

IV. ACTIVITIES UNDER THE LAW ON ELECTRONIC COMMUNICATIONS AND THE LAW FOR THE ELECTRONIC DOCUMENT AND ELECTRONIC SIGNATURE

1. Provision of electronic communications

1.1. Authorizations for use of individually assigned scarce resource

Table 11

Authorizations under the Law on Electronic Communications						
Electronic communication network	Amendments/Supplements/ Transfers (number)	Authorizations issued (number)	Terminated/Revoked (number)	Expired (number)	Active authorizations as of 31.12.2010 (number)	Active authorizations as of 31.12.2011 (number)
Electronic communication networks for terrestrial analogue broadcasting:						
broadcasting of television signals with national and local coverage	62	-	13	-	133	120
broadcasting of radio signals with national and local coverage	120	24	14	-	294	304
Electronic communication networks for terrestrial digital broadcasting	13	-	-	-	4	4
Electronic communication networks from a mobile radio service - paging	-	-	-	-	2	2
Electronic communication networks from the mobile radio service - TRUNK	-	-	-	-	3	3
Electronic communication networks from the mobile radio service - PMR	94*	31*	31	6	651	645
Electronic communication networks from the aeronautical mobile radio service	-	1	1	-	13	13
Electronic communication networks from the mobile radio service - TETRA	1	-	-	-	3	3
Land mobile network – in frequency bands 900 MHz and/or 1800 MHz	3	3	-	-	3	6
Land mobile network - UMTS in frequency band 2 GHz	-	-	-	-	3	3
Land mobile network - PAMR	-	1	-	-	-	1
Aeronautical mobile, radiolocation and radionavigation radio services for the air traffic control and provision of aeronavigation service of flights in the civil air space	-	-	-	-	1	1
Provision of positions on the geostationary orbits allocated to the Republic of Bulgaria via international agreements	1	-	-	-	2	2
Electronic communication networks from the fixed satellite radio service	5	-	1	-	17	16
Electronic communication networks from the fixed radio service of the “point-to-point” type	110**	4**	13	1	121	111

Electronic communication networks for broadband wireless access (BWA)	3	1	-	1	7	6
Electronic communication networks for fixed wireless access (FWA)	-	-	1	-	2	1
Electronic communication networks for the provision of a fixed voice telephone service	89	10	2	-	22	34
Electronic communication networks for the provision of access to a voice telephone service through the carrier selection service	10	2	3	-	11	9
Electronic communication network for data transfer - numbers	4	-	-	-	3	3
Electronic communication network from a fixed radio service of the "point-to-multipoint" type – numbers	3	-	1	-	2	1
Public telephone service and all service included in the GSM and/or UMTS standard	6	-	-	-	3	3
TOTAL:	524	77	80	8	1300	1291
Temporary authorizations	-	9	-	-	-	-

* The total number of provided radio frequencies is 196;

** Amendments and supplements to the technical data of a total of 5184 radio relay links, including provided radio frequency spectrum for another 3186 links.

1.2. Notifications on the provision of public electronic communications

Table 12

Public Registry of undertakings which have notified CRC of their intention to provide public electronic communications (Registry under Art. 33, Para 1, item 1 of LEC)			
Type of activity	as of 31.12.2010 (number)	2011 (number)	Total number
Processed notifications for provision of public electronic communications	1098	282	1380
Processed notifications for termination of the provision of public electronic communications	461	130	591
Issued certificates for entry in the Registry	101	56	157
Undertakings entered in the Registry	1531	119	1650
Undertakings deleted from the Registry	378	113	491

1.3. Provision of electronic communications through radio equipment from the amateur radio service

Table 13

Table 14

Authorizations, certificates and licenses

Exams for radio amateur capacity

Type of document	as of 31.12.2010 (number)	2011 (number)	Total
Authorizations for radio amateur capacity	2092	218	2310
HAREC certificates	208	16	224
CEPT licenses	320	28	348
TOTAL:	2620	262	2882

Exams/Examined persons	as of 31.12.2010 (number)	2011 (number)	Total
Exams	61	7	68
Examined persons	1690	179	1869

In 2011, 243 personal and 226 temporary identification signs of persons with radio amateur capacity were approved. In addition, exams for radio amateur capacity were held in the cities of Sofia, Kazanlak, Plovdiv and Burgas.

2. Market regulation

The main purpose of the activity of CRC is to ensure conditions for the development of effective competition on the electronic communications markets allowing users to make an informed choice and satisfying their needs of diverse, quality, modern and affordable electronic communication services. In this respect, the collection of information about the activity of undertakings, the analysis of competitive environment on the electronic communications markets, and the regulatory measures taken with the purpose to ensure a competitive environment, are among the main priorities in the Commission's activity.

2.1. Monitoring of the electronic communications market

In accordance with Art. 40 of LEC, as well as Art. 18 of the Methodology for the terms and procedures of relevant market definition, analysis and assessment¹ (the Methodology), monitoring of the Bulgarian electronic communications market is carried out by CRC through observation of a set of parameters for which data is collected from over 1300 undertakings by means of specially created for this purpose questionnaires, complying with the public electronic communication services provided by them. The set of parameters spans information necessary to the Commission for:

- definition, analysis and assessment of the relevant electronic communications markets according to the 2002 European regulatory framework;
- preparation of a summarized annual analysis on the state and development of the electronic communications market in Bulgaria for the preceding year, part of the regulator's Annual Report;
- providing information to the EC related to the preparation of the annual progress reports for the single European electronic communications market aimed at achieving the objectives set out in the Digital Agenda Scoreboard for Europe adopted in May 2010;

¹ The Methodology was adopted by Ordinance No. 40 of 28.02.2008 of the Council of Ministers and promulgated in the State Gazette, issue 27 of 11 March 2008.

- providing information to international institutions and organizations of which CRC is a member by virtue of international agreements: ITU, BEREC, Independent Regulators Group (IRG), etc.

2.2. Definition, analysis and assessment of the relevant electronic communications markets according to the 2002 European regulatory framework

In 2011 was completed the work on the definition, analysis and assessment of the markets for provision of wholesale (physical) network infrastructure access (including full and shared unbundled access) at a fixed location, and the market for provision of wholesale broadband access (respectively, Markets 4 and 5 of Recommendation 2007). The Commission adopted its final Decision No. 246 of 22.02.2011 and designated the undertaking BTC as having with significant market power on each of the relevant markets. In this respect, CRC imposed on BTC the obligations of access, non-discrimination, transparency, price control and publication of Reference offer for unbundled access to subscriber line and Reference offer for provision of access to a passive infrastructure (duct network). The aim of the imposed regulatory measures is to improve the opportunities for undertakings to offer high-speed Internet access in Bulgaria, so that end users will have more options to choose quality services at affordable prices.

In compliance with LEC and the Methodology transposing in the national legislation the 2002 European regulatory framework, during the past year, CRC the second round of market analysis for call origination on public telephone networks provided at a fixed location, and call termination on individual public telephone networks provided at a fixed location, and the market for call termination on individual mobile networks. CRC adopted its final decision on the analysis and assessment of these markets in May 2012. Currently (June 2012), the analysis and assessment of leased lines markets is subject to public consultation.

In accordance with Commission Recommendation of 7 May 2009 on the regulatory treatment of fixed and mobile termination rates in the European Union (2009/396/EC)², CRC signed a contract with the subcontractor who was awarded under an open public procurement to develop fixed and mobile network models that will be used to determine the costs of an efficient operator.

