

**CROATIAN POST AND ELECTRONIC COMMUNICATIONS AGENCY**

**The Council of the Croatian Post and Electronic Communications Agency**

**ANNUAL WORK PROGRAMME  
OF THE  
CROATIAN POST AND ELECTRONIC COMMUNICATIONS AGENCY**

**FOR 2010**

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# 1. Introduction

The Croatian Post and Electronic Communications Agency (hereinafter: HAKOM) is a national regulatory body carrying out regulatory and other tasks in electronic communications and postal services sectors. HAKOM was founded and organised pursuant to the Electronic Communications Act and its activities are in compliance with the Electronic Communications Act (hereinafter: ECA) and the Postal Services Act (hereinafter: PSA).

The founder of HAKOM is the Republic of Croatia, and founding rights are exercised by the Croatian Parliament and the Government of the Republic of Croatia. HAKOM's main activity is the regulation of the electronic communications and postal services markets in the Republic of Croatia. HAKOM also governs, manages and supervises the use of the radio frequency spectrum as a naturally limited public resource of interest for the Republic of Croatia. In order to be able to carry out the function of completely and independently regulating the electronic communications and postal services markets, HAKOM must ensure special prerequisites in terms of staff, expertise and financial resources.

HAKOM's work is in the first place oriented towards the achievement of certain principles and objectives of regulation of the electronic communications and postal services market, with a special emphasis on maintaining and promoting efficient and sustainable competition and on facilitating market access for new operators and service providers. In this respect, HAKOM pays particular attention to ensuring a good quality of electronic communications and postal services at an affordable price and to providing a high level of consumer protection. Through its regulatory activities, that is, by adopting a series of decisions and documents important for further liberalisation and regulation of electronic communications and postal services markets, HAKOM has ensured and keeps ensuring conditions for efficient competition. HAKOM's activities are focused on the liberalisation of the Croatian market and on the creation of equal conditions for operators and service providers thus providing to end users the possibility to choose the operators and services according to their wishes. In accordance with the envisaged dynamics of gradual liberalisation by the end of 2012, one of the key roles of the national regulatory body is to prepare the postal services market for all the challenges brought by gradual liberalisation and the opening of the postal services market.

On the basis of its competences, HAKOM plans, allocates and manages the use of the radio frequency spectrum by applying the principles of objectivity, transparency, proportionality and non-discrimination and by harmonising radio frequencies at the European level. This enables the application of communications networks with the use of the radiofrequency spectrum for the purposes of development of electronic communications market services, for the needs of public services and national security without unwanted interferences or abuse.

It is HAKOM's mission to ensure the following:

- competition, stable growth and room for innovations on the electronic communications and postal services markets;
- protection of interests of users and the possibility to choose from among various communications and postal services at affordable prices;
- sustainable competitive conditions for operators and service providers under fair conditions for return on investments;
- support to economic growth, public services and quality of life in the RoC by using modern technologies.

The Council of the Croatian Post and Electronic Communications Services adopts, upon prior consent of the Government of the Republic of Croatia, the Annual Work Programme of HAKOM. The HAKOM's 2010 Work Programme (hereinafter: the Programme) is based on HAKOM's obligations according to ECA, PSA, bylaws and HAKOM's Strategic and Operational plans.

In the year to come, 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 balanced development by making electronic communications and postal services equally accessible to all citizens of the Republic of Croatia regardless of where they live.

HAKOM will encourage, in particular:

- Competition in the offer of communications services;
- Constant growth and rapid implementation of modern communications technology;
- Stable, interoperable and reliable communications infrastructure;
- Affordable offer of communications services to Croatian consumers;
- Efficient use of the spectrum;
- Rapid growth of broadband products and services;
- Increased reliability of communications in crisis situations;
- Further development of the Croatian economy.

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

2. Regulation of electronic communications market;
3. Radio frequency spectrum management;
4. Regulation of postal services market;
5. Consumer protection
6. HAKOM's capacity.

## **2. Regulation of Electronic Communications Market**

### **2.1. Regulatory affairs**

HAKOM establishes markets susceptible to ex ante regulation, carries out market analysis consisting of the definition of the relevant market and the evaluation of the existence of effective competition. If it is assessed that there is no effective competition in the relevant market, HAKOM identifies one or more operators with significant market power and imposes regulatory obligations on the operators in question. HAKOM also supervises the implementation of regulatory obligations by operators with significant market power.

The market analysis procedure and/or the carrying out of the three criteria test comprise the following:

1. Preparation of a questionnaire for market analysis;
2. Sending the questionnaire to operators;
3. Analysis of data from the received questionnaires;
4. Definition of the relevant market on the basis of the analysis of received data;

5. Evaluation of effectiveness of competition on the relevant market;
6. Identification of SMP operators on the relevant market;
7. Imposition of regulatory obligations on SMP operator/s or the withdrawal of all regulatory obligations imposed on SMP operators.

HAKOM also supervises the application of accounting separation and cost accounting by the company HT-Hrvatske telekomunikacije d.d (hereinafter: HT) in relation to the preparation of regulatory financial statements on the basis of HCA/FAC and CCA/LRIC models and may, where necessary, request from HT to amend the weighted average cost of capital (WACC), which is a part of the Regulatory Accounting Document. HAKOM also builds and applies cost models of SMP operators on the following markets: the interconnection market in fixed and mobile electronic communications networks, the access market in fixed electronic communications networks and a cost model for the calculation of net costs for the provision of universal services.

The supervision of the application of accounting separation and cost accounting carried out by HAKOM in relation to the preparation of regulatory financial statements on the basis of the HCA/FAC model includes the analysis of possible amendments in HT's regulatory accounting documents and their impact on regulatory financial statements. This is done in the manner that HAKOM gives comments and adopts a decision on the (non-)approval of the mentioned amendments. HAKOM analyses HT's revised regulatory financial statements and uses the received data for the carrying out of its regulatory tasks. HAKOM supervises the process of implementation of CCA/LRIC model, including the supervision of HT's activities defined in the Implementation Plan.

HAKOM collects and processes indicators of growth and development of electronic communications and postal services markets in the Republic of Croatia, follows changes in retail prices and prepares OECD's consumer baskets in mobile communications. It also prepares comparative overviews of market indicators of the Republic of Croatia and European countries.

#### Europe and the Republic of Croatia

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.

In the EU Member States which implement the regulatory obligation of accounting separation, CCA is most frequently used as a cost basis, while FAC is the most frequently used cost methodology in retail access markets and LRIC on wholesale markets.

In July 2009, HAKOM completed 5 analyses of relevant markets which are a part of the European Commission Recommendation and 4 analyses of relevant markets which are not a constituent part of the mentioned Recommendation. HAKOM's Council adopted decisions

identifying SMP operators on 5 relevant markets which are a constituent part of the Recommendation and regulatory obligations of SMP operators, and it confirmed the existence of effective competition on the remaining 4 relevant markets. HAKOM will continue with the analysis of markets which are a part of the Recommendation and of other markets which are not a part of the Recommendation with a view to further liberalisation of the electronic communications market in the Republic of Croatia. The process of analysis of three relevant markets related to leased lines services at retail and wholesale level has started in the last quarter of 2009.

