of users of packages amounted to 254,783 which is 29.58 percent of the total number of broadband connections via the fixed network. Figure 1.27 illustrates user preferences, that is, a high market potential offered to operators for linking services to be offered to the end users. Since this is cheaper and more affordable from the point of view of users, it is to be expected that the number of users of packages, as well as this kind of offer, will grow.

1.4.2 Regulatory measures

The development of broadband services is of particular importance for the economic development of the Republic of Croatia and it is of key importance for the development of a knowledge society in the RoC. The newest broadband services (online education, social networking, high-definition television, working from home and other) require certain transfer capacity which may be achieved by means of optical access infrastructure and appropriate wireless next generation technologies.

As a result of liberalisation, operators on Croatian electronic communications market have been trying to reach end users for several years. The ratio between price and service, as well as increased Internet use in general, better Internet availability and a growing awareness of uses about Internet as a source of business information and entertainment and other contents had the biggest influence on the dynamics of the development of the market of broadband Internet access and the increase in the number of users.

Furthermore, the development of the broadband access market is caused by stronger competition between operators and by regulatory measures imposed by HAKOM in the interest of both operators and users, which, through a series of regulatory decisions on the wholesale broadband access market, created conditions for further development of competition.

Market of wholesale access to network infrastructure

HAKOM's activities in 2011 were primarily focused on monitoring the implementation of regulatory obligations imposed on the operator with significant market power (HT) in the previous years. In accordance with the law, HAKOM did not conduct the analysis of the wholesale network infrastructure access market, and the second round of analyses on this market is expected in 2012. Furthermore, the implementation of a project for the development of cost models for HT started, this being the only regulatory aspect which is currently not fully aligned with the existing European practice. The cost models project will allow the calculation of the real cost of the service of unbundled local loop, that is, of the wholesale service, related to the market of wholesale network infrastructure access. The completion of the above-mentioned process is expected in 2012.

Market of wholesale broadband Internet access

Activities on the wholesale broadband access market were focused in the previous period on the achievement of the already established principles and objectives of regulation of the electronic communications market. The only regulatory aspect that was not fully aligned with the existing European practice is the calculation of a cost-oriented price in accordance with EC recommendations and guidelines. This was the reason for the implementation of the project for the development of cost models for HT has started and it will, among other things, permit the calculation of the cost of provision of the *bitstream* access service at IP level. The price of the *bitstream* access service at IP level will take into account the relationship between wholesale and retail prices in order to avoid the problem of price squeeze. The completion of the above-mentioned process is expected in 2012. HAKOM's activities in 2011 also included the monitoring of the implementation of regulatory obligations imposed on the operator with significant market power (HT) in July 2009. The new round of market analyses is expected to take place in 2012.

Service of wholesale broadband access at IP level

The procedure for the amendment of "percentage X" for the service of wholesale broadband access (bitstream access) at IP level was initiated in August 2011. The procedure was initiated pursuant to the regulatory obligation of price control and cost accounting which was imposed on HT by HAKOM Council's decision from July 2009 on the market of wholesale broadband access. In accordance with the above-mentioned decision, the price of wholesale broadband access may not allow to HT to abuse its position of significant market power on the wholesale and retail markets in question.

It was established on the basis of examination of quarterly data from the electronic communications market that, since the adoption of the decision of HAKOM's Council from March 2010 on "percentage X" amounting to 40 percent and the application of the determined wholesale prices, a very small number of connections was established on the basis of the above-mentioned wholesale service with the majority of connections being established by HT's affiliated company Iskon Internet. Therefore, in HAKOM's opinion, it is possible that "percentage X"of 40 percent allows HT to abuse the position of significant market power.

Further examination, that is, analysis of the revised regulatory financial statements submitted by HT, showed that the existing level of retail and wholesale prices results in margin squeeze of beneficiary operators, which represents an abuse of significant market power. For that reason, HAKOM's Council adopted in November 2011 a decision imposing on HT the obligation to apply "percentage X" in the amount of 60 percent.

This decision is very important for the development of the broadband access market because the *bitstream* access service allows to beneficiary operators to provide broadband Internet access in the entire territory of the Republic of Croatia. The above-mentioned wholesale service allows for the provision of broadband Internet access at retail level even in those areas where there are technical obstacles for the provision of the unbundled access to the local loop.

Pursuant to requests made by Vipnet and Metronet, the procedure for amending the HT's Wholesale Broadband Access service was initiated in October 2011. It was assessed that conditions in the Reference Offer are making harder and unnecessarily slowing down the realization of wholesale broadband access. Such conditions represented an obstacle to competition recognised in the analysis of the wholesale broadband access market, and the imposition of regulatory obligation represented an attempt to prevent such obstacles. For that reason, the procedure for amending the Reference Offer was initiated in order to ensure the application of regulatory obligations, in particular in the part referring to conditions, deadlines and procedures for the realization of wholesale broadband access. For the purposes of cost-effectiveness, the procedure was merged with the procedure for amending the conditions and prices of the wholesale broadband access service on the basis of the FTTH solution. The final decision on the merging of procedures was adopted on 15 December 2011. The amended conditions will facilitate the realization of wholesale broadband access and thus contribute to further development of the broadband access market.

In June 2011, HT published the Wholesale Broadband Access Reference Offer amended with conditions and prices for FTTH technology. This obligation is based on Council of HAKOM's decision adopted in July 2009,which incorporates the analysis of the wholesale broadband access market, designating HT as the significant market operator on the wholesale broadband access market. Among other things, HT was ordered to ensure access for the provision of bitstream access service at IP level on the basis of FTTH solution, that is, to regulate optical access infrastructure.

It was considered that the published conditions and prices for wholesale broadband access on the basis of FTTH technology are not in accordance with regulatory obligations imposed on HT. For that reason, the procedure for amendments to the Reference Offer was initiated in July 2011 in parts referring to conditions and prices for the service of wholesale broadband Internet access on the basis of FTTH technology. For the purpose of cost-effectiveness, the above-mentioned procedure was merged with the procedure for the amendment of conditions, deadlines and procedures for the realization of wholesale broadband access and the final decision on the merging of procedures was adopted on 15 December 2011.

Pursuant to the provision of the above-mentioned Reference Offer, HT will able to provide services to its end users with access speed of 20Mbit/s and higher. It will be obliged to provide the same services to other operators on the market at the wholesale level. Therefore, all operators active on the market will be able to offer to their end users more quality services via next generation networks. Services may be offered on the market on the basis of the copper (existing) infrastructure and optical (new) access infrastructure. Taking into account that optical infrastructure offers significantly more possibilities for the end users in terms of quality and diversity of services, the conditions state that the minimum speed offered to users on optical infrastructure equals maximum speed offered to users on copper infrastructure.

Wholesale conditions and prices in the reference offer are defined in such a manner that operators that will be using HT's optical access must also share the investment risk with HT. At the same time, wholesale prices are set at a level that allows other operators to be competitive in the provision of services via optical infrastructure. It is not economically justified for every operator to build its own optical infrastructure. Precisely for this reason, and taking into account the fact that, pursuant to conditions of effective competitions, all operators on the market must be able to provide services to end users, it is necessary to create a model for sharing investment risk in such a manner that all operators bear a certain amount of risk of investment into new technologies. Since this is a new technology that will be used for the provision of new, more advance and more quality services, the investment risk exists because end users may not recognize all the benefits brought by the new technology.

On the basis of this Reference Offer, HT will able to offer to its users, who wish to have greater access speed than offered by the usual ADSL access, services based on the optical access network. This will, at the same time, permit the diversification of services provided over copper and optical access infrastructure, which will result in the promotion of access based on optical technology. In this manner, recent investments of beneficiary operators into access over copper infrastructure will be protected and it will be freed from all users with high access speed in areas in which optical network will be built. Higher access speed represents an opportunity and an incentive for operators to introduce and develop new, advanced services.

Pursuant to the ECA, HAKOM's objective is to promote efficient investments and innovations into new and advanced infrastructure and to protect competition for the benefit of end users of services. HAKOM is convinced that this decision fulfilled both objectives and that conditions and prices established in the Reference Offer provide a favourable regulatory environment for investments into new optical access infrastructure by the HT and by new operators. The introduction of next generation networks will, together with further development of competition, result in the fulfilment of objectives from the Strategy for Broadband Development in the Republic of Croatia, with the final objective being the creation of better conditions for end users.

Service of wholesale broadband access on new access points

According to the analysis of the broadband access market, HT must, in addition to wholesale broadband access at IP level, offer such services at other levels of access within 90 days from the date of receipt of a reasonable request for broadband access made by a beneficiary operator. Since in September 2011 HAKOM received two requests: one at the Ethernet level, and one at the OLT level, HT incorporated in December 2011 the mentioned services into the Wholesale Broadband Access Reference Offer. The above-mentioned access points are closer to the end user, which gives operators greater freedom in the creation of retail services, that is, a higher level of added value to the service provided by HT.

Retail broadband access market

Activities concerning the regulation of the retail broadband access market started in the second quarter of 2011. This market is not a part of the relevant EC Recommendation on relevant markets susceptible to ex ante regulation, which means that the Three Criteria Test must be implemented in order to assess the effectiveness of competition on the market in question.

Since the Three Criteria Test showed that all three criteria referred to in Article 53, paragraph 2 of the ECA have been cumulatively met on the retail broadband access market, that is, the presence of high and non-transitory market entry barriers of structural, legal or regulatory nature, market structure which does not aim towards the development of effective competition within a certain time framework; the application of relevant competition legislation alone does not make possible the elimination of market entry failures concerned, the market in question is susceptible to ex ante regulation.

The definition of the relevant market is a basis for conducting market analysis which consists of the definition of the relevant market and assessment of the existence of one or more operators with significant market power on that market and of the imposition of regulatory obligations on operators with significant market power.

Further to the conducted market analysis, in the first quarter of 2010 HAKOM designated HT and Iskon as operators with significant market power on the retail broadband access market and imposed the corresponding regulatory obligations, which will be discussed in HAKOM's Activity Report for 2012.

Strategy for Broadband Development in the Republic of Croatia

The level of development of broadband access in the RoC up to 2011 and the determinants of the Digital Agenda for Europe represent the main starting points for the adoption and implementation of the Strategy for Broadband Development 2012-2015. The purpose of objectives and measures of this Strategy is the creation of preconditions for further development of broadband access and the familiarisation of citizens and the business sector with broadband use and all advantages offered by broadband use in different segments of the society, such as education, health and public administration.

In relation to this, HAKOM played an active role last year in the development of the Strategy for Broadband Development in the Republic of Croatia 2012-2015, as well as of the action plan for the implementation of the strategy for which the competent authority was MSTI. HAKOM prepared these documents in cooperation with MSTI and the Central Office for e-Croatia[14]. The Strategy sets out strategic objectives and measures for the development of infrastructure and broadband access in the RoC in the period between 2012 to 2015, and it focuses on the economy, civil society, state administration bodies and other public bodies, research and educational institutions, that is, all participants in the market of electronic communications networks and services that are involved or will be involved in the development and promotion of an information society, not only through activities in the area of business management, but also education, health, public administration and other. Special attention is dedicated to the role of local and regional self-government which is invited and encouraged, through a series of planned activities, to actively participate in the development of broadband access, in particular on the islands, in rural and highland areas lacking sufficient commercial interest for investments into broadband access infrastructure.

[14] Today part of the Ministry of Public Administration.

The Implementation Programme for the Strategy for the period 2012 - 2013 defines state administration bodies and other public bodies competent for the implementation of the Strategy and elaborates a total of 21 measures with the relevant activities for the implementation of the Strategy's objectives, according to competent authorities for the implementation of measures, expected outputs, success indicators, sources and amounts of the necessary funds. Therefore, considering its role in the development and promotion of importance of broadband access, HAKOM will participate in the implementation of the Strategy for Broadband Development together with the competent ministry.

The purpose of the above-mentioned documents is to assist with further increase in the number of broadband connections in the Republic of Croatia by encouraging investments into new generation networks of fixed and mobile networks that will provide to end users innovative and more quality services.

Expert supervision and HAKOM's decisions

Expert supervision over HT was carried out in July 2011 due to a violation/non-compliance with the regulatory obligation of transparency that was imposed to this company on the wholesale broadband access market. The violation was established because HT, at the moment of publication of wholesale conditions for the provision of the service of independent broadband Internet access, requested from other operators the payment of additional costs, that is, costs which are not necessary for the provision of the service in question. For that reason, HT was instructed to eliminate the irregularities in order to ensure further development of effective competition and to release other operators from the obligation of covering additional costs, that is, costs which are not necessary for the provision of the service in question.

1.5 Television services

The TV market has been rapidly changing as a result of digitalisation of audiovisual content. The digitalisation of audiovisual content allows the introduction of many new services based on personalisation and interactivity (such as personal selection and programme schedules, postponed reception, video on demand, interactive voting, participation in game shows, elimination or viewing of selected commercials only). New players are appearing on the market and traditional TV operators are changing and, in addition to offering their own digital channels, they have been expanding their activities to broadband Internet and mobile communications.

1.5.1 Market overview

Overall digitalisation of TV broadcasting resulted in a significant growth of the market of transmission of pay-per-view channels. Taking into account the fact that an increasing number of end users have been using TV service based on the Internet protocol (IPTV),, in addition to the publicly available telephone services and broadband Internet access, it has become necessary for HAKOM to collect data on TV service accordingly, that is, the number of connections and revenues from all technologies used for the provision of TV services (cable TV connections (CTV), IPTV connections, satellite TV connections (SAT TV) and terrestrial TV connections). Before 2011, data were collected only for CTV which is why revenue illustrated in Figure 1.28 for the period between 2005 and 2010 refers only to revenue from CTV.

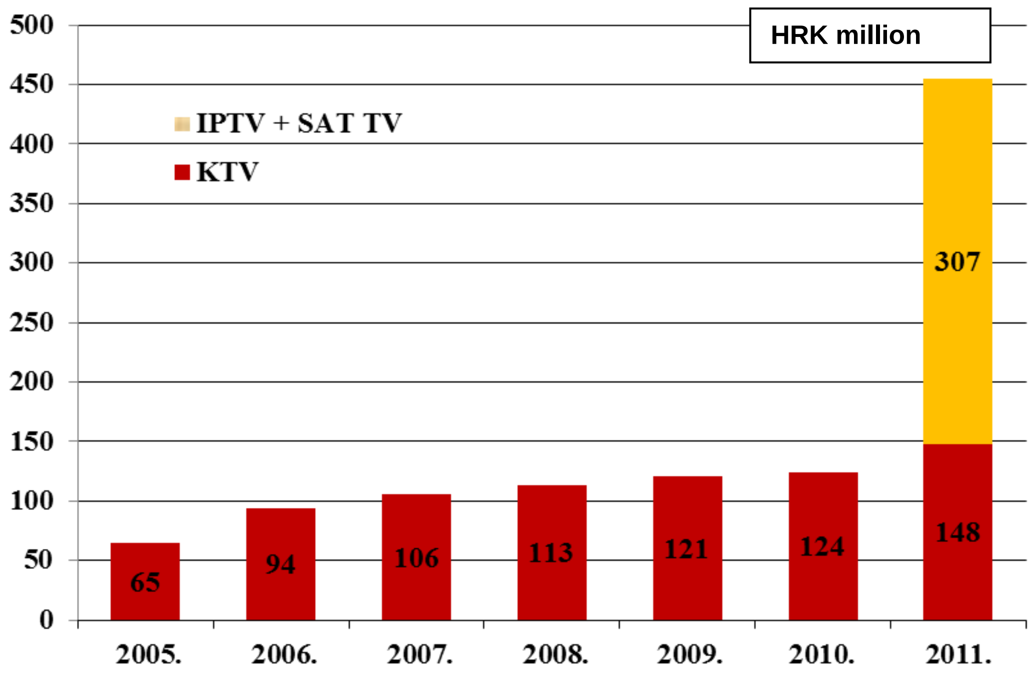


Figure 1.28. Total revenue from TV service

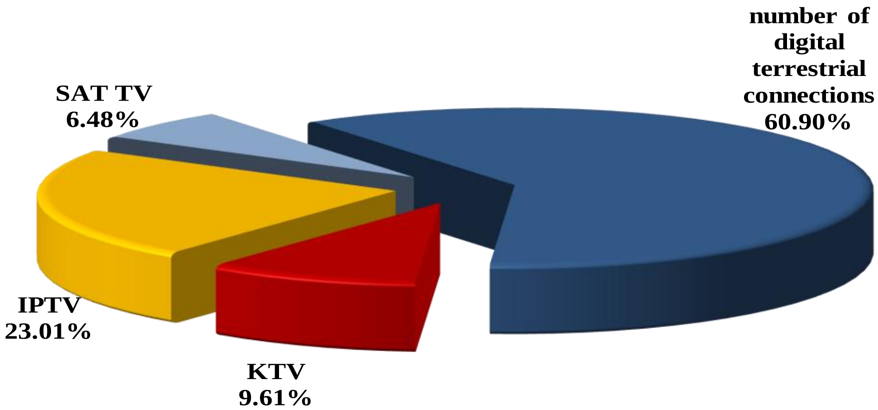


Figure 1.29. Share of households according to technologies used for receiving TV content[15]

According to the delivered data for the end of 2011, out of an approximate number of 1.5 million TV households in RoC, slightly less than 40 percent have been using the TV service from one of the cable, IPTV or satellite operators with a fee. The remaining 60 percent of households are currently watching TV exclusively via terrestrial transmitters. Revenue earned from CTV amounts to HRK 147.8 million, and from IPTV and SAT TV 306.8 million.

A large number of households are using exclusively digital terrestrial signal for the reception of TV contents. This shows that his market has very high potential. In accordance with market trends, that is, with increasing demand for service packages, it is expected that the number of connections based on other technologies will grow because operators will, as a result of preferences of end users for service packages, start combining the Internet service with the TV service.

The digitalisation of audiovisual content enables the increase in quality and number of the existing, so-called linear services of audiovisual content, but also the introduction of numerous new services based on personalization and interactivity.

Despite efforts and EU recommendations to ensure switchover to digital television by 2012 hereinafter: DTV) in order to free the RF spectrum and ensure the so-called digital dividend for additional TV contents and new information and communications services, the Czech Republic was the only other country that completed the digital switchover in 2011. The majority of other EU Member States, who have not disconnected analogue terrestrial TV until now, are planning to do so in the course of 2012, and the group of countries that postponed their plans for disconnection of analogue TV (hereinafter: ATV) until after 2012, was joined by Hungary, and some South European countries, such as Macedonia and Bosnia and Herzegovina.

[15] Number of digital terrestrial connections = (Number of households ROC – number of households without TV) – (number of CTV connections + number of IPTV connections + number of SAT TV connections)

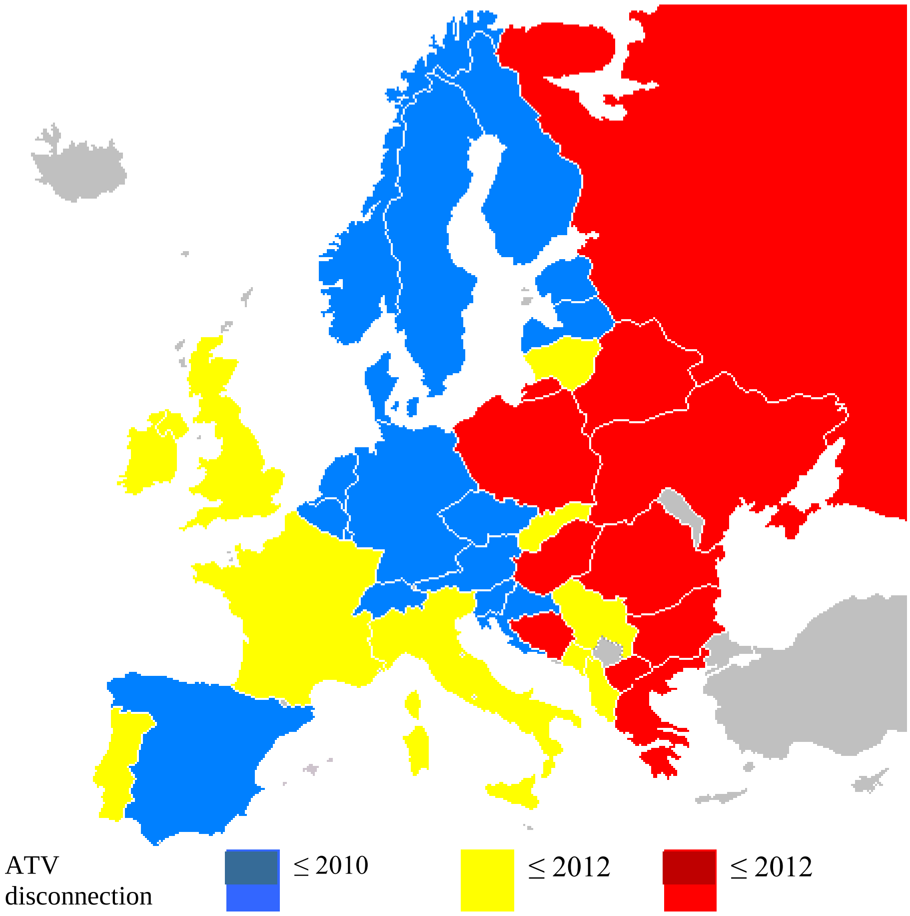


Figure 1.30. Overview of digital switchover per countries

With the implementation of the Analogue to Digital Television Broadcasting Switchover Strategy in the RoC, successful switchover to DTV in 2010 was followed by further DTV network development in 2011 in accordance with trends of leading European countries.

The development of standard for digital terrestrial television (DVB-T2) ensured more efficient use of the RF spectrum, that is, greater transfer capacity which is able to satisfy an increasing number of market requirements for transferring more SDTV and HDTV channels and introducing 3D video contents and multichannel audio.

European countries that started introducing DTV earlier, such as Austria, Finland, Croatia, Italy, Germany, United Kingdom, Sweden and others, have decided to use MPEG 2 standard for encoding video contents in addition to the DVB-T standard, while countries that opted for a delayed beginning of introduction of DTV chose MPEG 4 standard.

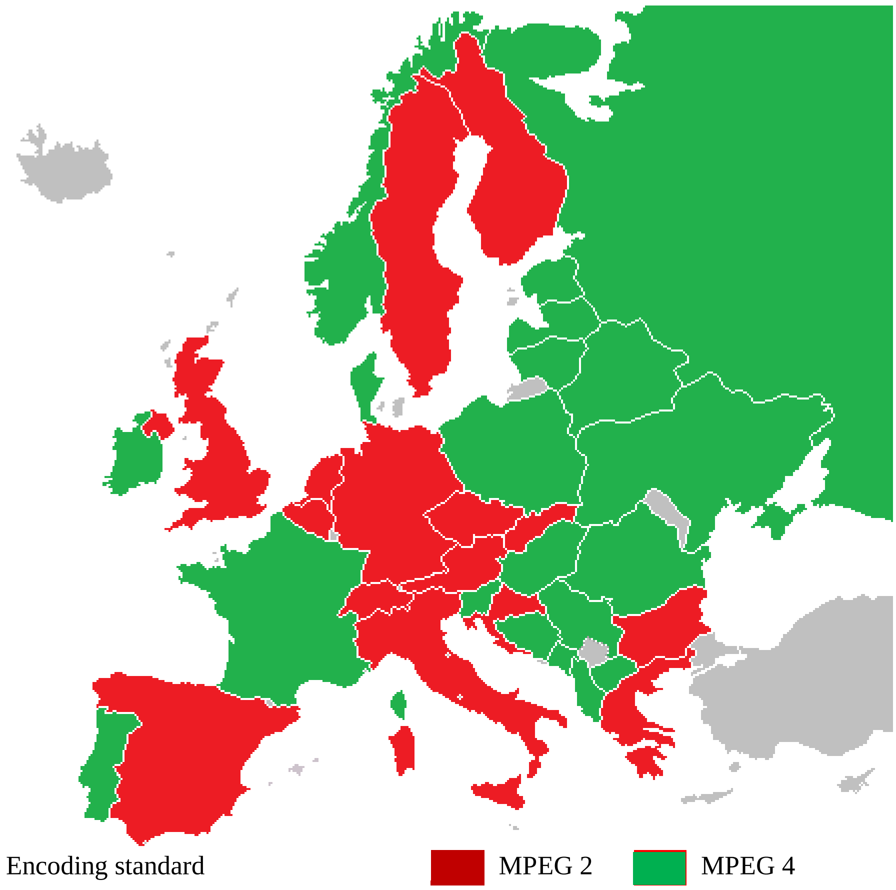


Figure 1.31. The selection of the encoding standard per countries at the start of introduction of DTV

Further development of digital terrestrial TV in the majority of countries that started with MPEG 2 standard for encoding video contents when they started introducing DTV included the introduction of new SDTV and HDTV channels on the basis of the MPEG 4 standard, in particular for "PAY-TV" services. The overview of the situation in 2011 concerning the decisions and implementation of MPEG 2 and MPEG 4 standards is illustrated in Figure 1.31.

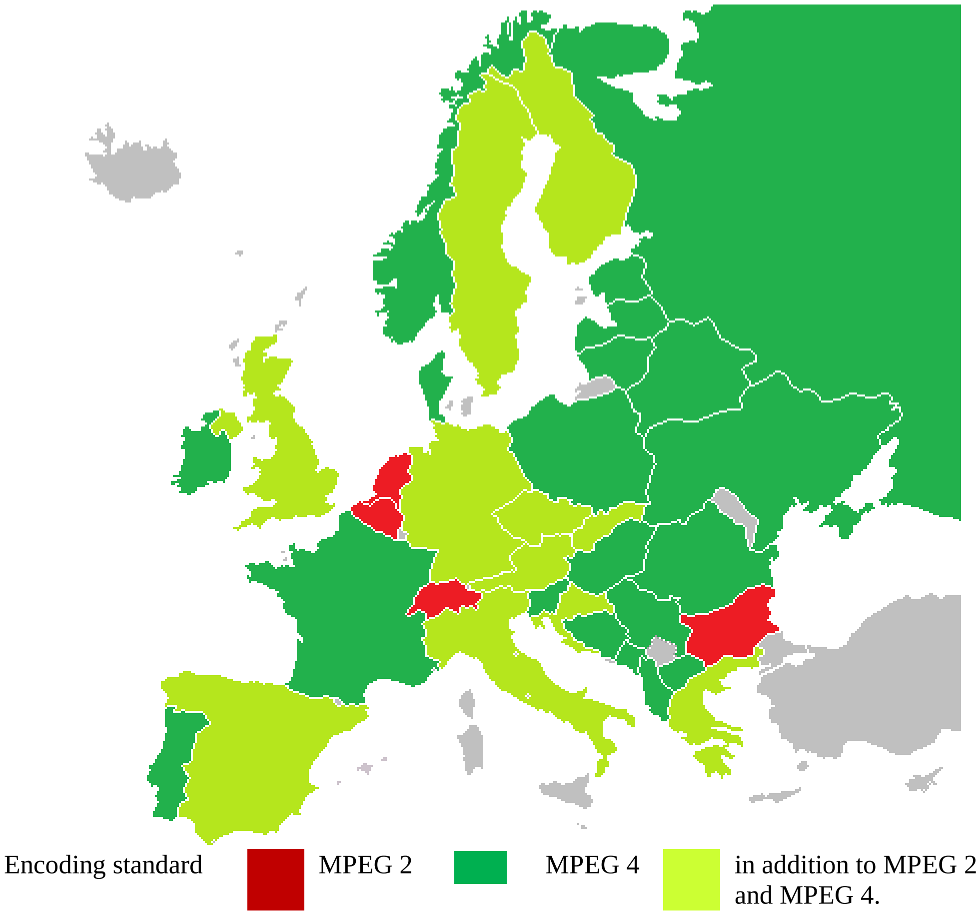


Figure 1.32. The application of the standard for encoding video contents per countries in the course of 2011

Some of these countries have, in addition to introducing a more advanced encoding system, MPEG 4, simultaneously started introducing the second-generation digital terrestrial DVB-T2, which is a logical continuation of the development of DTV and more efficient use of the RF spectrum. On the other hand, some of the countries which have only started introducing DTV, such as Serbia or Montenegro, took this opportunity to directly introduce DVB-T2 and MPEG 4 standards as basic DTV standards in their countries, thus skipping standards of first generation of digital terrestrial television TV DVB-T and MPEG-2. Some countries, such as Austria, Slovakia, Czech Republic, Serbia, Montenegro, Ukraine and Denmark, adopted decisions on the introduction of new multiplexes and services in DVB-T2 standard, and intensive testing is in progress in Germany and Spain, while commercial services are already available in Finland, Italy, United Kingdom and Sweden. Croatia also started testing DVB-T2 standard in September last year, and what follows in 2012 is the building and launching of commercial "PAY TV" services by means of two new DVB-T2 networks, MUX C and MUX E multiplexes.

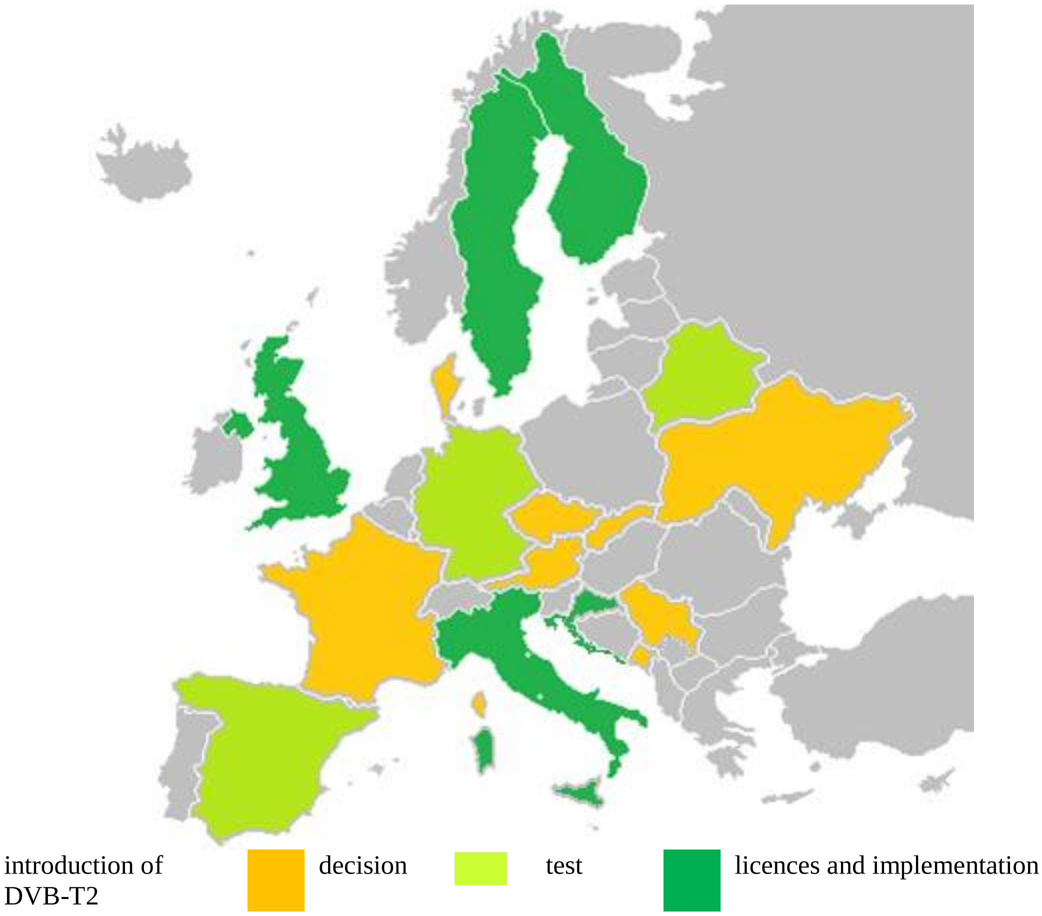


Figure 1.33. Introduction of DVB-T2 standard per countries in the course of 2011

In order to harmonize various extents of digitalisation in the countries in the region and to reduce the digital gap between the countries in the region and in relation to EU Member States, regulatory agencies for electronic communications and the media in Slovenia, Austria, Hungary, Croatia, Bosnia and Herzegovina, Montenegro, Serbia, Albania, Macedonia and Italy initiated in 2011 a regional and cross-border cooperation project "South-East European Digital Television" (SEE Digi.TV) as part of a transnational cooperation programme for South Eastern Europe with the main project objectives being the following:

1. speeding up the process of switching off analogue television and ensuring further development of digital television,
2. alignment of legislation and technical framework with the EU digitalisation process,
3. avoiding the fragmentation of market, politics and technology,
4. preparing a regional strategy for efficient use of the RF spectrum and introducing new services and managing the digital dividend.

1.5.2 Regulatory measures

DVB-T

Following successful implementation of the Analogue to Digital Broadcasting Switchover Strategy in the RoC in 2009 and 2010, as part of which HAKOM granted licences for use of the RF spectrum enabling the provision of the service of management of electronic communications networks of DTV for MUX A and MUX B, for contents at the national level, and MUX D for contents at national, regional and local level, HAKOM continued with ensuring technical and regulatory preconditions for further development of digital broadcasting.

Thus, HAKOM completed, in early 2011, a procedure for collecting opinions from potential providers of electronic communications services of multiplex and networks management in terrestrial broadcasting and other market participants aimed at collecting information on the basis of which it would ensure preconditions for the implementation of new contents and services that would provide added value to end users in relation to the existing services, and ensure to providers of services the manner and conditions for use of the RF spectrum that will enable the development of a successful and sustainable business model in the RoC.

Following this procedure for collecting opinions, and ensuring the necessary technical and regulatory preconditions, HAKOM published in 2011 a public tender for the granting of the licence for use of the RF spectrum for the provision of the service of management of two electronic communications networks of DTV (MUX C and MUX E multiplexes) in the territory of the RoC. Furthermore, in order to create preconditions for the introduction of standards of second generation terrestrial TV in the ROC, a new „Recommendation on minimum technical requirements for DVB-T/DVB-T2 receivers in the Republic of Croatia“ was published as a guide for producers and distributors of receiving equipment for sale of equipment on the Croatian market.

A joint tender submitted by the companies HP Production d.o.o., Odašiljači i veze d.o.o. and Hrvatska pošta d.d. (hereinafter: HP) was selected and they were granted a licence for use of the RF spectrum for MUX C and MUX E DTV multiplexes. After the granting of the licence, and in accordance with the tender of the licensee, users of terrestrial DTV will be offered over 30 new SDTV and HDTV channels via DVB-T2 network and with the application of MPEG 4 encoding standards with conditioned pre-paid access (PAY-TV).

Unfortunately, significant interference from the territory of the Republic of Italy, which was for the first time recorded by HAKOM in December 2010 in the territory of Istria, continued in 2011 The mentioned interferences are a consequence of Italian digital switchover during which the Italian government allowed to operators of DTV networks to use frequencies belonging to the RoC contrary to international agreements and the Geneva 2006Agreement and Plan. Interferences from Italy prevent the reception of Croatian DTV channels for 30.000 to 50.000 inhabitants of Istria. In spite of HAKOM's activities at the national level aimed at mitigating the consequences of interferences by means of technical solutions in cooperation with network operator Odašiljači i veze d.o.o. and international activities within the International telecommunications Union (ITU) aimed at trying to force Italy to eliminate the interferences, interferences of DTV broadcasting still existed in Istria.

IPTV

As part of the analysis of the retail broadband access market, HAKOM also analysed the closely related market of pay-per-view television, which was, following the carrying out of the Three Criteria Test, defined as a market susceptible to ex ante regulation. Pay-per-view is a type of service that will, in addition to broadband, represent a basis for growth of mobile network operators in the future. For that reason, it was considered necessary to set the boundaries of the mentioned market and check whether the market of pay-per-view TV is a market aiming towards effective competition.

When HT and Iskon were identified as operators with significant market power and obstacles to efficient competition were established, HAKOM imposed on these operators regulatory obligations which may eliminate the noticed obstacles. Regulatory obligations on the retail market of pay-per-view TV were imposed because it was possible for HT and Iskon to provide this service separately, that is, without linking it to the service of retail broadband access. In this manner, HT and Iskon would be able to abuse their significant market power by offering the service of transmission of pay-per-view TV channels below cost and thus distorting effective competition since alternative operators would not be able to match HT's and/or Iskon's price offer because that would incur losses that would they would not be able to recovered by providing other services, which is easier for HT and Iskon because of their market power.

1.6 Network and line rental service

1.6.1 Market overview

Total revenue from network and line rental service amounted to 446.686.207 at the end of 2011 which represents about 2 percent of total revenue on the electronic communications market (Figure 1.34). According to collected annual data about the situation on the electronic communications market, it was reduced by around 1.8 percent compared to 2010.

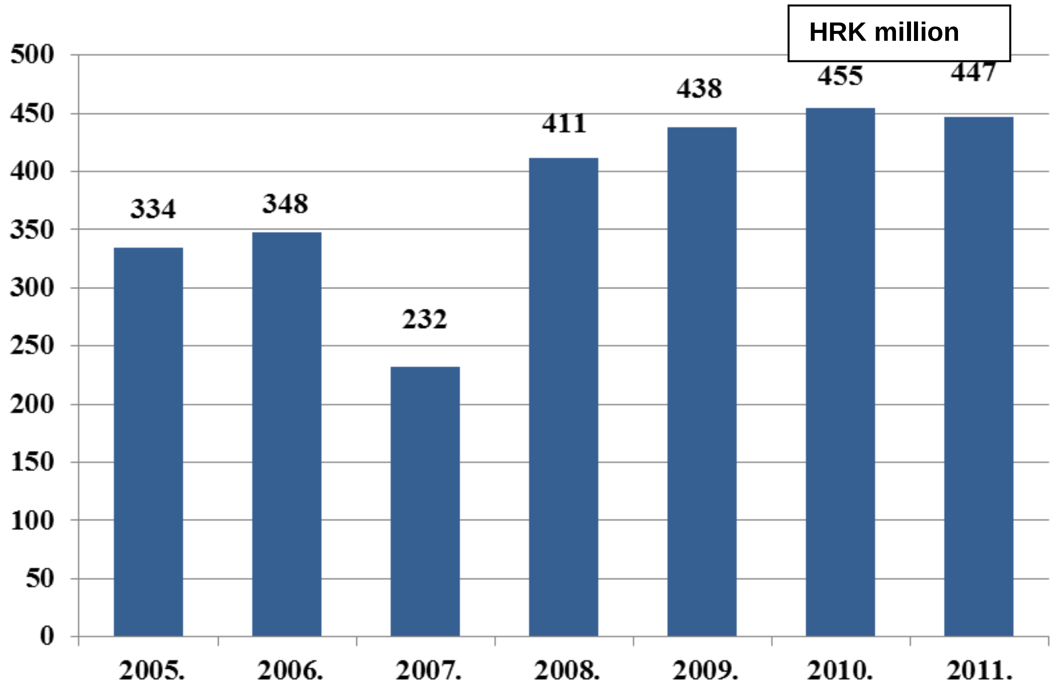


Figure 1.34. Total revenue from the service of network and line rental

1.6.2 Regulatory measures

Analysis of the market of leased lines

In the fourth quarter of 2011, HAKOM completed the market analysis procedure of leased lines markets which were regulated in accordance with the TA pending the completion of the above-mentioned analyses. The wholesale level distinguishes between the market of terminating segments of leased lines and the market of trunk segments of leased lines.

The market of trunk segments of leased lines does not make a constituent part of the EC Recommendation on relevant markets because of which it was necessary to conduct the Three Criteria Test on this market in order to establish whether the this market is susceptible to ex ante regulation. HAKOM divided the market in question into competitive and non-competitive routes, where only non-competitive routes were identified as susceptible to ex ante regulation and market analysis was carried out only on these markets. On the market of terminating segments of leased lines and on the market of trunk segments of leased lines, HAKOM identified HT as the operator with significant market power and imposed on it regulatory obligations aimed at promoting effective competition and encouraging further development of overall market of electronic communications. Wholesale service of leased lines is important both for the provision of the service of leased lines at retail level and for the provision of other electronic communications services at retail level: publicly available telephone services, data transfer services, broadband Internet access services, VPN services and others.