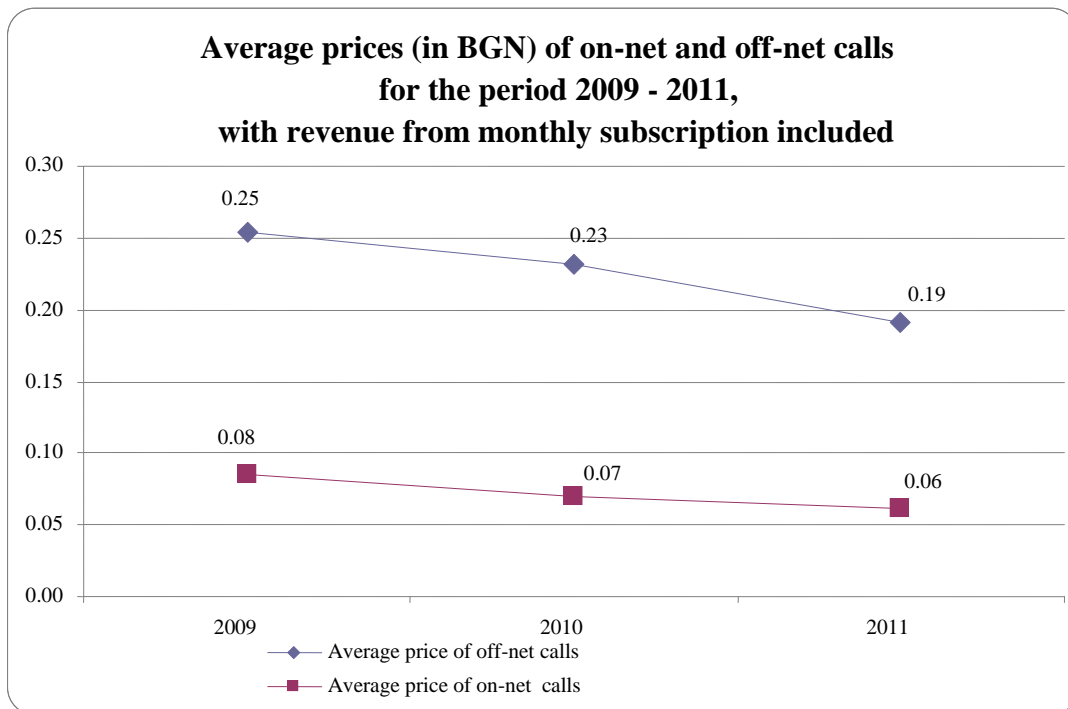
2.3. Price regulation

In accordance with the provisions of LEC, electronic communications prices are subject to regulation only if prescribed by law or if based on a market analysis it is found that the competition on the relevant market is ineffective, and if CRC has imposed specific price obligations on the undertakings with significant market power.

The reduction of prices on the market for call termination on individual mobile networks as a result of the specific obligations imposed in 2009³, reflected on the levels of weighted average prices of mobile undertakings on the relevant retail market for off-net calls, which were down by 18%, as compared to 2010. At the same time, the weighted average price for on-net calls in Bulgaria was reduced by 12% for a one-year period (Figure 60).

² Commission Recommendation on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC).

³ Decision No. 236 of 17.03.2009 on the final adoption of the analysis and assessment of the market for voice call termination on individual mobile networks.



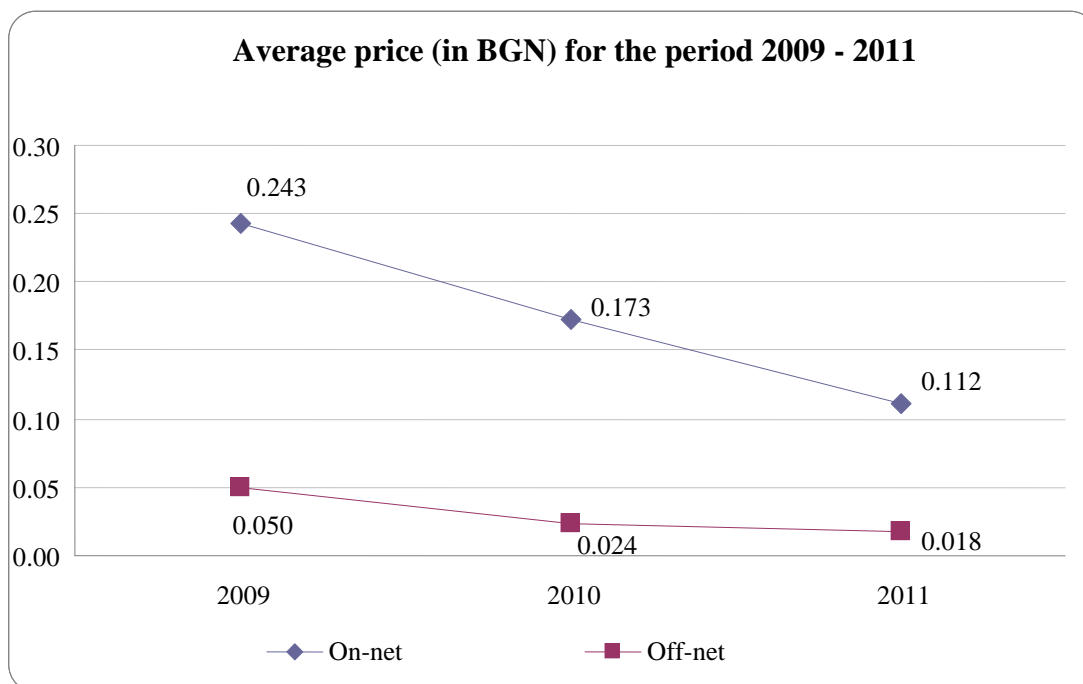
Source: Data submitted to CRC

Figure 60

Although prices of off-net calls to other networks are decreasing, prices for on-net calls are still much lower. This is an expression of commercial tactics aiming to retain subscribers.

The reflection of price reduction on the market for call termination on individual public telephone networks provided at a fixed location, as a result of the specific obligations⁴ imposed in 2009 on the levels of weighted average prices on the relevant retail market of voice calls is illustrated on the chart below:

⁴ Decision No. 237 of 17.03.2009 of CRC regarding the final adoption of the analysis and assessment of the markets for call origination on public telephone networks at a fixed location and call termination on individual public networks at a fixed location



Source: Data submitted to CRC

Figure 61

As a result of the specific obligations imposed, the retail weighted average price for off-net calls dropped by 35% on a year-to-year basis, and by 54% since 2009. The trend is preserved towards reduction of weighted average price for on-net calls as the drop of 25% in 2011 against 2010 is smoother than the preceding period. The considerably lower rates of on-net calls, as compared to the off-net, reflect the undertakings' strive to retain their subscribers.

As for the market for call origination on public telephone networks provided at a fixed location, it should be noted that the reduction of wholesale prices for origination⁵ did not lead to an increase in the use of "carrier selection" service, and in 2011, the traffic generated during its provision once again registered a decline, as it decreased by 51.9%, as compared to 2010. This decline explains the lack of demand for the wholesale line rental service, even though with Decision No. 712 of 29.06.2010 CRC approved a Reference offer for wholesale line rental, and BTC unilaterally reduced the monthly subscription prices.

In accordance with the specific obligations imposed⁶, BTC, in the capacity of undertaking with significant power on the retail markets for access to public telephone network provided at a fixed location and publicly available telephone services provided at a fixed location, applies prices, price packages and promotional offers following an assessment carried out by CRC of their effect on the competitive environment. In 2011, the undertaking submitted, and the Commission assessed, 21 price packages and promotional offers. Due to changes occurred in the competitive environment, with Decision No. 13 of 13.01.2011, CRC suspended any further offering of price package "Vivacom DUO".

With Decision No. 246 of 22.02.2011, CRC adopted the first round of analyses of the market for the provision of (physical) wholesale access to the network infrastructure (including full and shared unbundled access) at a fixed location and the market for the provision of wholesale broadband access as a relevant markets susceptible to ex-ante regulation. With the above decision, BTC was designated as the undertaking with significant

⁵ See note 60.

⁶ CRC Decision No. 650 of 25.06.2009.

power on these markets, therefore, along with the other obligations, the undertaking's obligations to apply cost-oriented prices for the use of route from the duct network determined on the basis of costs of an efficient operator were prolonged. Until these were determined, CRC imposed price caps in accordance with the cost model adopted by Decision No. 1220/11.11.2010. In this way, the price list of the undertaking was simplified, and the price of linear meter of subduct laid down by BTC was reduced by approximately 24%.

By Decision No. 246 of 22.02.2011, CRC imposed on BTC obligations to apply cost-oriented prices determined on the basis of costs of an efficient operator in terms of services related to unbundled access to subscriber line, and set a margin of 48% between retail prices and wholesale broadband access prices (bitstream access).