In August 2009, the Council of HAKOM approved HT's regulatory accounting documents that will serve as a basis for HT to prepare and submit to HAKOM draft regulatory financial statements prepared on the basis of the HCA/FCA model. The procedure of the Council's approval of HT's regulatory accounting documents based on CCA/LRIC model is currently in progress. HAKOM has also initiated a public procurement procedure for consultancy services in order to ensure a successful implementation of the project "Cost- models of operators with significant market power" which will enable better verification of financial information by the operators. Operating procedures for cost models will be decided upon in agreement with selected consultants.

Focus and activities of HAKOM

In 2010, HAKOM will focus, in particular, on the following:

- supervising the implementation of regulatory obligations of SMP operators with a special emphasis on the determination of reasonable prices for wholesale services offered by HT on wholesale broadband markets;
- defining the amendment procedure for reference offers and process for controlling the correspondence of prices of services to regulatory obligations imposed on SMP operators;
- ensuring successful cooperation with operators which have been imposed the obligation of cost accounting and/or accounting separation;
- finding the optimal approach to the development of cost models by taking into account market demands and actual possibility of the operators to deliver the requested data;
- improving of the public consultation procedure concerning market analyses and/or the three criteria test;
- improving the drafting of reports on market review;
- publication of glossaries with detailed explanations of individual indicators.

HAKOM's main regulatory activities in 2010:

No.	Activity	Period covered	Link to the financial plan
2.1.	Supervise the implementation of regulatory obligations by SMP operators	I-IV quarter	
2.2	Complete the analyses of three relevant markets related to leased lines services at the retail and wholesale levels and the opening of the public consultation	I and II quarter	4257
2.3	Analyse the remaining markets from the old European Commission Recommendation on	II-IV quarter	4257

	relevant markets susceptible to ex ante regulation (except for the market 17 international roaming and market 18 broadcasting market), which refer to retail public electronic communications market access and publicly available telephone service		
2.4	Selection of the consultant (public procurement) and realisation of the project “Cost models”	I-IV quarter	VI
2.5	Introduction of a system for electronic collection, processing and publication of data of the Indicator System – SPOK, related to market development indicators	II quarter	IV
2.6	Upgrading and improvement of the SPOK system with OLAP functionality (Online analytical processing – the possibility of multidimensional queries in the report preparation process).	III quarter	IV

## 2.2. Communications networks

HAKOM manages the addressing and numbering space in electronic communications by adopting decisions on the primary allocation of addresses and numbers and the corresponding accounts for the allocation of addresses and numbers, and by adopting the Addressing and Numbering Plan. It is also responsible for the implementation of number portability by managing the central administrative base of portability (CABP) and by preparing new functionalities.

HAKOM is also in charge of issuing certificates, invoices for fees for the provision of electronic communications services and other documents in accordance with the Electronic Communications Act and regulations adopted pursuant to this Act. HAKOM also supervises the conditions for the provision of electronic communications services and the quality of electronic communications services.

By adopting decisions, HAKOM identifies operators of universal services, defines their rights and obligations and follows the development and level of retail prices of universal services and the quality of universal services. Upon request of operators of universal services, HAKOM decides whether costs incurred by the obligation to provide universal services represent an unfair burden on universal services operators, it calculates net costs for the provision of universal services and finally, where necessary, adopts a decision establishing a system for the compensation of net costs of universal services operators.

### Europe and the Republic of Croatia

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 EC market and with the application of new IT aids for the management of the addressing and numbering space.

The 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.

Focus and activities of HAKOM

In 2010, HAKOM will focus, in particular, on the following:

- upgrading and modernising of the central administrative number portability database;
- carrying out the annual verification of the manner of use of numbers in order to ensure efficient use and management of the addressing and numbering space;
- identifying universal services operators;
- upgrading of the list of available/allocated addresses and numbers and of the procedure for resolving applications for the allocation of addresses and numbers;
- supervising payments of fees for the use of numbers and of fees from gross income of operators for the carrying out of the activity of electronic networks and services (state budget/HAKOM financing);
- creating and connecting the database of EC operators by means of a web interface offering a simpler search for operators by name and type of service.

HAKOM's main activities in 2010 in relation to communications networks:

No.	Activity	Period covered	Link to the financial plan
2.7.	Identify a universal services operator and an operator to provide directory and directory enquiry services	I quarter	
2.8	Monitor cost orientation of prices of universal services and the fulfilment of obligations undertaken by universal services operators in relation to special advantages for socially disadvantaged users of electronic communications services, and the quality of universal service	I-IV quarter	
2.9	Adjust and integrate new functionalities of CAPB to facilitate the number portability procedure, and carrier selection and pre-selection	III quarter	IV
2.10	Shorten time limits in the number portability procedure in mobile electronic communications networks from five to three days		
2.11	Introduce new numbers for emergency services by changing them from the existing	I-IV quarter	4253

	92,93 and 94 to 192, 193, 194 in accordance with the Numbering Plan and conduct promotional activities		
<b>2.12</b>	Prepare databases of all numbers that will support related accompanying services such as direct reservations, portal searching and number portability	II quarter	IV
<b>2.13</b>	Prepare a single database of operators of electronic communications services and connect it to HAKOM's web interface	III quarter	IV

## **2.3. Facilities and infrastructure**

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.

### **2.3.1 Building requirements**

Building requirements refer to spatial planning of electronic communications infrastructure, special conditions for the construction of electronic communications infrastructure and of business or residential buildings, protection zones of electronic communications infrastructure and associated facilities and protection zones of radio corridors, the issuing of certificates of compliance of main projects and technical checks of constructed facilities in procedures for the issuing of a certificate of occupancy for facilities.

In relation to building requirements, HAKOM implemented the following key processes:

- defining and issuing of requirements and guidelines for the content of spatial plans at all levels in the part referring to electronic communications infrastructure;
- participating in previous and public consultations in the procedure for the drafting and adoption of spatial planning documents;
- issuing opinions in the process of drafting and adopting spatial planning documents;
- issuing of special conditions in the procedure for the issuance of location permits, opinions and approvals for designs;
- participating in the issuing of location permits by taking part at conferences;
- determining special conditions for interventions in space within the zone of electronic communications infrastructure and associated facilities and protection zone and the radio corridor of certain radio stations;
- issuing of the certificate of compliance of the main project with designs in the procedure for the issuing of approvals for main projects and building permits;
- participating in the work of commissions for technical inspection of completed facilities in the procedure for the issuing of certificates of occupancy for facilities in relation to which it participated in procedures for the issuance of documents approving construction;
- issuing of certificates of quality of joint antennae systems.

### Europe and the Republic of Croatia

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.

In order to efficiently encourage the development of electronic communications infrastructure, HAKOM will continue to undertake actions aimed at creating preconditions for fast and undisturbed development of mobile communications networks of all operators and for the building of quality cable ducts by means of spatial planning. It will continue to contribute to efforts to create quality Spatial Plans in counties and at lower levels that will better appreciate the role of electronic communications in the overall economic and social development of the observed areas. By systematic efforts and proposals, HAKOM will try to influence the improvement of Spatial 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.

### Focus and activities of HAKOM

In 2010, HAKOM will focus, in particular, on the following:

- participating in the adoption or amendments to spatial 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.