The market of leased lines according to the TA includes the market of the minimum set of leased lines. The above-mentioned market also does not make a constituent part of the EC Recommendation on relevant markets because of which it was necessary to conduct the Three Criteria Test on this market in order to establish whether the this market is susceptible to ex ante regulation. Regulation of a retail market is justified only when regulation of the upstream wholesale market is not sufficient, in this case of the market of terminating segments of leased lines and the market of trunk segments of leased lines. Since regulatory obligations on the above-mentioned wholesale markets will enter into force in 2012, HAKOM will carry out the Three Criteria Test on the downstream retail market when it is able to establish whether regulatory obligations on wholesale markets are sufficient for the achievement of effective competition at the retail level.

1.7 Other services

1.7.1 VAS services

In the course of 2011, preventive activities were carried out towards operators of special tariff services as a result of amendments to the ECA and the Ordinance on the manner and conditions for the provision of electronic communications networks and services. HAKOM familiarized the above-mentioned operators with their obligations, that is, with legal provisions referring to their area of competence. The manner of providing services available on the market was inspected during the year and, in case of suspicions of violation of the Act, inspection was initiated to remove deficiencies in the provision of services. A significant number of inspections was carried out during the year resulting in sanctions for special tariff operators for the purpose of protection of end users and also for the purpose of alignment of the existing and future special tariff services with provisions of the ECA and Ordinance on the manner and conditions for the provision of electronic communications networks and services.

1.7.2 Universal services

One of the main principles and objectives of regulation of the Electronic communications market in the Republic of Croatia is to ensure access to universal services for all service users.

Universal services in electronic communications represent a minimum set of electronic communications services of a certain quality, which must be available to all end users at an affordable price in the entire territory of the Republic of Croatia regardless of their geographical location and with the minimum possible distortion of competition. In 2011, there were two operators of universal services in the Republic of Croatia. Imenik d.o.o. is the universal operator of the service of access of end users to at least one comprehensive directory of all subscribers of publicly available telephone services, in a printed or electronic form, which must be updated on a regular basis, while HT was designated as the universal operator for the following services:

1. access to public telephone network and publicly available telephone services at a fixed location,
2. access of end-users, including users of public pay telephones, to a telephone directory enquiry service,
3. placing of public pay telephones on public locations accessible at any time,
4. special measures for disabled users including access to emergency services, directory enquiry services and directories, equivalent to that enjoyed by other end-users,
5. special tariff systems adjusted to needs of socially disadvantaged groups of end users of services.

HAKOM's Council adopted in February 2011 a decision imposing on HT an obligation to apply a tariff system with a 47 percent discount on the standard monthly subscription for all Halo user packages provided by HT on the retail market to users who are receiving universal service via FGSM and PCM/PGS, where there is a disparity from the value of the quality indicator for universal services and data transfer speed as opposed to other users who are receiving universal access via fixed electronic communications network, while prices of calls and other services which may be used to upgrade the user package, shall remain unchanged. In 2011, HAKOM paid special attention to the quality and availability of universal services.

1.7.3 Future services

M2M

Machine-to-machine communications (M2M) is a developing area which is currently in the initial stage of significant growth, and experts estimate that up to 10 billion devices will be connected by 2020. M2M communication comprises automated communication (data transfer) between two or more communications (ICT) entities. Due to increased demand for data traffic and requirements for providing wholesale data traffic packages, HAKOM started in 2011 to follow the situation of the M2M on the market and where necessary, and for the purpose of development of this market, it is ready to take steps to prevent the closing of the market, that is, to increase market dynamics and strengthen competition between operators. Furthermore, the predicted growth of the M2M service will result in greater numbering needs since numbers are allocated to each device. For that reason, HAKOM will, where necessary, and in accordance with European practice, allocate the numbers so that numbering would not become a limiting factor of the development of this market. Furthermore, the growth of M2M services will also require HAKOM to pay more attention to problems of privacy and data security.

Cloud computing

Cloud computing is a new form of computing. It uses the Internet service is a platform enabling the sending of applications and documents from anywhere in the world, which are saved and kept on advance servers. There are four different models for the deployment of cloud computing services. The four models include a public cloud, private cloud, community cloud and hybrid cloud. The architecture of software systems involved in cloud computing typically includes multiple mutual communication of cloud components. Communication takes place over an application interface, normally over a web server.

Cloud computing solves problems such as distribution difficulties and coordination of many tasks on different computers, initiating processes on them and ensuring additional computers in case one of them fails. Furthermore, the time between the execution of operations and response decreases, business risk decreases, initial costs decrease, tempo of innovations increases, resources are used more efficiently, costs on the basis of use and decrease of processing time.

From the moment of appearance of this new technology, many new providers of cloud computing services have emerged on the market. On the basis of its findings, HAKOM analysed the impact of the introduction of cloud computing on the Croatian electronic communications market. The analysis of the European regulatory practice in relation to this technology will continue and, where necessary, be implemented into subordinate legislation.

1.8 Services of access to infrastructure and network and building of electronic communications infrastructure

1.8.1 Market overview

In 2011 HAKOM continued monitoring the sharing of existing cable ducts with special attention. The focus was on the gathering of information about infrastructure and associated facilities of infrastructure operators, legalization, that is, introducing some order into irregular sharing.

Activities related to building and physical planning were carried out within the deadlines. In early 2011, and in order to improve and speed up business operations, electronic marking of all created documents was introduced.

1.8.2 Regulatory measures

For the purpose of alignment of the existing ordinance with the Act on amendments to the ECA (OG No.. 90/11), and with the relevant Directives of the European Parliament and of the Council, HAKOM did the following:

- drafted a new Ordinance on the manner and conditions of access to and sharing of ECI and other associated facilities (OG No. 136/11);
- drafted a new Ordinance on the certificate and fee for the right of way (OG No. 152/11);
- drafted a new Ordinance on special authorizations for the carrying out of activities in electronic communications, which was adopted at the session of HAKOM's Council and is waiting for the opinion by the Minister of Physical Planning and Construction;
- amendments to the Ordinance on the manner and conditions for determining the zone of electronic communications infrastructure and associated facilities, the radio corridor safety zone and obligations of the investor of works or of the building (OG. No. 39/11);

Quality of broadband access in the RoC

The majority of users of broadband access in the RoC are using xDSL (ADSL) transfer technology. For that reason, special attention in 2011 was dedicated to the analysis of parameters of the quality of service provided in this manner. DSLAM platforms of all operators permit the measuring of all key transfer parameters of a subscriber line within given periods of time. The statistical processing of collected data permits the assessment of quality of broadband access. The necessary measuring equipment (ADSL analyser) was procured. Periodical measurements of parameter ADLS lines will start in 2011 as well as the systematic measuring of quality of services in the unbundled environment in the RoC. Furthermore, the impacts of two regulatory measures were analysed for the environment in question, which increase the degree of usability of the existing access network for the provision of new broadband services and contribute to energy efficiency at the same time.

Measures for preservation of network neutrality

Public consultations aimed at collecting comments, opinions and proposals from all interested parties in the Republic of Croatia took place in 2011, as part of monitoring of issues of network neutrality. Public consultations contained issues referring to the existing or potential problems that may appear in the future, possible regulatory measures that would have to be adopted by HAKOM to preserve Internet neutrality while at the same time taking into account the interests of operators, innovators and end users. In 2011, HAKOM actively participated in the work of BEREC. It is expected that first measures aimed at preserving Internet neutrality will be adopted in 2012.

New interconnection models

Within the framework of cooperation with European national regulatory authorities and BEREC, HAKOM started more actively following issues concerning the development of electronic networks and new interconnection models resulting from technological development and adoption of architectures based on packet switching networks.

Development of an infrastructure database

The preparation of tender documentation for the development of a solution for a single logical database of ECI started in 2011. The database should enable the connecting of the existing ECI databases owned by infrastructure operators, regardless of their physical location, as well as the integration of new databases about ECI in a manner that will allow unified access to a set of standardized data about the ECI that will be used by HAKOM, the infrastructural operators and beneficiary operators.

Encouraging investments into local self-government units

Several lectures and seminars for local and regional self-government units took place in 2011 to familiarize them with possibilities of effective investments into optical infrastructure. Local government and self-government units represent potential new investors into optical distribution networks, in addition to operators. It is in their interest to ensure quality communications infrastructure to their population, particularly to businesses, which will additionally contribute to the development of their community. It was emphasised at the lectures that the use of innovations (microducts and microholes) may reduce costs, in particular if ECI is planned and constructed together with other utilities infrastructures.

Right of way

The improvement of the process of granting rights of way continued in 2011. A new Ordinance on the certificate and fee for the right of way (OG No. 152/11) was adopted.

1.9 Management of limited resources

The RF spectrum and the addressing and numbering space are naturally limited resources, of interest for the RoC, and HAKOM has been entrusted with their management. The efficient management of new resources, which takes into account the principles of objectivity, transparency, non-discrimination and proportionality, is one of the most important tasks.

1.9.1 Radiofrequency spectrum

Pursuant to the ECA, HAKOM is managing the RF spectrum. On the territory of the RoC, this aspect refers to the planning and preparation of technical parameters, the granting of licences for use of the RF spectrum and control of the spectrum. In international terms, this refers to the alignment of the use of the RF spectrum in accordance with the valid ITU and CEPT decisions and recommendations and the valid international agreements.

Efficient use of the radio frequency spectrum

In early 2011, HAKOM included data about the allocation of the RF spectrum in the RoC into the European Frequency Information System (EFIS). Thus Croatia joined the majority of EU countries and it is now possible to check the allocation of a certain frequency band in the RoC on www.efis.dk and compare them with other countries that have their information in EFIS.

During preparations for the World Radiocommunications Conference 2012 (WRC12) in 2011, HAKOM carried out 2 public consultations about the European Common Proposals (ECP) for the work of the conference. During the consultation, HAKOM received comments of the Mobile Communications Association of Croatia which supports European positions. Therefore, HAKOM co-signed all proposals for WRC12 and will participate in the 2012 conference.

A public consultation took place on HAKOM's website with a view to amending the Radio Frequency Spectrum Allocation Table. The amendments referred to parts of the RF spectrum which are used for the provision of public communications services by changing the manner of allocation of those parts of spectrum at the auction. HAKOM finds this allocation manner to be most appropriate and most transparent, with the same criteria for all market participants. Following the completion of a public consultation and processing of comments, the amended proposal of the Table was submitted to MSTI for publication.

Four new general authorizations were granted, five existing authorizations were amended and five withdrawn in 2011 in order to harmonize and align the use of the RF spectrum to the greatest possible extent with use in Europe and to facilitate the circulation of devices that are freely using the RF spectrum in the territory of CEPT.

The amendments to the Ordinance on the manner and conditions for the allocation and use of the RF spectrum introduced a more simplified procedure for granting licences in 2011. This procedure was intended for short-range dedicated links where there is very limited possibility for interference between two systems. As opposed to the traditional licence granting procedure in which HAKOM lays down the technical parameters and plans the spectrum, interference analyses and international coordination, in simplified procedure for the granting of the licence, the user checks spectrum availability by himself, sets technical parameters for a certain link and applies for the desired part of the spectrum. In this manner, the entire procedure was sped up and made easier for the users and for HAKOM. In late 2011, after public consultation, the Allocation Plan was adopted for the 71-76 /81-86 GHz frequency band according to which this frequency band was included into simplified licence granting procedure. Complete implementation of this procedure requires adjusting the amounts of fees that will be charged in compliance with the Ordinance on the payment of fees for the right to use addresses, numbers and the RF spectrum, which is under the competence of the MSTI, since the currently valid fees are too high and do not promote the use of this part of the spectrum.

The simplified procedure for the granting of licences will be completely electronic. For the planning of connections, users will use the database that will be available on HAKOM's website. The application process and submission of requests will be carried out over the internet, the preparations for which are already in progress. The software for the application process and for the submission of requests for the simplified licence-granting procedure will be fully operational and available to all interested users in 2012.

In accordance with the expressed interest and appropriate amendments to the Allocation Table in the course of 2010, HAKOM conducted public consultation in early 2011 and adopted allocation plans for wireless access at 3.5 GHz, 10GHz and 26 GHz. The procedure for the allocation of the 10-10,3 GHz frequency band was conducted on the basis of one and only submitted request in the territory of the Istria, Primorsko-goranska and Ličko-senjska County, which resulted in the granting of the licence for use of the RF spectrum to the company Keter Air. Furthermore, the procedure for the granting of a frequency block from 2x21 MHz in the 3410-3600 MHz frequency band for the territory of the Republic of Croatia was conducted the basis of one submitted request. A license for use of the RF spectrum was granted to the company Novi-Net. A public invitation for the expression of interest for the 2x14 MHz block in the same frequency band was published in late 2011, on the basis of a new request. Lacking any additional interest, the applicant will be granted the mentioned frequency band.

During 2011, an expression of interest for the use of the 410-430 MHz frequency band, which used to be intended for NMT technology (1st generation mobile networks) was received in 2011. With a view to achieving optimum use of the spectrum (it is currently used by a limited number of users of private mobile networks), HAKOM published a public consultation , which was followed by the adoption of the Allocation Plan for the frequency band in question allowing the use of broadband wireless access technologies.

Preparations for the allocation of the digital dividend

Concerning the digital switchover in 2010, HAKOM continued with preparations for the allocation of this part of the RF spectrum for mobile communications networks.

In order to better understand issues related to the operation of new broadband systems (LTE) and to ensure better implementation at the domestic and international level, HAKOM participated, in cooperation with representatives of the operators and the industry, in several workshops on LTE and its efficient planning and operation. Moreover, since certain operators are already testing the LTE technology in the 790-862 MHz frequency band (digital dividend) in some locations, HAKOM has conducted measurements in cooperation with them and the industry to check the impact of broadcasting transmitters on LTE and vice versa.

As part of the "Looking to the Future" project, HAKOM studied the main parameters of auctions together with representatives from the Faculty of Electrical Engineering and Computing and from the Faculty of Economics and Business. Since public auction has been established in the Allocation Table as the allocation mechanism for all frequency bands (including the digital dividend) intended for new broadband systems, it is very important to choose technical and economical parameters that are applicable and appropriate for the Croatian market. Bearing in mind that digital dividend, as a limited resource managed by the state, is a very valuable part of the spectrum, but also that operators must be allowed to develop new services from which both market and end users will benefit, the parameters must reflect the balance between those two aspects. For these reasons, this analysis is taken very seriously and special attention is given to experiences from other countries which have conducted RF spectrum auctions in the digital divided, and in other frequency bands, as well.

In late 2011, HAKOM signed the International Agreement on Cross-Border Coordination in the 790-862 MHz Frequency Band laying down the manner of use and obligations of coordination with the neighbouring countries in border areas. Cosignatories include Austria, Hungary and Slovenia.

At the international level, HAKOM is also included in the work of the CEE Regional Working Group dealing with issues of digital dividend allocation at the regional level. The group focuses on the exchange of information about current status of the digital dividend in individual countries and discusses the possibilities for allocation and coordination (technological and temporal) at the regional level. Special attention is given to the allocation mechanism - in the majority of countries this part of the spectrum will be allocated on the basis of a public auction. The objective of the group is to collect as many experiences from other countries as possible in relation to auction parameters with a view to achieving optimum allocations in individual countries. The work of the group may be followed at: http://www.ceeregionalworkinggroup.net.

Public mobile communications networks

During 2011, HAKOM received, as part of its regular activities, notifications of base stations, and, having verified data about those stations, it issued certificates of compliance for these stations. Special attention in the verification is dedicated to areas of special sensitivity (residential areas, schools, pre-school facilities, hospitals and the similar). Where necessary, additional measurements are carried out. Figure 1.35. illustrates the growth in the number of notified base stations (coverage sector) in the Republic of Croatia.

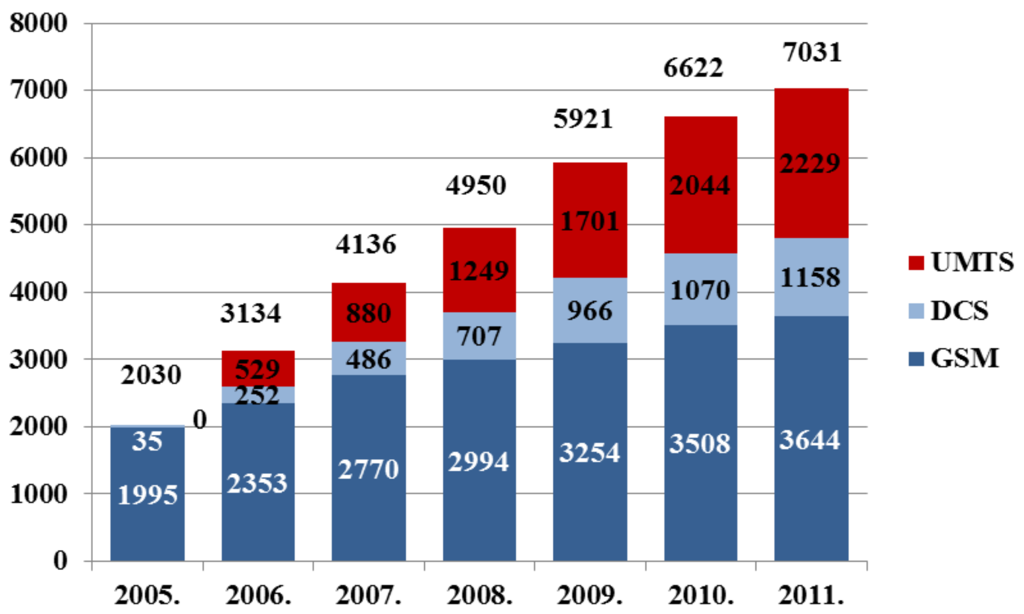


Figure 1.35. The number of notified base stations

In the course of 2011, upon request of the existing operators and having conducted appropriate allocation procedures laid down in the Allocation Table, additional RF spectrum was allocated in the 1800 MHz as follows:

- HT was allocated additional 2x11.6 MHz , which means that the total block in this frequency band amounts to 2x20 MHz.
- Vipnet was allocated 2x10MHz.

The total allocated RF spectrum at 1800 MHz is illustrated in Figure 1,36 which clearly shows that operators form blocks of 2x10 with the additional RF spectrum, which enables them to implement broadband systems in this frequency band.

1805/1710 MHz					1880/1785 MHz	
Tele2		HT		VIPnet		
12	8	20	10	10	14.8	MHz

Figure 1.36. Allocated spectrum at 1800 MHz

Upon request of the existing operators and equipment manufacturers, a total of 9 licences for the testing of LTE technology were granted in 2011 in different frequency bands - at 800MHz, 1800MHz and 2600 MHz. Testing took place in restricted areas during limited periods of time, taking into account restrictions towards other countries..

Private mobile communications networks

In order to ensure efficient and economical use of the RF spectrum in the part intended for private mobile communications networks, HAKOM takes into account other uses at the domestic and international level as part of its regular activities.

There was an increase in the number of granted licenses for private mobile communications networks, which use new digital technologies compared to the analogue technology.

Furthermore, capacities of the existing private networks have noticeably decreased, which is also obvious from the fact that new users have turned towards public networks.

The coordination of frequencies at the international level took place in accordance with the signed HCM agreement and requirements of neighbouring signatory countries.

Microwave and satellite networks

The activities of frequency planning and international coordination of microwave links were carried out continuously in 2011. In accordance with the principles of efficient use of the RF spectrum, the received requests were processed and licences were granted. International coordination of allocated frequencies was carried out in accordance with the HCM agreement or, in case of international microwave links, on the basis of direct agreement between competent administrations.

Concerning the procedure for the granting of licences, HAKOM worked intensively on the preparation and introduction of a simplified procedure for the granting of licences for frequency bands in which the risk of interference is negligible. Following a public consultation published on HAKOM's website, the allocation plan for the 71-76/81-86 GHz frequency band was adopted.

In relation to regular activities concerning satellite networks, HAKOM analysed and replied to coordinating requests of other countries, in accordance with ITU procedures. Furthermore, controlled notifications of installation of radio stations in satellite services were received, in particular of SNG vehicles.

Concerning mobile and satellite systems covered by the provisions of general licenses, HAKOM keeps and regularly maintains a list of notified installed radio stations.

Radio networks

After having prepared the plan for the digital radio signal coverage in the VHF III band in the territory of the RoC, HAKOM continued in 2011 with intensive international coordination of DAB radio stations. However, international coordination is slow because the majority of neighbouring countries still have not completed the digital switchover, and, as a result, have not freed the VHF III and for the introduction of digital broadcasting.

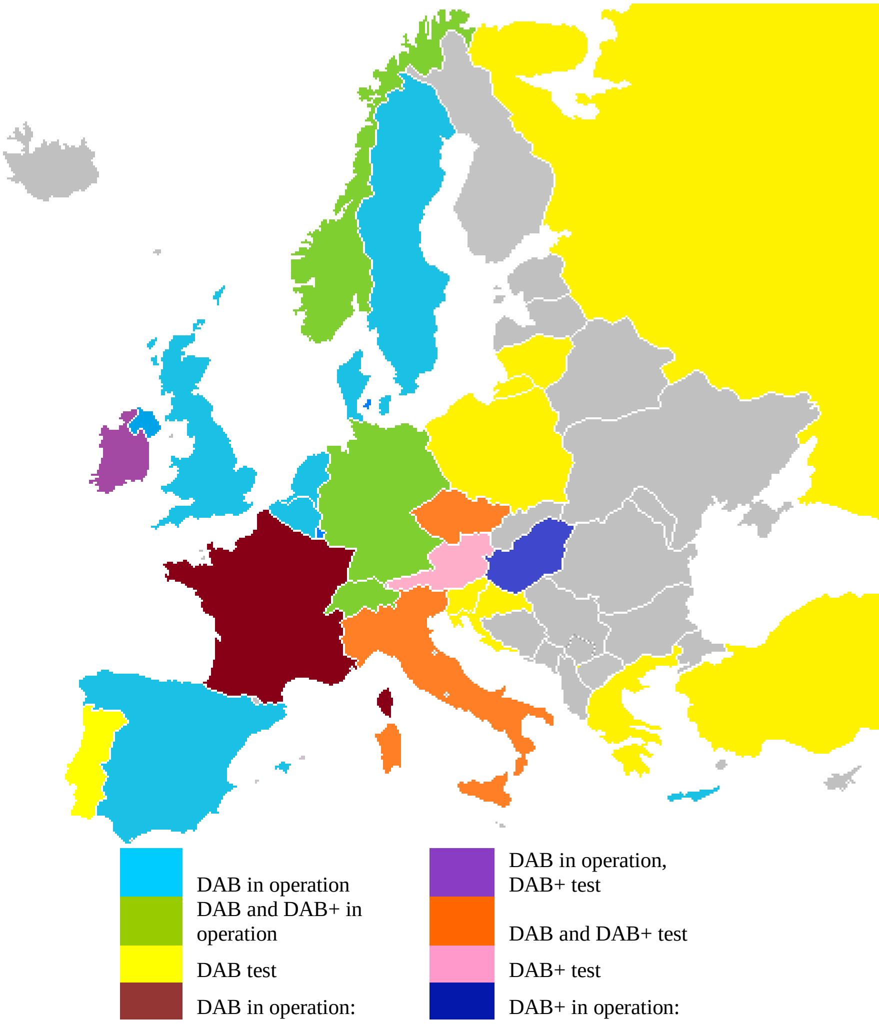


Figure 1.37. The application of the digital radio standard per countries in the course of 2011

According to the existing plans, several types of digital radio standard from the EURECA 147 family may be used in the VHF III frequency range: DAB (Digital Audio Broadcasting), DAB + (upgraded Digital Audio Broadcasting) and DMB (Digital Multimedia Broadcasting), and the application of DVB-T2 standard or DRM+ standard (Digital Radio Mondiale+) is also possible.

The majority of countries are today using DAB or DAB+ standard for commercial activities or testing. Only France decided for commercial use of the DMB standard, while some other European countries are still testing this standard.

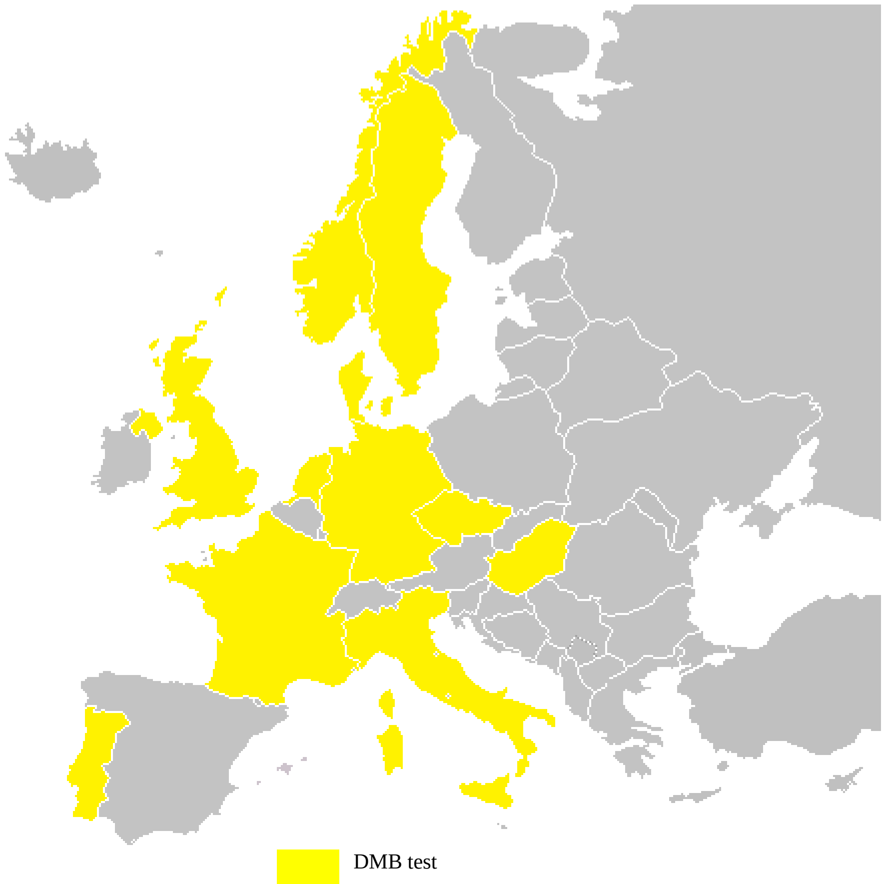


Figure 1.38. Introduction of DVB standard per countries in the course of 2011

During 2009, HAKOM initiated a Digital Radio Forum, which gathers experts of different profiles from various institutions with a view to drafting conclusions and basic guidelines for the adoption of a strategic decision on the introduction of digital radio and selection of a "Croatian standard": Activities related to the preparation of a document with a list of available standards, to network planning and overview of use of digital radio in the territory of Europe, which should contribute to the technical and technological part of resolution of issues of introduction of digital radio in Croatia, were continued in 2011.

In spite of significant saturation of VHF II frequency part of the spectrum (FM radio), intensive planning and optimisation of networks of radio stations was continued in order to ensure better coverage of the existing broadcasters and provide frequencies for new concessions. Around 70 requests of radio broadcasters related to increasing coverage or possibility to amend technical parameters were processed.

Furthermore, activities related to broadcasting of medium-wave and short-wave radio signals continued in 2011, as well as experimental broadcasting of digital radio in DAB and DRM (Digital Radio Mondiale) standards.

As a main precondition for the granting of concessions for media activities, HAKOM regularly determined technical parameters, that is, a technical basis, for the invitation of the tender for the provision of radio services, and answers to questions on the existence of technical parameters for the granting of concessions in individual areas. It also carried out technical inspections of the fulfilment of minimum conditions for the carrying out of media activities as a precondition for the signing of concession agreements. During all these activities, HAKOM closely cooperated with the Agency for Electronic Media (hereinafter: AEM).

On the basis of results of re-planning of the existing and planning of new FM networks and the international coordination of frequencies, the database of the radio frequency spectrum for radio was updated and it is publicly available on HAKOM's website.

Within the framework of international coordination, FM radio stations published via ITU BRIFIC were analysed on a regular basis, and the registration of shortwave radio stations for the season A09, B09 and A10 was carried out, which makes a total of more than 500 radio stations.

Intense international coordination of radio stations with the neighbouring countries, Austria, Bosnia and Herzegovina, Montenegro, Hungary, Slovenia, Serbia and Italy, was continued, and, as part of international cooperation, a total of 100 coordination requests for FM/T-DAB radio stations were sent and/or analysed.

Television networks

The switching off of analogue television in the Republic of Croatia took place gradually by 5 October 2010, that is, by 31 December 2010 for broadcasters below national level. After that date, operation of around 70 analogue islands was continued, that is, micro areas in which the reception of public service channels over DTV was not satisfactory. In 2011, digital television reception in these areas was ensured as a result of the improvement of the existing DTV network parameters or by distribution of satellite cards by the Croatian Radiotelevision, and the last remaining transmitters in analogue islands were disconnected. Licences granted by the end of 2011 ensured population coverage amounting to more than 98 percent for MUX A, 96 percent for MUX B and 90 percent for MUX D in the territory of the Republic of Croatia.

In relation to the freeing of the radio frequency spectrum in the 790-862 MHz band, the so-called digital dividend, which was envisaged for the introduction of mobile communications, that is, the termination of use of the above-mentioned frequency band for digital television, HAKOM continued with the re-planning of DVB-T networks in the 470-790 MHz frequency band in order to try to substitute for planned coverage that is being lost in the 790-862 MHz band. For that purpose, the introduction of second generation digital terrestrial TV (DVB-T2) was considered and the Frequency Allocation Plan for the area of terrestrial broadcasting (148,5 kHz – 1492 MHz) was amended.

HAKOM prepared and published on its website a new version of the „Recommendation on minimum technical requirements for DVB-T/DVB-T2 receivers in the Republic of Croatia" , which serves a sort of a guide for producers and distributes of equipment for placing the reception equipment on the Croatian market.

In early 2011, when HAKOM finished gathering opinions on constructions and management of digital terrestrial television networks and on the type and manner of providing new services that would provide additional value to users, in the second half of 2011 it published a public tender for the granting of the licences for use of the RF spectrum for the provision of services of management of two DTV electronic communications networks (multiplexes MUX C and MUCX E) in the territory of the RoC. A joint tender of companies HP Produkcija d.o.o., Odašiljači i veze d.o.o. and HP was granted a licence for use of the RF spectrum for DTV multiplexes MUX C and MEX E. On the basis of the granted licences, users of terrestrial DTV will be offered in 30 new SDTV and HDTV channels in 2012, over the DVB-T2 network and by means of application of the MPEG 4 encoding standard together with PAY-TV.

International coordination of Croatian DVB-T stations with neighbouring countries continued and the coordination requests from administrations of Austria, Bosnia and Herzegovina, Hungary, Montenegro, Slovenia, Italy, Germany, the Czech Republic and Greece were analysed. More than 100 coordination requests for DVB-T stations were sent and/or analysed in the course of cooperation.

The database of the RF spectrum for television, which is publicly available on HAKOM's website, was renewed on the basis of results of the re-planning of the existing and planning of new TV networks and international coordination of frequencies.

HAKOM has also started cooperation on an international project entitled "Digital Television in South Eastern Europe - SEE Digi.TV". The project was planned for the purpose of coordination of activities in the region of South Eastern Europe in relation to the introduction of DTV services and reduction of the digital divide between the countries of the region and in relation to EU Member States. This topic was analysed in more detail in Chapters 4.5. and 4.7. International cooperation and EU funds.

Control and supervision of the spectrum

For the purpose of coordination of use of radio frequencies at the national and international levels, radio frequency spectrum monitoring, measurements, tests and determination of causes of interference in the radio frequency spectrum and taking of prescribed measures for their elimination, and in order to perform other expert and technical activities within the framework of efficient RF spectrum management, HAKOM has established a system of control and measuring centres (hereinafter: CMC), and control and measuring stations (hereinafter: CMS) with the necessary measuring, computer and communications equipment, software support and measuring and other vehicles.

Taking into account geographical characteristics of the RoC, CMCs are located in Zagreb, Osijek, Split and Rijeka. In addition to CMCs, there are also seven CMSs which are remotely managed from CMCs. HAKOM has five measuring vehicles equipped with the measuring equipment for measurements in the RF spectrum.

The seventh CMS - Veliki Bokolj on the island of Pašman - was built in 2011 for the purpose of measuring in the entire Northern Dalmatia and Central Adriatic. This measuring station is specific because it is powered exclusively from renewable energy sources, that is, from the solar and wind energy. In late 2011, three old measuring vehicles were replaced by new vehicles.

The majority of HAKOM's activities in 2011, concerning spectrum control, focused on the measuring of interferences by the Republic of Italy in the territory of Istria and in the Croatian coastal area. In addition to these, HAKOM also carried out systematic measuring aimed at protecting the RF spectrum as a naturally limited resource of interest for the RoC. Everyday measuring was carried out from all four control and measuring centres and six remote control and measuring stations, while the measuring vehicles carried out periodic measurements in areas where the immobile part of the measuring system does not provide satisfactory control. In addition to measuring aimed at protection or monitoring the spectrum, measuring for the purpose of frequency planning and international coordination were also carried out, where necessary.

All planned measuring campaigns and other types of measuring in the RF spectrum were successfully carried out in accordance with the measuring plan, with a special emphasis on the protection against interference. The operation of radio stations in microwave links and radio stations in broadcasting was tested in accordance with the prescribed licences. HAKOM also paid special attention to the measuring of the radio and TV signals on the coast and in coastal areas. Measuring results indicate further increase in the number of uncoordinated broadcasting signals coming from the Republic of Italy. Cooperation with other neighbouring countries was adequate and successful.

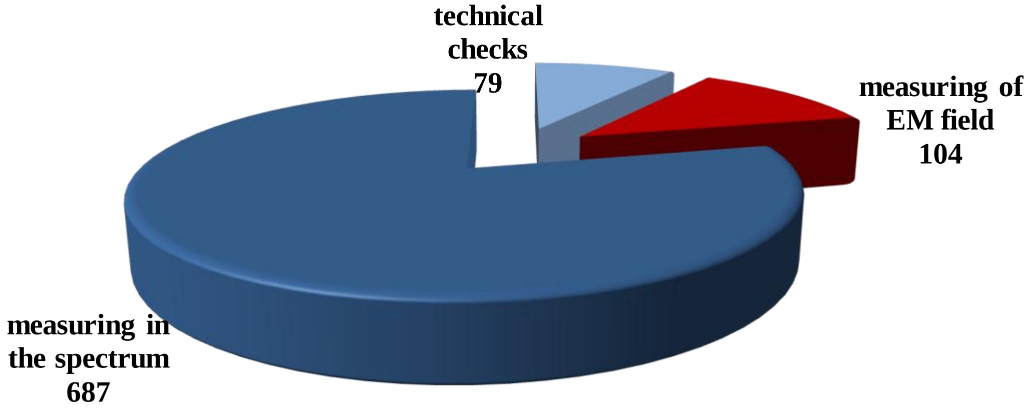


Figure 1.39. RF spectrum control

On the basis of expert supervisions which resulted in the discovery of non-compliance with laws and subordinate legislation, 2 procedures were initiated as part of a regulatory measure prohibiting the operation of illegal radio stations and ordering them to comply with the law.

Measuring of electromagnetic radiation

The RF spectrum monitoring also included the measuring of the size of electromagnetic fields for the purpose of efficient protection of human health from their influence. A measuring campaign was conducted in locations selected on the basis of the criterion of the smallest distance of an area of special sensitivity from base stations of public mobile communications networks. HAKOM regularly checked the measuring results submitted by legal persons authorized for the activities of measuring electromagnetic radiation. Measuring results at 104 locations showed that levels of electromagnetic fields were significantly below the prescribed levels at all locations where measuring took place.

Protection from interference

Protection from interference in radio communications is among more important HAKOM's tasks. Special attention is given to state administration bodies in charge of search and rescue, emergency services, maritime and air traffic control radio communications (whose purpose is the safety of human lives) and operators of electronic communications.

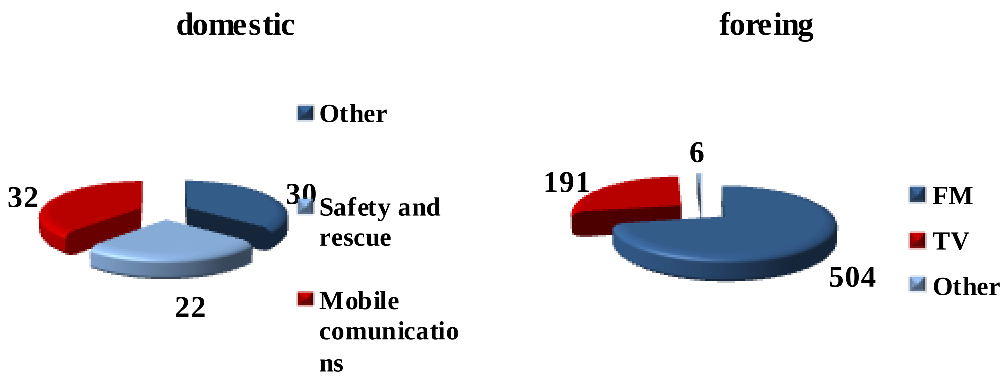


Figure 1.40. Interferences in the RF spectrum

The number of reported and eliminated interferences in the UMTS frequency band in mobile communications networks has decreased. The number of interferences in communications of maritime or air radio communications has also dropped compared to 2010.

The measuring of radio and television signal on the coast and in the coastal areas indicated an increasing trend in the number of interferences from the Italian Republic. Weekly measuring throughout the year were carried out in the coastal area of Istria because of the digital switchover in the Republic of Italy. The existence of non-harmonized TV signals from Italy interfered with quality reception of Croatian DBV-T multiplexes in the Northern part of Istria, while reception in the rest of the coastal area was most of the time possible. Although there were many reports of interference made to the competent Italian administration, the Italian side did not take any steps to resolve this problem.

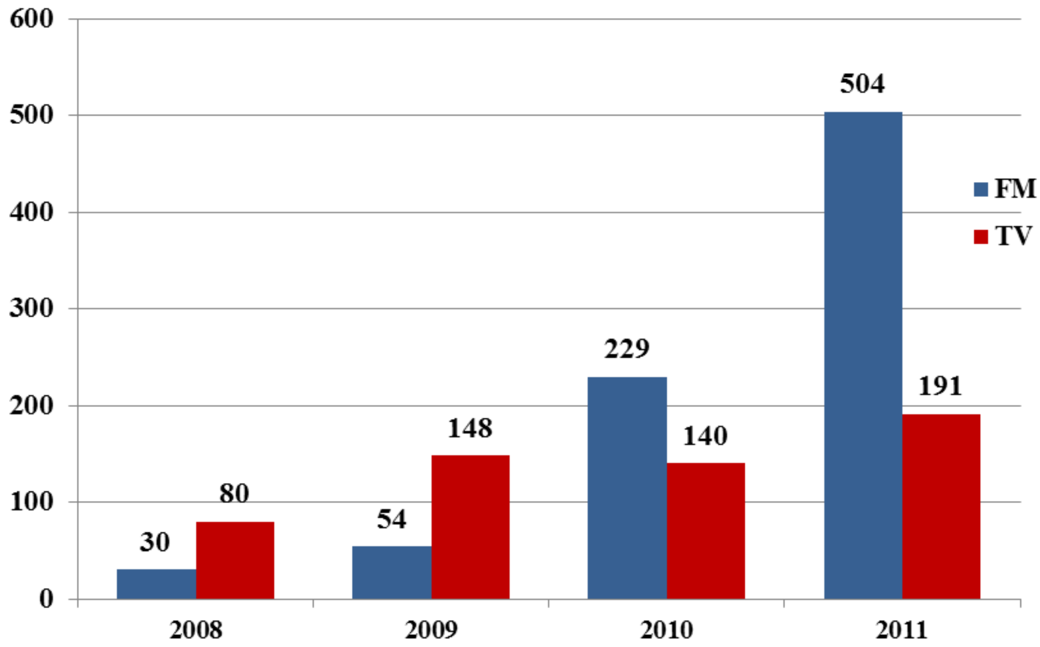


Figure 1.41. Interference reports to Italian state administration by years

Radio frequency spectrum interferences from the Italian Republic

In December 2010, the Republic of Italy released into operation the interfering transmitters which are seriously interfering with the reception of Croatian TV channels in all three multiplexes (multiplexes A, B and D) in the coastal part of Istria. In spite of official interference reports to the Italian state administration, notifications to the International Telecommunications Union and contacts through the Ministry of Foreign Affairs and European Integration, the Italian side did not eliminate the interferences or resolve any of the interferences reported in the course of 2011. In 2011, HAKOM sent 533 official letters to the relevant state administration body of the Republic of Italy concerning interferences.