International roaming

In execution of Regulation (EC) No. 544/2009⁷ (the Regulation) amending Regulation (EC) No. 717/2007 on roaming on public mobile telephone networks within the Community, the Bulgarian mobile undertakings offered to their subscribers Eurotariff and Euro-SMS tariff. In compliance with the requirements of the Regulation, outgoing calls are charged per second, with an initial interval of up to 30 seconds. The Bulgarian undertakings also introduced the requirements for the provision of information about tariffs of regulated SMS messages and data transfer services in roaming. In order to protect the users from excessively high bills, as of 1 July 2010, a limit for data roaming was introduced, which did not exceed the amount of EUR 50 (VAT excl.) or any other preliminary agreed amount. Once the limit is reached, the undertakings are obliged to suspend the data traffic, unless consumers have expressly declared their wish to continue to use the service.

The prices for international roaming of Bulgarian undertakings providing mobile services, applied as of 01.07.2011, are as follows:

Table 15

	Undertaking		
	MOBILTEL EAD	COSMO BULGARIA MOBILE EAD	BTC
Eurotariff			
Outgoing call (BGN/min., VAT incl.)	0.82	0.822	0.82
Incoming call (BGN/min., VAT incl.)	0.258	0.258	0.25
Euro-SMS tariff			
SMS message	0.252	0.25*	0.252
Mobile Internet 100KB	1.29	1.79**	0.49**
Way of charging	Incoming calls are billed per second, while the initial interval for billing outgoing calls is 30 seconds, and then billing is per second. The way of charging is the same for subscribers and for clients of the prepaid service and applies for both incoming and outgoing calls. The Internet charging interval is 100KB.		

⁷ With this Regulation, the term for regulation of international roaming within the Community is prolonged up to 30 June 2012, the scope of regulation is extended so that it covers SMS messages and data

** For users of prepaid services, the price is BGN 0.258 per SMS, VAT incl.*

*** For users of prepaid services, there is no price announced.*

Source: The official websites of BTC, COSMO BULGARIA MOBILE EAD and MOBILTEL EAD.

Along with the Eurotariff, MOBILTEL EAD offers special roaming tariffs: “M-Tel WORLD TRAVELLER” – tariff effective as of 01.06.2009, and “M-Tel 3 FOR FREE”, effective as of 15.06.2011, including voice calls, SMS messages and data, with prices and way of charging different from those displayed in Table 15. Mobile undertakings also offer additional bundles including minutes for voice, volume of data, number of SMS messages or combination of the above. At the end of 2011, the total number of different alternative tariff plans and bundles offered was 36.

Each end consumer using the roaming service is entitled to request at any time to transfer to Eurotariff, or to stop using such tariff. The transfer or suspension is carried out free of charge within one working day from the request receipt and may not be linked to any conditions or restrictions affecting other components of the subscription.

In compliance with the provisions of the Regulation, CRC prepares and regularly submits reports to EC regarding the compliance with the requirements for international roaming prices.

The Regulation is valid until 30 June 2012, and a new regulation is to be accepted with a validity period until 30 June 2022, which shall provide for a continued glide path reduction of both retail and wholesale prices for voice, SMS messages and data.

2.4. Cooperation with the Commission on Protection of Competition

On the grounds on the Rules for interaction and coordination adopted in 2008, which aim to establish conditions for effective cooperation and coordination between both institutions when exercising their legally delegated powers and implementing national and European electronic communications and competition law, the Commission on Protection of Competition (CPC) and CRC continued their active cooperation.

In 2011, the Commission assisted CPC in carrying out investigations concerning potential breaches of the Law on Protection of Competition and evaluations of economic concentration cases involving undertakings providing electronic communications services.

On its part, CPC provided statements on the draft market analyses prepared by CRC.

3. Radio equipment and electronic communication terminal equipment

In compliance with Art. 269 of LEC and in connection with the application of Art. 6, Para 4 of Directive 1999/5/EC of the European Parliament and the Council concerning the radio and terminal equipment and mutual recognition of their conformity, during the past year CRC received by e-mail, timely stored and reviewed 846 notifications for radio equipment placed on the market, from which 841 were received through the European portal OSN (One Stop Notification) for electronic services at the Directorate-General for Enterprise and Industry of the European Commission. After an analysis of the received notifications concerning the ability to use frequency bands from the relevant radio equipment with technical parameters indicated in them and applied standards, 194 letters were sent. Thus, CRC informed about the inability of an equipment to be put into service on the territory of the Republic of Bulgaria or the ability of some equipment to be put into service in line with the conditions and the relevant technical parameters specified in the Bulgarian secondary legislation.

4. Standardization

CRC successfully performed the functions of the National Standardization Organization for the European Telecommunications Standards Institute (ETSI) by organizing a public enquiry of draft ETSI standards.

In 2011, CRC took part in the ETSI procedures, as follows:

Table 16

2011	Number of processed documents	Number of procedures
PE – Public enquiry	40	14
Vote – Voting	52	23
OAP – One-step procedure	25	15
MV – Member voting	23	15
PUB – Weekly received documents	3007	

Information about the national standards published by the Bulgarian Institute for Standardization (BIS), with the help of which ETSI standards were introduced, is periodically entered into the ETSI database. In the past year, 99 ETSI standards were introduced by endorsement as national standards. All translations of headlines for standard harmonization projects were prepared and coordinated at the Technical Committees (TC) of BIS by way of correspondence.

On its website, CRC maintained and updated on an ongoing basis the ETSI documents on the public enquiry and voting.

Representatives of CRC took part in the 57th and 58th General Assembly of ETSI.

In the beginning of the year, an Agreement for cooperation and joint activity in the sphere of standardization was signed between CRC and the Bulgarian Institute for Standardization (BIS). Its purpose is to improve coordination in the joint activity of the two organizations related to the introduction of ETSI standards as national.

In 2011, CRC continued to actively participate in the work of four TCs (TC75, TC47, TC57, TC80) for standardization to BIS, which dealt with electronic communications.

5. Interconnection and access

In 2011, the Commission's activity related to interconnection and access was focused on the approval of drafts submitted by the BULGARIAN TELECOMMUNICATIONS COMPANY AD (BTC AD) for reference offers and resolution of controversial issues arising among undertakings.

1. Assistance

Two requests for assistance were filed with CRC – for conclusion of interconnection contract between CABLE SAT-WEST OOD (CABLE SAT-WEST) and BTC AD, and for non-execution of the interconnection contract entered into by EAST TELECOMMUNICATION COMPANY AD (ETC) and BTC AD.

CABLE SAT-WEST approached the Commission for assistance in solving a dispute which had arisen between the undertakings over the requirements set by BTC AD for organization points of interconnection (POI) and the absence of agreement over financial issues. CABLE SAT-WEST provides telephone services through geographic numbers only in the towns of Kyustendil and Blagoevgrad. In this respect, the undertaking has filed with BTC AD a request for interconnection of the two networks in two POI in the relevant towns. In its reply to this

request, BTC AD has set the condition that a higher-level POI must first be opened on the network in one of the cities of Sofia, Plovdiv or Varna. The financial problem is related to the supporting documents which need to be presented by CABLE SAT-WEST with the purpose of cost sharing and maintaining the physical connectivity between both undertakings.

Based on the information provided and conducted meeting with experts from BTC AD, the Commission found that:

- ✓ the requirement for compulsory initial establishment of point of interconnection (POI) in the cities of Sofia, Plovdiv or Varna is improper, since its opening is only aimed to ensure signaling traffic in the two POI requested by CABLE SAT-WEST;
- ✓ there should be no technical and technological obstacles for BTC to ensure the signalling routing of incoming and outgoing calls in case of interconnection via all POI organized in media gateways in the same way as it ensures within its own network.
- ✓ the requirements introduced by BTC appear as an unjustified financial burden for alternative undertakings whose network has no national coverage.

Based on its judgment, the Commission decided that BTC has to provide the interconnection in the points requested by CABLE SAT-WEST in the towns of Kyustendil and Blagoevgrad, without setting the condition for opening of POI in Sofia, and BTC AD has to also ensure the transfer of signaling traffic. As for the supporting documents requested by CABLE SAT-WEST (or any other alternative undertaking), such may only be requested if the prices listed therein are higher than those of BTC, in accordance with the different options for organization of POI. The undertakings were notified by letters.