HAKOM's main activities in 2010 in relation to building requirements:

No.	Activity	Period covered	Link to the financial plan
2.14	Participate in previous and public consultations on the procedure for amendment, drafting and adopting spatial	I-IV quarter	

	planning documents;		
<b>2.15</b>	Adopt an ordinance on technical conditions for infrastructure and electronic communications networks (ECM), which will facilitate business and directly influence the upgrading of network features related to broadband access and create equal access conditions for all operators.	I-IV quarter	4257
<b>2.16</b>	Collect documentation on the existing zones and corridors in order to enable more effective implementation of the Ordinance on protection zones of electronic communications infrastructure	I-IV quarter	
<b>2.17</b>	Promote and encourage the building of integrated infrastructure in cooperation with state administration bodies and local self-government bodies by means of presentations and lectures with a view to remove barriers to infrastructure development and to ensure better fulfilment of the requirements of human health, spatial protection and environmental protection	I-IV quarter	
<b>2.18</b>	Ensure that all building owners have the ability to freely choose the operator and that all operators have access to the building under equal and non-discriminating conditions	I-IV quarter	

### **2.3.2. Infrastructure**

The building of and access to electronic communications infrastructure is an important factor in the liberalisation and development of the electronic communications market. The principal role of HAKOM in this field is the following: to effectively use the existing electronic communications infrastructure and associated facilities, to adopt legislative documents and regulate the existing situation, the right of way, to present and sanction trespassing, and dispute mediation. The definition of conditions for sharing of the existing telecommunications ducts has contributed to the consolidation of this area in good faith thus enabling new operators to have easier access to new users.

In procedures related to joint use of electronic communications infrastructure and associated facilities, HAKOM carries out the following key activities:

- analyses requests for collocation and sharing of electronic communications infrastructure and the establishment of the existence of technical possibilities for sharing;
- mediates in and analyses the prepared technical solutions in disputes;
- establishes technical conditions for collocation and unbundling of the local loop;
- drafts proposals for laws, acts, instructions and forms necessary for sharing of electronic communications 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 stimulus of overall economic development, employment and competitiveness and an obligatory factor for a more efficient health, education, science, tourism and other sectors.

The total number of Internet and broadband users in the Republic of Croatia shows a rapidly increasing trend. However, concerning broadband access, the Republic of Croatia is not as competitive as other EU Member States. In this respect, it is important to mention the lack of balance in the distribution of broadband connections in individual counties. For that reason, the selective stimulus for the development of broadband Internet access in the Republic of Croatia, as proposed by the Government, was fully justified. In 2010, HAKOM will continue to guide and supervise the sharing of electronic communications infrastructure and associated facilities in order to reduce the number of incidents of unauthorised access into the distribution electronic communications ducts and continue the issuing of certificates for the right of way.

In 2010, HAKOM will continue to work intensively on further development of broadband Internet access. In spite of enviable results achieved in previous years, the density of broadband Internet access is still unsatisfactory. HAKOM will continue to promote new technologies and the development of infrastructure that will improve the availability of broadband Internet access and allow a diverse offer of broadband services of all operators.

HAKOM will continue collecting and entering data on paths and infrastructure capacities into the geo-information system thus contributing to more efficient processing of requests for sharing of telecommunications infrastructure and resolving of the existing situation related to the use of infrastructure.

Focus and activities of HAKOM

In 2010, in the area of infrastructure, HAKOM will focus, in particular, on the following:

- supporting effective use of the existing electronic communications infrastructure as a limited resource;
- 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;
- monitoring the development of access technologies and models encouraging more rational use;
- collecting data on paths and infrastructure capacities in the geo-information system.

HAKOM's main activities in 2010 in relation to infrastructure:

No.	Activity	Period covered	Link to the financial plan
2.14	Promote and encourage investments in electronic communications infrastructure, in	I-IV quarter	

	particular with the view to development of broadband Internet access, quicker and more rational building and use of infrastructure, and joint investments of more operators, as well as joint investments of the local government and operators;		
<b>2.20</b>	Ensure effective use of limited resources and supervise the implementation of provisions of the Ordinance on the manner and conditions of access to and sharing of electronic communications infrastructure and associated facilities	I-IV quarter	4257
<b>2.21</b>	Draft ordinances prescribing technical, use and other conditions for certain types of electronic communications networks and electronic communications infrastructure and associated facilities	I-IV quarter	4257
<b>2.22</b>	Draft an ordinance on the construction, development and maintenance of ducts by encouraging investments, development and building	I quarter	4257
<b>2.23</b>	Intensify the issuing of right-of-way certificates and the carrying out of right-of-way procedures and regulate the existing situation (adoption of laws)	I quarter	
<b>2.24</b>	Speed up the collection and entry of data on paths and infrastructure capacities into the geo-information system this contributing to quicker resolution of requests for sharing of the existing telecommunications infrastructure and the resolution of the existing situation in the use of infrastructure		

### 2.3.3. 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. This directive replaced the old system of type approvals with the new system allowing free movement of R&TT equipment among Member States of the EU. Since Directive 1999/5/EC introduces a kind of ex post regulation of the market of R&TT equipment, Member States of the EU invest a lot of effort into market regulation, and an important trend at the EU level is the harmonisation of the level of quality and manner of market control.

The Ordinance on R&TT equipment was adopted in the process of accession of the Republic of Croatia to the EU and the alignment of legislation with the EU regulations. This Ordinance partially implements Directive 1999/5/EC and it will have to be amended before the accession of the Republic of Croatia into the EU for the purpose of complete harmonisation. This Ordinance lays down the obligation to obtain HAKOM's prior approval before import and placing on the market of R&TT equipment, which represents ex ante market regulation. The approval is issued on the basis of documentation which is usually provided to inspection

services in EU Member States and it represents a sort of inspection supervision. However, in accordance with the criteria that the Republic of Croatia must meet as part of Chapter 1, this will have to be changed by enabling free import and placing on the market, followed by on site inspection. For that reason, it will be necessary to establish and train within HAKOM a professional control service that will be capable of controlling the R&TT equipment market.

Focus and activities of HAKOM

In 2010, HAKOM will focus, in particular, on the following:

- regular tasks of 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 in the order in which they were received;
- speeding up of procedures, better information of users who need our services and availability of the most recent technologies on the market of the Republic of Croatia, which allow more effective use of the RF spectrum (considering laws regulating the use of the RF spectrum and standardisation).

HAKOM’s main activities in 2010 in relation to R&TT equipment:

No.	Activity	Period covered	Link to the financial plan
2.25	Update the database of issued approvals for import and placing on the market	I-IV quarter	
2.26	Incorporate an application that will allow the publication of the above-mentioned database directly from the document management system in order to increase efficiency, reduce the possibility of error and improve accessibility	I quarter	IV
2.27	Monitor the amendments of regulations, adjust work procedures to new regulations and timely inform users of services related to R&TT equipment	I-IV quarter	
2.28	Prepare a training plan for the control department in order to ensure effective control of the market of R&TT equipment	I-IV quarter	
2.29	Improve the website in the part on R&TT equipment by adding contents that will make it easier for producers and importers to fulfil their obligations when importing and/or placing on the market of R&TT equipment	I-II quarter	IV

**2.4. Expert supervision**

Expert supervision over the application of the Electronic Communications Act and the Postal Services Act, as well as regulations adopted on the basis of these two Acts, is carried out by electronic communications and postal services supervisors in all cases of possible violations of legislative provisions. Supervision is also possible in cases of protection of users against

interference. Procedures are initiated on the basis of findings or facts collected by HAKOM following a complaint made by users or operators. After having completed the procedure, supervisors issue proper decisions, and HAKOM may initiate misdemeanour proceedings in cases of established violations of the law.