This behaviour and lack of cooperation on the Italian side seriously endangers the rights to RF spectrum guaranteed to Croatia at the Regional Radiocommunications Conference in Geneva in 2006.

In addition to the damage already incurred to the Republic of Croatia in the territory of Istria, there is serious concern that the continuation of Italian digitalisation towards the South could endanger the entire coastal territory and that the problem with the reception of the television signal will expand to Kvarner and Dalmatia. HAKOM will continue with efforts aimed at solving the problem. One of the activities that were initiated this year were multilateral meetings organized in cooperation with ITU that, upon HAKOM's request, became actively involved in the resolution of the interference problem with the Republic of Italy. In addition to the meetings presided by the ITU Director himself, measuring results and presentations made by HAKOM and neighbouring countries were published on a part of ITU's website, as well as the results of the meetings and the database prepared by ITU containing all information about interference reports made to Italy. The database will used to check progress with the resolution of the problem of each individual interference originating from the Republic of Italy.

1.9.2 Addressing and numbering space

One of HAKOM's tasks is to ensure efficient use of addresses and numbers and to manage the addressing and numbering space in the RoC. HAKOM is therefore carrying out the following activities:

- assigns addresses and numbers to operators on the basis of the Addressing Plan and the Numbering Plan,
- supervises number portability and carrier preselection,
- monitors the work of the Central Administrative Database of Ported Numbers (CADPN) and takes care of the necessary changes to ensure its proper functioning.
- controls the use of addresses and numbers,

Management of the addressing and numbering space

Efficient management of the addressing and numbering space in the RoC is among the most important HAKOM’s tasks. Only transparent, objective, proportionate and unbiased allocation of addresses and numbers to operators at any time fosters fair competition on the market of electronic communications. According to the Numbering Plan of the Republic of Croatia, short codes (numbers) 192, 193, 194 and 155 are reserved for future needs of emergency services (police, fire department, emergency medical assistance and the National Headquarters for Search and Rescue at Sea). In relation to the above, the transition of the existing numbers for emergency services of fire-fighters 93 to the proposed number 193 was carried out for the purpose of alignment with the provisions of the Plan and deadlines for the beginning of use of the 194 number of emergency medical assistance were agreed upon.

The increase in the number of operators in the EU results in the increased demand for resources in the addressing and numbering space. A similar trend may also be noticed in the Republic of Croatia which requires continuous training of employees in the department to keep up to date with international trends in the introduction of new technologies on the EC market and with the application of new IT aids for the management of the addressing and numbering space. Consequently, in 2011 HAKOM improved the management of a list of the allocated addresses and numbers by offering the possibility for browsing the allocated addresses and numbers on HAKOM's website. Furthermore, numbers may be searched by operator and prefix, and the results of the search show currently allocated and active addresses and numbers. Furthermore, it is also possible to search operators and activities, that is, search by operator or by activity is also possible. Active activities will be presented for the selected operator. All operators registered for the provision of the activity in question will be displayed for the selected activity.

Number portability

With a view to eliminating barriers to entry of new participants in the market, it is very important to offer the number portability service to all users of services. An increasing number of market participants requires continuous upgrading of the portability database while taking into account the demands of market participants and making number portability much simpler in the administrative sense. In order enable simple and quick number porting for the end user, HAKOM focused the majority of its activities in 2011 on the improvement of the number portability process in the manner that it paid special attention to administrative procedure of number portability and the upgrading of the CADPN was completed. During 2011, a total of 105 decisions on primary assignment of addresses and numbers were adopted, and 181 invoices for the fee for addresses and numbers were issued. HAKOM had to intervene 6969 times into the number portability procedure in order to speed up the process (of number porting or of giving up the request for number porting) and satisfy the requests of users of the above-mentioned services to the greatest possible extent.

e-Operator

The service of e-Operator became available in 2011 and it represents a system for managing data about operators of electronic communications networks and services. The service expands and facilitates access to HAKOM and increases its productivity and efficiency by IT introduction into all processes. e-Operator is the central database of information about operators of electronic communications services and about the addressing and numbering space. The service provides an interface for the entry of the necessary data by the operator and HAKOM's staff and facilitates to operators the submission of previous notices, applications for primary allocation, applications for the transfer of rights and other related applications, including reports on gross revenue and information about the group of numbers.

1.9.3 R&TT equipment

Efficient use of the RF spectrum and protection against interference is one of the main preconditions for the provision of electronic communications services requiring the use of the RF spectrum. This requires such R&TT equipment, which is put on the market and used in the RoC, which does not create interference with other devices and systems and efficiency uses the RF spectrum. It is therefore of utmost importance that provisions of the Ordinance on R&TT equipment (OG No. 112/2008) concerning basic requirements for R&TT equipment are implemented, as well as conditions for placing R&TT equipment on the market. HAKOM has, accordingly, granted approvals for import and placing on the market in 2011 and carried out procedures for the evaluation of compliance of R&TT equipment and it has provided expert opinions concerning R&TT equipment. Particular attention has been given to the fact that approvals for import and placing on the market create an obstacle for free placement of R&TT equipment on the market and that a lot of effort has been invested in shortening the procedures to less than 30 days, which is a legally-prescribed deadline, so that end users could import and place the equipment on the market as soon as possible. Furthermore, a lot of effort has been invested into informing the public and interested participants on the market of R&TT equipment. It is also important to mention that the database of approved R&TT equipment has been upgraded in order to enable automatic updating of data about issued approvals. Furthermore, searching by a key word is also possible, which makes the search faster and simpler.

In relation to further accession to the EU and the need to align procedures in as many areas as possible, HAKOM actively participated in the working group for drafting a new Ordinance on R&TT equipment which is fully aligned with the provisions of Directive 1999/5/EC:

In addition to the alignment of regulations on R&TT equipment with the EU *acquis,* HAKOM actively participated in the training of inspectors that will participate in the inspection of R&TT equipment by organizing a workshop that covered all aspects taken into account in the supervision of R&TT market.

2 POSTAL SERVICES MARKET

2.1 Market Development

The situation on the postal services market in the RoC did not change significantly in the course of 2011 compared to the previous years in spite of the generally unfavourable economic situation and the recorded decrease in postal traffic in developed countries in Europe and in the world.

The new Postal Services Act (hereinafter: PSA), adopted in mid-2009 and amended in 2011, divided and defined postal services differently than the previous legislation because of which postal market data for 2010 and 2011 are not fully comparable with data from the previous years. The report provides group indicators on the postal market but separately for the public operator, the HP, and collectively for other providers.

Providers of postal services in 2011 provided a total of 356,348,098 services according to the submitted data, which is almost two percent less than the year before when a total of 364,493,884 were provided (Figure 2.1.).

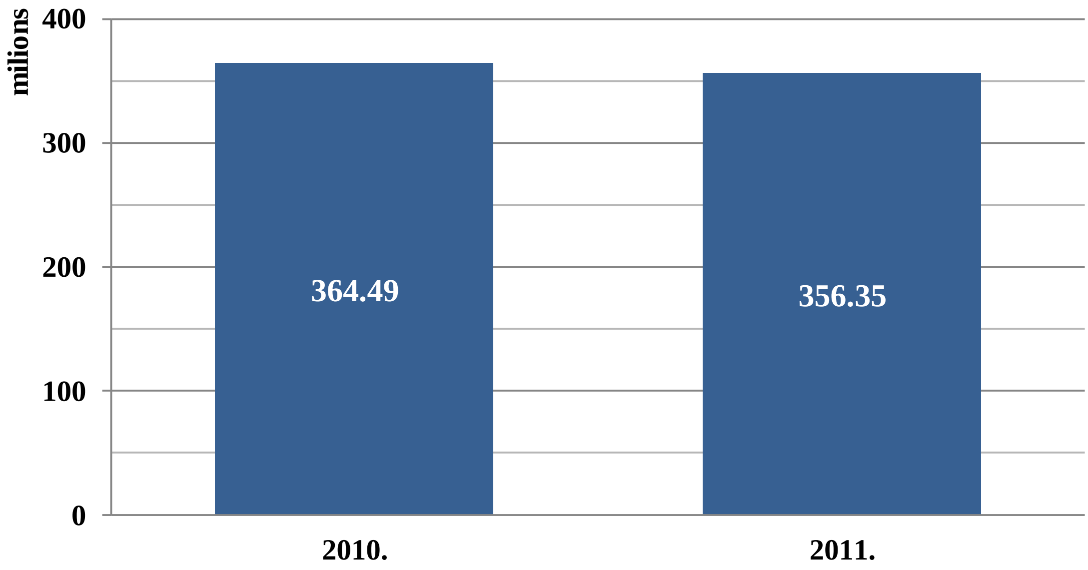


Figure 2.1. Total number of postal services

HP's share on the entire postal services market was almost 72 percent with 254,909,431 provided services, while other providers had a share of around 28 percent with 101,438,667 provided services. It is obvious from the comparison of the number of provided services by HP and other providers of postal services in 2011 that HP recorded a drop in traffic amounting to eight percent compared to the year before, while other providers have significantly increased the number of provided services by approximately 16 percent. Therefore, with a total drop in provided services on the Croatian postal market amounting to about two percent, HP is participating with 71.5 percent at the end of 2011, which is 4.5 percent less than the year before, while other providers are participating with 28.5 percent, which is 4.5 percent less than the year before. (Figure 2.2.)

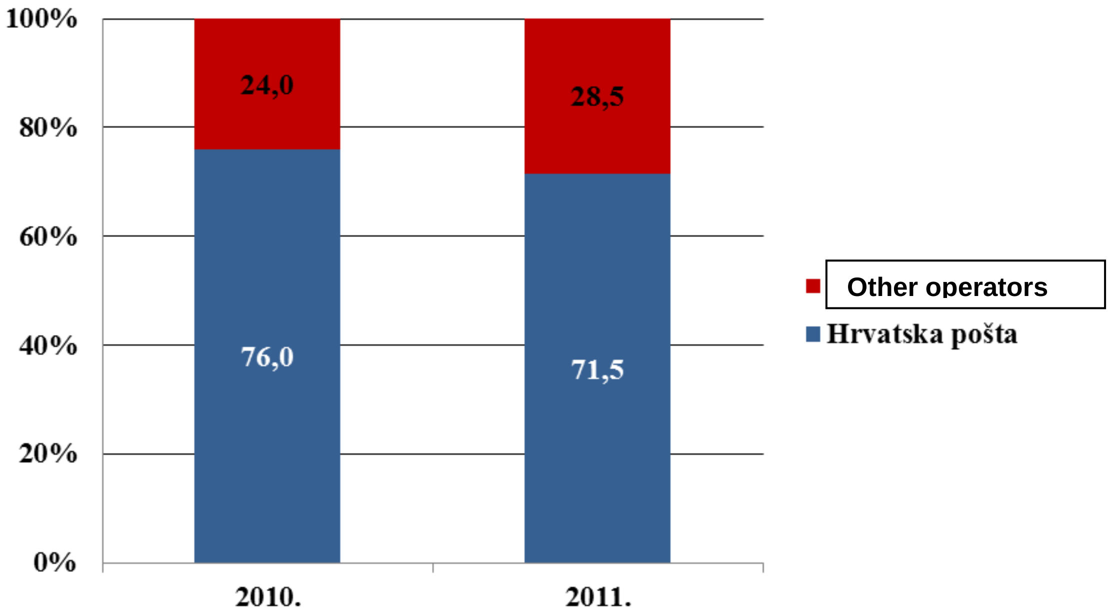


Figure 2.2. Market share of providers in the total number of provided postal services

Out of the total number of provided services, 337.4 million or 94.7 percent were provided in domestic traffic, 11.3 million or 3.2 percent in international incoming traffic and 7.6 million or 2.1 percent were provided in international outgoing traffic (Figure 2.3.). The mentioned shares did not change significantly compared to 2010.

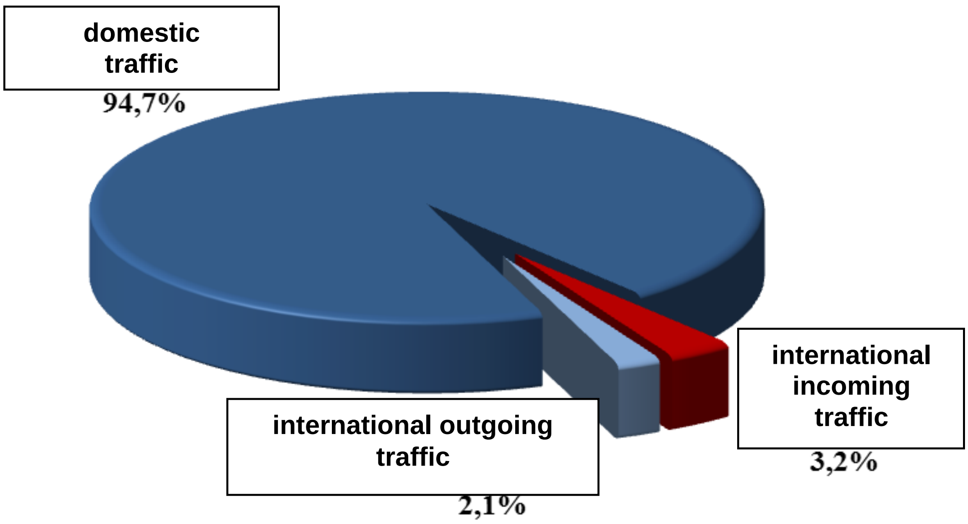


Figure 2.3. Shares of provided services per types of traffic in 2011

Out of the total number of services in domestic traffic, HP provided approximately 70 percent of services, and other providers almost 30 percent, while out of the total number of services in international traffic, 97 percent were provided by HP and the rest by other providers.

The structure of a total number of provided postal services (Figure 2.4.) shows that universal postal services made almost 59 percent of all services, and other postal services almost 41 percent.

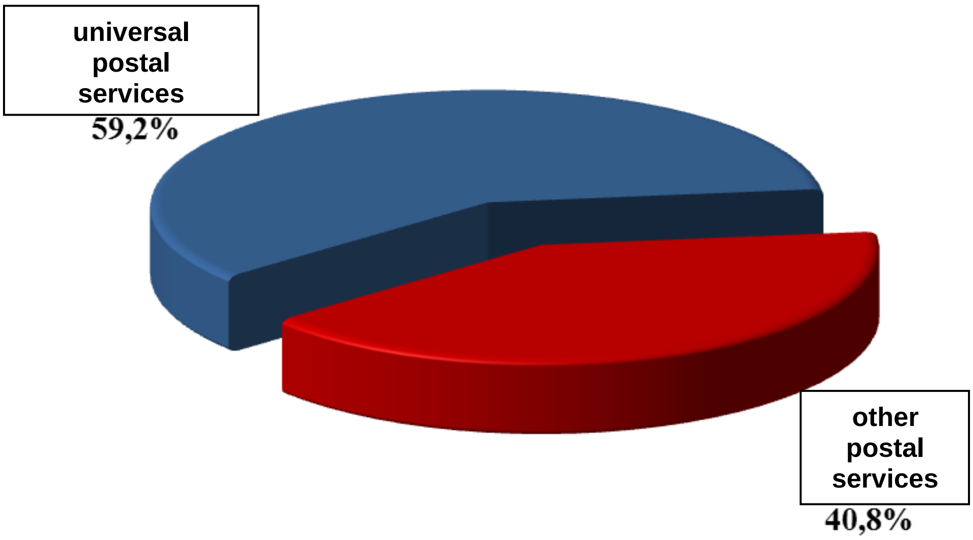


Figure 2.4. The shares of individual types of services in total provided postal services in 2011

Providers of postal services have, in 2011, shown revenue from the provision of other postal services amounting to HRK 1,526,023,322 million. Revenue in 2011 was at the same level as in 2010 when it amounted to 1,538,786,206 (Figure 2.5.).

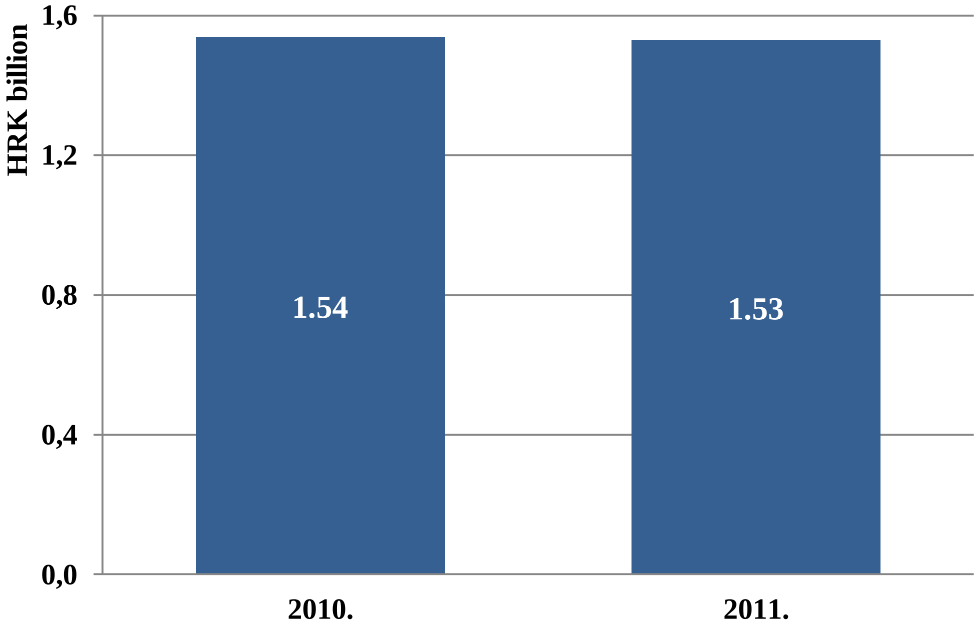


Figure 2.5. Total revenue from the provision of postal services

Out of the total revenue earned in 2011, HP earned a total of HRK 1,096,099,224 in revenue or nearly 72 percent, while other providers earned HRK 429,924,098, that is, nearly 28 percent (Figure 2.6).

Compared to 2010, HP's revenue decreased by nearly two percent, while the revenue earned by other providers increased by nearly two percent. Therefore, the share of HP in the total revenue from the provision of postal services decreased by one percent compared to the year before.

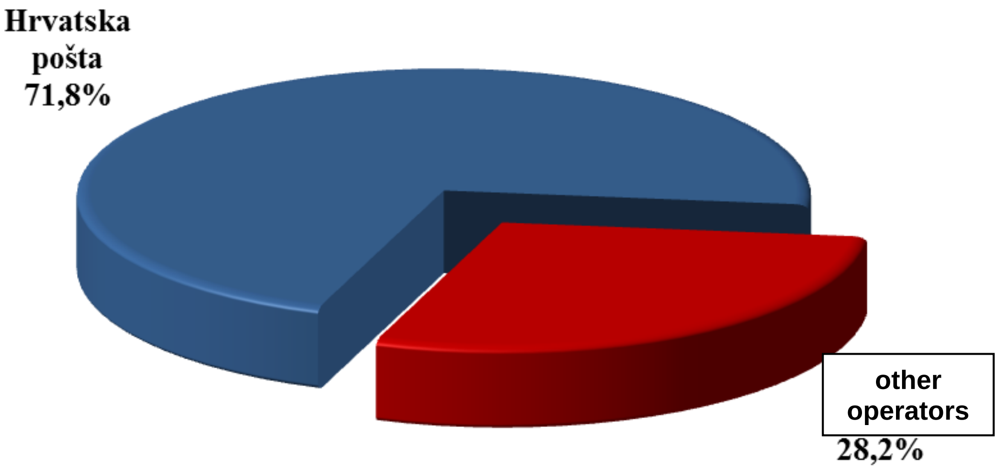


Figure 2.6. Shares of providers' revenue in total revenue

In early 2011, there were 21 registered providers of postal services on the postal services market in the RoC, while at the end of 2011, there was a total of 23 providers of postal services who were providing postal services on the basis of a licence and/or notification (Table 2.1.). In 2011, HAKOM received two new notifications for the provision of other postal services and two new requests for amendments to the granted licence for the provision of universal postal services, and one amendment to the notification.

Out of the providers listed in Table 2.1., HP is the only one providing all universal postal services pursuant to the PSA and entitled to provide all universal services in the entire territory of the RoC. The remaining two providers of universal postal services that were granted the licence to provide universal postal services by HAKOM in 2010 and whose licence was amended in 2011 at their request, do not provide all universal services. The remaining twenty providers, as well as HP and providers who have been granted the licence for the provision of universal postal services, have been notified for the provision of the remaining postal services. In relation to the type of service they provide, 19 providers have been notified for all remaining postal services, three providers only for value added services and one provider for other postal services which are not universal. In relation to the area in which they provide their services, 13 providers have been notified for the provision of services in the territory of the RoC and in international traffic, and nine providers for the provision of services only in the territory of the RoC.

According to data delivered by providers, there were the total of 10,500 employees engaged in the provision of postal services, out of which 8,238 are employed by HP, that is, about 78 percent, while other providers employ 2,262 people or approximately 22 percent. It must be underlined that, compared to the year before, other providers of postal services increased the number of employees by 22 percent, while HP kept the same number of employees in the postal sector.

Table 2.1. List of postal service providers

POSTAL SERVICE PROVIDERS		
PROVIDERS OF UNIVERSAL POSTAL SERVICES		
HP - Hrvatska pošta d.d.	Jurišićeva 13	ZAGREB
POST d.o.o.	Zastavnice 38	HRVATSKI LESKOVAC
LIDER EXPRESS d.o.o.	Ulica Sv. Roka 3, Donje Sitno	ŽRNOVNICA
PROVIDERS OF OTHER POSTAL SERVICES		
HP - Hrvatska pošta d.d.	Jurišićeva 13	ZAGREB
DHL – INTERNATIONAL d.o.o.	Utinjska 6	ZAGREB
DPD CROATIA d.o.o.	Franje Lučića 23	ZAGREB
LAGERMAX AED CROATIA d.o.o.	Franje Lučića 23	ZAGREB
INTEREUROPA d.o.o.	Josipa Lončara 3	ZAGREB
IN TIME d.o.o.	Velika cesta 78	ZAGREB
RHEA d.o.o.	Buzinski prilaz 36/a	ZAGREB
LIDER EXPRESS d.o.o.	Ulica Sv. Roka 3, Donje Sitno	ŽRNOVNICA
ZUM DISTRIBUCIJA d.o.o.	Slavenskog bb	ZAGREB
BICIKL EXPRESS d.o.o.	Radićev odvojak 37	VELIKA GORICA
OVERSEAS TRADE Co. Ltd d.o.o.	Zastavnice 38a	HRVATSKI LESKOVAC
TISAK d.d.	Slavonska avenija 2	ZAGREB
NOVA DISTRIBUCIJA d.o.o.	Između dolaca 11	NOVA MOKOŠICA
BRZO SREBRO d.o.o.	Potok 41	ZAGREB
D.F.F.Ž. d.o.o.	Potok 41	ZAGREB
A1 DIREKT d.o.o.	Majstorska 6	ZAGREB
POST d.o.o.	Zastavnice 38a	HRVATSKI LESKOVAC
NADA, obrt za usluge prijevoza, Goran Andrašec	Vukomerec 26	ZAGREB
CITY EX d.o.o.	Donje Svetice 40	ZAGREB
DIREKT KONTAKT d.o.o.	Dimitrija Demetra 19/1	BJELOVAR
A2B EXPRESS d.o.o.	Bani 108	ZAGREB
ZUM 2010 d.o.o.	Jelkovečka 5	SESVETE
PRINT CENTAR KRAPINA d.o.o.	Slatina Svedruška 39	PETROVSKO

2.2 Market overview

2.2.1 Universal postal services

Universal postal services represent a set of postal services of appropriate quality and at affordable prices, which are available to all users of postal services in the area where the licence has been issued, whereby the public operator must ensure availability of these services under equal conditions, in terms of quality and affordability of prices, to all users in the entire territory of the Republic of Croatia. Universal postal services in domestic and international traffic include the following postal services: clearance, sorting, transfer and deliver of postal items, registered items and insured items up to 2 kilograms; clearance, sorting, transport and delivery of packages up to 10 kilograms in domestic traffic and clearance, transport and delivery of packages up to 20 kilograms in international traffic and clearance, sorting, transport and deliver of cecograms up to 7 kilograms, free of charge.

HP is a provider of all universal postal services and has the right and obligation to provide universal services in the entire territory of the Republic of Croatia, as opposed to other two providers who have been granted a licence to provide universal postal services which covers the entire territory of the Republic of Croatia, but does not include all universal postal services. Universal postal services are provided by two other licence providers, in addition to HP, but their results in the total market are negligible and data and indicators for universal postal services are almost identical to data and indicators for HP.

Providers of postal services in 2011 provided a total of 211,085,855 universal postal services according to the submitted data, which is almost two percent less than the year before when a total of 232,433,901 were provided (Figure 2.7.).

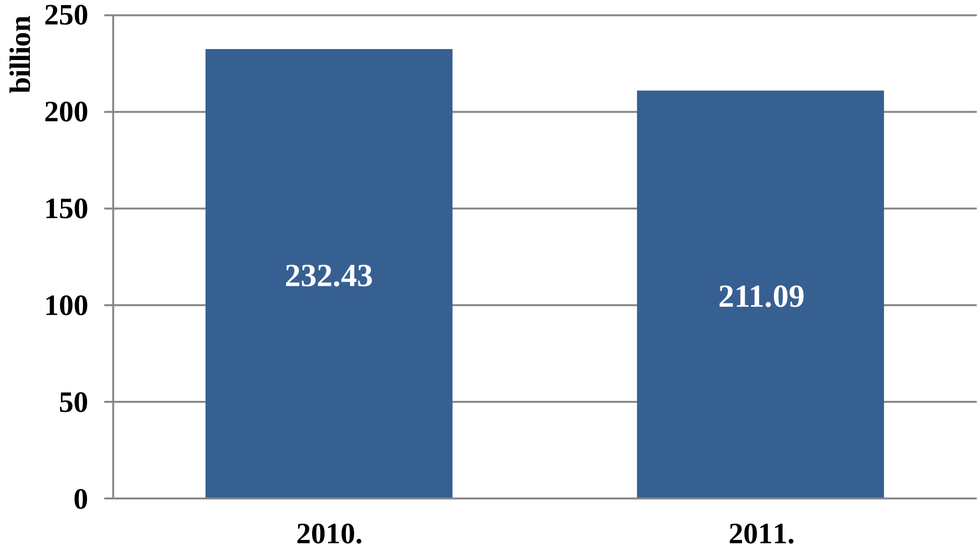


Figure 2.7. Total number of universal postal services

The share of universal postal services in total postal services in 2011 amounted to almost 59 percent, which is nearly five percent less than in 2010.

Out of the total number of universal postal services, a total of 192.25 million, or almost 91 percent, were reserved universal postal services, which is an increase of almost two percent compared to the year before. The majority of universal postal services, nearly 92 percent, were provided in domestic traffic, 3.3 percent in international outgoing traffic and 4.4 percent in international incoming traffic.

It is obvious from the structure of provided universal postal services (Figure 2.8.) that items of correspondence, which amounted to 176.0 million made up almost 83 percent of all universal postal services, registered items with 32.8 million made almost 16 percent, and packages with 1.3 million of provided services and insured items with 0.9 million made up less than one percent, while the share of cecograms in the total number of universal postal services was almost completely negligible. The share of items of correspondence decreased compared to 2010, while the number of registered items increased.

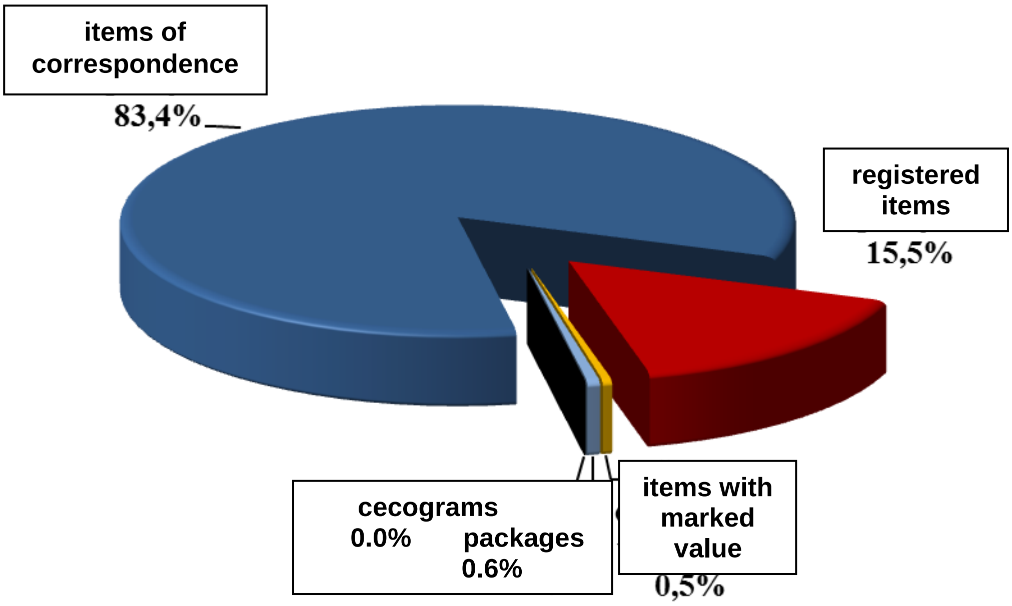


Figure 2.8. Shares of provided universal postal services per types of traffic in 2011

Providers of postal services have, in 2011, shown revenue from the provision of postal services amounting to HRK 846.9 million, which is nearly one percent less than the year before.

2.2.2 Other postal services

Other postal services include value added postal services and other postal services which are not universal postal services.

In 2011, providers of postal services provided a total of 145,262,243 universal postal services according to the submitted data, which is almost ten percent more than the year before when a total of 132,059,983 services were provided (Figure 2.9.).

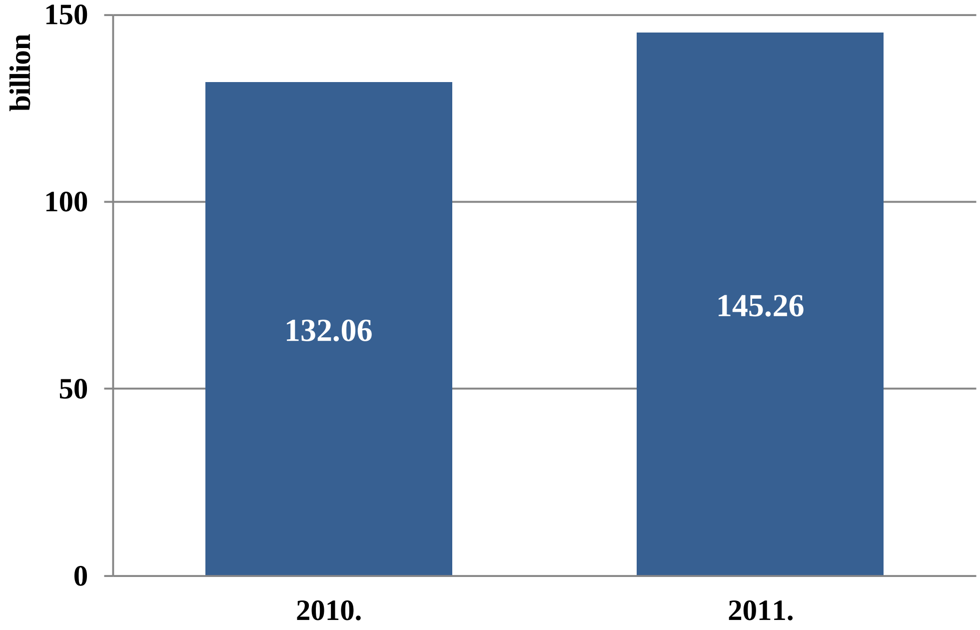


Figure 2.9. Total number of other postal services

The share of other postal services in total postal services in 2011 amounted to almost 41 percent, which is nearly five percent more than in 2010. Out of the total number of other postal services, HP's share on the market was almost 30 percent with 43,992,533 provided services, while other providers had a share of around 70 percent or 101,269,710 of provided services. It must be stressed that number of other services provided by HP was almost two percent less than the year before, and other providers increased the number of other services by nearly 16 percent. Thus, other providers not only maintained the leading position in the provision of other postal services but also increased their market share compared to 2010 by almost four percent (Figure 2.10.)

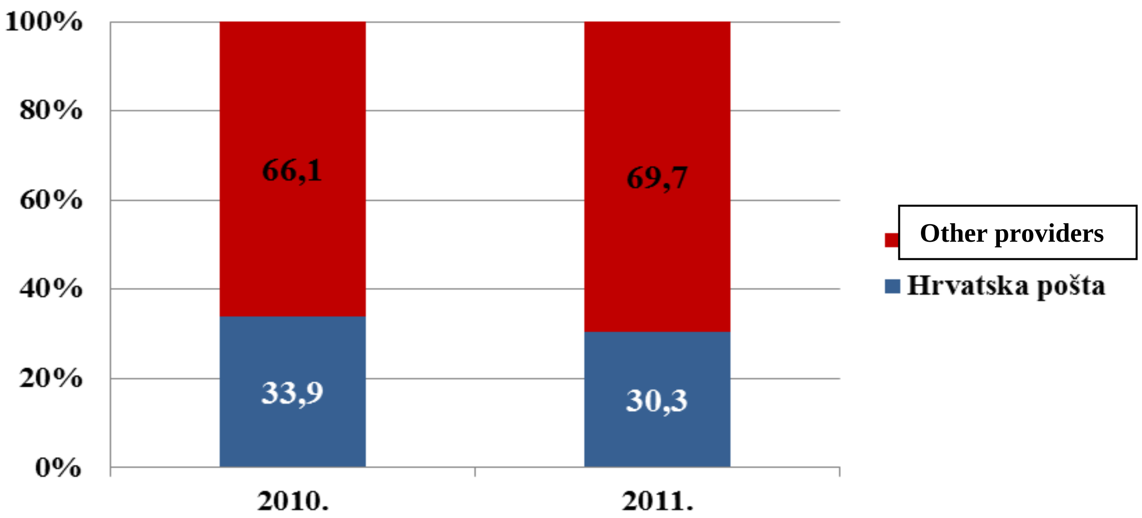


Figure 2.10. Market share of providers in the total number of provided other postal services

The majority of other postal services, nearly 98 percent, were provided in domestic traffic, 0.4 percent in international outgoing traffic and 1.4 percent in international incoming traffic.

It is obvious from the structure of the total provided postal services (Figure 2.11.) that value added postal services with 74.6 million of services made up nearly 51 percent of all postal services, and other postal services, which are not universal, made up almost 49 percent with 70.7 million. Compared to 2010, the share of value added postal services decreased by nearly one percent.

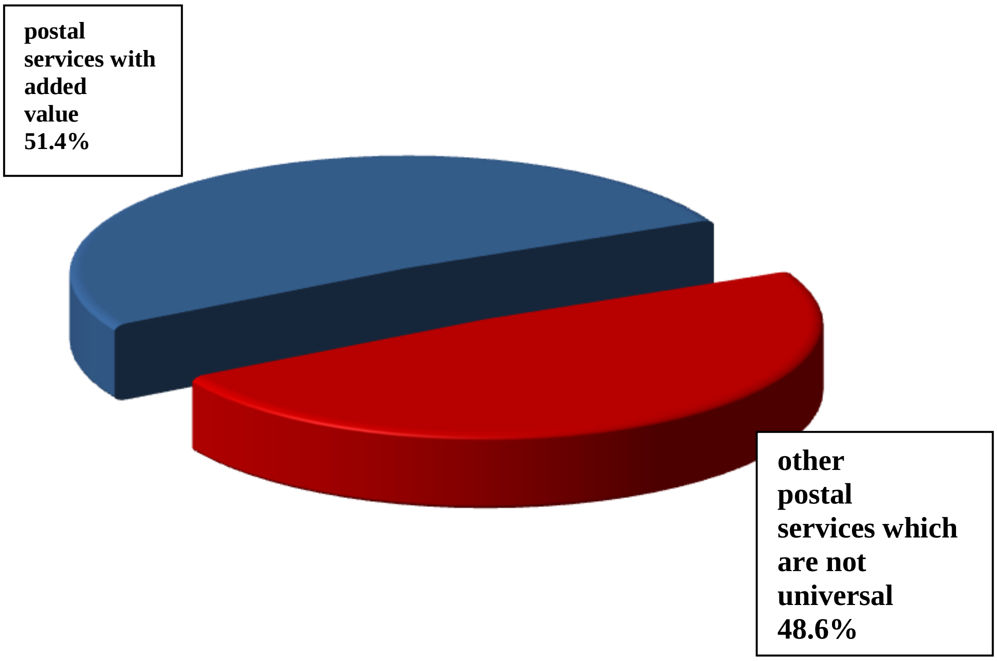


Figure 2.11. Shares of provided other postal services per types of traffic in 2011

The biggest share among other postal services referred to services of sending printed matter with a share of 52 percent, and the direct mail services with a 45 percent share. These shares have not changed significantly compared to the year before.

Providers of postal services have, in 2011, shown revenue from the provision of postal services amounting to HRK 679.1 million, which is nearly one percent less than the year before. Out of the total mentioned revenue, HP earned a total of HRK 250 million in revenue or nearly 37 percent, and the group of other providers earned HRK 430 million or nearly 63 percent (Figure 2.12).

Figure 2.12. Shares of providers' revenue in total revenue from the provision of other postal services in 2011

HP's revenue from other services decreased by nearly five percent compared to 2010, while other providers increased their revenue from these services by nearly two percent. Therefore, HP' share in the total revenue from other services in 2011 dropped by nearly two percent compared to the year before.

2.3 Regulatory measures

HAKOM carries out its regulation of the postal services market in the two basic ways:

- proactively – by giving initiatives for further development of the postal services market;
- correctively – reaction to noticed situations and/or development trends on the postal services market.

The proactive component of HAKOM's activities includes collection, analysis, directing and publishing of data, information and documents on the situation on and development of the postal services market. In addition, HAKOM strengthened and confirmed its role of the market regulator by means of frequent contacts and cooperation with all providers of postal services on the market and by guiding postal services providers towards complete market liberalisation.

The corrective component of HAKOM's activities includes the undertaking of appropriate measures to guide the development of the postal services market in accordance with the PSA.

Regulatory activities in the sector of universal postal services

Pursuant to the PSA and the Ordinance on the provision of universal postal services (OG 37/10), the public operator, HP, must, starting from 1 January 2011, ensure to all users one collection and one delivery of a postal item to the house address or to premises of a legal or natural person for at least five working days per week Furthermore, the PSA and the Ordinance on the provision of universal postal services leave to HAKOM's discretion the full application of this provision to a maximum of 10 percent of the total number of households in the RoC (according to the results of the census) and in special geographical conditions or other circumstances. Therefore, the public operator provided a list of all discrepancies in the provision of universal postal services for 2011 according to which the obligation of delivery within five working days to the home address, that is, to the premises of a legal or natural person does not apply to 9.64 percent of households in the RoC, that is, to 142,285 out of a total of 1,475,959 households.