A contract for interconnection of the networks of both undertakings was signed on 26.10.2011, and the points of interconnection were respectively positioned in Sofia, Blagoevgrad and Kyustendil.

CRC found that the issue raised by CABLE SAT-WEST is of substantial importance for the provision of interconnection between the networks of BTC AD and the undertakings that carry out activity only in certain settlements. For this reason, when preparing the analysis of the markets for call origination and termination on individual public telephone networks at a fixed location, one of the specific obligations imposed on BTC AD and related to granting access was to provide, upon request, signaling service at specified points of interconnection, and in compliance with the signaling protocols agreed.

In 2011, reviewed was also a complaint filed by ETC containing a series of allegations for non-execution of the concluded interconnection contract on part of BTC (mobile network). ETC stated that BTC AD had terminated the contract for no reason and had not executed Decisions No. 236/2009 and No. 320/2011 of CRC.

Based on the additional information and proofs on the case, a breach of the interconnection contract on part of ETC was found, which represents termination of international calls in the mobile network of BTC, disguised as national calls. ETC disputed the correctness of data, yet it did not provide any proofs. During the inspection of BTC AD, the correspondence exchanged between ETC and BTC AD regarding negotiations for a new contract and renewal of the interconnection between the parties, was collected. Summarizing the available information, the Commission arrived at the conclusion that BTC AD had legal grounds to terminate the contract entered into between the parties.

II. Approval of reference interconnection and access offers **Reference interconnection offer (RIO)**

With its Decision No. 375/14.04.2011, CRC adopted the results of public consultations for a draft Reference interconnection offer submitted by BTC AD (Reference offer, RIO). With the same decision, the Commission adopted binding instructions for amendment to the draft, and obliged BTC to submit draft of texts to be included in the

Reference offer which will regulate the terms for requiring security and guarantees for receivables under individual interconnection contracts with undertakings.

Following an analysis of the draft texts submitted by BTC, CRC found that the texts should be amended and supplemented so as not to provide an option for these terms to be unclear or to the detriment of competition. The Commission also found that the texts should not introduce terms which might be excessive for the parties, thus hampering or blocking the process of contracting and providing interconnection. Following a procedure of public consultations, the texts were approved by the Commission with Decision No. 1098 / 01.12.2011.

The remaining part of Decision No. 375/2011 is appealed by BTC, as the company asked the court to stop its preliminary execution. Until the end of the year, there was no ruling of the competent court.

Reference offer for passive infrastructure access

With its Decision 246/22.02.2011 (the Decision), CRC adopted analysis of the market for provision of (physical) wholesale network infrastructure access (including full and shared unbundled access) at a fixed location as a relevant market susceptible to ex-ante regulation, as one of the specific obligations imposed on BTC AD was to prepare a reference offer for passive infrastructure access (duct network).

In compliance with the deadline stipulated in the Decision, BTC AD submitted a draft Reference offer for passive infrastructure access (reference offer). Following an analysis of the draft, it was found that BTC AD had not fully executed the Decision, and the reference offer does not contain texts that regulate some of the terms for passive infrastructure access. BTC AD was required to submit the missing texts describing the terms and procedures for passive infrastructure access, including documents in support of expenses for provided services or such that may be formed by the company when performing its obligations under the decision.

Once the required additional information was submitted by BTC AD, CRC continued to work on summarizing the submitted information and preparing its position on the reference offer.

6. Electronic signature

In 2011, the trend towards growth and wider application of the qualified electronic signature (QES) was preserved. The business and citizens became convinced that its use saves them expenses and allows optimization of the administration's work. The number of services which may be used online, including those in the public sector, is continually growing. An important part of the provision of online services is the secure and reliable identification of the user who purchases, sells or performs his public duties through the Internet. In this respect, QES, created with the help of of Secure Signature Creation Device (SSCD) as means for creation of security and trust in the electronic data transfer, the electronic trade and open networks in general are finding a wider application and gaining greater popularity, both in the world and in our country. This is why we registered a growth in the number of issued and re-issued QES certificates in the past year, and the trend towards increase in the investments made in the activity of certification service providers (CSP). This is also confirmed by the fact that the number of QES certificates issued in 2011 increased by 17.2% as compared to 2010, and the investments made were by 14.9% more.

In order to meet the requirements of the information security market, CSP developed and offered a wide range of other certification services and products for information and cryptographic security, such as the provision of services related to mediation in sending and

receiving electronic mail and its certification, provision of independent, autonomous certification of the date and time of creation and signing of electronic documents and transactions, software for electronic signing, encryption, and safe storage of electronic documents, etc.

A trend was observed towards an increase in the number of issued and re-issued certificates with specific purpose, such as certificates for safe identification and communication with a server, for proving copyright of an information or software object, application-oriented certificates, etc., as this growth was by over 20% for some providers in 2011.

A key moment in the activity of CRC related to the electronic signature was that experts from the Commission expanded and updated some of the provisions contained in the promulgated on 21 December 2010 bill for amendment and supplement to the Law for the Electronic Document and Electronic Signature (LEDES). In 2011, updated were Ordinance on the requirements to the algorithms for creation and verification of qualified electronic signature (prom. SG, issue 71 of 13 September 2011), and Ordinance on the activities of the Certification Service Providers, the terms and procedures of termination thereof, and the requirements for provision of certification services (amended SG, issue 85 of 1 November 2011). CRC developed and adopted Ordinance on the terms and conditions on keeping, storing and access to the register of the Certification Service Providers (prom. SG, issue 27 of 1 April 2011). The last ordinance introduced the provisions of Decision 2009/767 of the European Commission (EC) of 2009 amended by Decision No. 425 of 28 July 2010 stating that member states must establish, publish and maintain their trusted list (TL) containing information related to the certification service providers (CSP) issuing qualified electronic signature who are supervised and accredited by them. In execution of the provisions of LEDES and the Ordinance, CRC established and published on its website a TL of CSP established on the territory of the Republic of Bulgaria and CSP accredited in the country. The list was notified to the European Commission which established a centralized list containing links to the national trusted lists. This will help enhance the trust in electronic signatures issued by the different member states, and will facilitate the cross-border, within the European Community, use of electronic signature issued by a CSP which is established in a certain member state.

In order to guarantee the maximum level of security and reliability of the provided certification services, and with a view to the CRC powers arising from LEDES, in 2011 the Commission continued to carry out control and monitoring over the activity of the five registered CSP. In this respect, a partial inspection of "SEP Bulgaria" AD was performed. It covered the compliance with measures taken to guarantee safety and secure continuity of the provider's activity. The results of the inspection were satisfactory.

7. Communications control

In exercising its powers in the part "control over electronic communications", in 2011 CRC continued to observe the principles of conformity with the law, non-discrimination, transparency and protection of end users in the Republic of Bulgaria. In performance of its control functions, the Commission paid special attention to the implementation of regulations in the sphere of electronic communications and to the observance of the LEC requirements, as well as to the provision of appropriate conditions for work of the undertakings.

The control functions of CRC are performed by the Communications Control Directorate in the capital and by its five regional units in the cities of Plovdiv, Burgas, Varna, Veliko Tarnovo and Vratsa.

7.1. Monitoring and control of the radio frequency spectrum for civil needs

Radio frequency spectrum is a scarce resource through which different types of wireless electronic communication services are provided. Their significance is continually growing and the availability of free radio frequency spectrum is critical for both the introduction of new technology and the competition development.