The market of electronic communications in the Republic of Croatia and in the EU shows a trend of further liberalisation which permits easier entry and participation of companies on the market and the provision of an increasing number of diverse services. Simplified market entry procedures and various aspects of deregulation on the market call for better control and supervision. A system of inspection, that is, of supervision, has been established in all EU countries in the same or similar manner as in the Republic of Croatia.

*Focus and activities of HAKOM*

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

- implementing regulatory obligations of SMP operators;
- lawful provision of electronic communications services;
- protection of users from the point of view of the provision of services and pricing systems;
- provision of postal services;
- 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.

Main activities in expert supervision:

No.	Activity	Period covered	Link to the financial plan
2.30	Improve the protection of UMTS/GSM communications systems from interference by prompt reactions and closer cooperation with operators in mobile electronic communications	I-IV quarter	
2.31	Improve the protection of users by expert supervision in cases of unlawful actions of operators of value added services	I-IV quarter	
2.32	Prevent problems in market development by carrying out expert supervision and adopt measures and decisions in case of non-compliance with or abuse of regulatory obligations of SMP operators	I-IV quarter	
2.33	Improve protection of citizens in case of established increased values of electromagnetic fields created by electronic communications networks, radio stations or R&TT equipment by prohibiting their work	I-IV quarter	

### **3. 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 harmonisation of the radio frequency spectrum in accordance with adequate procedures and the conclusion of international agreements 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.

#### *Europe and the Republic of Croatia*

The EU has been striving towards more technological and service-related neutrality in radio communications, that is, towards the allocation of the radio frequency spectrum to users without determining the type of the communications service, concrete technology used and services provided in this part of the spectrum. The application of this principle has also been attempted in those radio frequency bands where it is possible.

By following the trends in radio frequency management in the EU, laws and bylaws in the EU have been adjusted to the allocation of the radio frequency spectrum on a technically and technologically neutral basis. Licences for use of the radio frequency spectrum which are issued do not determine the technology used but the technology is determined by the allocation plan for this radio frequency band. Before the adoption, the Allocation Plan is subject to a public consultation where all interested parties may give their comments and proposals. Operators of public electronic communications networks have already been issued technologically neutral licenses, and operators of mobile communications networks have, in particular, already been allowed to use the GSM and UMTS technologies, depending on their business plans. WiMAX operators are also no longer limited to fixed wireless access but they may also provide fixed and mobile broadband wireless access.

Digital broadcasting has become more widespread in the EU Member States after the European Commission adopted a recommendation inviting the phasing out of analogue television by 2012. The consequence of the application of digital technology is more efficient use of radio frequencies which releases a part of the spectrum used today and ensures a “digital dividend” for the provision of additional broadcasting and communications services. After the disappearance of analogue television, it is envisaged that new broadband electronic communications services with service and technological neutrality will be more frequently

applied in the 790-860 MHz frequency band. Digital radio (in the first place T-DAB) did not have significant success in Europe until today but lately there are more and more activities carried out to promote the digitalisation of radio. The profiles of receiving devices have been standardised for DMB/T- DAB/T-DAB+ and DRM standard.

In July 2008, the Government of the Republic of Croatia adopted a Strategy for the Transition from Analogue to Digital Broadcasting of Television Programmes in the Republic of Croatia and the accompanying Action Plan. As part of the implementation of measures from the Strategy, all the necessary bylaws have been adopted which served as a basis for the invitation of the public tender resulting in the granting of an individual licence for the use of the radio frequency spectrum for the provision of the services of management of electronic communications networks for digital television for MUX A and MUX B in the territory of the Republic of Croatia. The mentioned multiplexes ensured the broadcasting of the existing four national television programmes and the introduction of six new digital programmes at the national level. HAKOM also ensured additional frequencies thus enabling, first in Zagreb, and then also in Rijeka, the experimental digital video broadcasting for handheld (DVB-H). In accordance with the Strategy and the Action Plan, HAKOM continued its activities related to the international harmonisation of frequencies to ensure conditions for the transition of television broadcasters below the national level for MUX D, and to ensure frequencies for other future multiplexes (for HDTV and DVB-H). Today, there are 25 analogue television networks active in the Republic of Croatia, 2 digital television networks (multiplexes) and 170 analogue radio networks.

The appearance of new technologies, technological solutions, services and users in radio communications resulted in better usage of the radio frequency spectrum. Due to the liberalisation trend on the European and international markets, the control of the radio frequency spectrum has become an important factor in regulation, efficient management of radio frequencies, protection of users from interferences and electromagnetic radiation and in preventing unauthorised use. Because of this, all EU Member States have established measuring systems for spectrum control and the possibility of inspection i.e. supervision of all participants in the market.

HAKOM has established a measuring system for the control of the radio frequency spectrum which must be developed in such a manner to be able to measure and control systems which are using new technologies and to enable more efficient control of the radio frequency spectrum and the protection of people from electromagnetic radiation. The appearance of new users of the RF spectrum and the introduction of new technologies and technological solutions require constant upgrading of the system to prevent unauthorised use of the RF spectrum and to offer efficient protection against interference and electromagnetic radiation to all users. Measuring and control centres are currently located in inadequate leased premises in Split, Rijeka and Osijek, and the system of remotely controlled control and measuring stations has not been fully completed. Measuring vehicles are already old, and measuring equipment needs to be modernised in order to make the control of new technologies more efficient.

#### *Focus and activities of HAKOM*

Bearing in mind the key processes, the situation in the EU and the Republic of Croatia, HAKOM will in 2010 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 harmonisation of the radio frequency spectrum and the conclusion of international agreements related to the use of the RF spectrum;
- transition from analogue to digital television and the provision of frequencies for digital television multiplexes, in accordance with the Strategy;
- 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.);
- ensuring frequencies for the introduction of digital radio and the continuation of the Forum on digital radio. Planning support for the introduction of new services and technologies (T-DAB, DMB, DRM etc.) and the definition of the “Croatian standard” and strategic guidelines for the introduction of the digital radio;
- planning and optimising the network of the FM radio in the Republic of Croatia with a view to more efficient use of the RF spectrum;
- upgrading and modernising the control system of the radio frequency spectrum;
- carrying out regular measuring by means of an established measuring system as well as measuring for the purpose of frequency planning with a view to preventing unauthorised use of the RF spectrum and protection of users from interference.

HAKOM’s main activities in relation to RF management in 2010:

<b>No.</b>	<b>Activity</b>	<b>Period covered</b>	<b>Link to the financial plan</b>
<b>3.1</b>	Amend bylaws, in particular the Frequency Allocation Tables and the accompanying Plans in accordance with the development of market and of technologies. Particular attention will be paid to frequency areas intended for IMT	III-IV quarter	
<b>3.2</b>	Carry out activities related to the phasing out of radio stations of analogue television by 31 December 2010	I-IV quarter	
<b>3.3</b>	Re-plan parts of the radio frequency spectrum depending on the interest of users and taking into account the existing situation and the principles of equality and transparency for the purpose of more efficient use of the radio frequency spectrum	I-IV quarter	
<b>3.4</b>	Prepare the possible carrying out of a public auction for the allocation of the RF spectrum on 2.6 GHz (technologically neutral allocation – possible use by different technologies) in case of market requirements based on experiences of other countries. In that case, adequate	II-IV quarter	IV