Two requests for the amendments to licences granted in 2010 for the provision of universal postal services were received in 2011. The provider Post d.o.o., Zastavnice 38a, 10251 Hrvatski Leskovac, requested, and HAKOM approved, the expansion of the granted licence to the territory of the Krapinsko-Zagorska county, and to the right to clearance, routing, transfer and delivery of registered mail and insured mail. The provider Lider Express d.o.o., Svetog Roka 3, Gornje Sitno, 21251 Žrnovnica, requested in its request for the amendments to the licence, and HAKOM approved, the expansion of the territory in which universal services will be provided to the entire territory of the Republic of Croatia. Furthermore, HAKOM received a request from the company TIM EKSPRESS d.o.o., Trnjanska cesta 3, 10 000 Zagreb, for the granting of the licence for the provision of universal postal services in the entire territory of the city of Zagreb and the County of Zagreb, and HAKOM's Council adopted the decision on the granting of the licence. However, during regular inspection it was established that TIM EKSPRESS d.o.o. still has not started with the provision of universal services.

The analysis of terms and conditions for the provision of universal postal services of the provider Lider Express d.o.o. showed that some provisions of terms and conditions are contrary to the provisions of the PSA and that HAKOM has initiated, ex officio, administrative proceedings aimed at aligning these terms and conditions with the provisions of the PSA, which were then amended by Lider Express d.o.o. in compliance with HAKOM's requirements.

Regulatory accounting

The PSA imposes accounting obligation on all providers of postal services, and, in particular, on HP as the public operator. From the regulatory point of view, "accounting separation " or "separation of accounting" includes various activities among accounting activities of a postal services provider in order to obtain the appropriate basis for monitoring and/or execution of prescribed obligations, that is, for the adoption of decisions under their competence. "Accounting separation", that is, the keeping and allocating revenue and expenditure according to precisely defined categories, subcategories, groups and types of services and according to activities undertaken for the purpose of providing such services, represents a long-lasting and exceptionally demanding business project. For that reason it is necessary to adopt an additional regulatory document to comply with a legal obligation by using experiences of other regulatory bodies, in particular from the postal sector, in the country or abroad.

For the above-mentioned reasons, HAKOM applied for funds from EU pre-accession fund IPA 2009 for the project "Support to HAKOM in the area of accounting separation of postal services". This project was approved by the EU Delegation in November 2010 but its implementation started only in November 2011. The completion of the above-mentioned process is expected in 2012. One of the key results of this project is the "Manual for Accounting Separation", which will represent an additional regulatory act, and the main purpose of which is to support the implementation of the valid legal framework with new legislation based on the EU regulatory framework in the postal services sector. The objective of this document is to define more precisely HAKOM and HP's obligations and lead to the publication of a HAKOM's decision, following public consultation that will contain all provisions that must be applied by HP to comply with regulatory obligations. The objective of this document, that is, of the laying down of more detailed and transparent accounting procedures, is to assist HP in the fulfilment of its regulatory obligations, and to assist HAKOM in the appropriate monitoring and supervision of such compliance. The project has, until this moment, covered the analysis of the public operator, HP, in relation to accounting separation and gave proposals for the necessary elements. The most appropriate accounting separation method was also analysed and presented.

Accounting separation on the part of HP will satisfy HAKOM's need for financial information that will ensure:

- evidence on the part of HP of compliance with cost orientation and non-discrimination;
- investigation of possible non-compliance with the above-mentioned conditions, including the distortion of competition
- monitoring the fulfilment of obligations by HP in order to ensure the fulfilment of HAKOM's requirements, including the prevention of distortion of competition.
- establishment of price control.

Quality of universal postal services

The EU Postal Directive placed special emphasis on the raising of quality of provision of universal postal services for the purpose of preservation of those mass services available to everyone at an affordable price. Therefore, in its Annual Activity Plan for 2011, HAKOM focused in particular on the control of quality of universal service provision which is, pursuant to the PSA and the Ordinance, carried out by independent and continuous measuring of the time of transport of priority and non-priority items of correspondence from the sender to the addressee pursuant to standards HRN EN 13850 (for priority) and HRN EN 14508 (for non-priority) and measuring of a number of complaints and compensations for damage pursuant to standard HRN EN 14012 both in domestic and international traffic. The measuring of quality of provision of universal postal services in domestic traffic is laid down in Article 27 of the PSA which states that 85 percent of priority items of correspondence must be delivered within one day, and 95 percent within 2 days, while 95 percent of all other items must be delivered within 3 days. Standards for European postal traffic are laid down in Postal Directives (Annex II), which were accepted by the PSA, stating that 85 percent of priority postal items must be delivered within 3 days and 97 percent within 5 days. The PSA provides for HP's obligation to deliver to HAKOM the annual report on the quality of provision of universal postal services at the latest by 1 April for the previous year, and it also lays down penal provisions in case the report is not delivered by HP, that is, if it does not comply with the prescribed quality parameters for the provision of universal postal services.

Pursuant to the PSA, the public operator started, in 2011, independent and continuous measuring of the time of transport of postal items and the measuring of the number of complaints and compensation of damage in accordance with the prescribed standards. On 30 March 2012, it delivered to HAKOM its first Report on the Quality of Universal Postal Services for 2010. Because of the first official results of independent measuring carried out in accordance with Croatian standards, which did not satisfy the lawfully prescribed criteria, HAKOM will audit the methodology and results of the independent measuring authority by the end of this year in order to verify whether the measuring system is in compliance with the set standards, and to undertake corrective measures against the public operator to align he quality of postal services with the PSA.

It is obvious from the submitted report that the public operator participates in several procedures for the measuring of the time of transport of items of correspondence in international traffic, from those that are not laid down in the PSA (organized by the Universal Postal Union) to the obligatory ones where HP participates in the coordinated measuring of the time of transport of items of correspondence in accordance with European standards implemented by an independent measuring authority (UNEX) for the majority of Member States. The results of measuring in international traffic for 2011 show that 56 percent of items of correspondence were delivered within 3 days, 87 percent within 5 days, and it is obvious that HP d.d. did not satisfy any of the prescribed quality criteria. The public operator conducted three measuring procedures in domestic traffic out of which two were optional and one mandatory. The optional measuring of the time of transport of items of correspondence is in compliance with Croatian standards. The results of obligatory independent measuring for priority items of correspondence were at 80 percent for D+1 (next day delivery) and 95 percent for D+2, while 94 percent of non-priority items were delivered within D'3 days. It is obvious that HP did not satisfy the criterion for D+1 in the transport of priority items of correspondence or the criterion D+3 for non-priority items.

Furthermore, the report states that HP received 24,918 complaints from users of universal postal services in domestic traffic out of which 21,970 or 88 percent were resolved within the prescribed deadline and it established its own responsibility only for each twelfth submitted complaint that is in 1,977 cases. The majority of accepted complaints referred to non-delivery of an item (93 percent) and to non-delivery on time (1 percent) and to the damaged item (5 percent). In international postal traffic, HP solved 4,644 complaints (out of which users submitted 2,797 complaints to HP, while 1,867 complaints came from other countries), out of which it accepted 752 complaints. Finally, it needs to be stressed that HAKOM, in cooperation with HP, invested significant efforts in 2011 into preparation and quality measuring of quality of provision of universal services in 2012.

Postal network

In early 2011, HP had 1141 postal offices, and at the end of 2012, a total of 1126 postal offices. During 2011, HP closed sixteen postal offices 0127 Zagreb, 10152 Zagreb, 20219 Molunat, 20276 Brna, 20277 Prižba, 21321 Baška Voda, 21331 Živogošće, 21431 Nečujam, 44106 Sisak, 44271 Letovanić, 47284 Kašt, 47285 Radatovići, 48265 Raven, 51416 Medveja, 53295 Gajac, 53297 Stara Novalja), out of which nine were seasonal postal offices. In closing the above-mentioned postal offices, HP fully complied with the provisions of Article 16 of the Ordinance on the provision of universal postal services and ensured a minimum level of quality of provision of universal postal services for users of postal services in accordance with the prescribed criteria. Since the new manner of organisation of business operations did not place users into a less favourable position compared to the previous organisation, that is, the prescribed quality of the provision of postal services was not jeopardised, HAKOM agreed with the proposed closing of postal offices. Furthermore, HP also opened one new contract post office (22220 Bilice).

A little over three hundred postal offices changed their working hours in 2011 and the majority of changes referred to extending their working hours to one more day a week.

Expert supervision

In 2011, HAKOM started expert supervision over eight providers of postal services, in accordance with the provisions of the PSA. The subject of expert supervision was the implementation of provisions of the PSA and regulations adopted pursuant to the PSA under HAKOM's competence. Expert supervision in providers of postal services, POST d.o.o. from Hrvatski Leskovac, DIREKT KONTAKT d.o.o. from Bjelovar, ZUM 2010 d.o.o. from Sesvete and A2B Express d.o.o. from Zagreb established that postal services are carried out in compliance with the PSA and the licence for the provision of universal postal services (POST d.o.o.) and the submitted applications for the provision of other postal services. Therefore, the above-mentioned supervision was suspended by a decision and the postal inspector at the Ministry of the Sea, Transport and Infrastructure was informed thereof accordingly.

Expert supervision over provider TIM EXPRESS d.o.o. from Zagreb, to which HAKOM granted a licence for the provision of universal postal services and which notified the provision of other postal services, established that the provider did not start the provision of postal services, both universal or other services, and that the company is in the process of sale or liquidation, because of which the expert supervision was suspended. Furthermore, expert supervisions initiated in 2011 over the public operator HP-Hrvatska pošta d.d., LIDER

EXPRESS d.o.o. from Gornje Sitno i CITY EX d.o.o. from Zagreb, due to their complexity, were completed this year and will be mentioned in the report for 2012.

Monitoring the situation and the development of the postal services market and public information

Pursuant to the PSA, HAKOM is, among other things, competent for monitoring the situation and development of the postal services market. For that reason, HAKOM, in 2011, continued collecting statistical and other data from providers of postal services. Information on the postal services market is collected per quarters and on an annual basis and one part of data is collected as part of statistical market research carried out by the EC and EUROSTAT, where HAKOM was the competent authority for the entire project in the RoC. The data collection procedure was also improved in 2011 with the introduction of the SPOK system (Indicator's system) which enables providers to automatically submit their data over the Internet. Data collected in this manner is used for monitoring and analysis of the situation on and development of the postal services market and for the purposes of comparison with previous periods. Quarterly data on the postal services market are regularly published on HAKOM's website and additionally presented to the public in the form of press releases. HAKOM regularly publishes and updates the list of providers of postal services on its website, as well as other information and documents in the postal services sector, including decisions and rulings adopted by HAKOM, ordinances ad the similar.

Cooperation with stakeholders on the postal services market

In the postal services sector, HAKOM in 2011 actively participated in the work of and cooperated with the following stakeholders in the postal services market at the national and international level:

- HP,
- other postal service providers,
- Ministry of Maritime Affairs Transport and Infrastructure of the Republic of Croatia,
- Ministry of Foreign Affairs and European Integration of the Republic of Croatia,
- Central Office for Development Strategy and Coordination of EU Funds,
- Central Finance and Contracting Agency (CFCA),
- Croatian Standards Institute,
- Central Bureau of Statistics
- European Regulators Group for Postal Services (ERGP),
- European Committee for Postal Regulation (CERP) and participation in the CERP working groups,
- Directorate-General for Internal Market and Services of the European Commission
- Universal Postal Union (UPU).

3 CONSUMER PROTECTION

HAKOM's regulatory principles and objectives also include regulatory principles and objectives concerning users of services. In this manner, the promotion of competition ensures and provides the greatest benefits for users of services in relation to the selection of services and price and quality of services.

Interests of individual users are promoted through following procedures: ensuring access to universal services for all users, providing a simple and accessible dispute resolution procedure between operators and users of services; promoting clear information, in particular in relation to transparency of prices and conditions for use of publicly available services; ensuring a high level of protection of personal data and privacy. Special emphasis is placed on the needs of special social groups, in particular disabled users and children.

3.1 Protection of users of public communications services

In the course of 2011, HAKOM created and additionally strengthened conditions for further raising the degree of protection of users of electronic communications services, particularly on the basis of amendments to the ECA used for the adoption, application and alignment of laws and subordinate legislation in practice.

Activities were focused on resolving user complaints by adopting appropriate individually binding decisions and decisions and opinions of general importance. For the purpose of prevention in consumer protection, HAKOM is using and developing different procedures and processes for user education and information. Furthermore, HAKOM actively participated in the work of various associations and state institutions on projects concerning user/consumer protection.

3.1.1 Legislative and regulatory measures

Legislative measures

Amendments to the ECA were adopted in July 2011 and, in addition to promoting user interests by ensuring a high level of user/consumer protection, a simplified dispute resolution procedure by means of summary administrative proceedings, the promotion of clear information and resolution of needs of special social groups, it also prescribed the steps to be taken by operators in certain concrete situations. The alignment of their bylaws with the mentioned amendments was carried out within the legal deadline by all operators, which ensured consistent implementation of the law.

Subordinate legislation and HAKOM's regulatory decisions

Amendments to the Ordinance on the manner and conditions for the provision of electronic communications networks and services were adopted in May 2011 following a public consultation. These amendments aligned procedures related to the Electronic Money Act and additionally prescribed conditions for the alignment of practice in the application of previously adopted obligators' obligations.

HAKOM carried out all the necessary procedures for the adoption and adopted the Ordinance on manner and conditions for the provision of electronic communications networks and services which additionally regulates relations, conditions and manner of provision of all these types of services, including the following:

- all unfair contractual provisions, special conditions for contract termination and right for choosing penalties in case of early termination are prohibited;
- "unlocking" of devices upon termination of contract is prevented;
- free access to Customer Service 24/7,
- specification of tariff systems which provide data for calculation of the future debt,
- return or refund of the unspent amount in mobile and fixed networks,
- barring of outgoing services/calls to a certain number or a group of numbers or a monetary limit on the monthly bill upon the user's request, regular information of users about the possible bans,
- following habits of subscribers and issuing warnings when they spend the prescribed amount (double the average spending in the previous 3 months),
- making the rights of pre-paid users equal to rights and conditions that apply to subscribers for the same type of service and in cases when applicable,
- procedures for resolution of user complaints prescribed in detail (determination of administrative and technical proper functioning of the electronic communications network and subscriber terminal equipment as well as the inability of unauthorised use outside the subscriber's zone of responsibility),
- Internet services - prior to the beginning of provision of service, a user must receive written instructions about the need and possibility for protection against unauthorized use, the obligation to issue the call log, and the obligation to establish the real traffic speed in case of complaints against the bill,
- Value added services
  announcement of the price and possibility to interrupt the call (2 seconds) before the charging starts
  for services charged per minute – Announcement of the interruption and interruption of the call, after the expiry of 30 minutes or after having spent a certain amount (HRK 250.000.00)
  For SMS services – notification about the price and manner of interrupting the service
  Obligation to dial numbers in case of adult services,
- protection of children: the possibility to bar access to contents not appropriate for children, the application of numbers for children services, limitation on spending (HRK 50.00), obligatory recording and exchange of data about access numbers and addresses the content of which is not appropriate for children;
- persons with special needs: ensuring appropriate services and equipment, employing educated persons to work in customer service.

For the purpose of additional user protection, HAKOM adopted an operational decision on spending limits that enable users to set a spending limit in the amount of HRK 50.00. This provided additional control of costs to all users. This decision has been in force since March 2011. A decision regulating the use of the "voicemail" service was also adopted and it prescribes that this service may be provided only upon the subscriber's request and not automatically, which was the usual practice and users often did not know that they had this service which may incur costs for the caller, and for them while abroad. This decision prevented charges for voicemail services, except in case those users who have requested the

service. In this manner, the incurrence of unnecessary costs was prevented both for the calling and for the called party.
The regulatory decision for WLR laid down the obligation to issue one bill for CPS users.

3.1.2 Dispute resolution between users and operators

Analysis of received user complaints in 2011

The most significant corrective means in the consumer protection procedure is HAKOM's authority to solve disputes between users and operators and adopt binding decisions for operators. The decisions are adopted on the basis of an opinion adopted by the Consumer Protection Commission, which is HAKOM's advisory body. The Commission consists of seven members out of which two are representatives from two Unions of Consumer Protection Associations and five are HAKOM’s employees.

Some statistical indicators of received complaints are provided below. The increase in the number of cases (Table 3.1) since 2006 with a significant leap in 2007 when the first significant changes in the handling of irregularities were introduced, and in 2008 when rules of behaviour were established but still not fully enforced, resulted in a relatively stable development trend in 2009 and 2010. Due to significant changes in laws in 2011, the number of questions submitted by users significantly increased in relation to the interpretation of new regulations which may not be regarded as bill complaints.

On the basis of complaints analyses, HAKOM implements measures focused on critical points in the provision of services and in a short time manages to achieve the elimination of the established irregularities. At the same time, HAKOM collects information on the basis of which it may intervene as a regulator.

In accordance with the law, complaints refer to the following: a) complaints against bills of public communications services and b) the quality of public communications services and c) complaints resulting from the violation of provisions of subscription contracts, which is a new category in complaints resolution. Below is an overview of classified cases according to the subject of questions.

Table 3.1. Number of classified cases

Year	Number of cases	Bill complaints	Quality complaints	General questions[16]
2006	382	356	26	-
2007	700	395	305	-
2008	915	654	261	-
2009	930	687	243	-
2010	1011	764	247	-
2011	1783	1129	316	338

[16] Questions concerning contract termination and enforcement resulting from amendments to the ECA

The increase in the number of cases results from registration of general questions as well. There were 338 such questions and they referred to contract termination pursuant to amendments to the ECA and questions concerning enforcement procedures following amendments to legislation which is not under HAKOM's competence. There was a total of 1129 bill complaints which is more than 80 percent of all received complaints, with a 47 percent increase compared to the year before.

Quality complaints were also on the rise and mostly concerning data transfer speed, IPTV services and availability of more advanced services. Because of the appearance of a series of new services, better information of users on the performance of operators and their new obligations resulted in increased interest of users in this area, that is, preventive regulated provision of services prevented an even more significant increase in the number of complaints.

Types of complaints

It was established on the basis of the analysis of complaints that, in addition to the basic types of bill complaints and quality complaints, complaints against business procedures (behaviour) of operators in the provision of services must also be monitored, including complaints concerning number porting and carrier pre-selection. Dispute resolution procedures between users and operators are not usually carried out in case of number portability complaints, only direct procedures with operators. Table 3.2. shows data on registered user complaints classified according to type of complaint. A significantly larger number of questions concerning carrier pre-selection and number portability was received and processed through e-applications. Complaints against business procedures of operators as a rule refer to non-transparent information about services and contracting conditions, and inappropriate behaviour of sales representatives or customer service representatives.

Table 3.2. Types of complaints

Types of complaints	2008	2009	2010	2011
Quality complaints	135	111	124	138
Complaints against business procedures	48	31	36	71
Carrier pre-selection complaints	21	24	37	39
Number portability complaints	57	77	50	68
Bill complaints	654	687	764	1129
Total complaints	**915**	**930**	**1011**	**1445**

Analysis of bill complaints – basic groups of bill complaints

Bill complaints have increased by 47 percent compared to the year before. This was significantly influenced by the fact that HAKOM insisted that operators adopt the new regulatory framework and additional controls, and an increased knowledge of users about their rights.

The increase of the number of complaints in the group of *basic services r*esults from the increased number of questions made by users concerning the interpretation of new laws in the area of communications services and from the increased number of enforcement proceedings initiated by operators. Complaints primarily refer to new packages of services which have not been clearly and transparently communicated to users, that is, to insufficiently clear contractual conditions which resulted in bills for services that the user did not know he or she signed up for. HAKOM often does not have competence in such cases and for that reason only those opinions are adopted which attempt to influence the operators on the basis of HAKOM's authority.

The number of complaints against *Internet services* has also increased (43 percent) because the number of users has significantly increased both in mobile and fixed networks. These are most frequently complaints concerning the impossibility to use the service, that is, concerning discrepancies between contracted and actual speed. This problem will be solved in 2012 on the basis of application of the new Ordinance on the manner and conditions of provision of electronic communications networks and services according to which operators will be obliged to ensure the contracted speed or offer a lower tariff package at a lower price. There is still a problem referring to the lack of knowledge about the need and possibilities of protection during use of this service. This problem may be resolved after the introduction of obligatory control of traffic and provision of clear instructions to users by the operators. Users need to be additionally educated in this respect.

Table 3.3. Structure of bill complaints

Bill complaints	**2008**	**2009**	**2010**	**2011**
Basic services (subscription, tariffs, packages, contracts)	100	216	391	684
Other debts (dunning letters, interest rates, late payments)	20	20	15	29
Dialler	23	15	6	3
Internet traffic	123	187	186	266
Special tariff services	222	92	42	70
Games of fortune	166	1	0	0
MAG DRIVE	0	155	32	1
SMS IQ	0	0	3	1
SMS services with special tariffs	0	1	89	75
Total	**654**	**687**	**764**	**1129**

In mobile networks, the introduction of new types of technologies and tariffs for Internet access for more advanced mobile devices resulted in the increase in the number of cases when undesired Internet connections were established. The principal problem is that users are insufficiently educated and also, on the other hand, that operators are very passive when it comes to the giving of adequate instructions.

Some groups of complaints have almost disappeared completely (diallers, games of chance – as a special category of a special tariff service).

Special tariff services are on the increase in cycles, which results from the fact that the appearance of “illegal services” comes in cycles – every six months there is a new (as a rule one) problematic service of this kind.

An example (MAG DRIVE) on the basis of which we may conclude that HAKOM selected a good method for resolving possible disputes is the supervision which is carried out over the provider of value added services on the basis of users' complaints and a decision on the prohibition of the provision of this service. This decision prevents further provision of the disputed service by means of TV shows and future billing for unlawfully provided services. The decision resulting from the supervision also served as a legal basis for positive resolution of users' complaints against this specific service. In all procedures initiated by operators' complaints, the Court ruled in HAKOM's favour.

The number of value added SMS services has increased since 2009, which potentially also includes "illegal services": Since special attention during internal supervision was given to these services and adopted subordinate legislation, complaints in 2010 and 2011 were mostly resolved in favour of users and without any binding decision for operators.

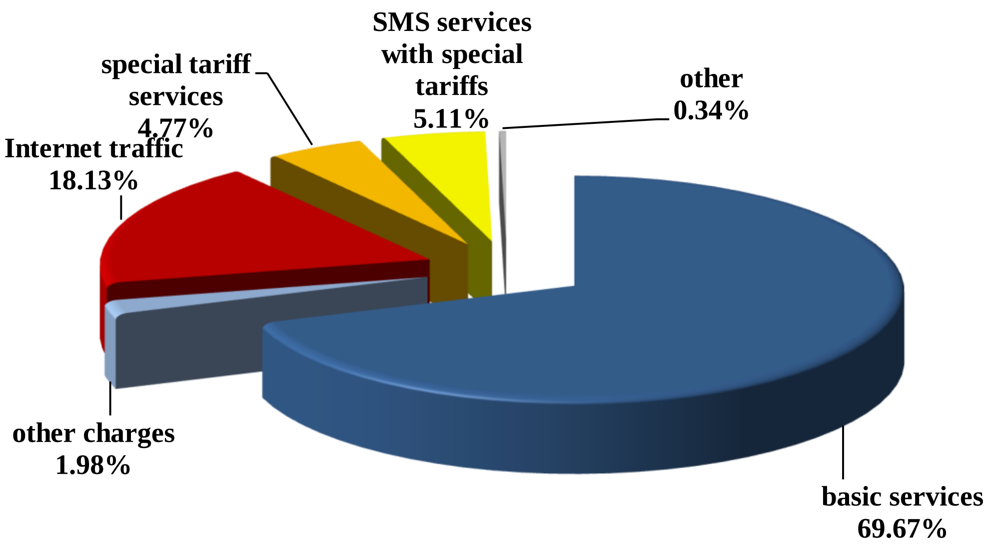


Figure 3.1. Bill complaints in 2011

Analysis of quality complaints

The number of quality complaints is again on the increase compared to the year before. The most significant increase in the structure of complaints (Table 3.4.) is recorded in case of more advanced services because of technical problems with ensuring a quality service for all potential users.

Table 3.4. Structure of quality complaints

Subject of complaint	2008	2009	2010	2011
Internet access speed	1	1	4	11
Accessibility	14	7	8	12
IPTV	17	44	2	36
Lack of technical ability to remove PCM devices, it requires expansion of network capacity	21	20	53	23
Inability to use ADSL due to network overload	3	3	16	1
Other technical problems	13	20	3	22
Noise, interference, crosstalk and signal interruption	5	16	15	26
Other in provision of services	61	-[17]	23	7
Total	**135**	**111**	**124**	**138**

Interferences and signal interruption as well as other technical problems mostly refer to Internet access services and associated services.

[17] Service category "other in the provision of services" in the new classification is divided into other categories of services and was not recorded in 2009. In 2010 it is recorded again and represents complaints against technical characteristics of services in mobile networks (e.g. automatic assignment of services not requested by the user, which can, nevertheless, be billed).

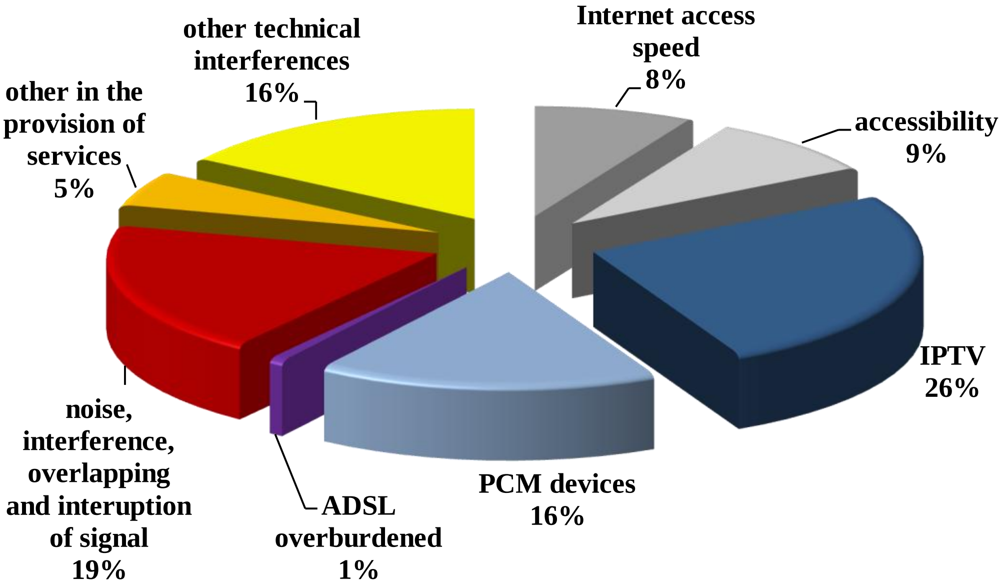


Figure 3.2. Quality complaints in 2011

Complaints against operator's actions – arising as a result of deceptive business practices

Complaints representing oversights in operator's actions were identified in 2008 and HAKOM is authorised to act upon such complaints pursuant to new regulations. It is a fact that operators on our market have different ways of forcing their subscribers to stay and ways of illegally stealing subscribers from other providers in combination with the non-transparency of contractual relations and a deceiving offer of services. This section deals with complaints concerning the impossibility to provide certain services (e.g. number portability, Local Loop Unbundling**)** and broadband), that is, various forms of deceptive sales practices. In order to eliminate occurrences of such behaviour, HAKOM pays special attention to control of bylaws operators' bylaws and their business practice.

Table 3.5. Complaints against operators' business practice

Complaints against operators' business practice	**2008**	**2009**	**2010**	**2011**
Misleading advertising by operators	48	31	36	71
Carrier pre-selection complaints	21	24	37	39
Carrier pre-selection complaints	57	77	50	67

Bearing in mind the data presented by other European regulators, this kind of behaviour of operators is on the rise and they are perfecting their deception methods.

User complaints through e-applications

The introduction of a new website (in mid-2009) which in a simple manner gives instructions to users and provides a possibility to ask HAKOM and to register as a user in order to initiate dispute resolution procedures before HAKOM permits quick and simple communication with users and during 2011, the following was recorded:

Table 3.6. Questions over the Internet

Questions over the Internet	2010	2011
Ask us	162	380
e-complaints (registration of users for initiating disputes)	206	436
Questions through the CISMELP (Central Information System of the Ministry of the Economy, Labour and Entrepreneurship)	0	251

In 2001, cooperation was established with the Ministry of the Economy, Labour and Entrepreneurship (hereinafter: MELP) for the purpose of implementing the National Consumer Protection Programme. HAKOM was directly included in this system.

Overview and analysis of resolved complaints

The total of 12 sessions of Consumer Protection Commissions were held in 2011. The total of 1051 cases were processed at the above-mentioned sessions. Since the prescribed time limit for the resolution of a case is 4 months, this number includes a part of received cases from 2010 (302 cases). Below is an overview of the structure of resolution of cases in 2011 (Figure 3.3.).

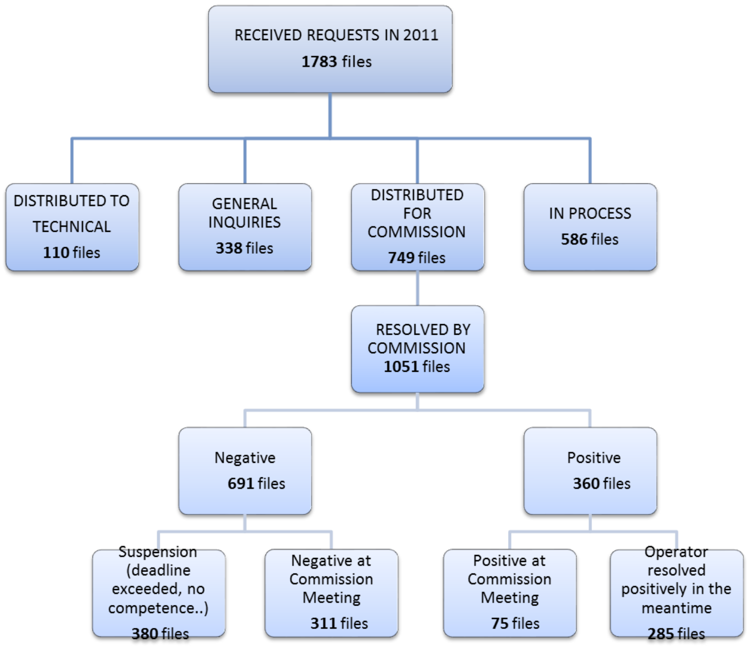


Figure 3.3. Structure of resolution of cases

Out of the total number of classified cases in 2011, a total of 110 cases were processed by technical departments and they were solved directly with operators. A total of 338 requests belong to the category of questions concerning the implementation of new laws and initiated enforcement procedures. The Consumer Protection Commission received 749 cases. Considering the fact that a part of cases received in the year before is always transferred to the following year, the Commission was also dealing with 302 cases from 2011, that is, a total of 1051 cases. Table 3.7. shows a structure of resolved complaints at the meetings of the Commission.

Table 3.7. The structure of resolved complaints at the meetings of HAKOM's Commission

Structure of resolved complaints	2009	2010	2011
Positively	193	192/408[18]	40/75
Operator positively in the meantime	98	(0) 185	51/285
Dismissal of proceedings	62	10/171	92/380
Negatively	217	126/255	119/311
Total	**570**	**328/1019**	**302/1051**

Those complaints for which HAKOM has a direct basis in its regulations received a positive resolution, that is, opinions were adopted on the need for a positive resolution of the user's complaint in case of subordinate application of other regulations. A more significant decrease in the number of positively resolved cases compared to 2010 results from the fact that HAKOM in 2010 accepted almost all bill complaints for higher tariff services (value added services) from 2009 and 2010, as well as complaints against unlawful behaviour of operators during conclusion of distance contracts and outside business premises of a company. HAKOM's decisions prevented further occurrences of such unlawful behaviour of operators. It must also be emphasised that operators reconsidered the subject of the complaint in 285 cases (27 percent) and, on the basis of HAKOM's request for an additional explanation, changed their originally negative decision themselves. This kind of behaviour of operators indicates a positive trend and an increase in the number of resolved complaints by 51 percent compared to 2010 confirms HAKOM's attitude that willingness to accept one's own mistakes and oversights, that is, the need to protect the weaker party in the proceedings, is in the long-run more purposeful than the adoption of rigid solutions, and also indicates the fact that operators are prepared for cooperation and a more significant contribution to the protection of their users.

Unfortunately, on the other hand, there are still cases of not acceptance and stalling attempts. Operators are executing HAKOM's decisions in their relations with users, but they are also instituting administrative disputes against HAKOM. They administrative complaints submitted in 2010 were rejected in 2011 thus proving that such procedures represent only additional unnecessary burden on HAKOM's resources. Operators have mostly given up filing complaints against HAKOM's decisions in 2011 but users have started doing it (10 complaints) and they have, probably because of the lack of understanding, initiated administrative disputes against HAKOM's negative decisions unaware that they cannot resolve their dispute with the operator in administrative proceedings.

Out of the total number of resolved complaints, 311 complaints were resolved unfavourably or 30 percent of the total number of resolved complaints. In case of negative resolutions of complaints, users, unfortunately, incorrectly interpreted their rights and obligations and there was no legal basis for accepting the complaint. In case of 380 complaints (36 percent) a

[18] (The number of cases from the previous year resolved in the year in question) Total number of resolved cases in the year in question

decision was adopted on the dismissal of proceedings for formal or legal reasons (the user did not conduct the prescribed proceedings, exceeded deadline, non-competence). The increase in the number of dismissed cases indicates the fact that users are aware that HAKOM exists but they are not completely familiar with its role and do not comply with the prescribed procedures and competences.

Dispute resolution procedure

Pursuant to the law, HAKOM is competent for dispute resolution between subscribers and operators of public communications services and is entitled to adopt binding decisions ensuring a high level of consumer protection because the operator is obliged to act in accordance with the decision. The adoption of binding decisions completely protects the user and the procedure is thereby terminated.

HAKOM resolves disputes in a transparent, objective and non-discriminating manner on the basis of an opinion adopted by the Consumer Protection Commission. Decisions on dispute resolution are adopted by HAKOM’s Director on the basis of the Commission’s opinion which satisfies the principle of cost effectiveness of procedures, and takes into account small value of disputes compared to disputes between operators the resolution of which is under the competence of HAKOM’s Council. Unfortunately, some operators initiate administrative disputes against these decisions thus unnecessarily burdening their own, HAKOM's and judicial resources because the court, as a rule, dismisses the complaints.

3.1.3 Preventive activities in user protection

Prevention through regular procedures

In order to ensure a high level of consumer protection, various preventive procedures which have proven to be effective and useful are carried out because they permit the elimination of irregularities when they first appear. Below is a list of more important preventive activities carried out by HAKOM during 2011:

- Ex ante and ex post control and alignment of terms and conditions of operators (terms and conditions of business and pricing systems) defining their business operations and special obligations concerning consumer protection in electronic communications; the terms and conditions for 12 biggest operators were reviewed, aligned with the new law, and approved.
- investigation and control of 420 requests for the existing and new prices of packages and service packages and promotional services of operators;
- operators' inquiries for expert opinion and interpretation of legislation were processed,
- questions from the media and various associations related to concrete questions of users were processed,
- the education of users by means of websites containing instructions and possibility to submit requests (see *Users' complaints though HAKOM's website*).
- a brochure with instructions for the protection of children on the Internet on the occasion of Safer Internet Days in February 2011.
- the publishing of a brochure with instructions for users of services, that is a leaflet "INSTRUCTIONS AND ADVICE FOR USERS OF ELECTRONIC COMMUNICATIONS SERVICES", informing the users in detail about electronic communications services was published as an insert in daily newspapers entitled "Večernji list" on 1 July 2011.
- contact number for getting information about specific cases, that is, assistance and instructions on what and how to act in case of problems in use public communications services, the total of 2732 calls were received,

- regular (1-2 a month) participation in radio and TV shows where users may complain about problems encountered in the use of public communications services and where they can get the necessary advice and instructions, HAKOM participates on a regular basis in the following TV shows "We are all consumers" on HRT2, "Live in Croatia" on HTV1, "RTL Today" and "An ounce of prevention is worth a pound of cure" on radio “Sljeme”.
- actively participates in the work of other state institutions on projects concerning user/consumer protection (MELE's round table on consumer protection, participation in the work of the National Consumer Protection Council).

Prevention through inspection

It was noticed in the past two years that new products are appearing on the market of public communications services, in particular in the group of special tariff services, and these new services are often barely legal. Considering the new legal procedures for preventive action and implementing measures as well as a systematic definition of permitted and prohibited services in legislation, inspection allows the termination of provision of such a service and quick alignment procedures. In this manner, the number of complaints decreases because the number of “deceived” customers is lower and initiated disputes may be resolved more quickly on the basis of an inspector’s general decision. In order to continue the good practice, two expert supervisions were initiated in 2011 against operators of special tariff services. This kind of practice will gain in importance in the upcoming period.

It must be emphasised that in 2011 operators also reacted to requests for comments on individual services and aligned them/or positively resolved complaints without formal expert supervision.

3.2 Protection of users of postal services

Pursuant to the provisions of the PSA, HAKOM's competence also includes the protection of rights of users of postal services and the resolution of disputes between users and providers of postal services thus offering a more effective and more quality mechanism for the protection of rights of users of postal services. In accordance with the provisions of the PSA, a user of postal services may submit a written complaint to a provider of postal services if a postal item was not delivered to the recipient, or was delivered with delay, or was not provided, or was not provided in its entirety or if the contents of the postal item were damaged or alienated. In case of dispute between users and providers of postal services in relation to the resolution of a complaint, a user may, before initiating proceedings before the competent court or before initiating some other out-of-court proceedings, submit the request for dispute resolution to HAKOM.

HAKOM resolves disputes on the basis of a final decision adopted on the basis of an opinion of the Consumer Protection Commission. HAKOM's decisions in disputes between users and providers of services are final and may not be appealed but an administrative dispute may be initiated before the High Administrative Court of the RoC.

Pursuant to the provisions of the ECA, there are certain differences in relation to the resolution of disputes with users and operators. Decisions on the resolution of disputes between users and providers of postal services used to be adopted by the HAKOM's Council until June 2011, that is, until the entry into force of amendments to the PSA. It was then aligned with the provisions of the PSA and the adoption of decisions fell under the competence of HAKOM's Director. Besides, the provisions of the PSA identify HAKOM as a second instance body in the resolution of user's complaints, and the user may address the regulator after having received a reply from the service provider. The ECA prescribes that a user is entitled to file a complaint to the operator's Consumer Complaints Commission, and, after that, to HAKOM as the third instance in the complaints resolution procedure.

In 2011, HAKOM received 32 requests for dispute resolution between users and providers of postal services. All submitted requests refer to the public operator HP- Hrvatska pošta d.d. Out of the total of 32 received requests, 31 were resolved, and no administrative disputes were initiated before the Administrative Court against HAKOM's decisions (4 proceedings were suspended, 25 requests were rejected, 1 was dismissed, 1 accepted).

In relation to types of complaints, 17 referred to non-provided contracted services, that is, lost items of correspondence, 3 complaints referred to non-provision of the service in its entirety and 2 complaints were submitted due to delayed delivery. A total of 10 requests were submitted due to damage or loss of contents of an item of correspondence.

3.3 Protection of children

As part of its competences, HAKOM pays special attention to protection of children. Therefore, with a view to protecting children against abuse that might arise in relation to value added services, the following have been introduced:

- special numbers for services for adults (064 xxx xxx), which are prohibited to children,
- special numbers for children services (069 xxx xxx),
- spending limit for the use of children services (HRK 50.00),

and the following duties prescribed for operators:

- record and exchange data on numbers and addresses the contents of which are not intended for children,
- ensure the monitoring of traffic habits of subscribers and notification when they exceed the prescribed limit,
- introduce the barring of calls towards a certain number or a group of numbers when the limit agreed with the user has been exceeded,
- regularly notify users about all possibilities for barring which are available to them.

