

CROATIAN POST AND ELECTRONIC COMMUNICATIONS AGENCY

Pursuant to Article 12, paragraph 1, item 1 and Article 30 of the Electronic Communications Act (Official Gazette No. 73/08 and 90/11), the Council of the Croatian Post and Electronic Communications Agency adopted the following:

ORDINANCE ON MANNER AND CONDITIONS FOR ACCESS TO AND SHARING OF ELECTRONIC COMMUNICATIONS INFRASTRUCTURE AND ASSOCIATED FACILITIES

I. GENERAL PROVISIONS

Contents and scope

Article 1

- (1) This Ordinance shall prescribe the manner and conditions for access to and sharing of cable ducts and antenna masts and buildings and of other associated facilities and equipment, the level of availability of free space in this infrastructure and basic elements of the agreement on access and sharing.
- (2) The provisions of this Ordinance must apply as basic requirements for electronic communications network and electronic communications infrastructure and other associated facilities at the moment of planning, designing, producing, building, maintaining and use.

Terms and meanings

Article 2

Individual terms in this Ordinance shall have the following meanings:

1. *small diameter duct*: a duct made out of high-density polyethylene with 20 to 40mm outside diameter and an internal wall which ensures a very low coefficient of friction;
2. *50mm diameter duct*: a duct made out of high-density polyethylene with 50mm outside diameter and an internal wall which ensures a very low coefficient of friction;
3. *large diameter duct*: a duct made out of polyvinyl chloride, polyethylene or concrete with 63 to 110 mm outside diameter,
4. *HAKOM*: Croatian Post and Electronic Communications Agency
5. *cable ducts*: a part of the electronic communications infrastructure consisting of a network of underground cables made out of appropriate material, manholes and cable galleries, the purpose of which is to install and protect electronic communications cables;
6. *manholes*: multipurpose underground chambers which are placed at locations where cable ducts continue, cross or change directions and in front cross connects and local exchanges
7. *microduct*: a duct with outside diameter of 3 mm to 16 mm, with an inside wall ensuring low friction coefficient;
8. *cable duct route*: designed or already existing route and a geodetically positioned line of cable ducts within the corridor of the electronic communications infrastructure.
9. *Act*: Electronic Communications Act

II. CONDITIONS OF USE OF CABLE DUCTS

Free space and efficient use of free space in cable ducts

Article 3

- (1) The use of cable ducts shall be based at all levels of the electronic communications network on the selection of technologies which allow maximum reasonable use of free space on the basis of equality and sharing.
- (2) Free space in ducts shall mean space not occupied by any cable or space that is occupied by a cable which has not been in use for more than 120 days (hereinafter: unused cable), provided that the space in question has not been foreseen as a necessary service space for maintenance of the existing capacities, and which may be used for pulling of electronic communications cables (optical or copper) in compliance with this Ordinance. If a beneficiary operator did not use a cable for more than 120 days, the infrastructure operator shall terminate the lease agreement for the route in question (cable), and the cable shall be labelled as "unused cable". The beneficiary operator shall not be entitled to the compensation of damage.