	international agreements will be concluded.		
<b>3.5</b>	Cooperate with the Ministry of the Sea, Transport and Infrastructure on the drafting of an ordinance on the limitations of effects of electromagnetic fields in order to take into account the experiences of HAKOM during application of existing regulations	I-IV quarter	
<b>3.6</b>	Upgrade the EFIS database rated to the Allocation Table and signed international agreements	I-IV quarter	
<b>3.7</b>	Carry out the tender and the issuing of licences for the use of the radio frequency spectrum for the provision of the service of the management of electronic communications networks of digital television at the regional and local levels	I-IV quarter	
<b>3.8</b>	Finish the procedure of international harmonisation of frequencies for regional digital television networks from MUX D	I and II quarter	
<b>3.9</b>	Ensure conditions for the introduction of additional digital television networks for new SDTV/HDTV contents and DVB-H	I-IV quarter	
<b>3.10</b>	Continue with the Forum on digital radio. Intensify activities related to the planning of digital radio networks and their harmonisation at the international level	I-IV quarter	
<b>3.11</b>	Improve and regularly maintain the control and measuring system	I-IV quarter	4252
<b>3.12</b>	Continue with activities related to the finding of premises for control and measuring centres	I-IV quarter	I A.2, I A.4., I A.6 III
<b>3.13</b>	Continue with the activities related do the rounding up of the necessary number of remotely controlled control and measuring stations	I-IV quarter	I A.3
<b>3.14</b>	Replace two 15-year old measuring vehicles with new ones	I-IV quarter	II A.2, V
<b>3.15</b>	Procure new measuring equipment for measuring in digital electronic communications	I-III quarter	II A.1
<b>3.16</b>	Establish a system and a procedure for regular periodical measuring of levels of electromagnetic radiation for radio stations which already have been granted certificates of safety and carry out a measuring campaign with the same purpose	I and II quarter	
<b>3.17</b>	Carry out regular control of the spectrum and measuring on a daily or periodic basis, on-site measuring and measuring campaigns. Measuring campaigns will	I-IV quarter	

	cover the use of the spectrum in broadcasting, microwave links, and measuring in coastal areas in order to establish the existence of any interferences caused by transmitting systems in other countries		
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## 4. Postal services

On the postal services market, HAKOM is responsible for the following processes:

- adopts implementing regulations for the Postal Services Act;
- issues licences for the provision of universal postal services;
- receives applications for the provision of postal services;
- adopts decisions on amendments, revocation and termination of validity of licences for the provision of postal services;
- adopts decisions on public operator network access, on the separation of business activities of a public operator and amendments or annulment of terms and conditions of universal services provider;
- approves the prices of reserved postal services;
- follows the application of prices of postal services and undertakes the adequate measures;
- regularly publishes data, notifications and documents in the area of provision of postal services;
- provides expert opinions and clarifications in the application of the Postal Services Act;
- carries out other tasks prescribed by the Postal Services Act.

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

1. Proactive – giving initiatives for further development of the postal services market;
2. Corrective – reacting to noticed developments and trends on the postal services market.

As part of the proactive component, HAKOM collects and publishes data, notifications and documents related to the situation on and development of the postal services market. HAKOM also plans to strengthen and consolidate its position of a market regulator through frequent contacts and cooperation with all providers of postal services on the market, and by providing guidance to postal services providers with a view to developing the postal services market in the direction of complete liberalisation.

The corrective component is carried out by undertaking adequate measures for directing the development of the postal services market in accordance with the Postal Services Act, the Strategy for the Development of the Postal Services Market in the RoC and the Action Plan for the implementation of the Strategy.

### Europe and the Republic of Croatia

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. The EU Member States with the already developed postal market must finish this process by the end of 2010.

Under such circumstances, postal services providers have been actively preparing for liberalisation and for competition, and they have been modernising their offer of services on the market.

The liberalisation of the postal services market in the Republic of Croatia has been in progress for several years and the adoption of the new Postal Services Act represents a strong incentive for the completion of this process. The postal services market made completely lawful the carrying of direct mail and forms and the weight limit for the reserved area has been reduced from 100 to 50 grams. The envisaged deadline for complete liberalisation is early 2013, and this date was accepted by the European Commission in accession negotiations between the Republic of Croatia and the European Union. These circumstances have contributed to the increase in the number of alternative providers of postal services to over 20.

Focus and activities of HAKOM

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

- drafting and implementation of implementing regulations under HAKOM's competence;
- ensure compliance of providers of postal services to the provisions of the Postal Services Act;
- 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.

HAKOM's main activities on the postal services market in 2010:

No.	Activity	Period covered	Link to the financial plan
4.1	Carry out market analysis and act systematically to bring the market in compliance with the Act	I and II quarter	
4.2.	Draft and implement the plan for the completion of all obligations of the public operator and HAKOM arising from the Postal Services Act, the Action Plan for the implementation of the Strategy for the Development of Postal Services in the Republic of Croatia in order to bring universal postal services to an adequate level of quality and accessibility to all users	I-IV quarter	
4.3	Draft and publish studies based on the relevant data collected from providers of postal services	IV quarter	VI
4.4	Draft the Ordinance on the payment of the annual fee for the carrying out of HAKOM's activities and a public consultation	IV quarter	
4.5	Draft the Ordinance on the provision of universal postal services and a public consultation	IV quarter	
4.6	Carry out a survey on the satisfaction of users of postal services, and publish the results	III quarter	4257

## 5. 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.

The promotion of interest of users is carried out by:

- ensuring access to universal public communications and postal services for all users of services in the entire territory of the Republic of Croatia;
- promoting clear information about prices and conditions of using the services;
- informing and educating consumers about their rights and obligations;
- dealing with the needs of special social groups (disabled persons, children, etc.)
- processing, controlling and harmonising general acts of operators adopted by operators in accordance with the law and ordinances;
- participating in various activities of other state institutions and societies dealing with user protection;
- international cooperation with the relevant organisations and institutions on consumer protection, and participation in the work of their expert bodies and work groups;
- publishing data and informing competent state authorities.

The protection of consumer rights is ensured by conducting simple and accessible procedures for the resolution of disputes between consumers and operators of public communications and postal services. HAKOM resolves disputes on the basis of a proposal and opinion of the **Commission for the Protection of Rights of Users** of public communications and postal services consisting of representatives of consumer protection associations.

The above-mentioned activities of promoting and protection of consumer interests are conducted in the Consumer Protection Department which also has a Consumer Protection Commission as an advisory body whose proposal and opinion serves as a basis for HAKOM to resolve disputes between operators and users of services. The Department carries out two main groups of tasks:

### **Dispute resolution**

- receiving, filing and processing requests for the resolution of disputes between subscribers and operators of public communication and postal services and their preparation for decision-making in the Commission for the Protection of Consumer Rights
- processing of cases after the opinion given by the Commission for the Protection of Consumer Rights on the basis of which HAKOM resolves disputes and may adopt binding decisions for operators;
- education and assistance to users in dispute resolution proceedings;
- enabling users to receive daily updated information on the status of their requests over the phone or on HAKOM's website;
- keeping the database of consumer complaints;
- cooperating with operators of public communication and postal services on the resolution of complaints and claims of users.

### **Prevention in consumer protection**

- informing and educating users about their rights and obligations;
- publishing appropriate information and instructions for users of public communication and postal services on HAKOM's website, in newspapers, or in some other appropriate manner;
- processing, controlling and proposing amendments of operators' bylaws adopted in accordance with the Act and various ordinances;
- researching, analysing and controlling services provided on the market, proposing measures for the prevention of user protection and initiating control on the basis of a complaint or ex officio;
- participating in professional gatherings and public consultations on user protection;
- preparing different types of reports of both internal and external nature.