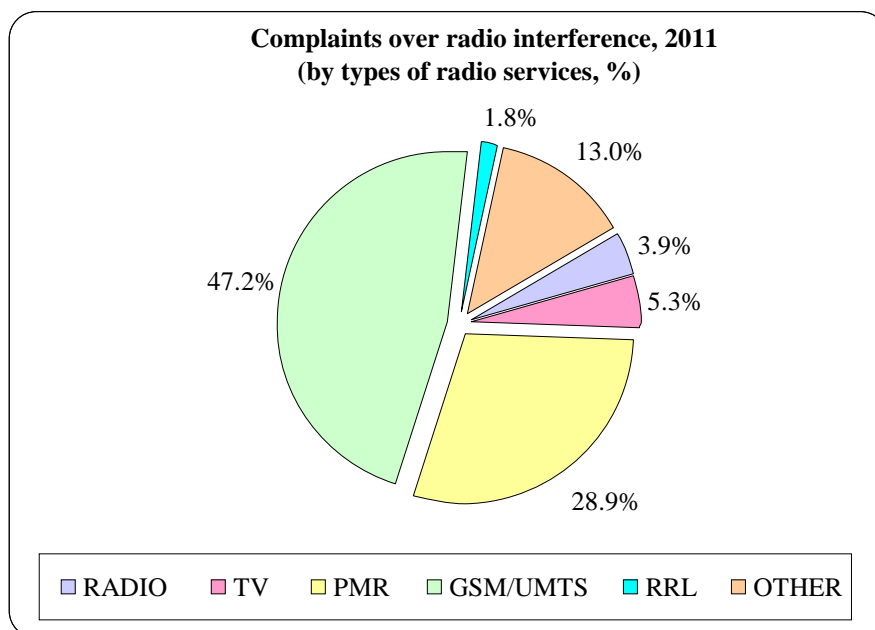
The policy for improvement of electronic communications envisages providing an option for greater flexibility in the use of radio frequency spectrum, ensuring the highest possible volume of free radio frequency spectrum and least restrictive technical conditions for the undertakings providing electronic communications. In order to achieve these goals, and considering the growing number of users of services provided through the use of radio frequency spectrum, this scarce natural resource needs to be effectively managed. The continuous monitoring and supervision of the radio frequency spectrum is an integral part of this effective management. It provides data for the spectrum management purposes and guarantees the normal work of the constructed networks without any harmful interference through timely localization and elimination of sources of interference and illegal broadcasting equipment.

In 2011, CRC, through the RFS monitoring and control activities by means of the expanded National system for RFS monitoring, continued to raise the role of its control functions with the goal to ensure equality among the legal users of the spectrum and guarantee a certain quality of the electronic communication services provided to end users. The monitoring of television broadcasting ranges in relation to creation of conditions of digitization of the terrestrial television broadcasting continued.

The main RFS monitoring and control activities were as follows:

- monitoring for **estimation of the actual occupation** of radio frequency spectrum and the free capacity for assignment of new frequencies – in relation to the started digitization of the television broadcasting, 259 television channels in 48 settlements all over the country were examined; observations and measurements were performed on the territory of 32 settlements in the country in the VHF/FM range for radio broadcasting 87.5-108.0 MHz;
- monitoring and control of **the conformity of the established broadcasting stations** for analogue terrestrial broadcasting of radio and television signals with the approved technical characteristics - 148 measurements of basic technical parameters were carried out, the role of preventive control for the creation of conditions for the normal work of lawful spectrum users and for the guarantee of a certain quality of offered services, as well as for prevention of the occurrence of interfering and illegal broadcasting, continued to evolve; in 2011, the electronic provision to undertakings of the results of conducted scheduled monitoring and measurements continued (data was provided from over 20 000 measurements of basic technical parameters); as a result of the implemented preventive monitoring, the trend was preserved towards maintaining the parameters of broadcasted radio and television signals within norms and reducing the generated out-of-band and intermodulation emissions, including in the range of the aeronautical service; with regard to the established deviations from the technical parameters, recommendations for corrections were given to the undertakings with a fixed period of up to 1 month for their elimination, after which the required administrative and punitive measures according to LEC were undertaken;
- control over **conformity with the rules for the use of radio frequencies and radio frequency bands** for civil needs; implementation of the policy for management of the radio frequency spectrum and the conditions of authorisations issued – a scheduled daily monitoring was carried out in frequency bands 20-3000 MHz through fixed (manned and unmanned) stations for radio monitoring by the National system for RFS monitoring, and periodic control and monitoring through mobile stations;
- monitoring for **evaluation of the electromagnetic environment:**

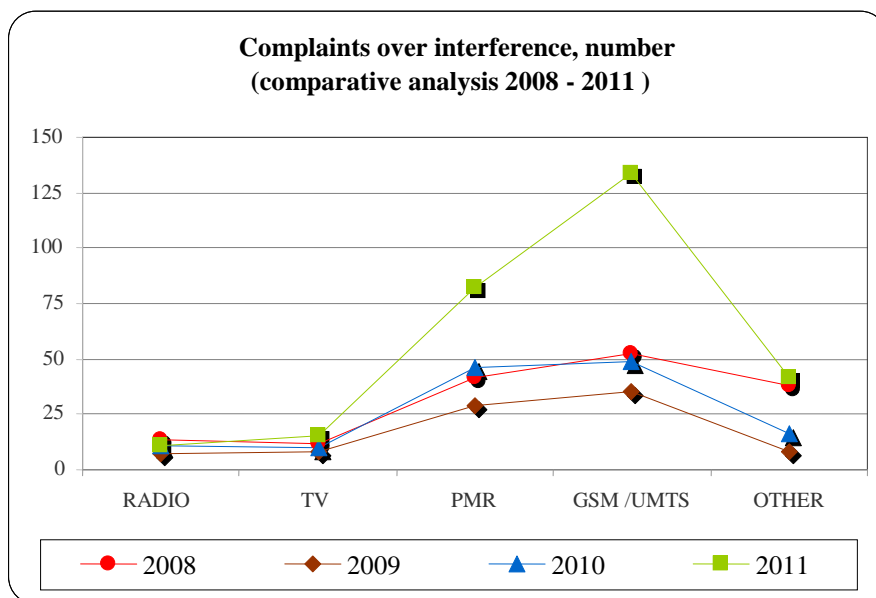
- monitoring for evaluation of **the cross-border harmful interference** in the frequency bands of radio and television broadcasting – 284 measurement protocols carried out on the territory of 75 settlements were summarized and analysed, concerning the intensity of the electromagnetic field and determining the direction of registered broadcasts in the borderline areas of the country on the territory of the neighbouring countries Turkey, Serbia, Romania, Macedonia and Greece; special attention was paid to the evaluation of the electromagnetic environment and cross-border harmful interference in the summer months on the Bulgarian Black Sea coast; continued the work of the created bilateral working group comprising experts of CRC and the Information and Communication Technologies Authority (ICTA) of the Republic of Turkey which works on solving the problem; concrete measures were identified, exchanged were results from measurements, and the first joint measurements by Bulgarian and Turkish experts were performed in several settlements along our South Black Sea coast;
- monitoring for evaluation of the **electromagnetic compatibility** of VHF/FM radio broadcasting stations in range 87.5–108.0 MHz and the radio navigation and communication equipment of the aeronautical services using the 109÷137 MHz frequency range – according to the *Methodology for measuring intermodulation products of “A1” type, occurring during the operation of closely situated VHF-FM radio broadcasting stations* (under item 2.5. of Appendix 1 to the *Technical requirements for the operation of the electronic communications networks from Broadcasting radio service and related equipment*), measurements were carried out of radio broadcasting sites in the outskirts of the towns of Sofia, Veliko Tarnovo, Shumen, Razgrad, Targovishte, Plovdiv, Devin, Silistra and Kavarna;
- monitoring and control over the quality of provided services with a view to the **protection of public and consumer interest**:
- monitoring over received **complaints and signals** from lawful spectrum users, citizens, organizations and institutions – 159 cases of radio interference were examined in 2011, as the prevailing number of complaints were over interference in mobile network ranges of the PMR type and the GSM/UMTS standard (Figure 62);



Source: CRC

Figure 62

- the necessary measures for quick localization and elimination of interfering sources were timely undertaken; interfering impacts of radio equipment of the Ministry of Defence on the mobile networks of the PMR type in range 160 MHz continued to be a problem; as a result of the started shared use of different technology in bands designated for the operation of mobile radio networks, a significant growth was reported in the cases of electromagnetic incompatibility and mutual interferences, as compared to preceding years, at the expense of the decreased number of complaints over absence of coverage and bad quality of services (Figure 63);