In order to achieve a high level of protection of children in use of information and communication technologies, HAKOM participated in Safer Internet Days on 5 February 2011 and for that purpose, it prepared a brochure intended for children and parents and on its website, it published a text providing basic instructions to children and parents about internet use in about protection of children against basic dangers in general (www.hakom.hr).

With a view to promoting safer internet use, network technologies and mobile phones, the e-mail address zastita-djece@hakom.hr was published for reporting illegal and inappropriate contents and services. Furthermore, during guest appearances in radio and TV shows intended for consumers special emphasis is placed on the protection of children.

3.4 Access to services by persons with special needs

In accordance with European practice and the announced new guidelines for the regulation of this area, HAKOM has already created a foundation in the existing legislation to ensure equality in access to and use of electronic communications services and for implementing a high level of special protection of disabled persons.
Operators must, among other things:

- ensure appropriate access to its services and appropriate equipment for such access which are specifically adjusted to needs of individual groups of persons with difficulties in verbal, visual and motoric communication,
- ensure access to and communication with customer service adjusted to special needs of individual groups of disabled persons.

In 2011, HAKOM launched an advisory mechanism gathering representatives of associations of disabled persons, of the operators and of HAKOM. The purpose of the advisory mechanism is to establish to what extent disabled persons are ensured equal availability of services, to define the necessary improvements and to supervise the implementation of agreed measures for the improvement of equal availability of services. The first activity of the advisory mechanism referred to ensuring a satisfactory level of education and training of operator's staff for providing the necessary information to disabled persons. The above-mentioned activity included the gathering of information from operators about the number of employees adequately trained for dealing with disabled persons, and a lecture by the "Touch" association about the manner of communication with deaf blind persons.

4 HAKOM's ORGANISATIONAL CAPACITY

4.1 e-Agency

The introduction of the element of e-business into everyday HAKOM's activities has been in progress since the national regulatory was established, but a systematic and planned development of IT platforms and software started in 2008 when the e-Agency project was launched. E-Agency is a comprehensive project for the improvement of HAKOM’s activities through application of information and communication technology thus making HAKOM’s work more user oriented. E-Agency also includes continuous adjustment of processing and technological action framework with a view to achieving more efficiency, optimum use of funds and a more quality provision of available services, all on the basis of transparency, collaboration and participation of all interested parties on the markets of postal services and electronic communications.

Considering the increased interest of citizens for e-services, HAKOM continued managing e-Agency projects in 2011 with a special emphasis on business processes by using web-oriented services. In addition to e-applications intended for external users, HAKOM has also sped up the internal processes by introducing new IT solutions and platforms. The introduced tools that permit efficient cooperation on projects and communication with end users show that employees are now able to complete several tasks within a shorter period of time and of a higher quality.

The infrastructure was replaced or upgraded in terms of the processing and storage capacity of the server, visualisation platform, platform for data storage and software updating. The solution for digital signatures and decoding of documents enabling identification, authorisation and protection of communication was applied to all employees. The main rules for decoding and refreshing access data, encoding information and remote access and remote control of devices were defined in order to apply the existing safety requirements and protection of business data. A major intervention was the replacement of an entire six-year old platform of the Central Database of Ported numbers in fixed and mobile communications networks. The planned relocation of HAKOM's offices required the preparation of the data centre and the evaluation of telecommunications needs of all business premises. Taking into account the use of the premises, HAKOM's experts have prepared solutions for air-conditioning, power and structural cabling of the premises.

The background information systems have been upgraded pursuant to the requirements form the amended legislation and for the purpose of adjustment to the business processes by means of upgrading the Enterprise Resource Planning (ERP), Document Management System (DMS) and the Human Resources Management System (HRM). The Enterprise Resource Planning system was upgraded to version NAV 2009 in order to open up integration possibilities through defined web services. HAKOM also monitors business performance which is why the statistical module of the Document Management System has also been put into operation and it enables the monitoring of the management process and of the resolution of cases. In addition to pre-defined reports, a tool for detailed analysis was also implemented to discover problematic points and illogical processes.

E-Agency is best represented through a simple and modern portal with numerous web applications such as Public consultation, e-Complaints, e-Portability, e-Licenses, e-Market, e-

Advice, e-Procurement, e-Careers. The following e-applications have been developed on HAKOM's website:

- e-Vessels - the process of electronic submission of requests and granting of licences for devices using the RF spectrum on vessels; A web oriented application which integrates the functionality of a portal, Enterprise Resource Planning and Document Management System.
- e-Licences- overview of granted general and individual licences for use of the RF spectrum and licences for approved radio and telecommunications terminal equipment with a possibility for browsing according to several criteria,
- e-Procurement - provides an overview of all of HAKOM's procurement cases with the possibility to download tender documentation,
- e-Complaints – an application allowing a user, after registration, to file a complaint electronically and follow the status of the complaint
- e-Certificates - a solution within the Document Management System ensuring automated grating of the right-of-way certificate to infrastructure operators. It comprises the submission of the request, preparation of the certificate and its presentation on the portal,
- e-Portability - this application has been most used and it is used by users to follow the status of number porting and receive information about the current network, all in real time, all synchronized with the central number portability database;
- e-Market - application that allows the collection of information on the situation on the market, It is carried out electronically with the authorisation of users from a remote location by means of a web service or a web portal. The application enables flexible analysis of market developments,
- e-Operator - the application which supports the management of data on electronic communications operators. The central register of operators has been established as well as the database of the addressing and numbering space, the interface for entry of the necessary data by operators and HAKOM's employees has been made and data processing has been automated by means of software integration with other business systems used in the process. Interaction between the agency and electronic communications operators has been significantly improved.
- e-Careers - the application for online completion of forms for applications for employment at HAKOM. The solution was created on the website itself and offers the possibility for the publication of vacancies, enables prompt responses upon receipt of applications and browsing on the basis of several criteria.

All e-applications have been realised on the basis of the principle of a unique application which is momentarily activated on the basis of user account parameters.

The Document Management System is used by all of HAKOM's employees in everyday work. Business processes have been optimised and documented. Internal procedures have been additionally automated by means of own knowledge and standard office tools.

The platform for cooperation between employees has been launched and it comprises an organized portal with complete and updated documentation necessary in everyday work. Within the internal portal, there are also applications for automation of internal processes in the form of travel orders and bills, as well as for public procurement processes in HAKOM.

E-Agency resulted from the ICT strategy of the Republic of Croatia and is a part of the e-business development strategy in the RoC. One of the tasks that need to be solved is connecting the regulatory authorities with the related ministries and agencies, which is why we participated in the concept of development of a concept of electronic exchange of documents and information in office management. The E-Agency programme is based on integrated information system oriented in the first place on the web approach through the agency-citizens and agency-economy communication channels.

We have increased the number of web services in 2011. In addition to static forms, we have introduced simple and intuitive forms that are at the disposal of end users. E-Operator and e-Vessels projects have enabled the implementation of a concept of open system integration with the opening of transaction interfaces in order to ensure automation of processes from one end to another. The above-mentioned two projects confirmed the usefulness of the approach in which an internet portal offers the entire service through e-applications leading the user in an intuitive manner through the process of receiving a licence or the necessary approvals. The monitoring of the progress of activities and resolution of requests is very important for the transparency of procedures and assessment of the regulatory authority's efficiency. The user goes through all activities in a single visit, while the system makes sure that all departments competent for the resolution of the request are included.

Activities and software solutions of e-Agency have been recognised by postal and electronic communications regulatory authorities in the region, which is why we have participated in workshops, conferences and coordination meetings with representatives from Macedonia, Montenegro and Albania, as part of international cooperation, and solutions which were implemented in HAKOM, were presented at international gatherings. Particularly interesting solutions are e-Operator, e-Vessels, Indicator System, e-Market, and the Central Database of Ported Numbers and the methodology for management and optimisation of business processes.

HAKOM does not have the necessary human resources to implement the e-Agency project by itself which is why it focused on the definition of architecture and specification of an individual application or system, and on the testing of functionality and training of users of applications. The applications and systems themselves are bought ready-to-use by HAKOM or some national companies are engaged in their development. There were no employments for the e-Agency jobs in 2011.

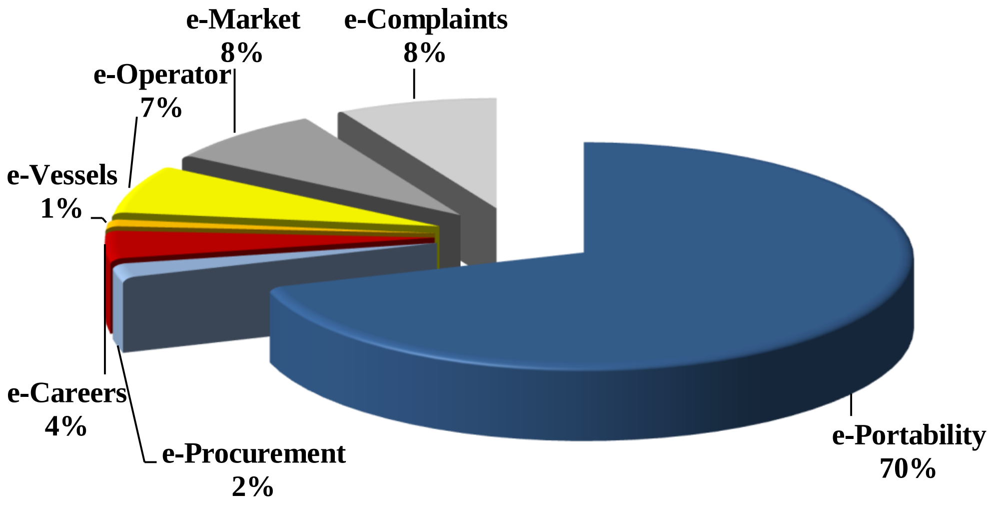


Figure 4.1. Overview of use of e-applications

Table 4.1. Example of results of introduction of e-applications

e-application	**Before**			**After**		
	min.	**average**	**max.**	**min.**	**average**	**max.**
e-Vessels	15 days	37 days	41 day	2 days	2 days	10 days
e-Operator	11 days	15 days	22 days	2 days	3 days	5 days
e-Travel orders	3 days	5 days	9 days	2 hours	8 hours	3 days

Table 4.2. Visits to HAKOM's website

Country	**Number of visits**	**Average number of visited web pages**	**Average time spent on a page**
Croatia	264096	4.55	0:04:02
Bosnia and Herzegovina	5120	3.34	00:02:23
Serbia	3192	5.21	00:03:59
Germany	1652	5.37	00:03:20
Latvia	1464	4.19	00:03:17
Slovenia	1324	5.15	00:04:00
USA	1320	3.65	00:02:48
Great Britain	1312	4.75	00:03:43
Austria	1084	5.26	00:03:44

4.2 Assistance programme

On 28 July 2011, HAKOM received an approval from the Croatian Competition Agency to award state aid in the form of subsidies for the development of broadband networks in accordance with HAKOM's Programme for Internet and Broadband Development in Areas of Special State Concern, Highland Areas and on the Islands in accordance with Measure 4 of the Implementation Programme of the Strategy for Broadband Development in the Republic of Croatia 2012 to 2013.

The objective and purpose of subsidies is the achievement of a balanced regional development, faster development of broadband, and connecting of target groups such as educational, health care and public institutions to the broadband network thus creating a broadband ecosystem. In 2011, locations were defined with representatives of a target group of users (CARNET, the Croatian Institute for Health Insurance, and the Croatian Fire fighting Association) were it was necessary to ensure broadband access in areas of special state concern, highland areas and on the islands. A public tender for state aid for broadband development was published with the definition of tender documentation and criteria for the allocation of subsidies, everything in compliance with the CCA's decision. A public invitation for proposals for software applications and services that will encourage faster development of areas of special state concern, highland areas and the islands was published at the same time. The objective of a public invitation is to collect ideas for software applications and services supporting the development of the economy and quality of live in the mentioned areas, that is, supporting the development of agriculture, tourism, health, education etc.

The broadband ecosystem comprises the entire chain of broadband Internet access, which includes infrastructure for broadband access, broadband-based applications and services, and the necessary equipment for the realization of services and for use of Internet access.

4.3 Development of competences

Since human resources are the most important capital of every organization, HAKOM is investing into their competences and their skills, which results in quality regulation of the market of electronic communications and postal services. In that sense, HAKOM continued encouraging the climate of life-long learning in 2011 because employees are the key instigators of each process in an organization.

Training programmes are carried out within the organization and outside the organization through cooperation with educational institutions, international bodies, postgraduate studies, research projects, seminars, conferences, participation in work groups, workshops and courses, the purpose of which is continuous development of staff competences. Therefore, it must be mentioned that HAKOM has continued cooperation with many international bodies in 2011 aimed at continuous upgrading of knowledge, exchange of experiences, and recognition of best practice and following of regulatory aspects in the world and in the EU. Furthermore, employees cooperate with operators, end users, different Croatian bodies and organizations. Since HAKOM operates in an extremely turbulent business environment, where new technological changes happen day after day, it is natural that employees are constantly faced with new challenges requiring continuous training and upgrading of knowledge and skills.

For that reason, it must be mentioned that HAKOM's management is aware of the importance of investing into education of its employees because they represent the biggest value of the organization, which is why all necessary actions are undertaken to organize continuous training aimed at the achievement and further strengthening of HAKOM's administrative capacity.

HAKOM's strategic objectives include the improvement of regulation of the electronic communications and postal services market, supporting the growth of investments and innovations into the electronic communications and postal services market, ensuring efficient use of limited resources, speeding-up the growth of broadband products and services, ensuring an affordable offer of communications and postal services, protection and information of users, building of an efficient and comprehensive information system, the definition and implementation of efficient processes the acquisition of multidisciplinary competences for market regulation.

Considering all of the above, it is understandable why an interdisciplinary approach to the resolution of market problems is required, which implies cooperation and knowledge of engineers, economists, lawyers, and similar professions and their continuous training.

For that reason, HAKOM continued in 2011 with previously initiated projects for the development of regulatory competences, such as the "Looking to the Future" project and continuous training and learning of foreign languages.

4.3.1 Multidisciplinary postgraduate studies

For the second year in the row, HAKOM's employees have been enrolling in the university interdisciplinary postgraduate study "R*egulation of Electronic Communications Market*", which was initiated by HAKOM in cooperation with the Faculty of Electrical Engineering and

Computing (hereinafter: EEC), the Faculty of Economics and Business (hereinafter: FEB) and the Zagreb Law School.

The requirements for enrolling into the postgraduate course include a degree in economics, electrical engineering, law or computing or the completion of some other four year undergraduate course which brings 300 ECTS points.
The duration of the course is one academic year (two semesters), and participants will acquire the following competences: a) economic, legal and technological aspects of market regulation; and b) ability to apply the regulatory framework and for the resolution of regulatory problems. Upon completion of the course, students will acquire the title of a Specialist in electronic communications market regulation.

By the end of 2011, a total of 18 of HAKOM's employees have enrolled in the course. The second generation of students are six employees who have fulfilled the requirements of an internal competition, including a topics for the thesis which is of interest for HAKOM and criteria of the course.

4.3.2 “Looking to the Future” project

In the last quarter of 2010, HAKOM initiated the "Looking to the Future" project in cooperation with the FEE in Zagreb, the Faculty of Electrical Engineering, Mechanical Engineering and Shipbuilding in Split, the Faculty of Electrical Engineering in Osijek and Faculty of Business and Economics in Zagreb. Other participants in the electronic communications sector and industry (operators, equipment producers) have been invited to participate in the project in order to create a forum for the resolution of challenges that will be faced by this area in the upcoming period. Until this moment, the decision on becoming involved in the project was adopted by Ericsson Nikola Tesla and Nokia Siemens Networks. The concept of the project helps HAKOM and other participants on the market of electronic communications to take into account new services and the manner of regulation thereof.

General topics that were covered in 2011 include the following:

A. Development of electronic communications sector up to 2016 Technological, business and market development stimuli.
B. Next Generation Network, architecture and technology of access and core networks. Internet, migration towards IP networks, IMS (IP Multimedia Subsystem) Relation between network operators and service providers in NGN. Development of NGN in the world and in Europe, migration strategies, plans of Croatian network operators.
C. Theoretic postulates of NGN regulation. The analysis of regulatory aspects of introduction and development of next generation networks (competition, social needs, limited resources, net neutrality), problems in the initial stage and the transitional period. Value chain of contents, services and networks, market participants and their relations, sustainable competition.
D. Policy for building elements of communications infrastructure as part of international, national, regional and local infrastructure projects, in particular in the energy and transport sectors. Influence of the electronic communications sectors on overall social and economic development. Situation in the world, Europe and the RoC.

In addition to general topics, the project also has specific topics agreed upon at the beginning of every year. The specific topics that were covered in 2011 include the following:

- Digital dividend. RF spectrum allocation and assignment plan (790 - 862 MHz) Coordination with other countries, technical problems of interference with analogue broadcasting.
- Broadband access in fixed and mobile network. Current and future access technologies in the RoC, evolution strategies, dynamics of penetration. Physical infrastructure of the access network (ducts, cables, cabinets, distribution frames, antennae poles, power supply), building, use and ownership.
- Development of Internet and services IP-based services, in particular VoIP (Voice over IP) and IPTV (IP television), network neutrality and alignment of solutions at the global level.

The first results of the project have already been published on HAKOM's website and are available to all interested participants on the electronic communications market. The results were presented at the Softcom conference in Hvar during a special session.

4.3.3 Foreign languages

Like in the previous years, HAKOM organized foreign language courses in 2011, or, more precisely, of English and French language courses for its workers. The need to improve language skills arises from the need for further training and development in linguistic areas necessary to follow the development of professional aspects of HAKOM’s activities and for participation in international regulatory organisations, at conferences and for reading literature in HAKOM’s field of competence. For that reason, in 2011, HAKOM put foreign language learning high on the list of priorities for the training of its employees.

In 2011, a total of 49 employees participated in foreign language courses, which were organized during two semesters in six groups for English language learners and in one group for French language learners.

4.4 Publicity of work

Pursuant to the provisions of the ECA and the Right of Access to Information Act, HAKOM fulfilled its obligations concerning the publicity of work in the following ways in 2011.

They regularly published on its website the following:

a) all adopted decisions and other administrative acts, and all judgements of the Administrative Court of the Republic of Croatia;
b) Pursuant to Article 22 of the ECA, 37 public consultations were organized on regulations adopted by HAKOM under its competence, and on proposals of regulatory measures;
c) public consultations on important issues which are not covered by formal procedures were carried out, such as consultations on network neutrality;
d) available databases on registers were regularly updated and made available;

e) statistical data on markets of electronic communications and postal services were published regularly;,
f) all requests based on the Right of Access to Information Act, a total of five in 2011, were resolved

In addition, HAKOM publishes information on important decisions, judgements and regulations on the electronic communications and postal services markets. HAKOM's representatives participate in radio and TV shows intended for informing the public about important issues in the electronic communications and postal services markets.

And finally, in addition to the obligation laid down in the Right of Access to Information Act, HAKOM replies to all questions submitted by users through its website. The number of questions in 2011 amounted to 1075.

4.5 Judicial proceedings

HAKOM's judicial proceedings are administrative proceedings initiated against HAKOM's final decisions and misdemeanour proceedings initiated by HAKOM against legal and natural persons violating the provisions of the ECA. HAKOM is also in charge of enforcement proceedings against legal and natural persons for non-payment of fees.

Administrative disputes

Pursuant to the provisions of the Act on Amendments to the ECA, all HAKOM's decisions are final in the administrative procedure and may not be appealed. They may be disputed in an administrative dispute before the Administrative Court of the Republic of Croatia, and, starting 1 January 2012, in proceedings before the High Administrative Court of the Republic of Croatia.

A total of 65 administrative proceedings have been initiated against HAKOM in 2011.

In 2011, the Administrative Court adopted 97 judgements in administrative disputes initiated against HAKOM's decisions out of which 19 judgements refer to disputes initiated in 2011.

Out of 97 cases, decisions were confirmed in 92 cases, and in 5 cases, HAKOM's decisions were annulled.

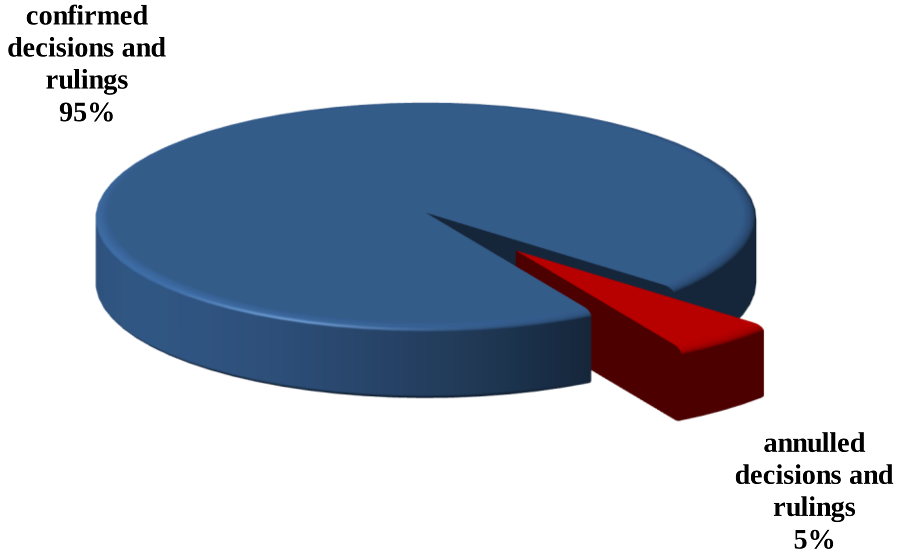


Figure 4.2. The result of Administrative Court's judgements in cases against HAKOM

The analysis of the submitted complaints reveals that the majority of them refers to decisions adopted in the complaint resolution procedure between operators and end users, as many as 35.

Generally speaking, the majority of complaints against HAKOM's decisions were submitted by Hrvatski Telekom d.d., a total of 33.

There is a positive trend in the work of the Administrative Court in relation to HAKOM's decisions in 2011 because the number of HAKOM's cases that were resolved by the court exceed the number of newly received complaints. In addition, almost a third of all cases initiated in 2011 were resolved in that same year. The above-mentioned data are very encouraging and show that cases older than 2 years could be completely resolved during 2012. Bearing in mind the fact that amendments to the ECA envisage exclusive competence of the High Administrative Court starting from 1 January 2012, it is justified to expect that the majority of cases will be finished within several months up to a year at the most. In this manner, legal security on the market of electronic communications will be significantly improved, which is one of the important preconditions for further development of this market.

Misdemeanour proceedings

In accordance with its legally prescribed authority, HAKOM issued in 2010 a total of 25 misdemeanour orders and submitted 15 motions.

In 2011, pursuant to amendments to the ECA, HAKOM completely took over the tasks of inspection supervision over its implementation. A total of 70 misdemeanour cases initiated by the inspection service of the former Ministry of the Sea, Transport and Infrastructure were taken over by HAKOM.

All misdemeanour proceedings are currently in first instance proceedings before competent misdemeanour courts.

In relation to misdemeanour proceedings initiated in the previous years, one final guilty verdict was adopted in 2011, and one non-final guilty verdict.

Enforcement proceedings

A total of 94 enforcement cases were instigated against various companies: Nexcom, Wimax telekom, Quaestel, Novi-net, Dubrovnik telekom, DJ Crikvenica, Radio Trogir, Međimurje donat, Mea media, Radio Salona, Janus, Rapsodija, Radio Virovitica, Radio 052, Zagorska sportska mreža, Kl-eurodom, DFFŽ, Brzo srebro, Radio brod, Radio plus, Radio Biokovo, Zum distribucija, DTR, Kult radio, Informativni centar Bjelovar, Ultravox, Bond 007, Mijor, 007 Miletić, TV Primorja i Gorskog kotara, Reful radio, Gradski radio, Dina petrokemija, Kanal ri, HOC Bjelolasica, Zaštita zadravec, Ceste zadarske županije, Mainfram, RIG-TSG, DI&MB, Radio Cibona, Infanti, Ross, Arting, E-radio, Primatel, Nautic radio, Dioki, Lulic, Primorski radio, Foša 7, Mosor radio, Metronet, Optima, Voiceco, Rapsodija, Iluzija, Rama dom, Agroing, Tele sat, V&V, Ranbit, Info granđa, Softnet, Net conc, Tora, Synektik, Ipsilon, Fenice, Elitvox. The claimed amount totalled HRK 8 million.

4.6 Cooperation

4.6.1 International cooperation

With a view to promoting efficient regulation of the market of electronic communications and postal services, the RF spectrum management and numbering resources, and of HAKOM as an active and modern regulator in the network of European regulators in relation to the application of the regulatory framework and market development, HAKOM continued in 2011 with active participation in the work of EC's working groups (COCOM, BEREC, ERGP, IRG; RSPG) and in the work of ITU and CEPT working groups on the electronic communications market and CERP and UPU working groups on the postal services market.

Although HAKOM has observer status in the work of BEREC *(Body of European Regulators of Electronic Communications)* that is, it is not entitled to vote when decisions are adopted, which is a prerogative of EU Member States, HAKOM's experts participate in the work of all BEREC's working groups and project teams in all areas important for the regulation of the electronic communications market. Furthermore, HAKOM participated in 2011 in the drafting of several documents within working groups in which it participates and it has proven itself as an important team member and a relevant and distinguished factor in their creation.
Participation in the work of work groups is important because it enables the gaining of experiences in activities related to cooperation with the European Commission which will be very useful after accession to the EU when HAKOM becomes a full member of BEREC with all rights and obligations.

As part of international cooperation, HAKOM also actively participates in the work of the CEE Regional Working Group on issues on digital divided at the regional level. In addition to Croatia, this group includes the following countries: Albania, Bosnia and Herzegovina, Greece, Hungary, Macedonia, Moldavia, Montenegro, Romania, Serbia, Slovenia and Turkey. Basic information about the current situation with the digital dividend and further group activities may be seen at the link http://www.ceeregionalworkinggroup.net.
In 2011, HAKOM successfully organized three meetings at the level of CEPT groups, including for ECC, WGFM PT 45 and WGFM PT 22.

Considering the importance of international cooperation, in particular with direct Croatian neighbours, HAKOM pays special attention to contacts with representatives of other countries and institutions. With a view to resolving other concrete issues and reaching an agreement in the RF management, a number of multilateral and bilateral agreements with regulators from the countries in the region was organized. With a view to strengthening international cooperation, several workshops have been organized where HAKOM presented its achievements in the area of market regulation and RF spectrum management so that countries from the region could use these experiences for more efficient application in their markets and thus contribute to better functioning of the market in general.
Furthermore, as part of professional training, HAKOM's employees participated in several gatherings, trainings and workshops abroad.

4.6.2 Domestic cooperation

In 2011, HAKOM cooperated on a daily basis with actors on the market of electronic communications and postal services by resolving their requests, by organising public consultation on decisions which are important for market development, joint meetings, working groups and seminars.

HAKOM regularly cooperated with state bodies and ministries on joint activities, among which, particular emphasis must be placed on cooperation with the:

- MSTI
- Ministry of Foreign Affairs and European Integration,
- Ministry of Defence,
- Ministry of Culture,
- Central Office for E-Croatia,
- Agency for Electronic Media,
- Croatian Competition Agency (CCA),

HAKOM actively cooperated with units of local and regional self-government within a view to promoting investments into broadband access and building of an integrated infrastructure.

In 2011, HAKOM's employees have actively participated in several gatherings, including at round tables and workshops and by presenting their activities.

4.7 ISO 9001 quality management system

During 2011, HAKOM's activities related to the quality management system were focused on further improvements of the efficiency of the system and on increasing user satisfaction by complying with their requests. HAKOM's quality management system is in the stage of implementation of the prepared and approved documentation and it was adopted by employees in their everyday work.

In accordance with that, the second audit over HAKOM was carried out by the certification company Bureau Veritas pursuant to requirements of ISO 9001-2008. The results of the audit will be used as preparation for system recertification and for further improvement of the quality system expected in 2012.

Taking into account the fact that, in accordance with ISO 9001-2008, an organization has to aspire to continuously improving its business processes, HAKOM's activities related to quality system improvement focused in 2011 on further improvement of procedures and on the set-up and development of key objectives aimed towards quality improvement. Thus HAKOM continued working on the improvement of the document management system by introducing further optimizations and upgrades in compliance with requirements of HAKOM's key users.

In relation to HAKOM's quality objectives, it must be stressed that they arise from the quality policy which provides guidelines for organization, and objectives must follow these guidelines. However, due to external influences, such as consumer requests and market environment, business conditions frequently change, which is particularly obvious on fast-growing markets such as the electronic communications market, which is why ISO 9001 requires from the management structure to change both policy and objectives from time to time. The above-mentioned objectives must be measurable and their procedures created in such a manner to satisfy those objectives. Therefore, quality objectives result from HAKOM's Annual Activity Programme and HAKOM's Strategic and Operational Plan. In that sense, it must be stressed that, in the course of 2011, and in accordance with findings of the first audit, the existing practice of governing objectives and monitoring their fulfilment was re-examined and a standard form for planning and monitoring work was created. Efficiency indicators for HAKOM were elaborated as well as the manner of measuring objectives for the entire organization, which directly depend on objectives management on the level of an individual Department and on objectives management on the level of an individual employee. Pursuant to the above, forms for the monitoring of objectives have been improved and the following are being applied: Quarterly Staff Objectives, Quarterly Staff Report, Quarterly Department Objectives and Quarterly Department Report.

Furthermore, in the course of 2011, for the purpose of improvement of HAKOM's quality, new instructions for work have been created and the existing ones have been improved. The Instruction for Marking Electronic Documents has been improved and updated, and instructions for work of individual HAKOM's departments have been prepared with a view to achieving quicker, more efficient and more quality business operations.

Since quality is a never ending long-term process and it is based on continuous improvements, it must be pointed out that HAKOM's commitment to continuous improvement and efficiency is demonstrated through:

- efficiency in the fulfilment of HAKOM's mission and values;
- efficient management of financial and human resources;
- user satisfaction and satisfaction of all interested parties.

4.8 EU funds

In 2011, HAKOM continued implementing a project within I component of the IPA programme (IPA TAIB 2007) entitled "R**einforcement of Institutional and Administrative Capacity for Croatian Post and Electronic Communications Agency"** valid EUR 4,114,910.00 out of which EUR 853,877.50 is the amount of national co-financing. The project consists of two components for the procurement of equipment for the frequency monitoring radiolocation system and technical assistance for the reinforcement of HAKOM's institutional and administrative capacity.

Equipment procurement component

"Upgrade of Frequency Monitoring Radiolocation System"

One-year guarantee period for the procured equipment was completed in 2011, and, upon expiry of the guarantee, the final acceptance certificate was issued. The certificate was issued in July 2011 marking the completion of this stage of the project.

Technical assistance component

"Reinforcement of institutional and administrative capacity for HAKOM"

The implementation of this component of the project was completed in September 2011, which was marked by the presentation of project results on 14 September 2011, which also marked the completion of the project itself. The project was oriented towards the development of expert knowledge in HAKOM's scope of activities and towards the reinforcement operational capacity of its employees.

Funds earmarked for the technical assistance component amounting to EUR 699,400.00 were contracted as part of the IPA pre-accession programme for 2007. The project consisted of two subcomponents:

- Subcomponent I included the research of the broadband internet access market resulting in reports on the impact of EC regulations on NGN/NGA on the electronic communications market; the analysis of the so-called "top-down" HCA/FAC model was conducted and technical assistance was provided in the form of accounting separation.

- Subcomponent II, which was focused on improving HAKOM's administrative capacity, included the assessment of needs for training and professional training on a series of selected topics, including management skills, communications skills, presentation skills, government skills, critical thinking, crisis situations etc. As part of the above-mentioned project, HAKOM's employees went to study tours to the Netherlands and to Belgium and Ireland where they were able to learn about the manner of operation of the regulator and other institutions in the host country.

This project, as a successor of CARDS programme, provides support to HAKOM's operational capacity and ensures capacity for supervising the implementation of EU's a*cquis communautaire*.

The IPA 2009 Twinning light project "Support to HAKOM in the area of accounting separation of postal services"

The implementation of a project within the IPA 2009 Twinning light project "*Support to HAKOM in the area of accounting separation for postal services"* started in November 2011 in HAKOM. Funds amounting to EUR 191,609,40 were contracted for the implementation of this project, out of which 10 percent of national cofinancing amounts to EUR 19,160,94. The objective of the project "Support to HAKOM in the area of accounting separation of postal services" is to promote and maintain the operation of a liberalised postal sector in compliance with European Union directives in the postal services sector and to ensure the implementation of legislation and appropriate market regulation for the protection of users of postal services. The purpose of the project is to promote administrative and regulatory capacities of HAKOM in the area of accounting separation. One of the key results of this project is the "*Manual for Accounting Separation*", which will represent an additional regulatory act, and the main purpose of which is to support the implementation of the valid regulatory framework. The objective of this document is to define more precisely HAKOM and HP's obligations and lead to the publication of HAKOM's decision, following public consultation, that will contain all provisions that must be applied by HP to comply with regulatory obligations. The objective of this document, that is, of the laying down of more detailed and transparent accounting procedures, is to assist HP in the fulfilment of its regulatory obligations, and to assist HAKOM in the appropriate monitoring and supervision of such compliance. The expected duration of the project is nine months.

4.9 Bylaws

Implementing legislation[19]

Pursuant to the Act on Amendments to the ECA, HAKOM's Council adopted in 2011 amendments to the existing implementing legislation and new necessary implementing regulations:

1. The Ordinance on amendments to the Ordinance on conditions for the assignment and use of the radiofrequency spectrum OG No. 39/2011.
2. The Ordinance on amendments to the Ordinance on the manner and conditions for determining the zone of electronic communications infrastructure and associated facilities, the radio corridor safety zone and obligations of the investor of works or of the building OG. No. 39/2011.
3. The Ordinance on amendments to the Ordinance on the manner and conditions for the provision of electronic communications networks and services OG No. 55/2011.
4. The Ordinance on amendments to the Ordinance on number portability, OG No. 62/2011.
5. Ordinance on the manner of work of the Consumer Protection Commission, OG No. 124/2011.
6. The Ordinance on the payment of the fee for the carrying out of HAKOM's activities, OG No. 133/2011.
7. The Ordinance on the manner and conditions of access to and sharing of ECI and other associated facilities OG No. 136/2011.
8. The Ordinance on the certificate and fee for the right of way OG No. 152/2011.
9. The Ordinance on the manner and conditions for the provision of electronic communications networks and services OG No. 154/2011.

HAKOM's bylaws

With a view to improving HAKOM's performance and aligning it with the Act on amendments to the ECA, HAKOM's Council amended in 2011 the existing bylaws and adopted new bylaws.

Cases and documents

In 2011, a total of 21,727 cases were opened in HAKOM containing a total of 61,475 documents. Out of this number, 31,707 documents were received, and 29,786 are documents prepared by HAKOM.

Out of the total number of cases, 9,572 are administrative cases which consist of 28,948 documents.
A total of 19.987 cases were solved during the year, out of which 8,534 are administrative cases.

R&TT equipment and approvals for import and placing on the market: the total of 5,054 cases have been processed and 8,636 documents issued.

[19] Legal acts may be found at: http://www.hakom.hr/default.aspx?id=317.

Licences for use of the RF spectrum and certificates of compliance of radio stations

Table 4.3. Information about granted licences

Licences for use of the RF spectrum	**Issued**
Licences for use of the RF spectrum for a fixed radio station	1014
License for use of the RF spectrum in microwave link	878
Licences for use of the RF spectrum for a fixed radio station	433
Licence for use of the RF spectrum in satellite service	4
License for use of the RF spectrum in broadcasting	120
Licence for use of the RF spectrum in satellite service	249
Licence for CEPT amateur license	27
License for use of the RF spectrum on a vessel	958
License for use of the RF spectrum on an aircraft	36
License for use of the RF spectrum for digital television networks	1
TOTAL	**3720**

Table 4.4. Data on issued certificates of compliance of a radio station

Certificates of compliance of a radio station	**Issued**
Certificates of compliance of DVB-T radio station	37
Certificates of compliance of GMS/DCS/UMTS radio station	1470
TOTAL	**1507**

Building conditions, requirements for physical planning, technical inspection of a building and rights of way certificates

Table 4.5. Information about building conditions, physical planning, technical inspections and right-of-way certificates

Description	**Number of processed cases/issued documents**	
Conditions for building	6339 cases	6142 documents
Physical plans	441 case	762 documents
Technical inspections of buildings	842 calls	124 cases/227 documents
Right of way	1254 certificates	95548.69 m

4.10 Staff

HAKOM consists of the Council and of HAKOM's administrative service. HAKOM is governed by HAKOM's Council composed of seven members, including the President and Deputy President of the Council appointed and dismissed by the Croatian Parliament upon proposal of the Government of the Republic of Croatia. The administrative service carries out administrative and technical tasks and it is governed by a Director appointed by HAKOM's Council.

As illustrated it Table 4.5, HAKOM had 175 employees at the end of 2011. It must be mentioned here that the increase in the number of employees compared to 2010 resulted from the agreement between MSTI and HAKOM on the basis of which five employees of the MSTI were transferred to HAKOM on 10 October 2011 for the purposes of inspection supervision which was transferred under HAKOM's competence on the basis of the ECA.

Table 4.6. Number of people employed by HAKOM on 31/12/2011

Level of education	Number of employees	Number of employees in%
Ph.D.	4	2.29
M.Sc.	16	9.14
Bachelor's degree	104	59.43
College education	18	10.28
High school	33	18.86
TOTAL	**175**	100.00 %

Figure 4.3 shows the structure of employees according to level of education The figure shows that 81 percent of employees have university and college degrees. Furthermore, it must be stressed that the percentage includes nine percent of employees with postgraduate education in electrical engineering, transport, law or economics and two percent with doctoral degrees.

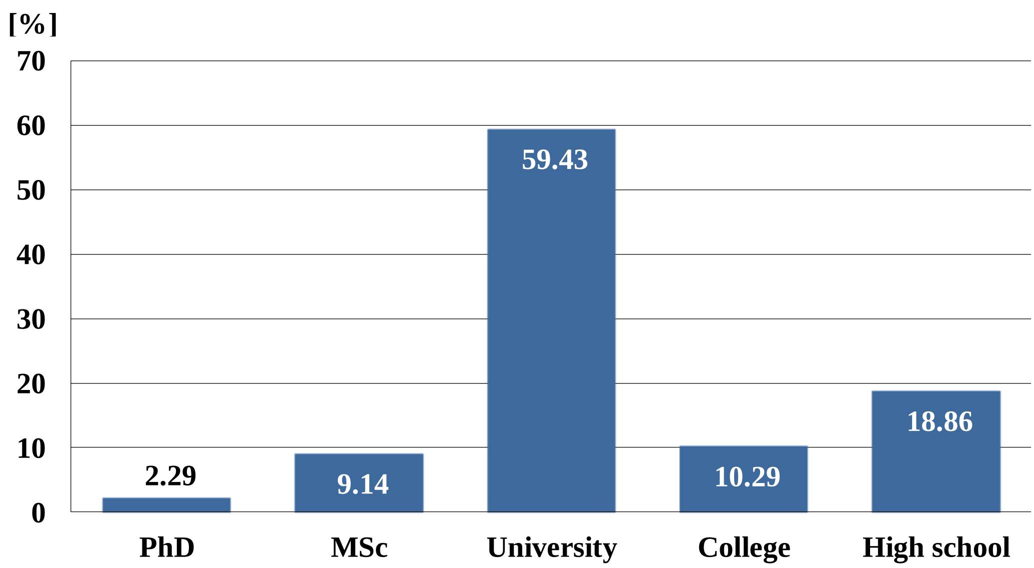


Figure 4.3. Structure of HAKOM's employees according to level of education

Figure 4.4. shows the percentage of employees per gender which clearly shows that special attention is paid to non-discrimination because 55 percent of employees are men, and 45 percent are women.