### Europe and the Republic of Croatia

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. Operators are obliged to establish customer services in order to promote the interests of users and protect them. 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.

A current project implemented as a part ERG/IRG activities is entitled "End user PT" which should, through its 4 project tasks, discover the direction in which the European Commission will regulate markets and relations for the purpose of promoting interests of users and for their protection. HAKOM has been actively participating in all of their activities.

In addition to the above-mentioned regulatory procedures, EU Member States have organised direct consumer protection in case of a dispute between consumers and operators in different ways:

- establishing a special, national body independent of the regulatory authority;
- resolving disputes within the regulatory authority – not as an individual complaint but by adopting new regulatory obligations;
- establishing special bodies of individual groups of providers of services which act on the basis of various documents of the "Code of practice" type.

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.

Bearing in mind the manner of dealing with disputes between consumers and operators in the EU, we may conclude that HAKOM has taken upon itself a big responsibility and obligation when it took over the resolution of these out-of-court proceedings. However, at this moment of market development and of the overall society development, this represents a contribution to legal security of all participants.

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.

Focus and activities of HAKOM

HAKOM's activities in 2010 will be focused on:

- 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 pricing systems, that is, by controlling operators' bylaws;
- adopting prescribed bylaws and introducing procedures and processes for user protection, which have proven to be efficient for users of public communications services.

HAKOM's main activities in consumer protection in 2010:

No.	Activity	Period covered	Link to the financial plan
5.1	Intensify the resolution of consumer complaints, analyse them according to structure and type and establish possible improvements in procedures, in particular from the point of view of HAKOM's relations with operators in order to increase efficiency on both sides	I-IV quarter	
5.2	Organise meetings (permanent or on as needed basis) with operators, with the following potential topics: <ul style="list-style-type: none"> <li>- dispute resolution, in particular in case of complaints against value added services;</li> <li>- draft general bylaws and pricing systems;</li> <li>- procedures for acting in case of resolved complaints</li> </ul>	I-IV quarter	4213
5.3	Continue informing and educating users by participating in radio shows with consumer-related topics, being involved in TV shows, maintaining and upgrading HAKOM's internet site for users	I-IV quarter	
5.4	Prepare and publish brochures for users	II-III quarter	4253

5.5	Carry out a survey to establish the needs of users and simultaneously analyse the results of the last year's survey	II quarter	4257
5.6	Draft an Ordinance on the manner of work of an internal unit for protection of rights of users of postal services	I quarter	
5.7	Analyse bylaws of operators and draft Instructions for preparation of bylaws in order to help operators with simpler, quicker and more efficient preparation thereof, and to shorten the time spent by HAKOM on their analysis and harmonisation	I and II quarter	
5.6	Analyse the provision of services on the market with a special emphasis on non compliance with laws and propose measures for the necessary harmonisation	I-IV quarter	
5.7	Improve the "Complaints system" application by allowing consumers to see the status of their case by means of a web interface	I and II quarter	IV

## 6. 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.

### 6.1 International cooperation

In the year 2010 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.

#### Europe and the Republic of Croatia

The European Union and the world have been trying, on one hand, to standardise, secure the interoperability and, on the other, to harmonise further development of the electronic communications and postal services market on one hand, and on the other to ensure innovations and investments, as well as competition in these markets. That process has been developing within the framework of international authorities, working groups, different associations, forums, as well as through bilateral and multilateral cooperation between countries. Furthermore, the EU Member States are currently applying the existing regulatory framework and preparing for the implementation of the new regulatory framework after its adoption.

HAKOM has regularly participated in the activities of these authorities in order to monitor market development, to secure the interests of the Republic of Croatia, to exchange information and experiences, to acquire new knowledge, to achieve a timely recognition of the regulatory, technological and market challenges, and to observe and apply best practices. A further proof of that is the successful closing of Chapter 10 „Information Society and Media“ in the process of the Republic of Croatia's accession to the EU, where HAKOM has proven the alignment with the *acquis communautaire* and has shown that it keeps step with the application of the best regulatory practice in the EU. This was further strengthened by continuous cooperation with the European regulators, as well as with other interest groups and organisations in the sector on an international level.

Focus and activities of HAKOM

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 EU's new 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.

HAKOM's activities in the area of international cooperation:

No.	Activity	Period covered	Link to the financial plan
6.1	Participation in the activities of: <ul style="list-style-type: none"> <li>• COCOM (Communication Committee),</li> <li>• the ERG (European Regulatory Group),</li> <li>• the IRG (Independent Regulatory Group),</li> <li>• the RSPG (Radio Spectrum Policy Group),</li> <li>• RSC (Radio Spectrum Committee).</li> </ul> Area: electronic communications market Tasks: cooperation with European regulators, gathering of knowledge and experience on the regulation of electronic communications market, gradual consolidation and harmonisation of the EU markets, management of the radio frequency spectrum, goals of the new regulatory framework of the EU which is expected in 2010 and on technology development such as Next Generation Networks (NGN/NGA) etc.	I-IV quarter	4213
6.2	Participation in the activities of: <ul style="list-style-type: none"> <li>• ITU (International Telecommunication Union),</li> <li>• ECC-a (Electronic Communications Committee).</li> </ul> Area: electronic communications market Tasks: gathering of knowledge and experience on the regulation of electronic communications market, participation in preparation and passing of decisions, recommendations and reports on the European and	I-IV quarter	4213

	global level, following technological trends in electronic communications, efficient management and harmonisation of the use of the radio frequency spectrum, efficient protection from harmful interferences and their elimination		
<b>6.3</b>	<p>Participation in the activities of:</p> <ul style="list-style-type: none"> <li>• CERP (European Committee for Postal Regulation),</li> <li>• UPU (Universal Postal Union),</li> <li>• continuous cooperation with the European Commission.</li> </ul> <p>Area: postal services market  Tasks: gathering of knowledge and experiences on the development of the internal market and services, adjustment of the postal system of the Republic of Croatia to the EU system.</p>	I-IV quarter	4213
<b>6.4</b>	<p>Continue participation in and organisation of:</p> <ul style="list-style-type: none"> <li>• meetings of international working groups in Croatia,</li> <li>• bilateral and multilateral meetings and workshops with the regulators from member countries and particularly with the neighbouring countries.</li> </ul> <p>Area: electronic communications and postal services market  Tasks: exchanging experiences in the regulation of the electronic communications and postal services market, harmonisation in the use of radio frequencies and elimination of harmful interferences.</p>	I-IV quarter	4213
<b>6.5</b>	<p>Ensure the use of the EU's pre-accession funds within the framework of the IPA programme for:</p> <ul style="list-style-type: none"> <li>• acquiring modern equipment and software for surveillance and measuring of the radio frequency,</li> <li>• strengthening of human resources in HAKOM,</li> <li>• providing support in implementing market analysis and regulatory accounting.</li> </ul> <p>Area: electronic communications market  Tasks: successfully implement the IPA project for which HAKOM applied the value of 4.2 million €.</p>	I-IV quarter	II A.1

## 6.2 Development of competences and modernisation

HAKOM has adopted a strategic and operative development plan until the year 2012 which is implemented through two improvement programmes:

- a) convergence – oriented towards competition and market regulation aimed at improving competition and increasing investments and innovations in the electronic communications market,
- b) 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.