- (3) The necessary service space for the maintenance of the existing capacity shall mean free space which is sufficient for pulling the largest diameter cables used on the relevant part of cable ducts.
- (4) Free space within manholes shall mean space sufficient for housing cable connectors with necessary spare elements (for optic fibre cables up to 20 m) without disturbing access to extensions at the existing cables.
- (5) If there is free space in a duct but the extension on the planned cable may not be placed into a manhole, pursuant to paragraph 4 of this Article, the cable extension shall be planned in cabinet, which will be installed next to the manhole.
- (6) If the cabinet may not be installed for any reason, the reconstruction of the existing or building of a new manhole shall be permitted.
- (7) Other technologies which satisfy the requirements referred to in paragraph 1 of this Article and which are not contrary to the law shall also be allowed.
- (8) The infrastructure operator must allow the beneficiary operator, for a fee and on the basis of a concluded contract referred to in Article 8 of this Ordinance, access to and sharing of its existing ducts, provided that the relevant conditions for access and sharing laid down in this Ordinance have been met.
- (9) If the infrastructure operator refuses to conclude the contract, or does not allow access and sharing of its ducts to the beneficiary operator pursuant to the Act and this Ordinance, HAKOM shall, upon request of the beneficiary operator, establish the existence of the relevant access and sharing conditions for cable ducts laid down in this Ordinance, and, if they do, it shall adopt a decision pursuant to the Act.
- (10) In order to establish the appropriate conditions referred to in paragraph 9 of this Article, HAKOM may commission and issue technical plans, main and detailed designs for certain works to be performed within ducts, aiming at ensuring access to and sharing of ducts. The costs of establishing feasibility of access and sharing shall be established pursuant to the General Administrative Procedure Act.
- (11) Basic principles for ensuring free space shall include the following:
 - a) pulling out the unused cables,
 - b) re-directing the existing end users to the nearest access nodes thus shortening the local loop and widening the spectrum of broadband services to be offered to users,
 - c) extending and amending the existing capacity of the electronic communications infrastructure and associated facilities,
 - d) regulating the existing situation.

(12) The direct pulling of optical cables with capacity of less than 288 fibres into large diameter duct shall not be allowed without previous installation of a protective small diameter duct or a microduct. Each individual cable shall be placed in its own duct or a microduct. This provides maximum flexibility of the system in relation to maintenance and protection of the installed cables. An exception to this rule are cables that were already pulled- in without a previously concluded contract on access to and sharing of cable ducts and will subject to subsequent regulation of the existing situation, pursuant to Article 9 of this Ordinance.

(13) The existing free space in large diameter ducts shall be used in such a manner that it is filled with small diameter ducts, of the same or different diameters. The use of the following small diameter ducts shall be allowed: PE20, PE25, PE32 and PE40.

Table 1 shows possible combinations of small diameter ducts for filling free space in large diameter ducts:

No.	Combinations of small diameter ducts	Free space required
1	1 xPE40+2xPE3 2+2xPE25	$\phi > 95\text{mm}$
2	2xPE40+2xPE32	$\phi > 95\text{mm}$
3	4xPE32	$\phi > 90\text{mm}$
4	1xPE40+2xPE32	$\phi > 85\text{mm}$
5	3xPE32	$\phi > 80\text{mm}$
6	3xPE40	$\phi > 95\text{mm}$
7	2xPE40	$\phi > 90\text{mm}$
8	up to 14xPE20	$\phi > 95\text{mm}$

(14) A combination of 4xPE32 or 1xPE40+2xPE32 or any other combination with PE20 ducts shall be used in ducts with concrete blocks. The appropriate duct combination in accordance with Table 1 can be manufactured as a single structure or it can be formed out of several separate small diameter ducts immediately before pulling in.

(15) If a large diameter duct with diameter $\phi = 100\text{mm}$ is occupied by only one cable for efficient use of available free space,, Table 2 specifies possible combinations of small diameter ducts and microducts (MC):

Table 2:

No.	Existing cable diameter (mm)	Combination of ducts to occupy free space
1	$\phi \leq 40$	PE40+2xPE32
2	$40 < \phi \leq 40$	PE32+2xPE25
3	$40 < \phi \leq 50$	PE25+2xPE20
4	$50 < \phi \leq 60$	PE20 +2xMC*16/12
5	$50 < \phi \leq 60$	MC16/12 +2xMC14/10
6	$60 < \phi \leq 70$	MC14/10+2xMC12/8
7	$70 < \phi \leq 80$	MC12/8+2MC7/4

8	$70 < \phi \leq 80$	2MC 7/4
9	$\phi > 80$	-

MC*=microduct

(16) Where two or more cables occupy a large diameter duct, and more suitable free space does not exist in the cable duct system, then the available free space shall be used by pulling in one or maximum two small diameter ducts or a larger number of microducts the size of which enables maximum usage of free space.