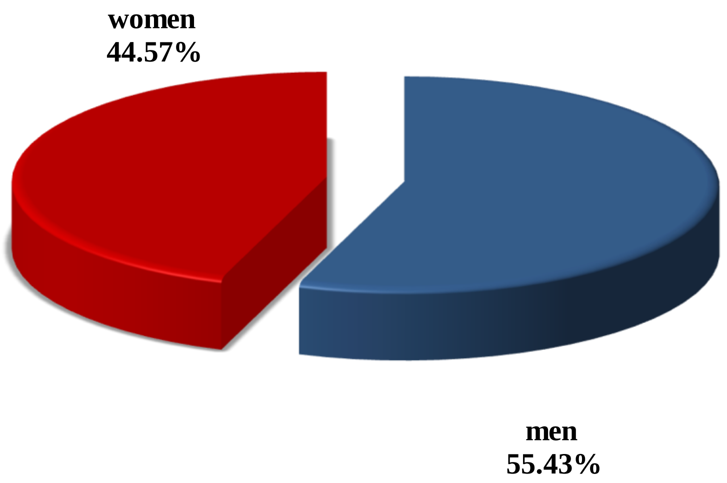


Figure 4.4. Structure of employees according to gender

As illustrated in Figure 4.5., in relation to age, it must be stressed that the prevalent age is between 30 and 40, that is, 47 percent of total HAKOM's staff.

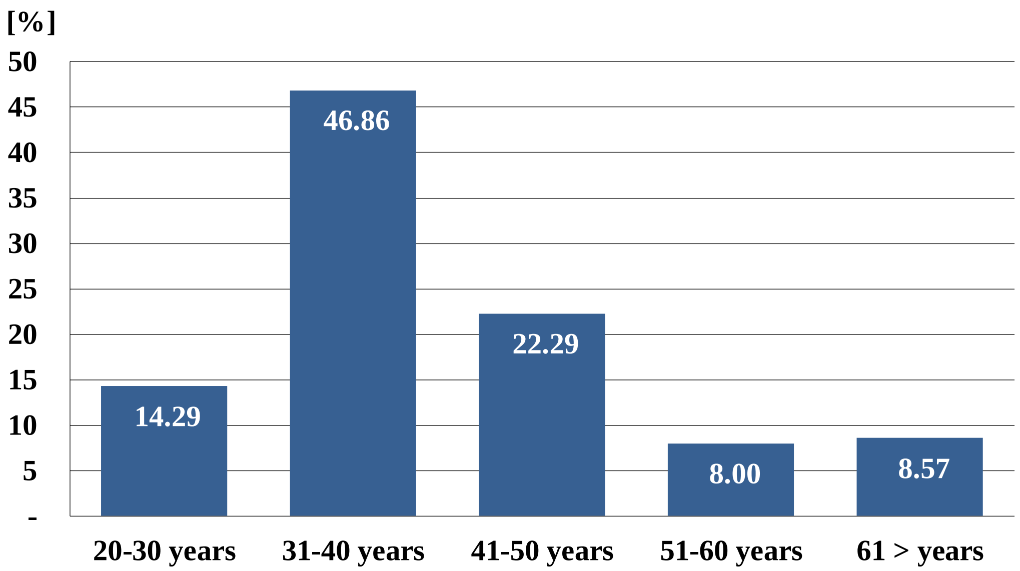


Figure 4.5. Structure of employees according to age

Figure 4.6. shows the structure of employees according to profession. Since HAKOM's main activity is the regulation of electronic communications and postal services markets, which requires engineering knowledge and skills, it is not surprising that electoral engineers make up 36 percent of staff, followed by economics who make 15 percent, lawyers with 14 percent, transport engineers with 13 percent, and 22 percent of staff with other professions. Since resolution of HAKOM's cases requires an interdisciplinary approach, which implies

cooperation between engineers, economists and lawyers, it is our opinion that the above-mentioned structure of employees according to professions is in compliance with the requirements of market regulation.

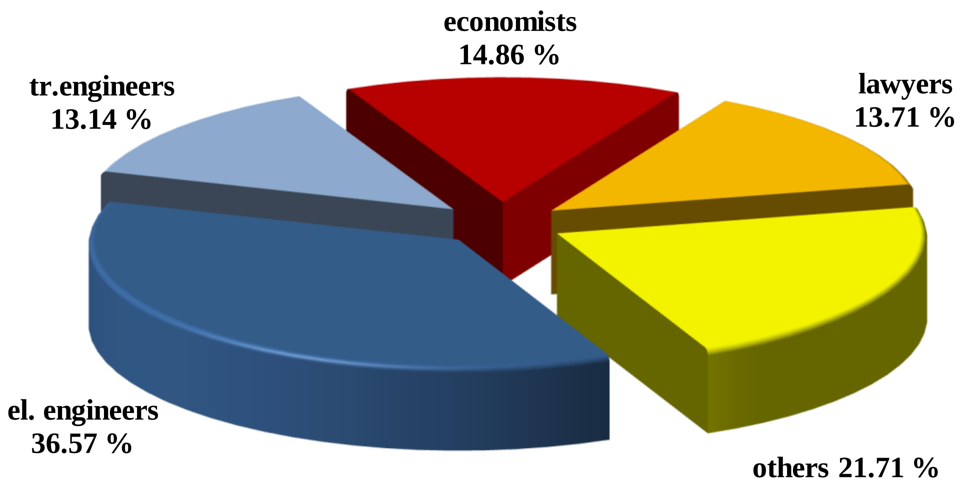


Figure 4.6. Structure of employees according to profession

Figure 4.7. illustrates the structure of employees per years of experience, which clearly shows that the highest percentage, that is, 34 percent of employees have 6 to 10 years of experience.

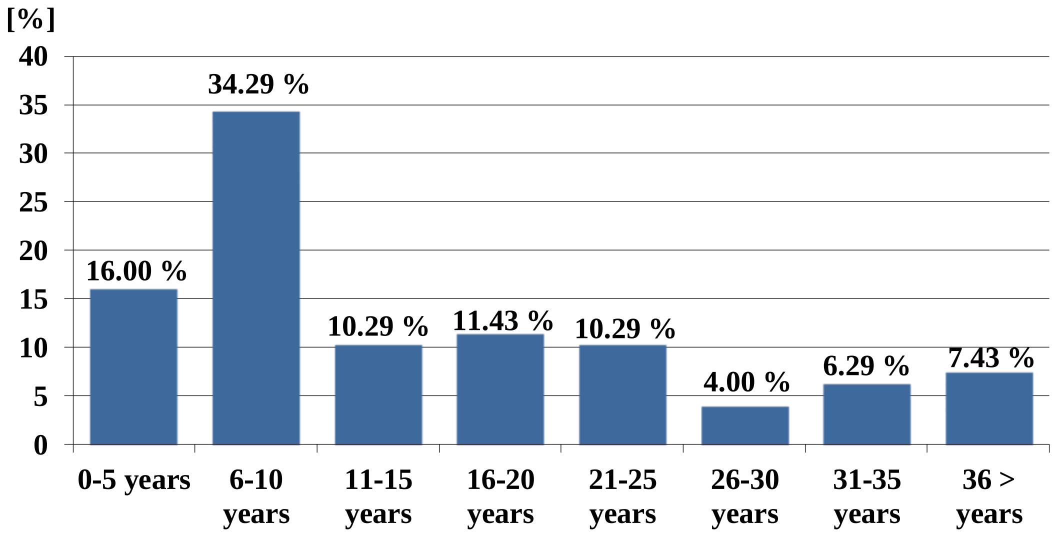


Figure 4.7. Structure of employees according to years of experience

5 FINANCIAL AND FINAL STATEMENT

5.1 Legislation

HAKOM applies legislation referring to non-profit organisations. The accounting of non-profit organisations is laid down by the Regulation on the accounting of non-profit organisations and it is based on generally accepted accounting principles of accuracy, authenticity, reliability and single recording of positions. Revenue and expenditure is shown according to the principle of occurrence of events regardless of collection or payment.

The ECA prescribes separate recording of accounting events related to electronic communications and postal services. Revenue, expenditure and business results for the electronic communications and postal services sectors are separated in the financial and final statements. The final statement consists of the analysis of revenue, expenditure and surplus revenue, the analysis of surplus of obtained funds, the balance sheet on 31/12/2011, the analysis of investments and analysis of revenue of the State Budget of the Republic of Croatia.

The ECA prescribes that HAKOM will transfer the surplus of funds in relation to the annual financial plan to the following calendar year.
The Ordinance on payment of fees for the carrying out of tasks by HAKOM prescribes the amount and manner of payment of fees to HAKOM.

The ECA prescribes that HAKOM issues invoices on behalf and for the account of the State Budget. State Budget funds are kept in the off balance sheet records per vendors and issued invoices.

5.2 Revenue

Funds for the carrying out of HAKOM's activities in 2011 were ensured in the following manner:

- for the electronic communications sector, on the basis of the approved HAKOM's annual financial plan from the fee for the use of addresses and numbers, fees for the use of the RF spectrum, fees for the carrying out of other HAKOM's tasks, fees for compliances, revenue from assets and revenue from applied and selected projects from pre-accession funds.
  Total revenue in the electronic communications sector for 2011 amounted to HRK 110,060,042.
- for the postal services sector, on the basis of the approved HAKOM's annual financial plan, as a percentage of the total annual gross revenue earned in the previous calendar year by providers of postal services and from revenue received on the basis of applied and selected projects from pre-accession funds.
  Total revenue in the electronic communications sector for 2011 amounted to HRK 5,365,142.

Table 5.1. Earned revenue in 2011 compared to the annual financial plan
(in HRK)

DESCRIPTION		Plan 2011	Realised in 2011	Index
1	Revenue from frequency fees	47,021,012	62,209,619	132
2	Revenue from fees for the carrying out of other HAKOM's activities	31,347,040	37,247,532	119
3	Revenue from fees for use of addresses and numbers	7,542,995	6,938,862	92
4	Revenue from annual fees for the carrying out of activities in the postal services sector	4,011,735	4,332,308	108
5	Revenue from EU pre-accession funds	2,600,000	2,234,548	86
6	Other revenue	900,000	2,462,315	276
TOTAL		**93.422.782**	**115.425.184**	**124**

Revenue from frequency fees

Revenue from frequency fees exceed by 32% percent the planned amounts.
During 2011, operators of mobile communications networks requested additional RF spectrum totalling 2x21.6 MHz in the 1800 MHz frequency band. In the planning of revenue for the following year, only the already allocated part of the spectrum is taken into account because it is not possible to plan with certainty whether additional spectrum will be allocated

and in which amount. Due to this unplanned allocation, the corresponding revenue has increased.

Furthermore, licence for use of the RF spectrum for the provision of the services of managing of two DTV electronic communications networks for MUX C and MUX E multiplexes in the territory of the RoC was granted in 2011, which could not have been predicted in advance.

RF spectrum management is the subject of Chapter 1.9.1 of the annual report.

Revenue from fees for the carrying out of other HAKOM's activities

The fee for the carrying out of other HAKOM's activities is expressed as a percentage of total annual gross revenue which was earned by operators in the previous calendar year for the provision of electronic communications networks and services on the market.

The total amount of revenue depends on the annual prescribed percentage, the number of providers of services and the total annual gross revenue. The amount of the percentage is decreased every year on the basis of the Ordinance on the payment of the fees for carrying out of HAKOM's tasks and

Table 5.2. Amounts of prescribed percentages (in percentages)

Year	2009	2010	2011	2012
Percentage	0.32 %	0.29 %	0.28 %	0.25 %

Revenue from fees for use of addresses and numbers

Revenue from fees for use of addresses and numbers is lower than planned.

In 2010 and 2011, operators of mobile and fixed networks noticed a disproportion between used and free numbers and in late 2010 and during 2011 they returned most of the numbers. Only HT returned over 1,000,000 numbers (partly fixed, a part of VAS services and other).

Addressing and numbering space management is the subject of Chapter 1.9.2 of the annual report.

Revenue from fees for the carrying out of activities in the postal services sector

Providers of postal services are obliged to pay the annual fee for the carrying out of HAKOM's activities in the postal services sector as a percentage of the total annual gross revenue earned from the provision of postal services in the previous calendar year. The calculation and the amount of the fee as well as the manner of payment are laid down in the Ordinance on payment of fees for the carrying out of tasks by HAKOM.

The total amount of revenue depends on the annual prescribed percentage, the number of providers of services and the total annual gross revenue. The amount of the percentage is decreased every year on the basis of the Ordinance on the payment of the fees for carrying out of HAKOM's tasks and the number of providers of services and the annual revenue are planned on the basis of results of the previous year.

Table 5.3. Amounts of prescribed percentages (in percentages)

Year	2010	2011	2012
Percentage	0.29 %	0.28 %	0.25 %

Postal services market is discussed in Chapter 2 of the annual report.

Revenue from EU pre-accession funds

Revenue from pre-accession funds is lower than planned because, in addition to the mentioned and realized projects, IPA CBC SEE Transnational cooperation programme is also planned. The planned project value for 2011 amounted to EUR 70,850. The project started in 2012.

The use of EU pre-accession funds is discussed in Chapter 4.8 of the annual report.

Table 5.4. Revenue from pre-accession funds (in HRK)

DESCRIPTION		**Realised in 2011**
1	Revenue from the technical assistance component "Strengthening of HAKOM's institutional and administrative capacity"	1,201,714
2	Revenue from the IPA 2009 project Twinning light "Support in the area of accounting separation of postal services"	1,032,834
TOTAL		**2.234.548**

Other revenue

Other revenue is planned amounting to HRK 900,000.00. The realization of this revenue is significantly higher than planned.

The realization of exceptionally high revenue from financial assets is achieved by term deposits of available funds.

Revenue from compliance was not planned in the total amount because it was expected that HAKOM's role would change and it would no longer participate in the assessment of compliance of R&TT equipment or grant approvals for import and/or placing of R&TT equipment on the market. The introduction of this change would deprive HAKOM of this revenue. This change was introduced with the entry into force of the Ordinance on radio equipment and telecommunications terminal equipment in March 2012.

Table 5.5. Other revenue (in HRK)

DESCRIPTION		Realised in 2011
1	Revenue from assets	1,156,108
2	Revenue from compliance	789,667
3	Revenue from damages and refunds	97,715
4	Revenue from sales of long-term assets	25,500
5	Revenue from payments in kind	309,369
6	Other unmentioned revenue	83,956
TOTAL		**2,462,315**

5.3 Expenditure

5.3.1 Total HAKOM's expenditure per sectors

HAKOM's total expenditure in 2011 amounted to HRK 103,317,325 out of which:

- HRK 81,743,355 refers to revenue in the electronic communications sector,
- HRK 5,275,658 refers to revenue in the postal services sector.
- HRK 16,298,312 refers to revenue for capital donations.

Out of the total expenditure for the **electronic communications sector,** HRK 41,264,687 refers to employee expenses, HRK 28,973,836 refers to material expenditure, HRK 11,330,563 refers to expenditure from depreciation, HRK 75,120 refers to financial expenditure, HRK 84,600 refers to current donations and HRK 14,550 refers to other expenditure.

Out of the total expenditure for the **postal services sector,** HRK 3,040,086 refers to employee expenses, HRK 2,213,356 refers to material expenditure, HRK 13,507 refers to expenditure from depreciation, HRK 3,102 refers to financial expenditure, HRK 5,400 refers to current donations and HRK 207 refers to other expenditure.

Capital donations represent expenditure for assistance for the development of infrastructure for broadband access for connecting central and regional schools on the islands and for the establishment of distance learning, as well as for the purposes of maintenance and repair of equipment and for procurement and maintenance of new equipment for the existing and new projects on the islands and in other geographically remote areas.

5.3.2 Total HAKOM's expenditure according to accounts from the account plan

Total e**mployee expenses** are at the planned level. The analysis of employee expenses shows increases under some items compared to the planned amounts in sections 4121 Other employee expenses and 4112 Payments in kind. Other salary expenditure has decreased proportionately to the increase in these items.

Other employee expenses include retirement bonuses, financial aid in case of death of a close family member, aid to women who have given birth and presents for employee's children on special occasions.

Total **material expenditure** is lower than total expenditure approved in HAKOM's 2011 annual financial plan in all subgroups. Material expenditure has only two accounts that exceed the planned amounts and these are 4212 Commuting expenses and 4263 Power. Commuting expenses depend on transportation costs, and power expenses depend on energy costs.

Out of the total material expenditure, HRK 4,904,555 refers to reimbursements to employees, HRK 15,334 refers to compensation of costs to members of representative and executive bodies, HRK 65,187 refers to compensations to external contractors, HRK 23,388,926 refers to expenditure for services, HRK 1,829,795 refers to expenditure for material and power, and HRK 983,395 refers to other unmentioned expenditure.

Depreciation expenditure is within the planned depreciation expenditure.

Financial expenditure is significantly higher than planned, and the increase results mostly from negative exchange rate differences.

Donations include current and capital donations. Current donations are at the planned level.

Capital donations do not represent expenditure related to the carrying out of regular HAKOM's activities and are not financed from HAKOM's regular revenue. Funds for the coverage of this expenditure are included under surplus funds. The surplus funds are discussed in the Chapter 5.6. These funds are on a separate giro-account increased by the regular interest rate on a vista funds.

In accordance with the Decision of the Government of the RoC of September 2011, the following were realized from the 2006 surplus funds:

- A total of 4,250,880 was spent on the development of infrastructure for broadband access for linking central and regional schools on the islands and the establishment of the distance learning system.
- A total of 11,986,501 was paid by HAKOM on the single account of the State Treasury for the benefit of the Croatian Academic and Research Network CARNet for the purpose of maintenance and repair of equipment on the islands and purchase and maintenance of new equipment for the existing and new projects on the islands and other geographically remote areas.

5.3.3 HAKOM’s expenditure compared to the annual financial plan

The Table below shows expenditure realized in comparison with HAKOM's annual financial plan in total and then separately for the electronic communications sector and separately for the postal services sector.

Table 5.6. HAKOM's expenditure in 2011 compared to the annual financial plan (in HRK)

Class	Sub-group	Section	TITLE	2011 PLAN	2011 ACTUAL .	INDEX
41			Employee expenses	44,305,190	44,304,773	100
	411		Salaries	36,281,600	35,588,696	98
		4111	Salaries for regular work	35,424,600	34,855,974	98
		4112	Payments in kind	700,000	726,617	104
		4113	Salaries for overtime work	157,000	6,105	4
	412		Other employee expenses	1,257,590	2,611,996	208
		4121	Other employee expenses	1,257,590	2,611,996	208
	413		Contributions on salaries	6,766,000	6,104,081	90
		4131	Health insurance cotnributions	5,879,000	5,534,696	94
		4132	Employment contributions	887,000	569,385	64
42			Material expenditure	36,574,000	31,187,192	85
	421		Reimbursements to employees	5,483,000	4,904,555	89
		4211	Business trips	2,221,000	2,212,122	100
		4212	Travel expenses	691,000	737,216	107
		4213	Professional training of emplyoees	2,571,000	1,955,217	76
	422		Compensations for memebers in commissions and similar	107,000	15,334	14
		4221	Compensations for members in commissions and similar	107,000	10,298	10
		4222	Compensation of business trip costs	-	5,036	-
	424		Compensations to other unemployed persons	110,000	65,187	59
		4241	Fees for carrying out activities	110,000	65,187	59
	425		Expenditure for services	26,903,000	23,388,926	87
		4251	Phone, mail and transportation services	1,596,000	1,506,825	94
		4252	Current and investment maintenance costs	2,838,000	2,164,550	76
		4253	Promotion and information costs	828,000	674,303	81
		4254	Utilities	831,000	764,172	92
		4255	Leases and rents	8,360,000	7,472,301	89
		4256	Health and veterinary services	383,000	379,680	99
		4257	Intellectual and personal services	6,635,000	5,811,933	88
		4258	Computer services	2,532,000	1,754,831	69
		4259	Other services	2,900,000	2,860,331	99

Table 5.6. HAKOM's expenditure in 2011 compared to the annual financial plan (in HRK)-continued

Class	Sub-group	Section	TITLE	2011 PLAN	2001 ACTUAL	INDEX
	426		Exenditure for material and power	2,127,000	1,829,795	86
		4261	Office material and other material expenditure	1,065,000	768,267	72
		4263	Power	863,000	892,031	103
		4264	Small inventory and car tires	199,000	169,497	85
	429		Other unmentioned material expenditure	1,844,000	983,395	53
		4291	Insurance premiums	1,411,000	713,845	51
		4292	Entertaining	152,000	134,091	88
		4293	Membership fees	226,000	131,616	58
		4295	Other unmentioned material expenditure	55,000	3,843	7
43			Depreciation expenditure	12,000,000	11,344,070	95
	431		Depreciation	12,000,000	11,344,070	95
		4311	Depreciation	12,000,000	11,344,070	95
44			Financial expenditure	77,000	78,222	102
	443		Other financial expenditure	77,000	78,222	102
		4431	Banking services and transactions	47,000	47,647	101
		4432	Negative exchange rate difference and currency clause	15,000	18,910	126
		4433	Penalty interest	3,000	2,084	69
		4434	Other unmentioned financial expenditure	12,000	9,581	80
45			Donations	67,835,425	16,388,312	24
	451		Current donations	90,000	90,000	100
		4511	Current donations	90,000	90,000	100
	452		Capital donations	67,745,425	16,298,312	24
		4521	Capital donations	67,745,425	16,298,312	24
46			Other expenditure	12,000	14,756	123
	461		Fines, penalties, damages	12,000	14,756	123
		4611	Damages to legal and natural persons	-	10,140	-
		4612	Penalties, storage charges and other	8,000	4,616	58
		4614	Contracted fines and other compensation for damage	4,000	0	-
			TOTAL	160,803,615	103,317,325	64

Table 5.7. Expenditure in electronic communications for HAKOM in 2011 compared to the annual financial plan (in HRK)

Class	Sub-group	Section	T I T L E	2011 PLAN	2011 REALIZATION	INDEX
41			Employee expenses	41,309,590	41,264,687	100
	411		Salaries	33,821,000	33,153,316	98
		4111	Salaries for regualar work	33,054,000	32,486,416	98
		4112	Payments in kind	620,000	660,795	107
		4113	Payments for overtime work	147,000	6,105	4
	412		Other employee expenses	1,162,590	2,424,648	209
		4121	Other employee expenses	1,162,590	2,424,648	209
	413		Contributions on salaries	6,326,000	5,686,723	90
		4131	Contributions for health insurance	5,499,000	5,156,275	94
		4132	Contributions for employment	827,000	530,448	64
42			Material expenditure	32,938,000	28,973,836	88
	421		Reinbursements to employees	5,161,000	4,600,991	89
		4211	Business trips	2,090,000	2,084,086	100
		4212	Commuting expenses	641,000	666,651	104
		4213	Professional training of staff	2.430.000	1.850.254	76
	422		Compensations for memebers in commissions and similar	100,000	15,334	15
		4221	Compensations for memebers in commissions and similar	100,000	10,298	10
		4222	Reimbursement of costs of business travel	0	5.036	-
	424		Compensations to other unemployed persons	100,000	65,187	65
		4241	Compensations for the carrying out of activities	100,000	65,187	65
	425		Expenditure for services	23,852,000	21,585,474	90
		4251	Phone, mail and transport services	1,500,000	1,437,206	96
		4252	Services of current and investment maintenance	2,718,000	2,152,461	79
		4253	Promotion and information services	768,000	643,570	84
		4254	Utilities	786,000	730,396	93
		4255	Leases and rents	7,900,000	7,153,570	91
		4256	Health and veterinary services	360,000	361,531	100
		4257	Intellectual and personal services	4,670,000	4,611,761	99
		4258	Computer services	2,400,000	1,696,807	71
		4259	Other services	2,750,000	2,798,172	102

Table 5.7. Expenditure in electronic communications for HAKOM in 2011 compared to the annual financial plan (in HRK) - continued

Class	Sub-group	Section	TITLE	2011 PLAN	2011 ACTUAL .	INDEX
	426		Expenditure for material and power	1,995,000	1,760,745	88
		4261	Office materials and other material expenditure	1,000,000	737,866	74
		4263	Power	808,000	853,382	106
		4264	Small inventory and car tires	187,000	169,497	91
	429		Other unmentioned material expenditure	1,730,000	946,105	55
		4291	Insurance premiums	1,326,000	692,468	52
		4292	Entertaining	142,000	124,212	87
		4293	Membership fees	212,000	125,714	59
		4295	Other unmentioned material expenditure	50,000	3,711	7
43			Depreciation expenditure	12,000,000	11,330,563	94
	431		Depreciation	12,000,000	11,330,563	94
		4311	Depreciation	12,000,000	11,330,563	94
44			Financial expenditure	69,000	75,120	109
	443		Other financial expendigure	69,000	75,120	109
		4431	Banking services and payment transactions	42,000	45,703	109
		4432	Negative exchange rate difference and currency clause	14,000	18,764	134
		4433	Penalty interest	2,000	1,985	99
		4434	Other unmentioned financial expenditure	11,000	8,668	79
45			Donations	67,830,025	16,382,912	24
	451		Current donations	84,600	84,600	100
		4511	Current donations	84,600	84,600	100
	452		Capital donations	67,745,425	16,298,312	24
		4521	Capital donations	67,745,425	16,298,312	24
46			Other expenditure	11,000	14,549	132
	461		Fines, panelties, damages	11,000	14,549	132
		4611	Compensations for damage to natural and legal persons	-	10,140	-
		4612	Penalties, storage charges and other	8,000	4,409	55
		4614	Contracted fines and other compensations for damage	3,000	0	-
			TOTAL	154,157,615	98,041,667	64

Table 5.8. Expenditure in postal services for HAKOM in 2011 compared to the annual financial plan (in HRK)

Class	Sub-group	Section	TITLE	2011 PLAN	2011 ACTUAL .	INDEX
41			Employee expenses	2,995,600	3,040,086	101
	411		Salaries	2,460,600	2,435,380	99
		4111	Salaries for regular work	2,370,600	2,369,558	100
		4112	Payments in kind	80,000	65,822	82
		4113	Payments for overtime work	10,000	0	-
	412		Other employee expenses	95,000	187,348	197
		4121	Other employee expenses	95,000	187,348	197
	413		Contributions on salaries	440,000	417,358	95
		4131	Health insurance contributions	380,000	378,421	100
		4132	Employment contributions	60,000	38,937	65
42			Material expenditure	3,636,000	2,213,356	61
	421		Reimbursements to employees	322,000	303,564	94
		4211	Business trips	131,000	128,036	98
		4212	Travel expenses	50,000	70,565	141
		4213	Professional training of employees	141,000	104,963	74
	422		Compensations for members of commissions and similar	7,000	0	-
		4221	Compensations for members of commissions and similar	7,000	0	-
	424		Compensations to other unemployed persons	10,000	0	-
		4241	Fees for the carrying out of activities	10,000	0	-
	425		Expenditure for services	3,051,000	1,803,452	59
		4251	Phone, mail and transport services	96,000	69,619	73
		4252	Services of current and investment maintenance	120,000	12,089	10
		4253	Promotion and information services	60,000	30,733	51
		4254	Utilities	45,000	33,776	75
		4255	Leases and rents	460,000	318,731	69
		4256	Health and veterinary services	23,000	18,149	79
		4257	Intellectual and personal services	1,965,000	1,200,172	61
		4258	Computer services	132,000	58,024	44
		4259	Other services	150,000	62,159	41

Table 5.8. Incurred expenditure in postal services for HAKOM in 2011 compared to the annual financial plan (in HRK) - continued

Class	Sub-group	Section	TITLE	2011 PLAN	2011 ACTUAL	INDEX
	426		Expenditures for material and power	132,000	69,050	52
		4261	Office material and other material expenditure	65,000	30,401	47
		4263	Power	55,000	38,649	70
		4264	Small inventory and car tires	12,000	0	-
	429		Other unmentioned material expenditure	114,000	37,290	33
		4291	Insurance premiums	85,000	21,377	25
		4292	Entertaining	10,000	9,879	99
		4293	Membership fees	14,000	5,902	42
		4295	Other unmentioned material expendigure	5,000	132	3
43			Depreciation expenditure	0	13,507	-
	431		Depreciation	0	13,507	-
		4311	Depreciation	0	13,507	-
44			Financial expenditure	8,000	3,102	39
	443		Other financial expenditure	8,000	3,102	39
		4431	Banking services and payment transactions	5,000	1,944	39
		4432	Negative exchange rate difference and currency clause	1,000	146	15
		4433	Penalty interest	1,000	99	10
		4434	Other unmentioned financial expenditure	1,000	913	91
45			Donations	5,400	5,400	100
	451		Current donations	5,400	5,400	100
		4511	Current donations	5,400	5,400	100
46			Other expenditure	1,000	207	21
	461		Fines, penalties and damages	1,000	207	21
		4612	Penalties, storage charges and other	0	207	-
		4614	Contracted fines and other compensations for damage	1,000	0	-
			TOTAL	6,646,000	5,275,658	79

5.4 Business performance results

Table 5.9. Results of HAKOM's business operations according to sectors (in HRK)

DESCRIPTION		Realisation 2011	Realisation electronic communications sector	Realisation podr. P.U.
	REVENUE	115,425,184	110,060,042	5,365,142
1	Revenue according to special regulations	110,728,321	106,396,013	4,332,308
2	Revenue from assets	1,156,108	1,156,108	0
3	Revenue from donations	2,234,548	1,201,714	1,032,834
4	Other revenue	1,306,207	1,306,207	0
	EXPENDITURE	103,317,325	98,041,667	5,275,658
1	Expenditure for employees	44,304,773	41,264,687	3,040,086
2	Material expenditure	31,187,192	28,973,836	2,213,356
3	Depreciation expenditure	11,344,070	11,330,563	13,507
4	Financial expenditure	78,222	75,120	3,102
5	Donations	16,388,312	16,382,912	5,400
	- current donations	90,000	84,600	5,400
	- capital donations	16,298,312	16,298,312	0
6	Other expenditure	14,756	14,549	207
	Business performance results	**12,107,859**	**12,018,375**	**89,484**

Total HAKOM's business performance results in 2011 amount to HRK 12,107,859. Results in the electronic communications sector amount to HRK 12,018,375, and in the postal services sector HRK 89,484.

The Regulation on the accounting of non-profit organizations prescribes that revenue and expenditure is shown on the basis of the **occurrence principle** regardless of collection or payment, and business performance results do not represent a surplus of **collected** funds transferred to the next year. The excess funds are discussed in the next Section.

5.5 Surplus collected funds

The ECA prescribes that HAKOM will transfer the surplus of funds in relation to the annual financial plan to the following calendar year.

Table 5.10. Surplus collected funds (in HRK)

DESCRIPTION	Amount
Funds on the regular bank account, time deposited funds and petty cash on 31/12/2011	84,096,753
Transferred surplus collected funds, planned and distributed on the basis of HAKOM's financial plan for 2012	50,615,000
Unallocated surplus collected funds	33,481,753

Total surplus collected funds from 2008 amounts to HRK 84,096,753. A total of HRK 50,615,000 from this amount were already transferred to 2012 on the basis of HAKOM's financial plan. The undistributed planned surplus amounts to HRK 33,481,753.

Undistributed surplus collected funds will be transferred to 2012 business year by amendments to 2012 Annual Financial Plan.

5.6 Surplus funds (legislation up to 2008)

The TA (Article 16, paragraph 4), which was in force until 1 July 2008, prescribed that: "The amount and the methods of allocating the surplus of funds referred to in paragraph 1 of this Article and which represents the difference between the revenues and expenditure of HAKOM at the end of the current budget year **shall be defined** by a decision passed by the Government of the Republic of Croatia within six months after the end of the current budget year."

Until 1 January 2008, the Regulation on accounting of non-profit organisations prescribed the accounting principle of recording economic events. Since revenue and expenditure was recorded in accordance with the accounting principle, business results, that is, revenue surplus/deficit represented the surplus of funds.

Table 5.11. State of surplus funds on 31/12/2011

Surplus funds per years	State of funds on 31/12/2011
Surplus funds from 2005	222,801
Surplus funds from 2006	3,152,736
Surplus funds from 2007	320,753
TOTAL	**3,696,290**

The surplus funds from 2005, 2006 and 2007 are kept on a separate giro-account. The balance on the separate giro-account as of 31 December 2011 amounts to HRK 4,286,858, that is, the amount of the balance of surplus funds increased by the regular interest rate on the giro account.

5.7 Balance sheet

5.7.1 Assets

Assets consist of resources controlled by HAKOM as a result of previous events and which are expected to give future benefits. Assets are observed by type, duration and function in the carrying out of activity, and, in the non-profit system, it is classified into:

- non-financial assets - class 0,
- financial assets - class 1.

Non-financial assets

As a result of investments into residential and business facilities, plants and equipment, vehicles, software and licences, HAKOM's non-financial assets increased by 17% in 2011 compared to 2010.

More significant modernization and completion of the control and measuring system was carried out in 2011, and the facility for the CMS Osijek was purchased. Four vehicles were purchased because leasing agreements for four other vehicles had expired. Three old measuring vehicles were replaced by new ones.

Modernization of programmes also took place through the e-Agency project discussed in Chapter 4.1 of the Annual Report.

For long-term assets procured by 1 January 2008 the value correction is charged to the source of financing, and for assets procured after 1 January 2009, the value of long-term assets is corrected and expressed as depreciation expenditure.

Facilities and business premises include business premises and other buildings. The value of business premises has increased by the amounts of the purchased facility for the CMC Osijek and the built CMS Veliki Bokolj.

HAKOM owns a control and measuring centre in Rijeka built in 2010 and the control and measuring centre in Osijek built in 2011. Other control and measuring centres are located in Zagreb and Split in rented business facilities.

The value of office equipment and furniture has increased by 19 percent compared to the year before. Computer equipment of HRK 1,022,576 in value was purchased in 2011, and HRK 190,296 was spent on other equipment and HRK 601,835 on office furniture.

Financial assets

Table 5.12. HAKOM’s financial assets (in HRK)

Calculation from the accounting plan	Balance as of 31/12/2010	Balance as of 31/12/2011	%
11 cash in bank and petty cash	73,287,233	79,833,611	109
12 deposits, guarantees	11,813,311	9,043,596	77
16 liabilities	22,900,590	20,422,388	89
TOTAL	**108,001,134**	**109,229,595**	**101**

Deposits and guarantees

A part of HAKOM's funds totalling HRK 7,900,000 was deposited as a time deposit on the account in the Croatian Postal Bank, HAKOM's bank. The putting of funds on the deposit account resulted in more favourable interest rates. The analysis established that the putting of HRK 7,900,000 onto deposit account may not influence current liquidity.

Receivables

Receivables include HAKOM's receivables for invoiced unpaid revenue.

Table 5.13. HAKOM’s receivables (in HRK)

Description of receivables	Amount
Total receivables on 31/12/2011	20,422,388
Receivables	17,158,085
Past due receivables	**3,264,303**

By efficient collection of receivables, HAKOM has been decreasing the total amount of receivables year after year. A total of 94 enforcement cases have been initiated in 2011. Enforcement proceedings are discussed in Chapter 4.5 of the Annual Report.

Table 5.14. HAKOM’s balance on 31/12/2011 (in HRK) (in HRK) - Non-financial assets

Account	DESCRIPTION	Balance on 01/01/2011	Balance on 01/12/2011	Index
	ASSETS	155,730,811	165,062,532	106
0	Non-financial assets	47,729,677	55,762,937	117
01	Non-produced long-term assets	3,915,641	3,432,896	88
011	Material assets – natural resources	93,397	93,397	100
0111	Land	93,397	93,397	100
012	Non-material assets	17,744,232	19,444,140	110
0123	Licences	1,476,589	2,297,752	156
0124	Other rights	9,006	9,006	100
0128	Other non-material assets	16,258,637	17,137,382	105
019	Value adjustment for non-produced long-term assets	13,921,988	16,104,641	116
02	Produced long-term assets	43,623,782	52,330,041	120
021	Buildings	7,119,346	12,712,650	179
0212	Business facilities	2,160,393	7,753,697	359
0213	Other buildings	4,958,953	4,958,953	100
022	Facilities and equipment	125,155,155	127,355,572	102
0221	Office equipment and furniture	8,915,671	10,621,686	119
0222	Communication equipment	242,970	588,530	242
0223	Maintenance and protection equipment	222,490	311,984	140
0225	Instruments, devices, machines	111,816,370	111,337,962	100
0227	Devices, machines and equipment for other uses	3,957,654	4,495,410	114
023	Means of transport	20,766,608	23,145,230	111
0232	Other means of transport	20,766,608	23,145,230	111
024	Books, works of art and other valuables	28,174	28,174	100
0244	Other unmentioned valuables	28,174	28,174	100
026	Non-material produced assets	17,867,091	22,371,941	125
0261	Investments into computer software	17,867,091	22,371,941	125
029	Value adjustment for produced long-term assets	127,312,592	133.283.526	105
03	Precious metals and other stored valuables	0	0	-
04	Small inventory	0	0	-
042	Small inventory in use	479,548	600,542	125
049	Value adjustment for small inventory	479,548	600,542	125
05	Non-financial assets in preparation	190,254	0	0
051	Buildings in preparation	190,254	0	0
06	Produced short-term assets	0	0	-

Table 5.14. HAKOM's balance on 31/12/2011 (in HRK) (in HRK) - Financial assets - continued

	DESCRIPTION	Balance on 01/01/2012	Balance on 01/13/2012	Index
1	Financial assets	108,001,134	109,299,595	101
11	Money in bank and petty cash	73,287,233	79,833,611	109
111	Money in bank	73,279,462	79,827,472	109
1111	Money in accounts of domestic business banks	73,279,462	79,827,472	109
113	Petty cash	7,771	6,139	79
12	Deposits, advance payments and receivables from employees for overpaid taxes and other	11,813,311	9,043,596	77
121	Deposits in banks and other financial institutions	7,900,000	8,550,000	108
1211	Deposits in domestic banks and other financial institutions	7,900,000	8,550,000	108
122	Advance payments	3,590,000	0	0
123	Receivables from employees	516	136	26
129	Other receivables	322,795	493,460	153
1291	Receivables for refundable fees	23,905	32,919	138
1293	Receivables for advance payments	298,890	393,930	132
1294	Other unmentioned receivables	0	66,611	-
13	Loans	0	0	-
14	Securities	0	0	-
15	Stocks and shares in the capital	0	0	-
16	Receivables for revenue	22,900,590	20,422,388	89
163	Receivables for revenue according to special regulations	22,452,028	19,757,409	88
164	Receivables for revenue from assets	448,562	664,979	148
165	Other unmentioned receivables	0	0	-
169	Value adjustment for receivables	0	0	-
19	Future expenditure and collection of unmatured revenue	0	0	-
191	Future expenditure	0	0	-
192	Collection of unmatured revenue	0	0	-

Table 5.14. HAKOM's balance on 31/12/2011 (in HRK) (in HRK) - Liabilities and own sources - continued

Account from Plan	DESCRIPTION	Balance on 01/01/2012	Balance on 31/12/2012	Index
	LIABILITIES AND OWN SOURCES	155,730,811	165,062,551	106
2	Liabilities	50,210,655	49,756,456	99
24	Liabilities for expenditure	4,994,704	5,673,090	114
241	Liabilities for employees	3,455,863	4,248,527	123
2411	Liabilities for salaries – net	1,782,988	1,946,195	109
2414	Liabilities for taxes and surtax on revenue from salaries	527,492	633,014	120
2415	Liabilities for contributions from salaries	583,710	650,022	111
2416	Liabilities for contributions on salaries	499,072	556,699	112
2417	Other liabilities for employees	62,601	462,597	739
242	Liabilities for material expenditure	1,538,841	1,424,563	93
2421	Remunerations to employees	0	63,981	-
2422	Compensations to members of representative and executive bodies, commissions and the similar	612	0	0
2424	Compensations to other unemployed persons	37,650	0	0
2425	Liabilities towards domestic suppliers	1,500,579	1,360,582	91
25	Liabilities for securities	0	0	-
26	Liabilities for loans and leases	0	0	-
29	Deferred payments of expenditure and future revenue	45,215,951	44,083,366	97
292	Collected future revenue	45,215,951	44,083,366	97
2921	Prepaid revenue	41,201	49,281	120
2922	Deferred recognition of revenue	45,174,750	44,034,085	97
5	Own sources	105,520,156	115,306,095	109
51	Own sources	8,077,996	5,756,076	71
511	Own sources	8,077,996	5,756,057	71
5221	Surplus revenue	97,442,160	109,550,019	112
5222	Revenue deficit	0	0	-
	OFF-BALANCE SHEET ITEMS			
61	Off-balance sheet items – assets	54,519,510	50,261,176	92
62	Off-balance sheet items - liabilities	54,519,510	50,261,176	92

5.7.2 Liabilities

On the account No. 24 there are Liabilities for expenditure referring to liabilities for salaries for December 2011, liabilities for unpaid retirement bonuses and liabilities towards suppliers. December salary, liabilities for retirement bonuses and liabilities towards suppliers were paid in January 2012.