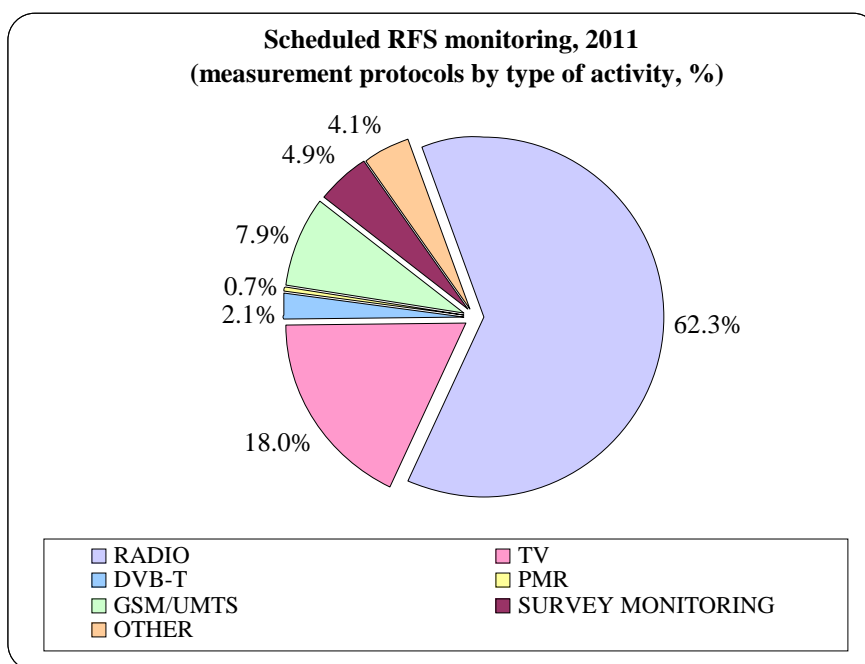


Source: CRC

Figure 63

- monitoring for inspection of the **coverage and quality of services provided in the GSM standard mobile networks** – measurements were carried out alongside 12 routes from the main national road network of the country and in 108 settlements on the territory of the entire country for the three undertakings providing services from mobile networks using the GSM standard; results from conducted measurements were summarized in 765 measurement protocols; determined was the minimum required level of signals for coverage and ascertainment of the admissible correlation between coverage level and quality of offered services in the GSM and UMTS ranges based on conducted measurements and analysis in 48 measurement points in certain settlements.

The results from the RFS monitoring and control carried out in 2011 were summarized in over **8600 measurement protocols** and are displayed in Figure 64 by types of activities.



Source: CRC

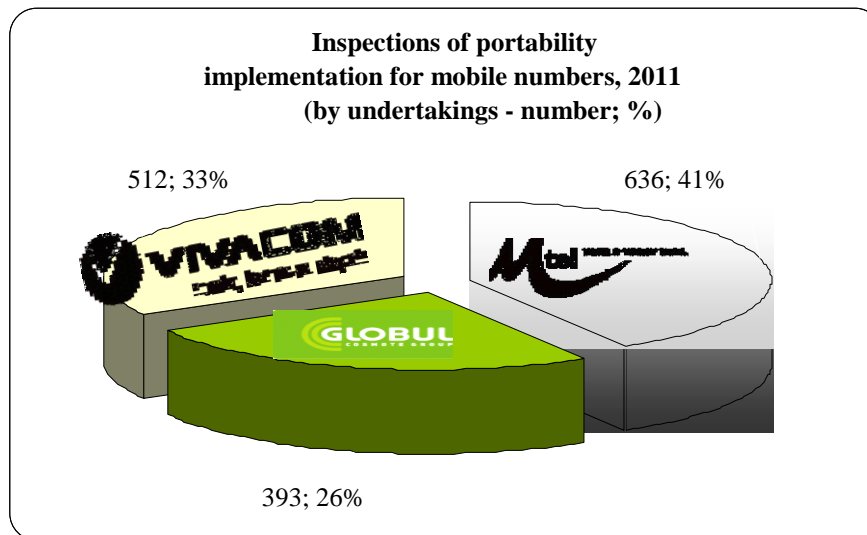
Figure 64

7.2. Inspection activity

In connection with the CRC functions related to the control over electronic communications provision pursuant to LEC and in compliance with the requirements of LEDES, the following main control activities were carried out during the year:

7.2.1. Monitoring on the provision of electronic communications under LEC:

- inspections related to solving problems in the number **portability implementation** at “one-stop-shop” in case of changing the telephone service provider – the introduction of new technological platforms and the provided option for number portability significantly increased the number of complaints submitted by end users; in 2011, approximately 2500 inspections were carried out for the observance of the Functional specifications for portability of geographic, non-geographic and mobile numbers, as 63% of the inspections were related to problems in mobile numbers portability implementation, and 37% were related to solving problems in portability of geographic and non-geographic numbers; a total of 274 administrative offence acts (AOA) were drawn up to the three operators for violations of the Functional specifications for implementing portability of nationally significant numbers in case of changing the public mobile service provider, as follows: to MOBILTEL EAD – 142 AOA, to “BULGARIAN TELECOMMUNICATIONS COMPANY” AD – 44 AOA, and to COSMO BULGARIA MOBILE EAD – 88 AOA;



Source: CRC

Figure 65

- inspections of **land mobile networks of GSM and UMTS standards** – in 2011, over 2400 inspections were carried out of the three undertakings providing mobile services: MOBILTEL EAD, COSMO BULGARIA MOBILE EAD and “BULGARIAN TELECOMMUNICATIONS COMPANY” AD; in addition to the inspections related to mobile numbers portability implementation (1541 in number), inspections were also carried out for: non-provision of detailed bills; sending unwanted messages for direct marketing and advertising purposes without the prior consent of users; inaccurate charging of calls in international roaming; radio interferences; problems and/or absence of quality coverage of mobile networks; claims for overcharged bills, problems with the quality of provided service, security of networks, confidentiality of messages and protection of users’ data, etc.
- inspections of electronic communication networks for **terrestrial analogue radio and television broadcasting** were carried out to monitor for compliance with the conditions of the issued authorizations, of the *Technical requirements for operation of the electronic communications networks of the Radio broadcasting service and the related equipment*, as well as the compliance of the broadcasting stations with the technical parameters approved by CRC – during the year, 148 inspections were carried out, as the positive trend for the undertakings' complying with the requirements laid down in the secondary legislation of LEC and the conditions of issued licenses, persisted; the preventive control continued with the application of Art. 313, Para 1, item 9 of LEC; with regard to the implementation of the main parameters deviation, off-set and created intensity of the electromagnetic field of transmitting stations for radio and television broadcasting, no significant breaches were found; 4 AOA were drawn up for offences found during the inspections of this kind of networks;
- inspections of electronic communication networks from a **mobile PMR radio service** – in relation to the efficient use of the provided scarce resource – frequency spectrum, 75 inspections were performed for compliance with the conditions of the issued authorizations for providing electronic communications for private needs via electronic communication network from a mobile radio service – PMR; 2 AOA were drawn up for offences found;
- inspections on **cable electronic communication networks** for transmission and/or distribution of radio and television programs, for data transfer without use of scarce resource – 33 inspections were carried out and 11 AOA were drawn up, mainly related to non-fulfilled obligations to furnish the Commission within the specified term with information on the broadband access provided by them; the inspections that started in 2009 in **compliance with Art. 286 of LEC** concerning the aerial construction of cable electronic communication

networks, and also the sanctioning of violators in case of any stated offence continued; in 2011, 53 inspections were performed and 14 AOA were drawn up for unauthorized aerial construction of cable networks;