(17) All duct combinations shall be pulled into the free space covered by the technical solution simultaneously. All pulled-in ducts shall become the property of the infrastructure operator. The operator for whom such technical solution has been produced shall bear all costs of the installation of the technical solution (pulling out of unused cable, pulling in ducts to fully occupy the free space, maintenance or widening of ducts and similar) and the calculation of these costs and the price of sharing shall be defined by a contract referred to in Article 8, paragraphs 3, 5 and 6 of this Ordinance.

(18) With a view to better and more efficient use the free space in manholes and in order to allow easier access to the existing cables, the small diameter ducts shall be cut in each manhole and they must be marked. Microducts of nominal wall thickness of 2mm must be pulled along the edge of the manhole, without being cut. Microducts with 1.5mm thick walls or less must be protected by a suitable covering or other protection when passing through manholes and when entering the connector.

(19) The installed ducts shall be appropriately fixed to make additional pulling in of cables easier and simpler. The created gap must be adequately sealed to prevent mud and impurity penetration. The ends of empty ducts shall be appropriately sealed.

(20) Available space within small diameter ducts may be filled with one or more microducts of appropriate diameter. By way of derogation, in the existing infrastructure for residential and/or business facilities with one or several small diameter ducts or with 50mm diameter ducts, additional cables may be pulled in addition to the existing cables. Table 3 illustrates possible types of microducts that may be installed and which are used to fill small diameter ducts and 50mm diameter ducts (the combination of different types of microducts is allowed):

Table 3

External duct diameter (mm)	Maximum number of microducts that may be installed		
	12/10	10/8	7/5.5
50	7	8	15

40	4	5	10
32	2	3	7
25	1	1	3

(21) In small diameter ducts or 50mm diameter ducts, which are occupied by one optical cable, free space is filled by means of microducts, as illustrated in Table 4:

Table 4

Outside diameter of PE duct (mm)	Outside diameter of the existing cable (mm)	Maximum number of microducts that may be installed		
		12/10	10/08	7/7.5
PE 50	12.0	5	6	-
	15.0	3	4	-
	16.5	2	4	-
	18.0	2	4	-
PE40	12.0	3	4	7
	15.0	2	3	7
	16.5	2	2	5
	18.0	2	2	5
PE32	12.0	-	-	3
	15.0	-	-	3
	16.5	-	-	2
	18.0	-	-	2

(22) The space between the optical cable and small diameter duct or microduct shall be appropriately sealed by a reusable seal. Pressure welding machine should be used with the adaptable seal for sealing gaps between all cables and microducts.

(23) If there is only one 50 mm or 40 mm duct (PE50 or PE50) on the existing ducts' route with the cable already inside, it shall be considered that there is no available space on that part and that the cable ducts system must be additionally expanded for any further installation of cables in compliance with the technical solution.

Use of small diameter ducts

Article 4

(1) Small diameter ducts are made of high density polyethylene (PEHD) stabilized by appropriate antioxidants and by adding soot in the quantity of $2.5 \pm 0.5\%$ per duct mass. Polymer density with additional components must be above 0.936 g/cm^3 . Table 5 specifies the basic physical properties for small diameter ducts at the temperature of 20°C :

Table 5:

Physical properties at the temperature of 20°C PEHD	PEHD
Average density	0.950 gr/cm^3
Breaking strength	$3,500 \text{ N/cm}^2$
Elongation strength	$2,400 \text{ N/cm}^2$
Elongation at break	800 %
Linear coefficient at thermal expansion	$2 \times 10^{-4} \text{ }^\circ\text{C}$
Permissible stress	500N

(2) Within the meaning of Article 3 of this Ordinance, to ensure multiple usage of the existing large diameter ducts, the standardised small diameter ducts made of high density polyethylene, with operating pressure of 1000 kPas (10 bar) type PE20, PE25, PE32 and PE40 must be used and their basic technical information is provided in Table 6:

Table 6:

Outside diameter D (mm)	Standard deviation ΔD (mm)	Wall thickness Δs (mm)	Standard deviation Δs (mm)	Duct mass (kg/m)
20	+0.3	2.0	+/-0.4	0.11
25	+0.3	2.0	+/-0.4	0.14
32	+0.3	2.0	+/-0.4	0.18
40	+0.4	2.4	+/-0.5	0.28

Use of microducts

Article 5

(1) Within the meaning of Article 4 of this Ordinance, for the purpose of more efficient use of small diameter ducts and to minimize the number of cable joints (extensions), the technology of microducts and microducts systems (bundles of microducts) shall be introduced in the optical access electronic communications network.

(2) Table 7 specifies standard microducts dimensions, nominal values for outside and inside diameter, minimal outside and inside diameter, and minimal wall thickness:

Table 7

Nominal outside/inside diameter (mm)	Outside diameter (mm)	Minimum inside diameter(mm)	Minimum wall thickness(mm)	Duct mass (kg/km)
3/2.1	3+0.1/-0.05	2.0	0.45	3.5
5/3.5	5+0.1/-0.055	3.4	0.75	10
7/4	7+0.1/-0.05	3.9	1.5	25
7/5.5	7+0.1/-0.05	5.4	0.75	15
8/6	8+0.1/-0.05	5.9	1.0	22
10/6	10+0.1/-0.05	5.9	2.0	48
10/8	10+0.1/-0.05	7.9	1.0	28
12/8	12+0.1/-0.05	7.9	2.0	60
12/10	12+0.1/-0.05	9.9	1.0	35
14/12	14+0.1/-0.05	11.9	1.0	40
14/10	14+0.1/-0.05	9.9	2.0	72
16/12	16+0.1/-0.05	11.9	2.0	84

(3) The microducts referred to in Table 7 shall be of different wall thickness, depending on the manner of use. Microducts of greater wall thickness (1.5 - 2.0 mm) can be pulled into ducts separately and laid directly into the ground after exiting ducting system. Thinner wall microducts must always be placed in small diameter ducts or protected (in manholes) by other means of protection (HDPE cover).

(4) Microducts shall be made of high density polyethylene with the inside sliding surface manufactured in such a way that it ensures low friction coefficient during microducting.

(5) To ensure multiple usage of space within occupied and free small diameter ducts, 7/5.5, 10/8 and 12/10 microducts should be used, while the 12/8, 14/10 and 16/12 microducts should be used in combination with PE20 and PE25 ducts for more efficient use of free space in large diameter ducts.

(6) Several microducts of same or different diameter may be grouped and protected with an external polyethylene duct coating. Depending on the type of the coating, this structure can be pulled into the existing large diameter ducts, laid directly into ground, laid above the ground or used during the construction of electronic communications

network in buildings. Basic properties (outside diameter and mass per length unit) for standard types of the microducts structures are given in Table 8:

Table 8:

Number of ducts	Microduct 5/3.5mm		Microduct 10/8mm	
	Outside D (mm)	Mass (g/km)	Outside D (mm)	Mass (kg/km)
2	13.5x8.5	80	13.7x23.7	180
4	15.7	123	27.9	248
7	18.6	168	33.8	334
12	23.9	248	-	-
19	28.6	340	-	-
24	33.6	450	-	-

(7) Microduct structures referred to in Table 8 may be allowed to fill free space in large diameter ducts together with the proposed combinations from Tables 1 and 2.

Use of optical cables

Article 6

(1) Single mode optical fibres, whose characteristics are in compliance with the relevant ITU Recommendations, must be used for building access electronic communications infrastructure in the Republic of Croatia.

(2) The use of multimode optical fibres in the external part of optical access network shall not be allowed. Multimode optical fibres can be used only as an exception in the construction of internal installations of structured cabling systems, most often, of business subjects, when active equipment is envisaged for the interface towards the external part of the optical network which has to be executed with single mode fibres.