These two programmes embrace, in particular, the development of competences and the e-Agency project.

### **6.2.1 Development of competences**

HAKOM shall continue to strengthen competences and qualifications of its employees. HAKOM is active in the area of permanent and extremely quick technological changes which represent a challenge for all the participants on the electronic communications market as well as for the regulatory authority itself. The activities and operations of the regulatory body are closely connected to the appropriate number and educational structure of the employees and demand the monitoring and evaluating of complex professional (electronic and communicational and postal), legal and economic issues. HAKOM shall pay special attention to the approaching issues and to those that will in the near future mark the electronic communications market. HAKOM's employees will improve their knowledge by participating in postgraduate studies, research projects, seminars, conferences, work groups, workshops and courses with an aim of improving organisational and individual competences.

HAKOM continuously monitors the development of regulatory aspects in the world and in the EU by participating in international regulatory organisations, by participating in conferences and by using reference works from this field. This will allow HAKOM to define legal and specific aspects of the market in the Republic of Croatia, notice the discrepancy between the market in the Republic of Croatia and in the world and the EU, recognise the best practices of world regulators, especially of the European regulators, and shall define a plan of competence development which relies initially on cooperation with universities in the Republic of Croatia. Therefore, in partnership with the Faculty of Electrical Engineering and Computing, the Faculty of Economics in Zagreb, the Faculties of Law in Zagreb and Split, HAKOM has been preparing a programme of competence development by initiating specialised, multi-disciplinary postgraduate studies in the regulation of electronic communications market and a multi-annual project „A Look into the Future“.

#### *Europe and the Republic of Croatia*

Although telecommunications traffic and income has been continuously growing and it will continue to do so, it does not happen in the same manner and with the same intensity as it used to. The possibilities for growth based on increased capacity or the number of connections still exist only in undeveloped countries, whereas in developed countries further growth is possible only by introducing a broadband network and new applications and services. More and more traffic has been arriving from network borders, that is, from new applications and services which have been offered by some new players in the chain. This presents new challenges before the participants in electronic communications market and requires new business models, new knowledge and skills as well as new relations on the market.

Next Generation Networking, NGN, is a term describing an architectural evolution in telecommunications core and access networks. The general idea behind NGN is single transport of all information and services (voice, data, and video) by using package commutation, as in the case of the Internet. NGN will pave the way for new multi-media applications and services. Examples of such applications are VoIP, IPTV, LBS etc. A process that will mark the development of electronic communications in the next 5 to 10 years has to a large scale already started in developed countries (UK, the Netherlands etc.), whereas in the Republic of Croatia this process is only starting. NGN asks for new multi-disciplinary (communication, economy and law) knowledge and skills from all of the participants on the electronic communications market. Taking into consideration that the participants on the Croatian market are not organised in such a way as to initiate research and gathering of all necessary knowledge, HAKOM has decided to begin with such an initiative by asking all participants on the electronic communications market to participate in those efforts. To that purpose HAKOM shall launch multidisciplinary studies in electronic communications market regulation and a research project „A Look into the Future“. The initiative should result in increasing the capacity of all of the participants in the electronic communications market regulation and development in the Republic of Croatia.

Focus and activities of HAKOM

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.

HAKOM's main activities in 2010 in relation to the development of competences:

No.	Activity	Period covered	Link to the financial plan
6.6	Multidisciplinary specialist studies – Topics: Microeconomics, Accountancy, Decision making based on costs, Accounting Separation and Cost Modelling, Legal basis and competences of regulatory bodies in the area of electronic communications, Market Competition and Electronic Communications, Privacy and Consumer Protection in electronic communications, Regulatory aspects of networks and services, Information and communication services, Network modelling, Radio Frequency Spectrum Management, Radio and Television Broadcasting.	IV quarter	4213
6.7	Project „A Look into the Future“ – Topics that the project should open are: a) Next Generation Networking (core networking, access networking, numbering, VoIP, etc.) and b) further development of	IV quarter	VI

	electronic communications market (market analysis methods, accounting separation and cost accounting models, spectrum managements and economy etc.).		
<b>6.8</b>	A study of the broadband services development – Development of FTTx and broadband applications and services and their influence on the market from the aspect of market regulation.	I quarter	VI

In order to carry out the projects and the competence development programmes it is necessary to cater for the necessary human and material resources. HAKOM does not possess the necessary human resources to independently realise the whole programme, nor is that HAKOM's task. For that reason, HAKOM will realise that programme in cooperation with the Faculty of Electrical Engineering and Computing, the Faculty of Economics in Zagreb, the Faculty of Law in Zagreb and Electronic Engineering and Naval Architecture Faculty in Split, as well as with other interested subjects on the electronic communications market in the Republic of Croatia. HAKOM's employees will actively participate in the above mentioned projects. HAKOM will concentrate particularly on defining the necessary knowledge and skills, on creating tender documentation, on participating in the programme implementation and on further training of its employees.

### **6.2.2 e-Agency**

With an aim of providing excellent service to the interested parties on the electronic telecommunications market HAKOM has been creating a strong, e-government based, integrated information system. In that manner HAKOM has been continuously adjusting to the quick technological changes and demands for excellent service, by improving the capacity, effectiveness and productivity, benefits and access to the regulatory services on electronic communications market.

The e-Agency has as its aim the transformation of HAKOM by using information and communication technology in order to provide to its costumers quality, timely, highly available and easily accessible information. In that manner HAKOM shall contribute to the development strategy of the Republic of Croatia – by ensuring a high level of information services to its economy and citizens – as well as to the integration of the Republic of Croatia into the single European electronic communications market and into the growing „pan-European/e-government“ services network.

HAKOM shall base the e-Agency on a layered architecture of e-government systems which consist of: a) infrastructure (LAN, servers, computers etc.), b) „back office“ (systems for documents, human resources, finances and accounting management) and c) „front office“ (numerous applications which comprise the e-Agency). The e-Agency architecture shall be optimised from the aspect of the end user, and it shall be based on global standards and recommendations. The e-Agency's conceptual architecture shall be constructed according to the following principles: a) a comprehensive integrated system of information systems, b) an adjustable information system acceptable in the future as well, c) a set of globally standardised protocols, d) an open and modular system and e) a system governed by consumer needs.

The main stages in the creation of an e-Agency are: the identification of potential problems, the analysis and setting of priorities, the identification of success factors, the definition of a referential model, the definition of the standard and architecture, the creation of communication scenarios, customer specification, the specification of agents and main components, system specification including security aspects and preparation of tender documentation.

### Europe and the Republic of Croatia

The vision of public services in the 21st century in developed countries is based on the concept of e-governments. An e-government can be defined as a process of applying information and communication technology to the exchange of information between government authorities on one side and citizens and businesses on the other. This process has become full-blown in developed countries. The usual communication channels are government-citizens, government-costomers, government-business, government-government and government-employees. Except for the Internet, the concept of e-government implies the use of other communication technologies such as SMS, MMS, RFID, Bluetooth etc. The aims of e-governments are promoting public services, democratisation processes, internal efficiency and productivity.