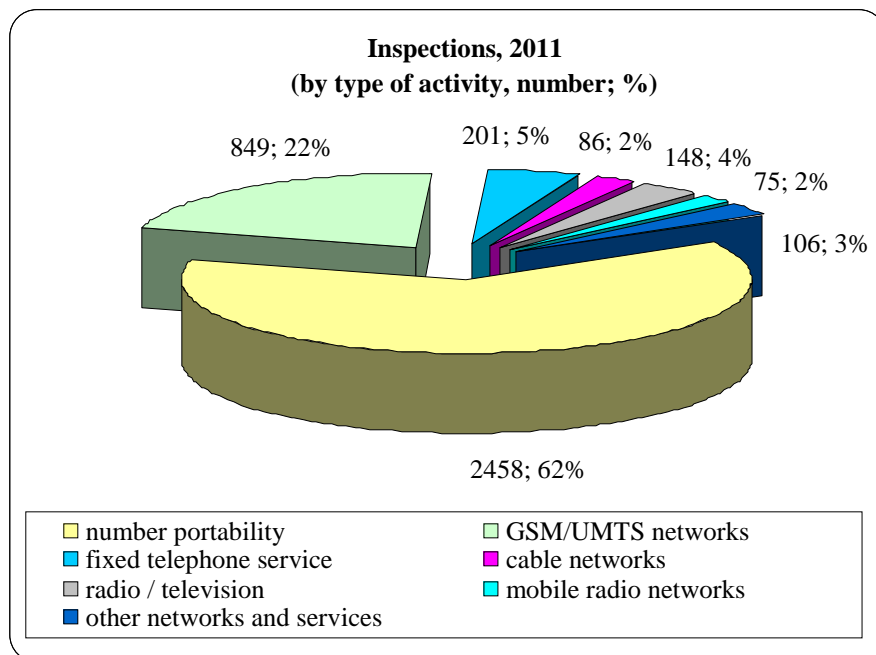
- inspections on **the provision of fixed telephony service** – in 2011, authorized employees of CRC carried out 1057 inspections in performance of their obligations to exercise control in relation to complaints filed by end users – the highest percent (over 85 %) of complaints was over problems in geographic numbers portability implementation (917 inspections); 167 AOA were drawn up for violations related to hindering the portability process; 140 inspections were also carried out on the quality of fixed telephony service provided to end users, claims for overcharged bills, non-provision of detailed bill of services used, etc.

- inspections for **the provision of the universal service** - in 2011, 61 inspections were performed for the compliance with the requirements for the provision of the universal service related to the quality of service, including those that are related to the optimization of the analogue network under the ANO system (Analog network optimization); 16 AOA were drawn up for offences found.

7.2.2. Control activity of the compliance with the requirements of LEDES:

In 2011, an inspection of "SEP BULGARIA" AD was carried out on the fulfillment of CRC recommendations given due to insignificant omissions found in its activity with regard to the compliance with the LEDES requirements.

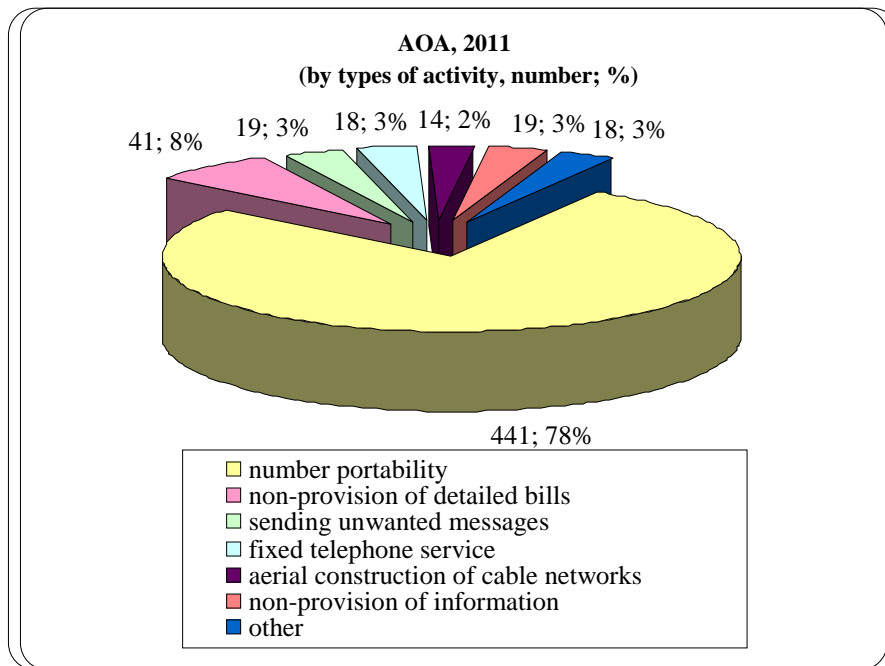
In connection with the performance of the control functions of CRC, **in 2011 approximately 4000 inspections were carried out** by CRC employees authorized under Art. 312 of LEC.



Source: CRC

Figure 66

As a result of the inspections, for the administrative violations of LEC found, **570 acts for administrative violations were drawn up and delivered.**



Source: CRC

Figure 67

The summarized data for the performed control activity and the engaged administrative and punitive liability in offences of LEC and secondary regulations, are displayed on Figure 66 and Figure 67.

7.3. Development and technical support of the National radio frequency spectrum monitoring system

Regarding the technical and technological support of the work on controlling and monitoring the electronic communications networks, the focus was laid on:

- development of the National radio frequency spectrum monitoring system for civil needs (NMS);
- technical support and introduction of measurement devices for RFS monitoring and control;
- examination of technological hardware and software equipment for control and monitoring of new networks and technologies;
- technical support of the specialized technological equipment: fixed, mobile and transportable monitoring stations, portable measurement devices and communication networks of NMS (configuration, settings and administration).

During the period, the development of NMS continued according to the adopted regional principle aiming at the creation of a unified monitoring system. The building of new unmanned remote monitoring stations (RMS) persisted in order to ensure an efficient RFS control on the entire territory of the country.

In 2011, two new RMS were fully legalized and put into operation:

- RMS "Lokorsko" - village of Lokorsko, Novi Iskar Region, Sofia Municipality (Figure 68)
- RMS "Razgrad" – village of Radingrad, Razgrad Municipality (Figure 69)



Figure 68



Figure 69

With the newly built radio monitoring stations starting to operate, CRC raised its capability to exercise an effective control over the radio frequency spectrum in the bands from 20 to 3000 MHz on the territory of the capital and Northeast Bulgaria.

At the end of the year, a procedure was also launched for the construction of another fixed station for RFS monitoring - RMS “Pleven”, which will be located in the village of Todorovo, Pleven district. The commissioning of RMS “Pleven” will help CRC in exercising an effective control of the radio frequency spectrum in the central part of North Bulgaria.

With reference to fulfilling the obligations under the Plan for introduction of digital terrestrial radio and television broadcasting in the Republic of Bulgaria, special attention was paid to the procedure for delivery of transportable measurement systems for monitoring and control of broadcasting networks using DVB-T system. CRC possesses measurement equipment necessary to control the quality of digital television signals emitted in compliance with the requirements of ITU and ETSI standards.

At the end of 2011, for the implementation of its control functions, CRC had at its disposal the following measurement systems:

- 14 fixed stations for RFS monitoring (4 manned and 10 unmanned remote monitoring) in the bands from 20 to 3000 MHz;
- 8 mobile stations for RFS monitoring;
- specialized mobile station GSM 900/1800 and DVB-T;
- 3 transportable measurement systems for DVB-T networks;
- 7 transportable measurement systems in the bands from 1.0 to 26.5 GHz;
- portable equipment in the bands from 9 kHz to 3 GHz.

8. CRC administrative-punitive activity

In 2011, 462 punitive decrees (PD) and 36 resolutions for administrative-punitive proceedings suspension were issued.

As far as collection of fines and property sanctions for administrative violations imposed by punitive decrees are concerned, it should be pointed out that undertakings which have failed to voluntarily pay the due amounts were sent invitations for voluntary performance, by which they were given the opportunity to settle their liabilities within 7 days. Whenever the amounts due were not paid, correspondence on the enforced punitive decrees was timely sent to the State Receivables Collection Agency for a forced collection. Some 72 correspondence sets on empowered punitive decrees for forced performance were sent during the year.

In 2011, CRC has considered and ruled on 4748 complaints related to problems and irregularities in the process of receiving electronic communication services. Out of the number of complaints stated above, 986 were over number portability, as CRC has carried out inspection and ruled on each one of them.