(3) When choosing the type and structure of an optical cable, the non-metal cable structure of small outer diameter shall be used. These can be installed either in the traditional manner (by pulling in) or by cable jetting into a small diameter duct or a microduct.

(4) While installing a cable into ducts, special attention should be paid that the pulling force and the bending radius do not exceed maximum limits, which are specified in the cable manufacturer's technical specification.

The gap between the installed cable and the small diameter duct must be appropriately sealed, to be, if necessary, used for pulling in or cable jetting of microducts at a later stage.

(5) Optical cables must be properly shaped, marked and conducted along the manhole wall and placed on the consoles, if there are any. Optical cables do not need additional mechanical protection in manholes. If optical microcables are used, proper mechanical protection is required (they must be placed within a separate microduct with a thicker wall or within microduct with thinner wall that are a part of a system, group of microducts with shared external covering). Storage boxes installed on the walls of a manhole may be used for placing surplus microcables at the joint.

(6) Ducts with maximum outside diameter must be used when small diameter ducts are used for pulling in of optical cables of the appropriate outside diameter, as illustrated in Table 9:

Table 9

Outside duct diameter (mm)	Type of duct (max. outside diameter in mm)
≤8.0	MC 16/12+ (16)
≤13.5	PE 20 (209)
≤18.0	PE 25 (25)
≤25.0	PE 32 (32)

*MC= microduct

(7) Ducts with maximum outside diameter must be used when microducts are selected for the pulling in of microcables of the appropriate outside diameter as illustrated in Table 10:

Table 10:

Outside diameter of cable (mm)	Type of duct (max. outside diameter in mm)
≤4.0	MC 7/5.5*(7)
≤6.0	MC 10/8(10)
≤7.5	MC 12/10(12)
≤9.5	MC 14/12(14)

MC*= microduct

Marking of cables and ducts

Article 7

- (1) Every cable in every manhole must be marked.
- (2) Every cable must have a marking that indicates the type, owner and name of the cable given by the owner, under which all data on the specific cable are kept in the technical documentation.
- (3) The marking referred to in paragraph 2 must be permanent and its accidental removal must be prevented (fixed or glued).
- (4) Microducts shall be laid down in groups, with every microduct in the group being of a different colour so that they can be differentiated. It shall not be necessary to additionally mark every individual microduct.
- (5) Small diameter ducts must be marked in every manhole.

Contracting the sharing of cable ducts

Article 8

- (1) The beneficiary operator shall submit to the infrastructure operator a request for sharing of a part of cable ducts for which it is interested.
- (2) The infrastructure operator shall, within 15 days from the receipt of the beneficiary operator's request pursuant to paragraph 1 of this Article, inform the beneficiary operator in writing about the possibility or impossibility for sharing of cable ducts on the route in question.
- (3) If established by the infrastructure operator that sharing of the entire existing route is possible in compliance with the beneficiary operator's request referred to in paragraph 1 of this Article, the infrastructure operator and the beneficiary operator shall conclude a contract on access to and sharing of ducts within 30 days from the date of receipt of the request referred to in paragraph 1 of this Article. A detailed technical plan in .dwg format shall make a constituent part of the Contract.
- (4) The technical plan referred to in paragraph 3 of this Article shall be in full compliance with this Ordinance and consist of the following:
 - a) Technical specification of the technical plan in question
 - b) Current situation of the relevant duct system