The Government of the Republic of Croatia, first and foremost with the e-Croatia programme, has been undertaking pervasive action in order to enhance the development of information society in the Republic of Croatia. The aim of the programme is to provide to citizens and businesses in the Republic of Croatia a high level of information services, the possibility of wide application and exchange of all kinds of information in such a manner as to enable their active participation in global development. HAKOM's previous information system was up to its task, but it had very limited possibilities. The physical and logical architecture of the system did not allow the implementation of e-government applications and services, it had difficulties in adjusting itself to technological changes and the introduction of new applications was relatively expensive. For that reason, HAKOM initiated the creation of e-Agencies - a modern, integrated information system with a series of applications from the area of e-governments. Until this moment, the Back office has been created (infrastructure, DMS, ERP and HRM) and the creation of the so-called Front office has started. The Front Office includes several applications from the area of e-government, and the development of new applications and services will be continued in the following year.

### Focus and activities of HAKOM

In the year 2010 HAKOM will focus the e-Agencies programme on:

- further automatisation of the process according to the abilities of the Document Management System, DMS, into Back office,
- increasing information security by introducing a mediation/agent layer tasked with preventing unauthorised access to HAKOM 's information system,
- development and installing the set of new, web-based and consumer-oriented applications from the area of e-governments.

HAKOM's major activities within the e-Agencies programme in the year 2010:

No.	Activity	Period	Link to the
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		<b>covered</b>	<b>financial plan</b>
<b>6.9</b>	Document management – improvement of document registration, saving, scanning, exchange and browsing.	IV quarter	IV
<b>6.10</b>	Introduction of the Case/task Management System, CMS, which should improve the communication between departments and the monitoring of shorter work assignments, as well as the Project Management System for project monitoring.	IV quarter	IV
<b>6.11</b>	Improvement of the communication infrastructure. Increase of connections capacity between the locations Iblerov trg-Jurišićeva-KMSs.	I quarter	IV
<b>6.12</b>	Implementation of the mediation/agent layer between the web server and application servers, whose task is to prevent unauthorised access to HAKOM's information system.	II quarter	IV
<b>6.13</b>	Introduction of e-business (Strategies of e-business development in the Republic of Croatia).	IV quarter	IV
<b>6.14</b>	Implementation of applications: <ol style="list-style-type: none"> <li>1. <b>General licenses</b> – an application enabling the search of the general licenses database according to the type of the equipment and the frequency band,</li> <li>2. <b>License database</b> – an application enabling the search of valid licenses according to the licence types,</li> <li>3. <b>Allocation table</b> – an application enabling the display of a chosen part of the Allocation table,</li> <li>4. <b>Numbers and addresses database</b> – an application for management and browsing of numbers and addresses (assigned, free, inactive, transferred),</li> <li>5. <b>Procurement</b> – an application as a support for the system of public procurement.</li> </ol>	I quarter  II quarter  III quarter  I quarter  II quarter	IV

The implementation of the e-Agencies programme requires the necessary human and material resources. HAKOM does not have the necessary human resources to independently carry out the whole programme, nor is that HAKOM's task. For that reason, HAKOM will focus only on defining the architecture and specification of a particular application or a system, on creating tender documentation, on supporting the implementation and integration applications and systems into the HAKOM's integrated information system, and on training the staff that will be using the application or the system. The applications and systems themselves will be bought ready-to-use by HAKOM or some national companies will be engaged in their development.

## 6.3 Goods, human resources and monitoring

### Goods and human resources

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 attempt to cater for the necessary human resources for performing the proscribed tasks by: a) increasing the efficiency by improving the process and the staff training and b) new recruitment. Namely, a project on modelling and optimising of HAKOM's business processes has started and the analysis of the necessary human resources has been performed. In the majority of cases HAKOM has at its disposal a sufficient number of trained employees for performing the tasks, but it is necessary to strengthen human potential in order to undertake certain activities. In this sense it is necessary to focus on:

- modelling and redefining business processes,
- strengthening market analysis,
- strengthening communications networks, connected to competence development, that is, the activities of the „Look into the Future“ and the development of broadband networks,
- ensuring the implementation of the project of cost accounting models,
- strengthening the regulation of the postal services market,
- strengthening HAKOM 's IT components linked to the e-Agency project.

No.	Activity	Period covered	Link to the financial plan
6.15	The analysis of the necessary number shall be performed and additional HAKOM's employees shall be included in the project of cost accounting models.	I quarter	
6.16	Activities on modelling and optimising HAKOM's business processes shall be continued.	I-IV quarter	
6.17	The ISO 9001 project shall be finished as a support to the definition of processes.	I quarter	
6.18	New employees shall be recruited up to 5% of the total number of HAKOM's employees, the number of employees would be increased from 160 to the maximum of 168 employees. Only those with a university degree shall be employed for the purpose of increasing the expertise in the new areas under HAKOM's competence.	I-IV quarter	II, III

### Monitoring of activities

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. In case of major

projects and programmes there is a managing group which 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.

## 7. List of abbreviations

CABP	- Central Administrative Base of Portability
CCA	- (Current Cost Accounting)
CEPT	- European Conference of Postal and Telecommunications Administrations
CERP	- European Committee for Postal Regulation
COCOM	- Communications Committee
DMB	- Digital Multimedia Broadcasting
DMS	- Document Management System
DRM	- Digital Radio Mondiale
DVB-H	- Digital Video Broadcasting – Handheld
DVB-T	- Digital Video Broadcasting Terrestrial
CBS	- Central Bureau of Statistics
EBU	- European Broadcasting Union
ECC	- Electronic Communications Committee
ECC PT2 TRIS	- Technical Regulation and Interconnection Standards
ECO	- European Communications Office
EFIS	- ERO Frequency Information System
E-GSM	- Extended Global System for Mobile Communications
EK	- European Commission
ECN	- Electronic Communications Network
ENISA	- European Network and Information Security Agency
ERG	- European Regulators Group
ERP	- Enterprise Resource Planning
EU	- European Union
EUROSTAT	- (Statistical Office of the European Union)
FAC	- Fully Allocated Costs
FGSM	- Fixed Global System for Mobile communication
FM	- Frequency Modulation
GSM	- Global System for Mobile Telecommunications
GSM-R	- Global System for Mobile Communications on Railways
HAKOM	- Croatian Post and Electronic Communications Agency
HCA	- Historic Cost Accounting
HCM	- Harmonised Calculation Method
HDTV	- High Definition Television
HRM	- Human Resource Management
HT	- Hrvatske telekomunikacije d.d.
IMT	- International Mobile Telecommunications
IPA	- Instrument for Pre-Accession Assistance
IRG	- Independent Regulators Group
IT	- Information Technology
ITU	- International Telecommunication Union
LRIC	- Long Run Incremental Costs
CMC	- Centre for Measurements and Control

MSTI	- Ministry of the Sea, Transport and Infrastructure
MUX	- Multiple
NPIEU	- National Programme for Integration of Croatia into the EU
OG	- Official Gazette
P-t-P	- Point to Point
P-t-MP	- Point to Multipoint
RF	- Radio frequency
RoC	- Republic of Croatia
R&TT	- Radio and Telecommunications Terminal Equipment,
SDTV	- Standard Definition Television
SMS	- Short Message Service)
SPOK	- Indicator System
TCAM	- Telecommunication Conformity Assessment and Market Surveillance Committee
T-DAB	- Terrestrial Digital Audio Broadcasting
UMTS	- Universal Mobile Telecommunications System
UPU	- Universal Postal Union
VAS	- Value Added Service
Council	- HAKOM's Council
VoIP	- Voice over Internet Protocol
WG NNA	-Working Group Numbering, Naming, Addressing
WGSE	-Working Group for Spectrum Engineering
ECA	- Electronic Communications Act
PSA	- Postal Services Act