Account 2922 Deferred recognition of revenue contains deferred revenue, that is, revenue for 2012. Since significant amount of fees are paid one year in advance (which does not correspond to a calendar year), the proportionate part of the fee represents income for the following business year. The amount of delayed revenue in 2011 amounts to HRK 44,034,085.

Account 51 Own sources shows the decrease in own sources resulting mostly from value corrections and disposal of assets procured in 2007 and before.

5.8 Investments

Table 5.15. Realisation of investments in 2011 (in HRK)

DESCRIPTION		2011 PLAN	2011 ACTUAL	INDEX
1.	Buildings	5,816,000	5,408,961	93
1.1.	Bulding of CMS Veliki Bokolj	2,000,000	1,873,465	94
1.2.	CMS Ozljak	116,000	0	-
1.3.	Purchase of premises for CMC Osijek	3,700,000	3,535,496	96
2.	Measuring and computing equipment	5,821,600	5,431,565	93
2.1.	Procurement of measuring equipment for CMS and HAKOM	4.591,600	4,408,989	96
2.1.1.	Modernisation of the measuring system	1,091,600	915,232	84
2.1.2.	Equipment for measuring vehicles	3,500,000	3,493,757	100
2.2.	Procurement of computer equipment	1,230,000	1,022,576	83
3.	Furniture	670,000	612,531	91
4.	Investments into computer software	7,558,800	5,326,013	70
5.	Means of transport	3,640,000	3,600,308	99
6.	Development projects and research studies	1,915,000	966,805	50
7.	Other equipment	385.000	353.087	92
TOTAL		25,806,400	21,699,269	84

5.9 State Budget revenue

The off-balance sheet records keep track of the assets of others. It records revenue of the State Budget of the RoC expressed as liabilities from users, which liabilities towards the budget of the RoC expressed at the same time. HAKOM only invoices these fees for the benefit of the State Budget, and amounts of the fees are paid directly into the State Budget. Off-balance sheet records are recorded analytically by buyers and issued invoices for the benefit of the budget.

The total of HRK 460,363,129 was invoiced in 2011 for the benefit of the State Budget. Out of the total invoiced amount, HRK 436,078,331 (94 percent) refers to fees for use of the radio frequency spectrum. Everything else refers to fees for authorisations and licences, addresses and numbers and legal penalty rates.

According to HAKOM’s records, a total of HRK 464,621,464 were paid into the State Budget in 2011. Old liabilities which are paid into HAKOM's account (2008 and before) and funds paid by mistake to HAKOM's account instead of to the State Budget are regularly paid by HAKOM into the State Budget. HAKOM paid the total of HRK 1,722,625 into the State Budget in 2011.

Table 5.16. Realisation of State Budget revenue in 2011 (in HRK)

DESCRIPTION	2010	2011
State Budget revenue	422,628,911	460,363,129
Paid into the State Budget	443,427,780	464,621,464

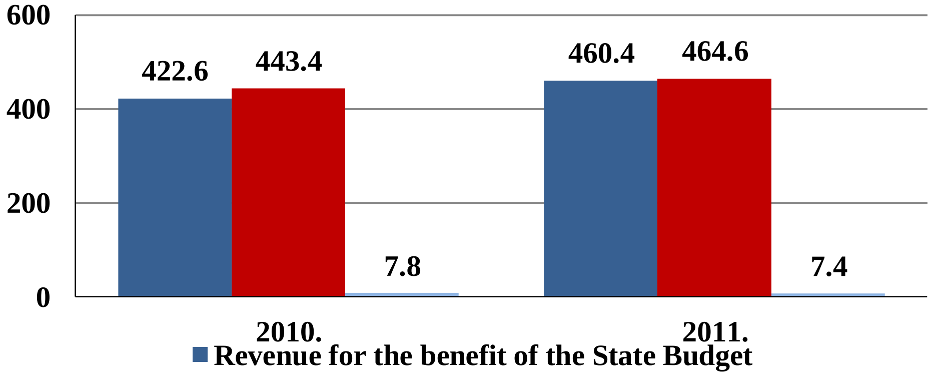


Figure 5.1. State Budget revenue, payments and receivables per years (in HRK million)

Table 5.17. Receivables - state budget (in HRK)

Description of receivables	Amount
Total SB receivables on 31/12/2011	50,261,176
SB receivables on 31/12/2011	42,900,619
Past due SB receivables on 31/12/2011	**7,360,557**

The fall in off-balance sheet records year after year indicates the improvement in the collection of State Budget revenue and decrease of receivables, which is evident from Table 5.17 where the amount paid into the State Budget exceeds the total amount of revenue (in 2010 and 2011)

A total of 94 enforcements were initiated in 2011 for all receivables that were not paid even 30 days after the issued dunning letter. The recovery of HRK 3,725,663 for the benefit of the State Budget was attempted through court and HRK 2,474,361 were collected.

5.10 Independent audit report

An independent audit firm performed the audit of financial statements of the Croatian Post and Electronic Communications Agency covering the balance as of 31 December 2011, and the revenue and expense accounts for the period from 1 January to 31 December 2011, and notes to financial statements. Financial statements were prepared in accordance with the prescribed legal form for non-profit organizations, and, according to the opinion of the audit company, present in a realistic and objective manner in all materially significant elements the financial position of the Agency as of 31 December 2011, as well as its business results in the year ending on that date.

Total assets of the Agency amounted on 31 December 2011 to HRK 165.1 million, out of which non-financial assets amounted to HRK 55.8 million and financial to HRK 109.3 million.

A total of HRK 21.7 million of non-financial assets were procured, and all investments were in compliance with amendments to the financial plan for 2011. The total value adjustment in 2011 amounted to HR 13.7 million while purchase value and value adjustment for depreciated non-financial assets amounted to HRK 5.5 million. A list of non-financial assets was published with the status as of 31 December 2011, and decisions were adopted pursuant to the proposal of the commission for listing assets recorded in the Agency's business books.

The most important item of financial assets is cash in bank and petty cash. Balances on domestic currency accounts and petty cash balance are based on credible documentation (except from business banks and a petty cash balance on 31 December 2011). Financial assets also include deposits, guarantees and advance payments, as well as receivables shown in accordance with the provisions of the Regulation on accounting of non-profit organizations. The audit company verified the shown receivables on the basis of written confirmations from buyers.

The balance sheet liabilities on 31 December 2011 consists of liabilities amounting to HRK 49.8 million, own sources amounting to HRK 5.9 million and business results amounting to HRK 109.5 million.
The most important item among liabilities is the postponed payment of expenditure and future revenue amounting to HRK 44.1 million. The company separated liabilities on revenues in the current and revenue in future periods.

The balance of own sources is a result of value adjustment and depreciation of assets purchased in 2007 and before.

Business results consist of cumulated surplus/deficit of revenue over expenditure in earlier years increased by the expressed surplus revenue in 2011 totalling HRK 12.1 million.
On 31 December 2011, the Agency has no significant contingent liabilities. In other words, according to the opinions of the lawyer and the Agency's, civil proceedings are in progress against the legal predecessor of the Agency (Croatian Telecommunications Agency) initiated by Televizija Jadran for the compensation of damage amounting to HRK 2.5 million. Two passive labour disputes are also pending. However, it is assessed that the mentioned disputes is very low the probability of losing.

SUMMARY

ELECTRONIC COMMUNICATIONS MARKET

Market Development

The Croatian electronic communications market was marked in 2011 by a strong development of broadband services and interactive TV, by a growing demand for internet content and data services and a continuous fall in revenue from phone services in fixed and mobile network in accordance with global trends. According to official data on the market of electronic communications, the electronic communications market in 2011 recorded a total fall in revenue amounting to 14 percent compared to 2010 (Figure 1.1.).

Data transfer has been gaining in importance, which is why revenue from internet access services is becoming more and more important in total revenue of the electronic communications market. Although the biggest drop in revenue was recorded in the part referring to phone services, the majority of revenue comes precisely from those services.

Investments

According to the most recent available data on investments in the EU countries, it is obvious that the Republic of Croatia is lagging behind with a little above EUR 4 per inhabitant compared to the EU average which amounted to 78.67 in 2009. Some of new EU Member States have been investing more into electronic communications per inhabitant.

Taking into account 2010 data available to HAKOM, a total of 1,952,753,210 was invested in that year, out of which 89.90 percent into telecommunications infrastructure and equipment. Therefore, it follows that investments per inhabitant amounted to nearly EUR 59 Euro in 2010, that is, EUR 53 if we take into account only investments into telecommunications infrastructure and equipment. A significant fall in investments was recorded in 2011, by a bit more than 19 percent, that is, a total of 1,569,713,261 was invested. Investments per inhabitant amounted in 2011 to EUR 47.70 that is, they were less than in the previous periods.

Telephone services in the fixed network

In accordance with market trends, both in Croatia and at the international level, total revenue from phone services in fixed network is demonstrating a downward trend, and, at the end of 2011, it amounted to less than HRK 3.4 billion. The fall in revenue results from increased competition and substitution of fixed public communications networks with mobile networks and increased use of broadband services. The operators will have to compensate for the continuing drop in revenue from telephone services in fixed network with broadband access, IPTV service, and telephone services in fixed network, as well as new applications and services.

The number of users of telephone services in the fixed public communications network in the Republic of Croatia has not changed. It is to be expected that the number of users of telephone services in the fixed public communications networks will continue to fall, which in the first place depends on the total number of private users of the fixed public communications network..

HT still has leading position in the provision of telephone services in the fixed communications network. On the other hand, the share of new operators (including Iskon Internet) at the end of 2011 has increased by more than 35 percent compared to the end of 2010 and in relation to the total number of users of telephone services in fixed network amounts to 42.22 percent (out of which the share of Iskon Internet amounts to 4.36 percent). A new manner of regulation which introduced in 2011 the first wholesale line rental (WLR) service, which created the conditions for the use of the carrier pre-selection services (CPS) - the most frequently used service, had a positive impact on the number of users of new operators,. In 2011 four operators signed WLR contracts and at the end of the year there were 111,908 active WRLs. Increased dynamics of this part of the market is also obvious from the increased number of ported numbers in 2011 by approximately 30 percent compared to the end of 2010. There is a noticeable migration of users from one operator to the other, which indicates that end users have greater selection.

For 2011, new operators were imposed the asymmetrical amount of 28 percent on the price of HT's service of regional call termination (in 2010 the asymmetry amounted to 42 percent) which means that new operators charged 0.076 HRK/min for the service of call termination in 2011.

Due to the specific nature of interconnection in Croatia from the beginning of liberalization, and in order to protect former investments of new operators on the market of electronic communications the price of national call origination and call termination for 2010 was not changed. However, year after year during the analysis, while prices of interconnection services are based on the reference value method, the interconnection services at national level should keep the same ratio in relation to the interconnection prices at regional level.. For that reason, since 1 January 2011, the amended price for national call origination amounting to 0.113 HRK/min has been applied, that is, for national call termination amounting to 0.114 HRK/min, which indicates a price decrease of 12.7 percent compared to 2010. The determination of a significant different in regional and national interconnection prices is aimed at protecting the existing investments of operators and encouraging new operators to invest into their own infrastructure, that is, to join in several points and come closer to the end user.

Interconnection prices that will be applied by operators for call origination and call termination in a public fixed communications network have been defined in 2011 and will apply from 1 January 2012. The amount of 0.042 HRK/min for the service of call origination and call termination at local level, and the new price amounting to 0.054 HRK/min for call origination, that is, the new price amounting to 0.062 HRK for call termination at regional level were calculated on the basis of a methodology defined during analyses of relevant markets.

For 2012, the new operators were imposed the asymmetrical amount of 14 percent on the price of the service of regional call termination which means that new operators will be charging 0.071 HRK/min for the service of call termination on their network. This contributed to further market development which resulted in more effective competition in relation to new investments by all operators active on the market and the creation of innovative services that will be offered at competitive prices.

In April 2011, HAKOM's Council adopted a decision on the identification of operators with significant market power and the imposition of regulatory obligations. It identified HT, together with its affiliated company Iskon, as the SMP operator on the market of access to the public communications network at a fixed location for private and business users. HT and Iskon are regarded as on business entity since Iskon is controlled by HT. Taking this into account, and on the basis of obstacles to competition that may appear on the market of access to the public communications network at a fixed location for private and business users, HAKOM's Council imposed appropriate regulatory obligations on HT and its affiliated company Iskon, as the operator with significant market power. The new manner of market regulation brought in 2011 a new wholesale service that will contribute to further development of effective competition.

In accordance with a decision adopted by the HAKOM's Council, HT published in July 2011 the Wholesale Line Rental Reference Offer elaborated in accordance with market needs and containing all the necessary time limits, conditions and tariffs. In the transitional period, pending the definition of cost-oriented prices, price control for the wholesale line rental service was based on the retail minus method. The calculation of percentage X for the reduction of the retail price by 15% was based on all costs incurred by HT that will no longer be incurred in the provision of the service of access to the public communications network at a fixed location when this service is provided to the end user by the operator of the wholesale line rental service.

In April 2011, HAKOM's Council adopted decision identifying the following relevant markets, *the market of publicly available telephone service in local and/or long-distance traffic provided at a fixed location for private users, and the market of publicly available telephone service in local and/or long-distance traffic provided at a fixed location for business users,* as susceptible to ex-ante regulation because the Three Criteria Test has been cumulatively met.

HAKOM's Council adopted in January 2011 a proposal of a decision establishing that the three criteria have not been cumulatively met on the r*elevant market of publicly available telephone service in international traffic provided at a fixed location for private users* and the r*elevant market of publicly available telephone service in international traffic provided at a fixed location for business users* because of which, the relevant markets are not susceptible to ex ante regulation. The final decision for both relevant markets was adopted in July 2011 and, in accordance with the adopted decision, HAKOM's Council revoked the previously imposed regulatory obligations on HT and ISKON in the part referring to international traffic for private and business users.

Considering the direct impact on the business operations of new operators, pursuant to the provisions of the TA, the issuing of consent for the prices of retail services concerning the publicly available service in the fixed network to SMP operators (HT and Iskon Internet) was continued up to 15 June, that is 20 July 2011 (when analysis of the market of publicly available telephone service in international, that is local and/or long-distance, traffic was finished by HAKOM Council's decision)-

Activities related to public procurement for consultancy services for the implementation of the project "Cost Models of Operators with Significant Market Power" were completed in the first half of 2011. The main objective of the project is to create, develop and apply cost models for the calculation of wholesale prices referred to in reference offers of SMP operators who have been imposed the obligation of price control and cost accounting. Public consultation presenting HAKOM's initial views on development and implementation of cost models was finished in 2011. The implementation of the project contribute to full transparency, that is, it will increase confidence into financial indicators of SMP operators thus having a positive impact of the development of the interconnection market.

Telephone services in the mobile network

Trends observed on the market of mobile communications in the previous years have remained the same in 2011. Taking into account the drop in prices, both in the world and in Croatia, 2011 was characterized by a decrease in revenue amounting to 15.18 percent as a result of decreased personal spending of users because of the crisis and new government taxes, including the 6 percent excise duty introduced in August 2009.

Due to changes in the methodology for the calculation of active users, the number of users of telephone services in the mobile network in the Republic of Croatia fell by 19.59 percent at the end of 2011 compared to the end of 2010 and it amounts to 116.65 percent. The current size represents a more realistic indicator than the previous.

The analysis of shares at the retail level shows that HT has managed to maintain its leading position in relation to all three segments, while the third operator, Tele2, increased its market share in relation to the same period in 2010. The comparison of OECD baskets in the RoC shows that they are lower than the EU average or the average of countries in the region aspiring to become EU Member States.

On the market of publicly available telephone service in mobile networks, that is, market on which HAKOM monitored the influence of the deregulation decision from 2009, and according to available data, there are currently around 180 different tariff packages for publicly available voice services in mobile networks, which shows that the decision on deregulation of the previously mentioned relevant market was justified, that is, that the market is effectively and sustainably competitive.

"Cost models of operators with significant market power" will also include a cost model for interconnection in the mobile network. Public consultation during which initial HAKOM's views on the development and implementation of cost models were presented and in which HAKOM proposed the modelling of mobile networks of all existing operators - HT, Vipnet and Tele 2 was finished in late 2011. The modelling of existing operators is usually accompanied by the modelling of a generic operator, that is, a hypothetical new operator on the Croatian market. Since symmetrical regulation is a long-term trend in the EU, the modelling of generic operator provide complementary results which are useful in the decision-making process.

Internet access service

As a result of fast development and use of broadband access, the share of the Internet access service in overall revenue has significantly grown. Revenue from data transfer has been growing year after year and has increased by 8 percent in 2011 compared to 2010. The number of broadband connections in fixed networks continues to grow in the RoC and it reached 861,276 connections at the end of 2011, which is 7 percent more than in the same period of the previous year. The increase occurred in almost all counties, which shows that operators have been offering their services in the entire territory of the RoC. However, although to a lesser extent compared to the previous period due to state incentives, the distribution of broadband connection per counties is still uneven, which also refers to the justification of selective incentives for the development of broadband Internet access.

Furthermore, HAKOM launched an assistance programme for the development of broadband in areas of special state concern, in highland areas and on the islands for target groups of users (schools, health care institutions and others). Investments as part of this programme will amount to HRK 100 million.

Broadband services market in the RoC still has a lot of potential for growth since 47.39 percent of Croatian households use broadband access in the fixed network. Compared to the end of 2010, the number of users of broadband access increased by 1.5 percent and, according to data for the end of 2011, the number of broadband Internet connections totalled 1,149,229, which means that penetration of broadband connections amounts to 26.78 percent in both fixed and mobile networks. Broadband internet access via technologies in fixed communications networks reached 20.07 penetration while mobile broadband access reached the penetration of 6.71 percent. However, this growth is not satisfactory. The analysis of development of broadband access in the Republic of Croatia shows that it is lagging behind in the number of broadband connections in relation to the average in EU Member States. The Republic of Croatia is among less developed European countries in relation to penetration of broadband termination points. Despite a significant increase in the number of users in the RoC, there are still significant possibilities for growth considering the penetration of 20.07 percent of broadband connections in the fixed public communications network compared to the average 27.16 in the EU Member States.

The majority of operators provide internet access via ADSL technology (Figure 1.24). The most prevailing access technology in relation to distribution of the number of access points for broadband Internet access in fixed communications network in the Republic of Croatia is ADSL, which is represented by 87.43 percent. Out of all other access technologies, the most widespread is access over cable networks with 8.31 percent.

Operators nowadays usually use service packages (2D, 3D, 4D), single access, that is, voice, data and TV in a single package. Since 2011, HAKOM has been gathering data about the number of packages of services and, according to the most recent data, the total number of users of packages amounted to 254,783 which is 29.58 percent of the total number of broadband connections via the fixed network.

HAKOM's activities in 2011 were primarily focused on monitoring the implementation of regulatory obligations imposed on the operator with significant market power (HT) in the previous years. In accordance with the law, HAKOM did not conduct the analysis of the wholesale network infrastructure access market, and the second round of analyses on this market is expected in 2012. Furthermore, the implementation of a project for the development of cost models for HT has initiated and this is the only regulatory aspect which is currently not fully aligned with the existing European practice.

The procedure for the amendment of "percentage X" for the service of wholesale broadband access (bitstream access) at IP level was initiated in August 2011. The procedure was initiated pursuant to the regulatory obligation of price control and cost accounting which was imposed on HT by

HAKOM Council's decision from July 2009 on the market of wholesale broadband access. It was established on the basis of examination of quarterly data from the electronic communications market that, since the adoption of the decision of HAKOM's Council from March 2010 on "percentage X" amounting to 40 percent and the application of the determined wholesale prices, a very small number of connections was established on the basis of the above-mentioned wholesale service with the majority of connections being established by HT's affiliated company Iskon Internet. Therefore, in HAKOM's opinion, it is possible that "percentage X"of 40 percent allows HT to abuse the position of significant market power. For that reason, HAKOM's council adopted in November 2011 a decision imposing on HT the obligation to apply "percentage X" amounting to 60 percent.

In June 2011, HT published the Wholesale Broadband Access Reference Offer amended with conditions and prices for FTTH technology. It was considered that the published conditions and prices for wholesale broadband access on the basis of FTTH technology are not in accordance with regulatory obligations imposed on HT. For that reason, the procedure for amendments to the Reference Offer was initiated in July 2011 in parts referring to conditions and prices for the service of wholesale broadband Internet access on the basis of FTTH technology. For the purpose of cost-effectiveness, the above-mentioned procedure was merged with the procedure for the amendment of conditions, deadlines and procedures for the realization of wholesale broadband access and the final decision on the merging of procedures was adopted on 15 December 2011. Pursuant to the provision of the above-mentioned Reference Offer, HT will able to provide services to its end users with access speed of 20Mbit/s and higher. It will be obliged to provide the same services to other operators on the market at the wholesale level. Wholesale conditions and prices in the reference offer are defined in such a manner that operators that will be using HT's optical access must also share the investment risk with HT. At the same time, wholesale prices are set at a level that allows other operators to be competitive in the provision of services via optical infrastructure.

Activities concerning the regulation of the retail broadband access market started in the second quarter of 2011. This market is not a part of the relevant EC Recommendation on relevant markets susceptible to ex ante regulation, which means that the Three Criteria Test must be implemented in order to assess the effectiveness of competition on the market in question.

HAKOM played an active role last year in the development of the S*trategy for Broadband Development in the Republic of Croatia 2012-2015,* as well as of the action plan for the implementation of the strategy for which the competent authority was MSTI. HAKOM prepared these documents in cooperation with MSTI and the Central Office for e-Croatia. The Strategy sets out strategic objectives and measures for the development of infrastructure and broadband access in the RoC in the period between 2012 to 2015, and it focuses on the economy, civil society, state administration bodies and other public bodies, research and educational institutions, that is, all participants in the market of electronic communications networks and services that are involved or will be involved in the development and promotion of an information society, not only through activities in the area of business management, but also education, health, public administration and other.

Expert supervision over HT was carried out in July 2011 due to a violation/non-compliance with the regulatory obligation of transparency that was imposed to this company on the wholesale broadband access market. The violation was established because HT, at the moment of publication of wholesale conditions for the provision of the service of independent broadband Internet access, requested from other operators the payment of additional costs, that is, costs which are not necessary for the provision of the service in question.

Television services

According to the delivered data for the end of 2011, out of an approximate number of 1.5 million TV households in RoC, less than 40 percent have been using the TV service from one of the cable, IPTV or satellite operators with a fee. The remaining 60 percent of households are currently watching TV exclusively via terrestrial transmitters. Revenue earned from CTV amounts to HRK 147.8 million, and from IPTV and SAT TV 306.8 million.

A large number of households are using exclusively digital terrestrial signal for the reception of TV contents. This shows very high potential of this market. In accordance with market trends, that is, with increasing demand for service packages, it is expected that the number of connections based on other technologies will grow because operators will, as a result of preferences of end users for service packages, start combining the Internet service with the TV service.

HAKOM published in the second half of 2011 a public tender for the granting of the licence for use of the RF spectrum for the provision of the service of management of two electronic communications networks of DTV (MUX C and MUX E multiplexes) in the territory of the RoC. A joint tender submitted by the companies HP Production d.o.o., Odašiljači i veze d.o.o. and Hrvatska pošta d.d. (hereinafter: HP) was selected and followed by the licence for use of the RF spectrum.

Network and line rental service

Total revenue from network and line rental service amounted to 446.686.207 at the end of 2011 which represents about 2 percent of total revenue on the electronic communications market (Figure 1.34). According to collected annual data about the situation on the electronic communications market, it was reduced by around 1.8 percent compared to 2010.

In the fourth quarter of 2011, HAKOM completed the market analysis procedure of leased lines markets which were regulated in accordance with the TA pending the completion of the above-mentioned analyses.

Other services

VAS services

In the course of 2011, preventive activities were carried out towards operators of special tariff services as a result of amendments to the ECA and the Ordinance on the manner and conditions for the provision of electronic communications networks and services. HAKOM familiarized the above-mentioned operators with their obligations, that is, with legal provisions referring to their area of competence. The manner of providing services available on the market was inspected during the year and, in case of suspicions of violation of the Act, inspection was initiated to remove deficiencies in the provision of services. A significant number of inspections was carried out during the year resulting in sanctions for special tariff operators for the purpose of protection of end users and also for the purpose of alignment of the existing and future special tariff services with provisions of the ECA and Ordinance on the manner and conditions for the provision of electronic communications networks and services.

Universal services

HAKOM's Council adopted in February 2011 a decision imposing on HT an obligation to apply a tariff system with a 47 percent discount to the standard monthly subscription for all Halo user packages provided by HT on the retail market to users who are receiving universal service iva FGSM and PCM/PGS, where there is a disparity from the value of the quality indicator for universal services and data transfer speed as opposed to other users who are receiving universal access via fixed electronic communications network, while prices of calls and other services which may be used to upgrade the user package, shall remain unchanged. In 2011, HAKOM paid special attention to the quality and availability of universal services.

Services of access to infrastructure and network and building of electronic communications infrastructure

In 2011, HAKOM continued following the sharing of existing cable ducts with special attention. The focus was on the gathering of information about infrastructure and associated facilities of infrastructure operators, on legalization, that is, on introducing some order into irregular sharing.

The majority of users of broadband access in the RoC are using xDSL (ADSL) transfer technology. For that reason, special attention in 2011 was dedicated to the analysis of parameters of the quality of service provided in this manner. DSLAM platforms of all operators permit the measuring of all key transfer parameters of a subscriber line within given periods of time. The statistical processing of collected data permits the assessment of quality of broadband access. The necessary measuring equipment (ADSL analyser) was procured.

Public consultations aimed at collecting comments, opinions and proposals from all interested parties in the Republic of Croatia took place in 2011, as part of monitoring of issues of network neutrality.

Management of limited resources

The RF spectrum and the addressing and numbering space are naturally limited resources, of interest for the RoC, and HAKOM has been entrusted with their management. The efficient management of new resources, which takes into account the principles of objectivity, transparency, non-discrimination and proportionality, is one of the most important tasks.

Radiofrequency spectrum

In early 2011, HAKOM included data about the allocation of the RF spectrum in the RoC into the European Frequency Information System (EFIS)-In this way, Croatia joined the majority of EU countries and it is now possible to check the allocation of a certain frequency band in the RoC on www.efis.dk and compare them with other countries that have their information in EFIS.

During preparations for the World Radiocommunications Conference 2012 (WRC12) in 2011, HAKOM carried out 2 public consultations about the European Common Proposals (ECP) for the work of the conference. During the consultation, HAKOM received comments of the Mobile Communications Association of Croatia which supports European positions. Therefore, HAKOM co-signed all proposals for WRC12 and will participate in the 2012 conference.

The amendments to the Ordinance on the manner and conditions for the allocation and use of the RF spectrum introduced a more simplified procedure for granting licences. This procedure was intended for short-range dedicated links where there is very limited possibility for interference between two systems. As opposed to the traditional licence granting procedure in which HAKOM lays down the technical parameters and plans the spectrum, interference analyses and international coordination, in simplified procedure for the granting of the licence, the user checks spectrum availability by himself, sets technical parameters for a certain link and applies for the desired part of the spectrum. In this manner, the entire procedure was sped up and made easier for the users and for HAKOM. In late 2011, after public consultation, the Allocation Plan was adopted for the 71-76 /81-86 GHz frequency band according to which this frequency band was included into simplified licence granting procedure. Complete implementation of this procedure requires adjusting the amounts of fees that will be charged in compliance with the Ordinance on the payment of fees for the right to use addresses, numbers and the RF spectrum, which is under the competence of the MSTI, since the currently valid fees are too high and do not encourage the use of this part of the spectrum.

During 2011, HAKOM received, as part of its regular activities, notifications of base stations, and, having verified data about those stations, it issued certificates of compliance for these stations. Special attention in the verification is dedicated to areas of special sensitivity (residential areas, schools, pre-school facilities, hospitals and the similar). Where necessary, additional measurements are carried out.

Upon request of the existing operators and on the basis of the appropriate allocation procedures laid down in the Allocation Table, additional RF spectrum was allocated in the 1800 MHz as follows: HT was allocated additional 2x11.6 MHz , which means that the total block in this frequency band amounts to 2x20 MHz, and VIpnet was allocated 2x10 MHz.

In relation to the freeing of the radio frequency spectrum in the 790-862 MHz band, the so-called digital dividend, which was envisaged for the introduction of mobile communications, that is, the termination of use of the above-mentioned frequency band for digital television, HAKOM carried out the re-planning of DVB-T networks in the 470-790 MHz frequency band in order to try to substitute for planned coverage that is being lost in the 790-862 MHz band (one to two coverages depending on the geographical area). For that purpose, the introduction of second generation digital terrestrial TV (DVB-T2) was considered and the Frequency Allocation Plan for the area of terrestrial broadcasting (148,5 kHz – 1492 MHz) was amended.

HAKOM has also started cooperation on an international project entitled "Digital Television in South Eastern Europe - SEE Digi.TV". The project was planned for the purpose of coordination of activities in the region of South Eastern Europe in relation to the introduction of DTV services and reduction of the digital divide between the countries of the region and in relation to EU Member States.

The seventh CMS - Veliki Bokolj on the island of Pašman - was built in 2011 for the purpose of measuring in the entire Northern Dalmatia and Central Adriatic. This measuring station is specific because it is receives power exclusively from renewable energy sources, that is, from the solar and wind energy. In late 2011, three old measuring vehicles were replaced by new vehicles.

The majority of HAKOM's activities in 2011, concerning spectrum control, focused on the measuring of interferences by the Republic of Italy in the territory of Istria and in the Croatian coastal area. In addition to these measurements, HAKOM also carried out systematic measurements aimed at protecting the RF spectrum as a naturally limited resource of interest for the RoC. Everyday measurements were carried out from all four control and measuring centres and six remote control and measuring stations, while the measuring vehicles carried out periodic measurements in areas where the immobile part of the measuring system does not provide satisfactory control. In addition to measurements aimed at protection or monitoring the spectrum, measurements for frequency planning and international coordination were also carried out, where necessary.

The RF spectrum monitoring also included the measurement of the level of electromagnetic fields for the purpose of efficient protection of human health from the influence of the electromagnetic field. A measuring campaign was conducted in locations selected on the basis of the criterion of the smallest distance of an areas of special sensitivity from base stations of public mobile communications networks. HAKOM regularly checked the measuring results submitted by legal persons authorized for the activities of measuring electromagnetic radiation. Measurements at 104 locations have shown that levels of electromagnetic fields are significantly below the prescribed levels at all locations where measurements were carried out.

Addressing and numbering space

The increase in the number of operators in the EU results in the increased demand for resources in the addressing and numbering space. Consequently, in 2011 HAKOM improved the management of a list of the allocated addresses and numbers by offering the possibility for browsing the allocated addresses and numbers on HAKOM's website. Furthermore, numbers may be searched by operator and prefix, and the results of the search show currently allocated and active addresses and numbers.

In order enable simple and quick number porting for the end user, HAKOM focused the majority of its activities in 2011 on the improvement of the number portability process in the manner that it paid special attention to administrative procedure of number portability and the upgrading of the CADPN was completed. During 2011, a total of 105 decisions on primary assignment of addresses and numbers were adopted, and 181 invoices for the fee for addresses and numbers were issued. HAKOM had to intervene 6969 times into the number portability procedure in order to speed up the process (of number porting or of giving up the request for number porting) in order to satisfy the requests of users of the above-mentioned services to the greatest possible extent.

The service of e-Operator became available and it represents a system for managing data about operators of electronic communications networks and services. The service expands and facilitates access to HAKOM and increases its productivity and efficiency through IT introduction into processes.

POSTAL SERVICES MARKET

The situation on the postal services market in the RoC did not change significantly in the course of 2011 compared to the previous years regardless of the generally unfavourable economic situation and the recorded decrease in postal traffic in developed countries in Europe and in the world.

The new Postal Services Act (hereinafter: PSA), adopted in mid-2009 and amended in 2011, divided and defined postal services differently than previous legislative solutions.

Providers of postal services provided a total of 356,348,098 services in 2011 according to the submitted data, which is almost two percent less than the year before when a total of 364,493,884 were provided.

HP's share on the entire postal services market was almost 72 percent with 254,909,431 provided services, while other providers had a share of around 28 percent with 101,438,667 provided services. It is obvious from the comparison of the number of provided services by HP and other providers of postal services in 2011 that HP recorded a drop in traffic amounting to eight percent compared to the year before, while other providers have significantly increased the number of provided services by approximately 16 percent. Therefore, with a total drop in provided services on the Croatian postal market amounting to about two percent, HP is participating with 71.5 percent at the end of 2011, which is 4.5 percent less than the year before, while other providers are participating with 28.5 percent, which is 4.5 percent less than the year before.

Out of the total number of provided services, 337.4 million or 94.7 percent were provided in domestic traffic, 11.3 million or 3.2 percent in international incoming traffic and 7.6 million or 2.1 percent were provided in international outgoing traffic (Figure 2.3.). The mentioned shares did not change significantly compared to 2010.

Out of the total number of services in domestic traffic, HP provided approximately 70 percent of services, and other providers almost 30 percent, while out of the total number of services in international traffic, 97 percent were provided by HP and the rest by other providers.

The structure of a total number of provided postal services shows that universal postal services made almost 59 percent of all services, and other postal services almost 41 percent.

Providers of postal services have, in 2011, shown revenue from the provision of other postal services amounting to HRK 1,526,023,322 million. Revenue in 2011 was at the same level as in 2010 when it amounted to 1,538,786,206.

Out of the total revenue earned in 2011, HP earned a total of HRK 1,096,099,224 in revenue or nearly 72 percent, while other providers earned HRK 429,924,098, that is, nearly 28 percent.

Compared to 2010, HP's revenue decreased by nearly two percent, while the revenue earned by other providers increased by nearly two percent. Therefore, the share of HP in the total revenue from the provision of postal services decreased by one percent compared to the year before.

Providers of postal services in 2011 provided a total of 211,085,855 universal postal services according to the submitted data, which is almost two percent less than the year before when a total of 232,433,901 were provided.

The share of universal postal services in total postal services in 2011 was almost 59 percent, which is nearly five percent less than in 2010.

Out of the total number of universal postal services, a total of 192.25 million, or almost 91 percent, were reserved universal postal services, which is an increase of almost two percent compared to the year before. The majority of universal postal services, nearly 92 percent, were provided in domestic traffic, 3.3 percent in international outgoing traffic and 4.4 percent in international incoming traffic.

It is obvious from the structure of provided universal postal services that items of correspondence, which amounted to 176.0 million made up almost 83 percent of all universal postal services, registered items with 32.8 million made almost 16 percent, and packages with 1.3 million of provided services and insured items with 0.9 million made up less than one percent, while the share of cecograms in the total number of universal postal services was almost completely negligible. The share of items of correspondence decreased compared to 2010, while the number of registered items increased.

Providers of postal services have, in 2011, shown revenue from the provision of postal services amounting to HRK 846.9 million, which is nearly one percent less than the year before.

Providers of postal services in 2011 provided a total of 145,262,243 universal postal services according to the submitted data, which is almost two percent less than the year before when a total of 132,059,983 was recorded.

The share of other postal services in total postal services in 2011 amounted to almost 41 percent, which is nearly five percent less than in 2010. Out of the total number of other postal services, HP's share on the market was almost 30 percent with 43,992,533 provided services, while other providers had a share of around 70 percent or 101,269,710 of provided services. It must be stressed that number of other services provided by HP was almost two percent less than the year before, and other providers increased the number of other services by nearly 16 percent. Thus, other providers not only maintained the leading position in the provision of other postal services but also increased their market share compared to 2010 by almost four percent (Figure 2.10.

The majority of other postal services, nearly 98 percent, were provided in domestic traffic, 0.4 percent in international outgoing traffic and 1.4 percent in international incoming traffic.

It is obvious from the structure of the total provided postal services (Figure 2.11.) that value added postal services with 74.6 million of services made up nearly 51 percent of all postal services, and other postal services, which are not universal, made up almost 49 percent with 70.7 million. Compared to 2010, the share of value added postal services decreased by nearly one percent.

The biggest share among other postal services referred to services of sending printed matter with a share of 52 percent, and the direct mail services with a 45 percent share. These shares have not changed significantly compared to the year before.

Providers of postal services have, in 2011, shown revenue from the provision of postal services amounting to HRK 679.1 million, which is nearly one percent less than the year before. Out of the total mentioned revenue, HP earned a total of HRK 250 million in revenue or nearly 37 percent, and the group of other providers earned HRK 430 million, that is, nearly 63 percent.
Two requests for the amendments to licences granted in 2010 for the provision of universal postal services were received in 2011.

It was established during analysis of terms and conditions for the provision of universal postal services of the provider Lider Express d.o.o. that some provisions of terms and conditions are contrary to the provisions of the PSA and that HAKOM has initiated, ex officio, administrative proceedings for the purpose of alignment of these terms and conditions with the provisions of the PSA, which were then amended by Lider Express d.o.o. in compliance with HAKOM's requirements.

The PSA imposes accounting obligation on all providers of postal services, and, in particular, on HP as the public operator. From the regulatory point of view, "accounting separation " or "separation of accounting" are two different activities which are included among accounting activities of a postal services provider in order to obtain the appropriate basis for monitoring and/or execution of prescribed obligations, that is, for the adoption of decisions under their competence. Support to HAKOM in the area of accounting separation of postal services" The execution of the project "Support to HAKOM in the accounting separation of postal services" started in November 2011. One of the key results of this project is the "Manual for Accounting Separation", which will represent an additional regulatory act, and the main purpose of which is to support the implementation of the valid legal framework with new legislation based on the EU regulatory framework in the postal services sector.

Pursuant to the PSA, the public operator started in 2011 independent and continuous measuring of the time necessary for the transfer of items of correspondence and the measuring of the number of complaints and compensations of damage in accordance with the prescribed standards. It is obvious from the submitted report that the public operator participates in several procedures for the measuring of the time of transport of items of correspondence in international traffic, from those that are not laid down in the PSA (organized by the Universal Postal Union) to the obligatory ones where HP participates in the coordinated measuring of the time of transport of items of correspondence in accordance with European standards implemented by an independent measuring authority (UNEX) for the majority of Member States. The results of measuring in international traffic for 2011 show that 56 percent of items of correspondence were delivered within 3 days, 87 percent within 5 days, and it is obvious that HP d.d. did not satisfy any of the prescribed quality criteria. The public operator conducted three measuring procedures in domestic traffic out of which two were optional and one mandatory. The optional measuring of the time of transport of items of correspondence is in compliance with Croatian standards. The report states that HP received 24,918 complaints from users of universal postal services in domestic traffic out of which 21,970 or 88 percent were resolved within the prescribed deadline and it established its own responsibility only for each twelfth submitted complaint, that is in 1,977 cases. The majority of accepted complaints referred to non-delivery of an item (93 percent) and to non-delivery on time (1 percent) and to the damaged item (5 percent). In international postal traffic, HP solved 4,644 complaints (out of which users submitted 2,797 complaints to HP, while 1,867 complaints came from other countries), out of which it accepted 752 complaints.