- c) Location of each manhole
 - d) Distance between individual manholes from the centre of one to the centre of the other
 - e) Number and type of ducts between manholes
 - f) Defined manner and the position of pulling in the beneficiary operator's cables with regard to the layout of the manholes along route from the beneficiary operator's request
 - g) The list of the material and works needed, specifying the type and amount
 - h) The list of the material and works needed according to the type and the amount for cases as referred to in Article 4 paragraph 17 of this Ordinance.
- (5) The beneficiary operator shall bear the costs of the material and works as referred to in Article 3 paragraph 17, that is, Article 8, paragraph 4, item h of this Ordinance while the infrastructure operator shall specify the manner and the time limit for cost reimbursement in the Contract referred to in paragraph 3 of this Article. Costs of the beneficiary operator referred to in this paragraph shall be refunded by the infrastructure operator by reducing one invoice for leasing under other contracts for sharing of cable ducts. If the total amount may not be refunded from the lease for the current year, the remaining amount shall be refunded from the following invoice and this practice will continue until complete refund of the total cost.
- (6) The reimbursement of the costs as specified in paragraph 5 of this Article shall not include the costs of the produced technical plan, material, works, supervision or other needed for the installation of beneficiary operator's cables.
- (7) The infrastructure operator and the beneficiary operator shall agree on the party that shall prepare the technical plan. If agreed that the beneficiary operator should draw up the technical plan, the infrastructure operator shall ensure access to the existing ducts, and submit to the beneficiary operator all available technical documentation.
- (8) The beneficiary operator shall submit to the infrastructure operator a list of expenses for the material and works as referred to in paragraph 4, items g) and h) of this Article, on a turnkey basis with market-oriented prices (unit and in total).
- (9) The infrastructure operator shall accept the presented prices or offer the works referred to in paragraph 4, items g) and h) of this Article to be performed in accordance with the infrastructure operator's prices and on the turnkey basis.
- (10) The technical plan accepted by both the beneficiary operator and the infrastructure operator shall be drawn up in accordance with the offer

referred to in paragraphs 8 and 9 of this Article, depending on which of the two contain the lower total price.

- (11) The works specified in the detailed technical plan can be performed by the beneficiary operator or contracted with a third party, under expert supervision of the infrastructure operator or an independent expert designated by the infrastructure operator. The price of expert supervision must be cost-oriented.
- (12) The inspections of the works done shall be performed by the experts of both the infrastructure operator and beneficiary operator.
- (13) If there are parts of the route where, according to the infrastructure operator's assessment, sharing of the existing ducts is not possible without the expansion or the placing of cables is not possible in the first place, the beneficiary operator can, if it deems otherwise, initiate a procedure before HAKOM to determine whether the conditions for sharing exist, in accordance with this Ordinance.
- (14) If HAKOM establishes that the conditions for sharing of cable ducts exist, HAKOM's Council shall adopt a decision ordering the infrastructure operator to prepare a new technical plan on access to and sharing of cable ducts or to enable beneficiary operator to prepare the plan, all at the expense of the infrastructure operator.
- (15) If the infrastructure operator refuses to conclude a contract on access to and sharing of ducts, or does not allow access and sharing of its electronic communications infrastructure and associated facilities to the beneficiary operator under the conditions referred to in the Act, HAKOM shall, upon request of the beneficiary operator, within 30 days from the submission of the request, establish the existence of suitable conditions, and where such conditions exist, it shall adopt a decision fully replacing this contract.

(16) If the infrastructure operator does not reply to the beneficiary operator's request within 30 days from the submission of the application, it shall be regarded that the infrastructure operator refused to conclude the contract on shared access and shared use of ducts.

Regulation of the existing situation with cables pulled without previous conclusion of the contract on access to and sharing of cable ducts

Article 9

(1) HAKOM shall encourage sharing of electronic communications infrastructure and associated facilities and prevention of the endangerment of safety of electronic

communications network use, network integrity and interoperability of electronic communications services. For that purpose, this article shall define the procedure of regulating the existing situation of cables that were pulled in without previously concluded contract on access and sharing of ducts (hereinafter: legalization).

(2) The infrastructure operator may start the legalization procedure for a part of the existing ducts, a route for which it has previously obtained a right-of-way certificate or holds some other real right over property or some other legal relationship with the manager of common good or owner of property, without HAKOM's mediation, by inviting all beneficiary operators, other legal or natural persons with laid cables on the route in question without a previously concluded contract on access to and sharing of cable ducts, to regulate their relations with it pursuant to the provisions of the Act.