9. Analysis of complaints filed by end users and reviewed under Chapter XIV of LEC

Based on the analysis of complaints filed with CRC in 2011 by users of electronic communication services, the following conclusions can be drawn: most complaints were over hindering the users' right to portability of mobile and/or fixed telephone numbers, the next place is occupied by complaints over incorrect telephone bills, including different money claims between subscribers and the undertakings offering the services in question (contractual penalties and the like), followed by complaints over unfair trade practices of the undertakings providing the services, including over incompetent service in their points of sale. The analysis of complaints reveals that complaints over the quality of electronic communication services, including coverage of the electronic communications networks of the undertakings providing services under the GSM and UMTS standard, when compared to the total number of complaints, represent a small number (276 out of 4748 complaints).

10. Court representation

Before the Supreme Administrative Court

In 2011, the CRC lawyers took part in the preparation and procedural representation in over 70 lawsuits before the Supreme Administrative Court.

Before regional and administrative courts

CRC opened 4 procedures for the implementation of periodic sanctions under Chapter 17 of the Administrative Procedural Code to undertakings which do not observe decisions of the Commission which allowed preliminary execution.

In 2011, 356 lawsuits were instituted before regional courts on claims against punitive decrees of the CRC chairman. The number of lawsuits instituted before administrative courts (as a second institution) was nearly the same.

11. CRC international activity in 2011

CRC participates in the activities of governmental and specialized organizations in the area of communications both at international and European level and performs regular exchange of information and experience with the European Commission (EC) and the National Regulatory Authorities (NRAs) of the EU member states for effective implementation of the EU regulatory framework.

11.1 Participation in the work of European structures

A high priority in the work of CRC is the active participation in the activity of the Body of European Regulators for Electronic Communications (BEREC). BEREC was established by Regulation 1211/2009 of the European Parliament and the Council of 25 November 2009 as a successor of the European Regulators Group (ERG). BEREC is made up of a Board of Regulators composed of the heads of the 27 European regulators. It is assisted by an Office seated in Riga, Latvia.

The main role of BEREC is to act as a single forum for cooperation between the NRAs, and between NRAs and the European Commission, as well as a body for analysis, debates and consultancy in the sphere of electronic communications.

CRC attended BEREC's Plenary meetings at Head level, as well as at expert level in the work of the Contact network and expert working groups. Representatives of the Commission participated in the following expert working groups: *Termination Rates, Benchmarking, International Roaming, Convergence and Economic Analysis, Regulatory Accounting End Users* and *Remedies Monitoring*.

The Commission participates actively in the activity of the European Regulators Group for Postal Services (ERGP) with its representatives in the working sub-groups "Monitoring of market outcomes" and "End user satisfaction".

11.2 Communication with the European Commission

In 2011, active dialogue with representatives of the European Commission (EC) was maintained, whereby updated information was provided about CRC's regulatory activities in priority fields such as market analyses, number portability, effective management of the spectrum, transition to terrestrial digital video broadcasting, etc. The Commission also took part in technical expert meetings organized by EC.

CRC participates as a full member in the sessions of the EC working committees:

- Communications Committee (COCOM)
- Radio Spectrum Committee (RSC)
- Radio Spectrum Policy Group (RSPG)

11.3 Projects related to the timely implementation of the European regulatory framework

The Communications Regulation Commission participated together with the Postal System General Directorate to the Ministry of Transport and Public Works in Spain in project "Support for the Croatian Post and Electronic Communications Agency in the area of accounting separation in postal services" in the Republic of Croatia. The goal of the project was to improve the administrative and regulatory capacity of the Agency (HAKOM) in the area of accounting separation with the purpose of supporting and maintaining the operation of a liberalised postal services market and protection of the users of postal services by means of adequate regulatory measures in compliance with the postal *acquis*.

11.4 Participation in the activity of specialized international organizations

Considering the importance of development of electronic communications and postal services at an international level, as well as the need to follow and analyze the world trends, CRC participated actively in the work of the International Telecommunications Union (ITU), Universal Postal Union (UPU), European Conference of Postal and Telecommunications

Administrations (CEPT), European Telecommunications Standards Institute (ETSI), etc.

Through its participation in the activity of the international organizations in the area of electronic communications and posts, and their working structures, CRC intensified the active presence of the national communications regulator and its role in the decision-making process, thus defending the national position and interests, and helping strengthen the image of Bulgaria as a factor and reliable partner at international, European and regional level.

In May 2011, in its capacity of chairman of the Network of national regulators in the sphere of communications of the member states of the Francophone International Organization (FRATEL), CRC hosted the two-day international conference on „*The key role of the user in determining the regulator’s activity*”. Over 50 foreign delegates from 20 Francophone countries took part in the event (Belgium, France, Switzerland, Benin, Burkina Faso, Guinea, Cameroon, Comoro, Congo, Mali, Morocco, Moldova, Senegal, Tunis, Central African Republic, Chad, etc.). Among them were representatives of the International Telecommunications Union (ITU), heads and leading experts of regulatory authorities, esteemed consultants from the telecommunication sector who exchanged ideas, practices and advices used in the field of electronic communications.

In November, in the city of Conakry, Guinea, CRC also took part in the 9th Annual meeting of the Network as it assumed the functions of moderator of a round table on “*The main role of the user: effect on the symmetric regulation*”, and in its introduction to the subject of the panel discussion, it made an analysis and presented the conclusions from the seminar held in Sofia in May.

11.5. CRC participation in significant international events

In 2011, CRC took part in significant events organised by governmental and specialised organisations in the area of communications both at international and European level:

- Ministerial Program at the Mobile World Congress, 14-16 February 2011 in Barcelona, Spain;
- 57th General Assembly of the European Telecommunications Standards Institute (ETSI), 19-20 April 2011, the 58th General Assembly of ETSI and the specially convened meeting, 29-30 November 2011, held in Cannes, France;
- ITU Telecom World 2011, 25-27 October 2011, Geneva, Switzerland;
- Assembly of CEPT, 19 December 2011, Copenhagen, Denmark;
- 28th, 29th and 30th meetings of the Electronic Communications Committee (ECC) in March in Porto, Portugal, in June in Baden, Switzerland, and in December in Kazan, Russia.

Bilateral and regional cooperation

Taking into account the specifics of certain regulatory problems which it would be most expedient to solve at bilateral or multilateral level, CRC also took part in the work of formations at regional level.

CRC consistently develops its relations with the countries from the South East European region, as it aims at deepening the regional cooperation, according to the common European policy.

During the year, bilateral agreements were signed with the regulatory authorities of Serbia and Greece. Joint measurements were also performed with the Turkish regulator aimed at solving the radio interference problems.

Some of the important events in which CRC took part in 2011, were:

- Conference and Exhibition Eurasia Com, 29-30 March 2011, Istanbul, Turkey;
- The seventh session of the Permanent Bulgarian-Russian working group “Information Society and Communication Technologies” to the Intergovernmental Bulgarian-Russian Economic Commission, 5 April 2011, Moscow, Russian Federation;
- Seminar and round table of the administrations of Central and Eastern Europe on terrestrial digital broadcasting and digital dividend, 2-4 May 2011, Győr, Hungary;
- Conference organized by the Romanian regulator ANCOM dedicated to the radio spectrum in Bucharest, Romania, on 12 May 2011.
- 6th international conference “Advanced Communication Infrastructures as a Cornerstone for Europe's Digital Agenda”, organized by the Greek regulator EETT on 2 and 3 June 2011 in Athens, Greece;
- 6th Black Sea and Caspian region regulatory conference “Transformation to digital cities: Experience in the fixed (optical) and mobile broadband services, trends”, 2-3 June 2011 in Istanbul, Turkey;
- Seminar on telecommunications regulation organized by the Turkish regulator, 13 - 17 June 2011 in Istanbul, Turkey.
- Seminar on issues of interest to the Macedonian regulator within the framework of the Memorandum of Understanding signed between CRC and the Macedonian regulator AEK, organized by CRC on 14 and 15 September 2011 in Sofia.
- BEREC-REGULATEL-EaP Summit, 23-24 November 2011, Barcelona, Spain, where CRC took part with a presentation within the round table “The role of national regulatory bodies on the electronic communications market”
- Seminar on electronic communications regulation, organized by the Turkish regulator from 21 to 24 November 2011 in Istanbul, Turkey;
- A distance learning course “Next generation mobile and wireless networks”, organized by the International Telecommunications Union, 22 November – 19 December 2011.