In early 2011, HP had 1141 postal offices, and at the end of 2012, a total of 1126 postal offices. HP closed sixteen postal offices in 2011 out of which nine were seasonal postal offices. In closing the above-mentioned postal offices, HP fully complied with the provisions of Article 16 of the Ordinance on the provision of universal postal services and ensured a minimum level of quality of provision of universal postal services for users of postal services in accordance with the prescribed criteria.

A little over three hundred postal offices changed their working hours in 2011 and the majority of changes referred to extending their working hours to one more day a week.

CONSUMER PROTECTION

Protection of users of public communications services

In the course of 2011, HAKOM created and additionally strengthened conditions for further raising of the level of protection of users of electronic communications services, particularly on the basis of amendments to the ECA used for the adoption, application and alignment of laws and subordinate legislation in practice.

Activities were focused on resolving user complaints by adopting appropriate individually binding decisions and decisions and opinions of general importance. For the purpose of preventive activities in consumer protection, HAKOM is using and developing different procedures and processes for user education and information. Furthermore, HAKOM actively participated in the work of various associations and state institutions on projects concerning user/consumer protection.

Amendments to the Ordinance on the manner and conditions for the provision of electronic communications networks and services were adopted in May 2011 following a public consultation. These amendments aligned procedures related to the Electronic Money Act and additionally prescribed conditions for the alignment of practice in the application of previously adopted obligators' obligations.

For the purpose of additional user protection, HAKOM adopted an operational decision on spending limits that enable users to set a spending limit in amounts of HRK 50.00. This provided additional control of costs to all users.

A decision regulating the use of the "voicemail" service was also adopted and it prescribes that this service may be provided only upon the subscriber's request and not automatically, which was the usual practice and users were often unaware of this service which may incur costs for the caller, and for them while roaming.

The most significant corrective means in the user protection procedure is HAKOM's authority to solve disputes between users and operators and adopt binding decisions for operators. The decisions are adopted on the basis of an opinion adopted by the Consumer Protection Commission, which is HAKOM's advisory body.

In accordance with the law, complaints refer to the following: a) complaints against bills of public communications services and b) the quality of public communications services and c) complaints resulting from the violation of provisions of subscription contracts, which is a new category in complaints resolution.

There was a total of 1129 bill complaints which is more than 80 percent of all received complaints, with a 47 percent increase compared to the year before.

Quality complaints were also on the rise and mostly concerning data transfer speed, IPTV services and availability of more advanced services. Because of the appearance of a series of new services, better information of users on the performance of operators and their new obligations resulted in increased interest of users in this area, that is, preventive regulated provision of services prevented an even more significant increase in the number of complaints.

It was established on the basis of the analysis of complaints that, in addition to the basic types of bill complaints and quality complaints, complaints against business procedures (behaviour) of operators in the provision of services must also be followed, including complaints concerning number porting and carrier pre-selection. Dispute resolution procedures between users and operators are not usually carried out in case of number portability complaints, only direct procedures with operators.

The number of complaints against *Internet services* has also increased (43 percent) because the number of users has significantly increased both in mobile and fixed networks. These are most frequency complaints concerning the impossibility to use the service, that is, concerning discrepancies between contracted and actual speed. This problem will be solved in 2012 on the basis of application of the new Ordinance on the manner and conditions of provision of electronic communications networks and services according to which operators will be obliged to ensure the contracted speed or offer a lower tariff package at a lower price.

In mobile networks, the introduction of new types of technologies and tariffs for Internet access for more advanced mobile devices resulted in the increase in the number of cases when undesired Internet connections were established. The principal problem is that users are insufficiently educated and also, on the other hand, that operators are very passive when it comes to the giving of adequate instructions.

Some groups of complaints have almost disappeared completely (diallers, games of chance – as a special category of a special tariff service).

Special tariff services are on the increase in cycles, which results from the fact that the appearance of “illegal services” comes in cycles – every six months there is a new (as a rule one) problematic service of this kind.

The number of quality complaints is again on the increase compared to the year before. The most significant increase in the structure of complaints is recorded in case of more advanced services because of technical problems with ensuring quality service for all potential users.

Protection of users of public communications services

In 2011, HAKOM received 32 requests for dispute resolution between users and providers of postal services. All submitted requests refer to the public operator HP- Hrvatska pošta d.d. Out of the total of 32 received requests, 31 were resolved, and no administrative disputes were initiated before the Administrative Court against HAKOM's decisions (4 proceedings were suspended, 25 requests were rejected, 1 was dismissed, 1 accepted).

In relation to types of complaints, 17 referred to unprovided contracted services, that is, lost items of correspondence, 3 complaints referred to non-provision of the service in its entirety and 2 complaints were submitted due to delayed delivery. A total of 10 requests were submitted due to damage or loss of contents of an item of correspondence.

Protection of children

As part of its competences, HAKOM pays special attention to the protection of children. Therefore, with a view to protecting children from abuse that might arise from the use of value added services, special numbers were introduced for adult services (064 xxx xxx) which are prohibited for children and special numbers for children services (069 xxx xxx) and the spending limit for the use of services for children (HRK 50.00).

It has also been prescribed that the operator is obliged to record and exchange data about access numbers and addresses not intended for children, to ensure the monitoring of traffic habits of their subscribers and to issue obligatory warnings when the prescribed limit is crossed, to bar outgoing calls to a certain number or a group of numbers, to notify the user when the agreed spending limit has been crossed and to regularly notify users of all available possibilities for barring.

In order to achieve a high level of protection of children in use of information and communication technologies, HAKOM participated in Safer Internet Days on 5 February 2011 and for that purpose, it prepared a brochure intended for children and parents and on its website, it published a text providing basic instructions to children and parents about internet use in about protection of children against basic dangers in general (www.hakom.hr).

Access to services by persons with special needs

In 2011, HAKOM launched an advisory mechanism gathering representatives of associations of disabled persons, of the operators and of HAKOM. The purpose of the advisory mechanism is to establish to what extent disabled persons are ensured equal availability of services, to define the necessary improvements and to supervise the implementation of agreed measures for the improvement of equal availability of services. The first activity of the advisory mechanism referred to ensuring a satisfactory level of education and training of operator's staff for providing the necessary information to disabled persons. The above-mentioned activity included the gathering of information from operators about the number of employees adequately trained for dealing with disabled persons, and a lecture by the "Touch" association about the manner of communication with deaf blind persons.

HAKOM'S ORGANIZATIONAL CAPACITY

e-Agency

Because of more interest of citizens for e-services, HAKOM continued managing e-Agency projects in 2011 with a special emphasis on business processes on the basis of web-oriented services. In addition to e-applications intended for external users, HAKOM has also sped up the internal processes by introducing new IT solutions and platforms. The introduced tools that permit efficient cooperation on projects and communication with end users show that employees are now able to complete several tasks within a shorter period of time and of a higher quality.

Assistance programme

On 28 July 2011, HAKOM received an approval from the Croatian Competition Agency to award state aid in the form of subsidies for the development of broadband networks in accordance with HAKOM's Programme for Internet and Broadband Development in Areas of Special State Concern, Highland Areas and on the Islands in accordance with Measure 4 of the Implementation Programme of the Strategy for Broadband Development in the Republic of Croatia 2012 to 2013.

The objective and purpose of subsidies is the achievement of a balanced regional development, faster development of broadband, and connecting of target groups such as educational, health care and public institutions to the broadband network which represents a broadband ecosystem. In 2011, locations were defined with representatives of a target group of users (CARNET, the Croatian Institute for Health Insurance, and the Croatian Fire fighting Association) were it was necessary to ensure broadband access in areas of special state concern, highland areas and on the islands. A public tender for state aid for broadband development was initiated with the definition of tender documentation and criteria for the allocation of subsidies, everything in compliance with the CCA's decision. A public invitation for proposals for software applications and services that will encourage faster development of areas of special state concern, highland areas and the islands was published at the same time.

Development of competences

Since human resources are the most important capital of every organization, HAKOM is investing into their competences and their skills to ensure quality regulation of the market of electronic communications and postal services. In that sense, HAKOM continued encouraging the climate of life-long learning in 2011 because employees are the key instigators of each process in an organization.

For that reason, HAKOM continued in 2011 with previously initiated projects aimed at the development of regulatory competences, such as the "Looking to the Future" project and continuous training and learning of foreign languages.

Publicity of work

Pursuant to the provisions of the ECA and the Right of Access to Information Act, HAKOM fulfilled its obligations concerning the publicity of work in the following ways in 2011.

They regularly published on its website the following:

g) all adopted decisions and other administrative acts, and all judgements of the Administrative Court of the Republic of Croatia;
h) Pursuant to Article 22 of the ECA, 37 public consultations were organized on regulations adopted by HAKOM under its competence, and on proposals of regulatory measures;
i) public consultations on important issues which are not covered by formal procedures were carried out, such as consultations on network neutrality;
j) available databases on registers were regularly updated and made available;

k) statistical data on markets of electronic communications and postal services were published regularly;,
l) all requests based on the Right of Access to Information Act, a total of five in 2011, were resolved

And finally, in addition to the obligation laid down in the Right of Access to Information Act, HAKOM replies to all questions submitted by users through its website. The number of questions in 2011 amounted to 1075.

Judicial proceedings

A total of 65 administrative proceedings have been initiated against HAKOM in 2011.

In the course of 2011, the Administrative Court adopted 97 judgements in administrative disputes initiated against HAKOM's decisions out of which 19 judgements refer to disputes initiated in 2011.

Out of 97 cases, decisions were confirmed in 92 cases, and in 5 cases, HAKOM's decision were annulled.

In accordance with its legally prescribed authority, HAKOM issued in 2010 the total of 25 misdemeanour orders and submitted 15 misdemeanour motions-

In the course of 2011, pursuant to amendments to the ECA; HAKOM completely took over the tasks of inspection supervision over its implementation. A total of 70 misdemeanour cases initiated by the inspection service of the former Ministry of the Sea, Transport and Infrastructure were taken over by HAKOM.

Cooperation

With a view to promoting efficient regulation of the market of electronic communications and postal services, the RF spectrum management and numbering resources, and of HAKOM as an active and modern regulator in the network of European regulators in relation to the application of the regulatory framework and market development, HAKOM continued in 2011 with active participation in the work of EC's working groups (COCOM, BEREC, ERGP, IRG; RSPG) and in the work of ITU and CEPT working groups on the electronic communications market and CERP and UPU working groups on the postal services market.

In 2011, HAKOM cooperated on a daily basis with actors on the market of electronic communications and postal services by resolving their requests, by organising public consultation on decisions which are important for market development, joint meetings, working groups and seminars.

ISO 9001 quality management system

During 2011, HAKOM's activities related to the quality management system were focused on further improvements of the efficiency of the system and on increasing user satisfaction by complying with their requests. HAKOM's quality management system is in the stage of implementation of the prepared and approved documentation and it was adopted by employees in their everyday work.

In accordance with that, the second audit over HAKOM was carried out by the certification company Bureau Veritas pursuant to requirements of ISO 9001-2008. The results of the audit will be used as preparation for system recertification and for further improvement of the quality system expected in 2012.

EU funds

In 2011, HAKOM continued implementing a project within I component of the IPA programme (IPA TAIB 2007) entitled "R**einforcement of Institutional and Administrative Capacity for Croatian Post and Electronic Communications Agency"** valid EUR 4,114,910.00 out of which EUR 853,877.50 is the amount of national co-financing. The project consists of two components for the procurement of equipment for the frequency monitoring radiolocation system and technical assistance for the reinforcement of HAKOM's institutional and administrative capacity.

The implementation of a project within the IPA 2009 Twinning light project "*Support to HAKOM in the area of accounting separation for postal services"* started in November 2011 in HAKOM. Funds amounting to EUR 191,609,40 were contracted for the implementation of this project, out of which 10 percent of national cofinancing amounts to EUR 19,160,94.

Bylaws

Pursuant to the Act on Amendments to the ECA, HAKOM's Council adopted in 2011 amendments to the existing implementing legislation and new necessary implementing regulations:

1. The Ordinance on amendments to the Ordinance on conditions for the assignment and use of the radiofrequency spectrum OG No. 39/2011.
2. The Ordinance on amendments to the Ordinance on the manner and conditions for determining the zone of electronic communications infrastructure and associated facilities, the radio corridor safety zone and obligations of the investor of works or of the building OG. No. 39/2011.
3. The Ordinance on amendments to the Ordinance on the manner and conditions for the provision of electronic communications networks and services OG No. 55/2011.
4. The Ordinance on amendments to the Ordinance on number portability, OG No. 62/2011.
5. Ordinance on the manner of work of the Consumer Protection Commission, OG No. 124/2011.

6. The Ordinance on the payment of the fee for the carrying out of HAKOM's activities, OG No. 133/2011.
7. The Ordinance on the manner and conditions of access to and sharing of ECI and other associated facilities OG No. 136/2011.
8. The Ordinance on the certificate and fee for the right of way OG No. 152/2011.
9. The Ordinance on the manner and conditions for the provision of electronic communications networks and services OG No. 154/2011.

In 2011 a total of 21,727 cases were opened in HAKOM containing a total of 61,475 documents. Out of this number, 31,707 documents were received, and 29,786 are documents prepared by HAKOM.

Out of the total number of cases, 9,572 are administrative cases which consist of 28,948 documents.
A total of 19.987 cases were solved during the year, out of which 8,534 are administrative cases.

R&TT equipment and approvals for import and placing on the market: a total of 5,054 cases have been processed and 8,636 documents issued.

A total of 3720 licence for use of the RF spectrum have been granted and 1507 certificates of compliance of radio stations.

Staff

At the end of 2011, HAKOM had 175 employees. It must be mentioned here that the increase in the number of employees compared to 2010 resulted from the agreement between MSTI and HAKOM on the basis of which five employees of the MSTI were transferred to HAKOM on 10 October 2011 for the purposes of inspection supervision which was transferred under HAKOM's competence on the basis of the ECA.

Electrical engineers are prevailing with as much as 36 percent among HAKOM’s employees, followed by economists with 15 percent, lawyers with 14 percent, transport engineers with 13 percent, and 22 percent have other degrees. A total of 81 percent of employees have university and college degrees.

Annexes:

A. Summary from the 2011 Work Programme

Next year, HAKOM will particularly focus on creating a regulatory environment that will enable and encourage investments and innovations on the Croatian electronic communications and postal services market. In this process, particular account will be taken of promoting competition and balanced development by making electronic communications and postal services equally accessible to all citizens of the Republic of Croatia regardless of where they live.

The basic elements of the programme of work and development of HAKOM are elaborated in detail in the following chapters of this text:

- Regulation of the electronic communications market,
- Radio frequency spectrum management,
- Regulation of the postal services market,
- Consumer protection
- HAKOM’s capacity.

Regulatory affairs

The Commission Recommendation (2007/879/EC) on relevant markets susceptible to ex ante regulation contains 7 relevant markets susceptible to ex ante regulation in relation to which the three criteria test does not have to be carried out to prove the need for ex ante regulation. National regulatory authorities may also regulate markets which are not a constituent part of the relevant Recommendation on relevant markets by proving that the three criteria (The Three Criteria Test), which prove the need for ex ante regulation, have been cumulatively met on those markets. National regulatory authorities mostly regulate those markets which are a part of this Recommendation, while the need for regulation of other markets depends on national idiosyncrasies.

HAKOM will continue with the implementation of the programme for accounting separation and cost accounting in HT. The Council of HAKOM granted its consent on HT's regulatory accounting documentation on the basis of which HT prepared draft regulatory financial statements on the basis of the HCA/FAC model in which HAKOM found certain inconsistencies and defined amendments to regulatory accounting documentation which must be taken into account by HT when preparing regulatory financial statements. The audit of financial statements should be completed in the first quarter of 2011.

In 2011, HAKOM will focus, in particular, on the following:

- supervision of implementation of regulatory obligations of operators with significant market power in relation to the development of a model for the division of investment risk in case of optical access infrastructure
- amendments to reference offer for interconnection services, for the service of unbundled access to the local loop and for the service of wholesale broadband access
- the analysis of the leased line market (3 relevant markets)

- the analysis of markets referring to retail services in the public communications network at a fixed location (5 relevant markets)
- the analysis of the market of network access for providers of value added services
- the implementation of the model of cost accounting and/or accounting separation
- carrying out of the cost models project with a view to calculating prices of all regulated wholesale services and prices for the provision of universal service
- preparation of a final revised regulatory financial statement on the basis of the CCA/LRIC model
- improvement of the manner of work with operators
- improved drafting of market assessment reports,
- cooperation with state administration bodies (MSTI, e-Hr, CCA,...)

Communications networks

The development of next generation networks is a precondition for economic development of any country. The development of broadband access services encourages the development of next generation networks and increases the value and overall competitiveness of a country and its regions. By regulating the access NGN network (NGA), the EU is trying to promote effective investments of SMP and other operators into infrastructure by protecting former investments. This includes the monitoring and guiding of the development and investments into next generation networks, in particular into optical access networks and, in addition to economic analyses, the observing and resolution of problems of implementation and migration towards NGN networks.

The increase in the number of operators in the EU results in the increased demand for resources in the addressing and numbering space. There is also a trend of using new technologies, and the appearance of new services (NGN, fixed-mobile convergence, IPTV), which makes the technical and regulatory conditions for the provision of services more complex. A similar trend may also be noticed in the Republic of Croatia which requires continuous training of employees in the department to keep up to date with world trends in the introduction of new technologies on the electronic communications market and with the application of new IT aids for the management of the addressing and numbering space.

Internet has grown exponentially in the recent years, as well as the number of users and types of technologies used for access to the network of all networks. The integration of classic data networks based on the IP protocol with other user communications networks and interfaces creates new needs and requirements for IP network protocol which may not be satisfied by the existing IPv4 version. Therefore, the new version of IP protocol, IPv& protocol is the next step in the development of Internet and its adjustment to new user needs, the development of new applications and integration of communications networks and it, thus, represents the future of the Internet in the long run. IPv6 protocol is envisaged as one of the basic communications protocols both in classic IP data networks and in next generation mobile networks. For the purpose of raising awareness of companies and citizens in the RoC, a new IPv6 working group will be established and it will be composed of CARNet, e-Croatia and HAKOM and its principal task will be the drafting of documents on technical procedures and manners of migration towards IPv6 networks.

In 2011, HAKOM will focus, in particular, on the following:

- preserving the open and neutral characteristics of the Internet, that is, on issues of network neutrality in accordance with the new EU regulatory framework
- the application of best EU practice in relation to the quality of service
- upgrading network security, i.e. protection of data during transfer over the Internet and protection of infrastructure by introducing electronic signature, electronic commerce, and preparedness for emergency response
- the monitoring of the introduction of elements of "Network and information security", such as supervision, lawful gathering of data, awareness raising and user protection.
- the monitoring of the Working Group for Next Generation Networks (NGN) and for Network and Information Security.
- the allocation of addresses and numbers to operators in a transparent, objective, balanced and unbiased manner by means of a web application existing within the framework of the e-Agency programme
- upgrading and modernisation of CADPN
- introduction of the numbering plan for SMS,
- the control of appropriate routing of calls towards emergency services,
- ensuring the appropriate dialling of emergency services for users with special needs,
- the shortening the time for number porting,
- supervising the fulfilment of obligations undertaken by universal service operators,
- the monitoring of the provision of value added services (special tariff services) in order to ensure additional protection of users of these services,
- the monitoring of the provision of services by mobile and fixed operators
- the testing of the quality of services, assessment, testing and verification of the measurement and billing systems,
- the carrying out of measurement/testing of lines that are or might be used for the provision of broadband services,

Facilities and infrastructure

HAKOM's competence also applies to facilities and infrastructure which include three interdepended areas: conditions for building, infrastructure and R&TT equipment.

Conditions for building

The EU is trying to speed up investments and building of electronic communications infrastructure as a precondition for the development of the electronic communications market, in particular, Internet, broadband access and broadband services market which have been recognised in the world as stimulating overall economic growth, employment and competitiveness. All obstacles that might result in the decrease in investments and building of electronic communications infrastructure are being removed. In the process, special attention is paid to the protection of the environment and of space.

With a view to promoting effective development of electronic communications infrastructure, HAKOM will undertake activities for the creation of preconditions for quick and undisturbed development of mobile networks of all operators and for the building of quality cable ducts through physical planning by promoting the planning and building of electronic communications infrastructure integrated with other utilities. It will continue to contribute to efforts to create quality Spatial Plans in counties and at lower levels that will better appreciate the contribution made by electronic communications to the overall economic and social development of the observed areas. HAKOM will invest systematic efforts and make proposals to try to influence the improvement of physical planning documents at all levels. Seminars will be organised for organisations authorised for the preparation of spatial plans where the importance of including electronic communications infrastructure in the plans will be presented in order to realise the preconditions for the improvement of economic, social and other starting points for sustainable development. Presentations will be held in units of local and regional self-government around the topic of integrated infrastructure.

In 2011, HAKOM will focus, in particular, on the following:

- participating in the adoption or amendments to physical planning documents;
- satisfying the requirements for the protection of human health and space and for the preservation of the environment;
- endeavouring to keep spatial planning in the part relating to electronic communications on a common basis;
- stimulating investments into electronic communications infrastructure on the common basis;
- encouraging effective investments into infrastructure by issuing special conditions for construction/approvals for projects;
- ensuring that all building owners may freely chose an operator, and that all operators have access to a building under equal and non-discriminating conditions;
- establishing special conditions for interventions in space in the zone of electronic communications equipment and associated facilities;
- securing protection zones and radio corridors;
- stimulating the construction of integrated infrastructure.

Infrastructure

The effective use of electronic communications infrastructure is a precondition for market development, in particular Internet, broadband access and broadband services and it has been recognised in the world as the key instigator of overall economic development, employment and competitiveness and, thus, an obligatory factor for a more efficient health, education, science, tourism and other sectors. The main trends noticed in the EU and in the Republic of Croatia, in relation to the majority of operators, are less investments into and construction of electronic communications infrastructure, the need for better protection of the environment and space, and rapid development of the infrastructure market, the need for deeper penetration of broadband access in fixed networks and the removal of barriers to deeper penetration.

In 2011, HAKOM will focus, in particular, on the following:

- stimulating the construction of integrated infrastructure.
- supporting effective use of the existing electronic communications infrastructure as a limited resource;
- initiating the programme for horizontal state aid to the development of broadband Internet access (fixed and mobile communications) into less populated areas
- prompt issuing of right of way certificates and carrying out of procedures related to the right of way;
- defining technical, occupancy and other conditions for certain types of electronic communications networks and electronic communications infrastructure and associated facilities;

- promoting and encouraging broadband Internet access, in particular by means of open optical access networks;
- monitoring the development of access technologies and models encouraging more rational use;
- collecting data on paths and infrastructure capacities in the geo-information system.

R&TT equipment

In 1999, the EU adopted Directive 1999/5/EC on important requirements and manner and conditions for the placing on the market of R&TT equipment. The above-mentioned directive replaced the old Type Approval system with a new system which allows free movement of R&TT equipment among EU Member States.

In 2011, HAKOM will focus, in particular, on the following:

- the issuing approvals for import and placing on the market, assessing compatibility, receipt and processing of notifications on the intention to place on the market R&TT equipment operating in non-harmonised frequency bands;
- the intensification of procedures, better information of users and availability of the latest technologies on the Croatian market, which enables more effective use of the RF spectrum;
- training of supervisors, inspectors and customs officers in relation to supervision of R&TT equipment;
- the participation in the work of TCAM in relation to the above-mentioned directive;

Expert supervision

HAKOM's expert supervision includes control over the implementation of the ECA, regulations adopted on the basis thereof, and decisions of the Council of HAKOM. Expert supervision is carried out by electronic communications supervisors who are authorised to undertake measures intended to ensure compliance of market participants with laws and subordinate legislation or HAKOM's decisions. In addition to undertaking such measures, supervisors are authorised to issue misdemeanour orders or propose to HAKOM the filing of motions in all cases where a fine has been prescribed for the misdemeanour.

During expert supervision, HAKOM will, in particular, focus on the following:

- implementing of regulatory obligations of SMP operators,
- lawfulness of provision of electronic communications services,
- protection of users from the point of view of the provision of services and pricing systems;
- addressing and numbering
- protection from interference;
- limiting effects of electromagnetic fields;
- complying with the obligations of producers and importers when importing and/or placing on the market of R&TT equipment;
- protecting against unauthorised access into cable ducts and legal obligations of infrastructure operators.

Radio Frequency Spectrum Management

In relation to radio frequency spectrum management, HAKOM is in charge of the following key processes:

- preparing a Frequency Allocation Table and Radio Frequency Allocation Plans;

- international coordination of the radio frequency spectrum in accordance with appropriate procedures, and the conclusion of implementing agreements (on a bilateral or multilateral level) concerning the use of the RF spectrum
- planning and preparation of technical parameters for the issuing of licences for the use of the radio frequency spectrum which may be issued on the basis of an application, a public tender or a public auction;
- granting of licences for use of the radio frequency spectrum;
- issuing of general authorisations;
- issuing of certificates of compliance for notified base stations of public communications networks (GSM, UMTS) which comply with the provisions of the Ordinance on the limitations of strengths of electromagnetic fields for R&TT equipment,
- regular control and measurements in the radio frequency spectrum in the entire territory of the Republic of Croatia;
- measuring, testing and establishing interferences in the radio frequency spectrum in the entire territory of the Republic of Croatia and their removal.

Bearing in mind the key processes, the situation in the EU and the Republic of Croatia, HAKOM will in 2011 focus on the following:

- implementing positive European and international practice in the management and regulation of use of the radio frequency spectrum and the alignment with the new EU regulatory framework when it is adopted;
- international coordination of the radio frequency spectrum in accordance with appropriate procedures, and the conclusion of implementing agreements (on a bilateral or multilateral level) concerning the use of the RF spectrum
- preparation for allocation of the radio frequency spectrum of the digital dividend (790-862 MHz) and observation of activities related to the introduction of other services in the 790-862 MHz (digital dividend) frequency band and their influence on broadcasting networks
- planning of radio frequencies and preparation of technical parameters for the issuing of licences for the use of the radio frequency spectrum;
- protecting citizens from non-ionising electromagnetic radiation with particular emphasis on protection in areas of increased biological sensitivity (residential areas, schools, preschools, hospitals etc.);
- development and evolution of digital television by ensuring the radio frequency spectrum and granting of licences for new digital terrestrial television networks in the Republic of Croatia
- monitoring activities of building of digital television networks in accordance with the issued licences for use of the radio frequency spectrum
- ensuring the radio frequency spectrum as a precondition for introduction of digital radio
- organisation of the Digital Radio Forum with a view to drafting the proposal of the "Croatian norm" and strategic guidelines for the introduction of the digital radio
- following international activities related to the introduction of digital radio in the VHF bands I and II and MF/HF band
- upgrading and modernising the control system of the radio frequency spectrum;
- carrying out regular measurements on the basis of the established measuring system, and measuring for the purpose of frequency planning
- control of use of radio frequencies in relation to the granted licences for use of the radio frequency spectrum.

Regulation of the postal services market

The postal services market in the EU is in the final stages of liberalisation. The third postal directive envisages the completion of this process by the end of 2012 which should result in completely opened postal services markets in all Member States of the EU. EU Member States with the developed postal markets are obliged to fully liberalise the postal services market in early 2011. Experiences that these countries have with the preservation of universal postal services after the opening of the market will be very valuable for HAKOM and other actors on the postal services market in the Republic of Croatia.

The legislator, HAKOM and the public operator will be faced by significant challenges in the period preceding full market liberalisation and HAKOM will continue in 2011 to strengthen its capacity for its role and tasks on a fully liberalised market. Therefore, for the purpose of providing the universal services under conditions of free competition, HAKOM will intensify all of its activities aimed at encouraging the public operator to fulfil its obligations under the Strategy for Market Development in the Republic of Croatia and the Action Plan for the implementation of the Strategy to be fully prepared for market liberalisation in 2013.

The key issues that HAKOM will focus on in the upcoming period are the following:

- working more intensively on the fulfilment of all obligations of the public operator;
- collecting and analysing data on the situation on the postal services market.
- lawfulness of the provision of postal services
- ensuring compliance with public operator's right to provide reserved postal services
- quality of universal postal services.

Consumer Protection

HAKOM's basic regulatory principles and objectives comprise, among other things, the promotion of interests and protection of rights of users of public communications and postal services.

A new regulatory framework was established in 2010 which envisaged more significant amendments concerning the exercise of rights of users to services and special protection of users. All EU Member States should be aligned by May 2011 which was accepted in this country as well as the final alignment deadline. European regulations establish the obligation to provide universal services in order to encourage the development of market and services and to ensure equal use of all services to all citizens regardless of their residence. With a view to promoting interests and protection of users, the new regulatory framework particularly emphasised the need for personal data protection and the resolution of requests by users with special needs, that is, of special social groups. Basic regulatory principles and objectives encourage competition for the purpose of market development, introduction of new services and finally, reduction of prices for end users. Basic regulatory principles and objectives also include the protection of end users.

The new legal framework for dispute resolution entitles HAKOM to adopt decisions which are binding for operators and which allow only the instigation of an administrative dispute. Decisions on the resolution of disputes for public communications services are adopted by the HAKOM's director thus satisfying the principle of cost-effectiveness of proceedings since, as opposed to disputes between operators, these are small claims disputes, the resolution of which is under the competence of the Council of HAKOM.

As opposed to the previous period when it was obliged only to control SMP operators for the purpose of issuing appropriate approvals, HAKOM has determined, in accordance with new regulations, that it is necessary to, in order to promote consumer interests, control bylaws of all operators and their pricing systems before publication. In order to establish the needs of consumers and to raise the level of their protection, surveys are carried out for users of postal and public communications services and the results of such surveys and of market analyses are used to determine the necessary activities.

HAKOM’s activities in 2011 will be focused on:

- completion of initiated activities related to the promotion of consumer interests;
- introducing additional preventive activities and procedures bearing in mind, in particular, the education of consumers in all operationally and financially feasible forms;
- organising adequate workshops with operators, which might develop into permanent – monthly processing of current topics;
- analysing services on the market both in relation to their provision and in relation to tariff systems, that is, by controlling operators’ general terms and conditions and tariff systems of operators and service providers;
- aligning the existing laws (ECA and PSA) with the new European Union legislative framework, that is, with other valid regulations in the Republic of Croatia
- aligning and adopting prescribed bylaws and introducing procedures and processes for protection of users of postal services, which have proven to be efficient for users of public communications services.

Increase of HAKOM’s Capacity

HAKOM has been continuously trying to adjust its regulatory capacity to market needs and to increase the efficiency and transparency of its work by means of better organisation, definition and computerisation of work processes, by creating a strong and integrated information system oriented towards e-government, by establishing active international cooperation and especially by enhancing the knowledge and skills of its employees.

International cooperation

In the year 2011 HAKOM will continue to participate actively and to exchange its experience in the field of the regulation of electronic communications and postal services and will strive to implement the best practice in accordance with the development and the conditions on the Croatian market.

In the field of international cooperation in the next year HAKOM will focus on:

- consolidating, harmonising and a more efficiently applying the electronic communications market regulation;
- understanding the revised regulatory framework;
- experiences in the regulation of Next Generation Networks;
- efficient management and harmonisation of the radio frequency spectrum use;
- adjusting the postal system to the one existing in the EU;

- using of the funding from the pre-accession funds.

Development of competences and modernisation

HAKOM has adopted a strategic and operative development plan until the year 2012 which is being implemented through two improvement programmes:
- convergence – oriented towards competition and market regulation aimed at improving competition and increasing investments and innovations in the electronic communications market,
- modernisation – oriented towards the development of its own ability to regulate and develop electronic communications markets with the priority strategic goal being the development of HAKOM's regulatory competence.

Special attention in these programmes is dedicated to the raising of own capacity and efficiency through development of regulatory competences and the e-Agency project.

Development of competences

In the following year HAKOM shall focus on:
- promoting a multidisciplinary (communications, economy and law) approach to solving regulatory problems,
- monitoring the development of incoming technologies and their influence on network and services development with a special emphasis on regulatory aspects,
- problems of a quicker and more balanced development of broadband Internet access and introduction of broadband applications and services into the network of the Republic of Croatia.

e-Agency

E-Agency is a project for the transformation of HAKOM’s activities through application of information and communication technology thus making HAKOM’s work more user oriented. E-Agency also includes the constant adjustment of the procedural and technological framework of HAKOM’s activities in order to achieve better efficiency, the optimum use of funds and more quality provision of the available services.

In the year 2011 HAKOM will focus the e-Agencies programme on:
- further automation of the process in accordance with the possibilities of the Document Management System, that will improve the monitoring of the course of activities and resolution of applications;
- developing a concept of open integration of the system by means of transaction interfaces in order to ensure automation of processes from one end to another;
- making possible for the user to finish all the steps in one visit, while the system makes sure that all departments competent for the resolution of the request are included;
- offer, over the website, all services that will lead the user in an intuitive manner suggesting future actions that will prevent him from making mistakes when submitting applications;
- increasing security of HAKOM's information system;
- development and installing the set of new, web-based and consumer-oriented applications;

Goods, human resources and monitoring

Material goods necessary for performing HAKOM's proscribed tasks, that is the activities mentioned in the above chapters, will be defined by a financial plan. Specific activities, which are an integral part of projects and programmes, will be specified in the paragraphs of HAKOM's financial plan.

HAKOM will try to ensure the necessary human resources for the carrying out of the necessary tasks by increasing efficiency through the upgrading of processes and training of employees.

In this sense it is necessary to focus on:

- modelling and redefining business processes,
- market analysis
- development of broadband networks
- implementation of the project of cost models,
- regulation of the postal services market
- E-Agency project.

The monitoring of HAKOM's fulfilment of tasks (activities) shall be undertaken by managers or assistant directors responsible for their implementation. The results of monitoring are regularly reported at HAKOM's meetings chaired by the executive director. HAKOM has a management group which is responsible for larger projects and programmes. It meets at least once a month and monitors the objectives, goods and the dynamics of project implementation and assists in risk management, The results are presented to HAKOM's Council every six months.

B. List of abbreviations

ADSL - Asymmetric Digital Subscriber Line
AEM - Agency for Electronic Media
ATV - Analogue television
CCA - Croatian Competition Agency
BEREC - Body of European Regulators for Electronic Communications
BRIFIC - Bureau Radio International Frequency Information Circular
CADB – Central Administrative Database of Ported numbers
CABP - Central Administrative Base of Portability
CARDS - Community Assistance for Reconstruction, Development and Stabilization
CARNET- Croatian Academic and Research Network
CEE Regional Working Group
CEPT - European Conference of Postal and Telecommunications Administrations
CERP - European Committee for Postal Regulation
CISMELP - Central Information System of the Ministry of the Economy, Labour and Entrepreneurship
COCOM - Communications Committee
CPS - Carrier Pre-Selection
DAB - Digital Audio Broadcasting
DAB+ - Digital Audio Broadcasting – an upgraded version of DAB system
DCS - Distributed Control System
DMB - Digital Multimedia Broadcasting
DMS - Document Management System
SB - State Budget
DRM - Digital Radio Mondiale – Short, medium and long wave digital radio
DAB+ - Digital Audio Broadcasting – an upgraded version of DAB system
DSL - Digital Subscriber Line
DSLAM - Digital Subscriber Line Access Multiplexer
DTV – Digital television
DVB-T - Digital Video Broadcasting – Terrestrial
ECP - European Common Proposals
ECTS - European Credit Transfer System
EFIS - European Frequency Information System
FEBZ - Faculty of Economics and Business Zagreb
EC – European Commission
ECI – Electronic communications infrastructures
EN - European norm
ERGP - European Regulators Group for Postal Services
ERP - Enterprise Resource Planning
EU - European Union
EUREKA 147 – digital audio broadcasting system DAB, DAB+, DMB
EUROSTAT - Statistical Office of the European Union
FAC - Fully Allocated Costs
FEEC - Faculty of Electrical Engineering and Computing
FGSM - Fixed Global System for Mobile communication
FM - Frequency Modulation
FTTH- Fiber to the Home
GSM - Global System for Mobile Communications
HAKOM – Croatian Post and Electronic Communications Agency

HCA - Historical Cost Accounting
HCM – Harmonised Calculation Method – International agreement for the harmonisation of frequencies for mobile and fixed terrestrial systems
HDTV - High Definition Television
HP - Croatian Post
HRM - Human Resource Management
HRN - Croatian Standard
HT - Hrvatski Telekom d.d. (Croatian Telecom)
CACP - Croatian Association for Consumer Protection
CFC - Croatian Fire fighting Community
CIHI - Croatian Institute for Health Insurance
ICT - Information and Communication technologies
ICT - Information and Communication technologies
IMS - Internet Protocol Multimedial Subsystem– IP multimedial subsystem
IP - Internet Protocol - Network protocol for data transfer which is used for source and destination computers for data communication over computer network
IPA - Instrument for Pre-Accession Assistance in the process of accession to the EU - one of the EU pre-accession cooperation and assistance
IPA CBS SEE - IPA Cross Border Cooperation - Component 2 of IPA programme. Provides framework for bilateral cooperation programmes between some of users of the IPA programme and its neighbouring countries
TAIB - Transition Assistance and Institution Building - Component I of IPA programme
IPTV - Internet Protocol Television
IRG - Independent Regulators Group
ISO - International Standards Organization
ITU - International Telecommunication Union
CMS – Control and measurement station
CMC – Control and measurement centre
CTV - Cable television
LTE - Long-Term Evolution - A technology which enables high transfer speed over 4th generation mobile communications systems
MELE - Ministry of the Economy, Labour and Entrepreneurship
MSTI– Ministry of the Sea, Transport and Infrastructure
MPEG - Moving Picture Experts Group
MSTI– Ministry of the Sea, Transport and Infrastructure
MUX – Multiplex – In digital television: a series of digital signals containing several radio or television programmes and/or other data that are being transferred simultaneously in one RF channel
M2M - Machine to Machine
NGA - Next Generation Access
NGN - New Generation Network
OG – Official Gazette
NMT - Nordic Mobile Telephony - 1st generation mobile network
OECD - Organisation for Economic Co-operation and Development
OLT - Optical Line Termination - Unit or device serving as terminating point for an optical line changing the optical signal into the electrical signal
PCM - Pulse Code Modulation
PGS - Pair Gain Systems
POTS - Plain Old Telephone Services
RF - radiofrequency
RSPG - Radio Spectrum Policy Group

RoC – Republic of Croatia
R&TT – Radio and telecommunications terminal equipment
CFCA - Central Finance and Contracting Agency
SAT TV - Satellite television
SDTV- Standard Definition Television
SEE Digi.TV - South-East European Digital Television
SIM - Subscriber Identity Module
SMS - Short Message Service
SPOK - Indicator system
T - DAB - Terrestrial Digital Audio Broadcasting
TV – Television
UMTS - Universal Mobile Telecommunications System (3rd generation mobile network)
UPU - Universal Postal Union
VAS - Value Added Service
VHF - Very High Frequency
VPN - Virtual Private Network - service intended for networking and connecting of several different locations within one user network
VoIP - Voice over Internet Protocol
WRC- World Radiocommunication Conference
WGFM - Working Group Frequency Management
WGFM - Working Group Frequency Management
WLR - Wholesale Line Rental
xDSL - x Digital Subscriber Line
ECA – Electronic Communications Act
TA – Telecommunications Act
PSA – Postal Services Act

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