(3) If one of the beneficiary operators, legal or natural persons, refuses legalization or claims that it does not own a cable on the route in question and the infrastructure operator does not accept it, the infrastructure operator may initiate legalization procedure before HAKOM.

(4) The infrastructure operator may initiate legalization procedure before HAKOM only provided that it had previously tried to regulate its relationship with the beneficiary operators and other legal or natural persons.

(5) In addition to the request for the initiation of legalization procedure, the infrastructure operator must submit the following documentation to accompany the request:

- a) document proving that the claimant is the infrastructure operator on the relevant cable duct route (e.g. right of way certificate),
- b) proof that the beneficiary operator, legal or natural person, refused to conclude the contract on sharing of cable ducts or claimed that it did not have laid cables on the route in question;
- c) location of every manhole;
- d) current situation on the cable duct route in subject;
- e) distance between individual manholes,
- f) number and type of ducts between manholes,
- g) documentation shall be submitted in the dwf. Format on CD for items c), d), e) and f)
- h) the number of delivered CDs must be equal to the number of beneficiary operators and legal or natural persons referred to in paragraph 3 of this Article.

(6) On the basis of the request referred to in paragraph 4 of this Article, HAKOM shall require from the beneficiary operator or any other legal or natural person to notify all pulled cables on the route in question within 30 days by noting them in the documentation referred to in paragraph 5, item g) of this Article.

(7) The documentation delivered by beneficiary operators will be forwarded by HAKOM to the applicant to prepare the final and complete documentation about the final current situation on the route in question.

(8) Technical documentation referred to in paragraph 7 of this Article shall be delivered to HAKOM by the applicant. HAKOM will carry out further procedure pursuant to the Act.

(9) Upon completion of the procedure referred to in paragraphs 1 through 9 of this Article, and on the basis of the results thereof, HAKOM's Council shall adopt a decision imposing further obligations on the infrastructure operator, the beneficiary operator and any legal or natural entity with the view to fully regulate the situation in the existing ducts.

(10) Cables for which the owner and function have not been established shall be treated as unused cables.

(11) If the owner and function of cables are known, and the owner of cables refuses to conclude a contract with the infrastructure operator, HAKOM shall inform the end users connected to that cable that they need to change operators so that the cable may be pulled out of cable ducts.

(12) The beneficiary operator or any legal or natural entity that has a cable pulled into ducts prior to the conclusion of a contract on access and sharing of ducts for the relevant cable or cables, may also initiate the procedure to regulate the existing situation or may submit a request to the infrastructure operator for the conclusion of the contract on access and shared use of ducts.

(13) The lease for the use of cable ducts shall be paid from the date of initiation of legalization procedure, provided that it has been completed successfully.

III. CONDITIONS FOR USE OF ANTENNA MASTS

Article 10

(1) A beneficiary operator shall submit to the infrastructure operator a request for access to and sharing of an antenna mast for installation of its antenna system, radio equipment and telecommunications terminal equipment.

(2) Beneficiary operator's request referred to in paragraph 1 of this Article must contain the following:

a) The height at which antenna system is to be installed, and directions

b) Exact number and type of antennas per direction

c) Space necessary for placing the equipment

d) Conceptual design consisting of:

- Technical specifications on dimensions and weight of antenna, antenna systems and other equipment subject to the sharing request,
- Special requirements and transmission capacity with the proposal for the solution,
- Special request for accessibility to existing ducts,
- Special requirements related to electricity, if collocations for telecommunications terminal equipment are possible (otherwise electricity connection should be required from the distribution system operator).

e) time-schedule of commencement and duration of shared use.

(3) The infrastructure operator shall inform the beneficiary operator, within 15 days from the date of receiving the request referred to in paragraph 1 of this Article, of the possibility or impossibility for sharing of a mast.

(4) If the infrastructure operator accepts the beneficiary operator's application referred to in paragraph 1, it shall submit to the beneficiary operator the proposal of the contract on sharing of the existing antenna mast and all available project documentation.

(5) In the case referred to in paragraph 4, the beneficiary operator shall draw up new project documentation, agree on it with the infrastructure operator and procure all the required permits in accordance with laws and regulations of the Republic of Croatia. The beneficiary operator shall procure the material and equipment and contract construction works to be performed under the supervision of the infrastructure operator or independent authorised expert, approved by the infrastructure operator at the cost of the beneficiary operator.

(6) If the infrastructure operator does not accept the beneficiary operator's request, the infrastructure operator shall enclose a written explanation to the notification on the refusal.

(7) If the beneficiary operator does not accept the infrastructure operator's explanation for refusing the sharing of the existing antenna mast, the beneficiary operator may initiate before HAKOM the procedure for the establishment of the existence of appropriate requirements for sharing.

(8) HAKOM shall carry out the procedure to establish the existence of relevant conditions. If such conditions exist, HAKOM shall adopt a decision fully substituting the contract.

(9) All installed electronic communications equipment shall be properly marked containing data on the type and the owner of the equipment. The contractor shall be obliged to mark the equipment.

IV. CONDITIONS OF USE FOR BUILDINGS AND OTHER ASSOCIATED FACILITIES AND EQUIPMENT

Article 11

(1) The infrastructure operator must allow to the beneficiary operator, for a fee and on the basis of a concluded contract, access to and sharing of its buildings and other associated facilities and equipment that are a part of its electronic communications infrastructure and associated facilities, in accordance with the Act.

(2) The beneficiary operator must submit to the infrastructure operator a request for sharing of buildings and other associated facilities and equipment with a detailed technical specification and a list of other infrastructure needed (electricity, water etc.), as well as time frame of the beginning and duration of sharing.

(3) The provisions referred to in Article 11 of this Ordinance shall apply to the proceedings related to the request referred to in paragraph 2 of this Article.

V. BASIC ELEMENTS OF THE CONTRACT ON ACCESS TO AND SHARING OF ELECTRONIC COMMUNICATIONS INFRASTRUCTURE AND OTHER ASSOCIATED FACILITIES

Article 12

(1) The infrastructure operator and the beneficiary operator, as contracting parties, shall conclude a contract on access and sharing of electronic communications infrastructure and associated facilities.

(2) The subject of the contract referred to in paragraph 1 of this Article shall be access to and sharing of electronic communications infrastructure and associated facilities in accordance with the request/bid made by the beneficiary operator, as defined by this Ordinance.

(3) The contract referred to in paragraph 1 of this Article shall refer to a part of electronic communications infrastructure and associated facilities identified in the beneficiary operator's request/bid.

(4) The technical plan drafted in accordance with the provisions of this Ordinance shall be a constituent part of the Contract referred to in paragraph 1 of this Article.

(5) The Contract referred to in paragraph 1 shall contain the following:

- a) subject of the contract
- b) provisions on the validity of the contract
- c) provisions on the price and manner of payment of the fee for access to and sharing of electronic communications infrastructure and associated facilities,
- d) provisions defining obligations on the infrastructure operator with reference to the safety of the installed equipment
- e) provisions on manner and procedures referring to the maintenance of the installed equipment
- f) provisions on reporting problems with installed equipment as well as the manner and deadlines for eliminating problems
- g) provisions on contract termination and cancellation.

h) Provisions on dispute resolution between the parties

VI. FINAL PROVISIONS

Article 13

1. This Ordinance shall enter into force within 8 days from the date of publication in the Official Gazette.
2. The Ordinance on manner and conditions of access and shared use of electronic communications infrastructure and associated facilities (Official Gazette No. 154/08 and 93/10) shall cease to be valid on the date of entry into force of this Ordinance.

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Done at Zagreb, 16 November 2011

CHAIRMAN OF THE COUNCIL

Miljenko Krvišek, BEng