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VIII. COMMUNICATIONS CONTROL

Among the main CRC priorities has been strengthening the control activity as tool for regulation of operators equality and efficient observance of the security and quality requirements for the services provided. Following priorities CRC has emphasized the control functions performance regarding observance the provisions of Telecommunications Act (TA), Postal Services Act (PSA) and Electronic Document and Electronic Signature Act (EDESA).

The control tasks are carried out at the units in Sofia and the 5 regional stations (RSKS) in the cities of Plovdiv, Burgas, Varna, Veliko Tarnovo and Vratsa. In order to enhance the control efficiency a National Radio Frequency Spectrum Monitoring System has been developed and subsequently approved by the Commission, taking into account the CRC vision for monitoring system long term development.

The control activity is performed in the following directions:

- Monitoring and Control of the Radio Frequency Spectrum (RFS);
 - fixed – in the cities of Sofia, Varna, Vratsa and Plovdiv;
 - remote controlled – in the cities of Veliko Tarnovo and Burgas;
 - mobile – in Sofia and at all the RSKS;
- Communications inspection;
 - communications inspections regarding the telecommunications performance by the order of TA.
 - communications inspection regarding the postal services provision by the order of PSA
 - communications inspection on observance of the EDESA provisions.
- Logistic of the control activity.
 - Logistic of the Radio Frequency Spectrum monitoring and control
 - Logistic of the inspection activity

1. Radio Frequency Spectrum Monitoring and Control

In 2005 the Radio Frequency Spectrum Monitoring activities have been directed mainly to fulfilment of the more important tasks as listed below:

- Measurements and estimation of cross-boarder interferences within the frequency ranges for terrestrial UHF FM and TV radio broadcasting – 30 settlements, located in the country boarder areas;
- Inspections on the Radio Frequency Spectrum occupancy for the country territory related to frequency planning for licensing telecommunications operators of terrestrial UHF FM and TV radio broadcasting - 137 settlements.
- Inspections on the Radio Frequency Spectrum occupancy for the country territory related to release of certain frequency subranges and frequency planning for licensing telecommunication operators of PMR networks - 22 settlements.
- Inspections on the Radio Frequency Spectrum occupancy for the country territory concerning the licensed UMTS operators - 22 settlements.
- Implementation of twenty-four-hours-a-day Radio Frequency Spectrum monitoring for the territory of Sofia.

The Radio Frequency Spectrum control activities in 2005 have been directed on provision of telecommunication services quality, i.e.:

- Study and analysis of the licensed terrestrial UHF FM radio broadcasting telecommunication operators Electromagnetic Compatibility (EMC) with the radio navigation air traffic facilities in the city areas of Sofia, Veliko Tarnovo, Plovdiv, Pleven, Burgas, Stara Zagora, Gabrovo and Smolyan;
- Inspections on services quality and coverage provided by the licensed GSM operators (MOBILTEL and GLOBUL) in 69 settlements, including the republican roads network as follows: Sofia-Stresimirovtsi, Sofia-Pleven, Boychinovtsi-Svishtov, Lovech-Silistra, Chirpan-Russe, Lubimets-Assenovgrad, Haskovo-Sevlievo, Sliven-Tsarevo and Stara Zagora-Chirpan;
- Inspections concerning compliance of the already established radio transmitter stations with the approved technical projects – 109 inspections of UHF FM radio transmitter stations and 75 inspections of TV radio broadcasting stations.
- Radio Frequency Spectrum control based on citizens/bodies signals and complaints in order to find out, localize and identify the interference sources as well as illegal Radio Frequency Spectrum users – 111 cases total as listed below:
 - PMR networks – 68;
 - Radio and TV broadcasting – 33;
 - Mobile operators – 10.

The technical parameters control of the broadcasting UHF FM radio transmitter stations have been extended from the cities of Varna, Burgas, Veliko Tarnovo to the cities of Plovdiv and Vratsa also. The control is 8-hours-a-day.

In 2005 a twenty-four-hours-a-day monitoring and control of the Radio Frequency Spectrum have been implemented including UHF FM radio transmitter stations technical parameters control.

2. Inspection activity

2.1 Communications inspections regarding the telecommunications performance by the order of TA.

- 208 inspections have been fulfilled regarding operators carrying out terrestrial broadcasting as telecommunication activity. The inspections have been fulfilled following CRC resolutions on approved projects of broadcasting stations as well as regarding the individual licenses terms observance. Typical infringements for this networks type remain: change of the emission spot, alteration of the permitted transmitter output power and differences in the antenna systems installed. The telecom operators operate transmitters with higher nominal power, which is a prerequisite for increase of transmitters output power above the one permitted by license. 22 statements of established violations have been drawn up.
- 75 inspections have been carried out concerning terrestrial TV broadcasting telecommunication networks. One statement on not regulated TV signals broadcasting has been drawn up.
- 443 inspections have been performed on public cable telecommunication networks for radio- and TV signals transmission as well as service provision trough them. The operators of the above networks are providing the “INTERNET Access” service also. By the end of the year CABLETEL AD and EVROKOM CABLE AD have been granted individual licenses for fixed voice service provision and thus the so called “triple-service” has been started, i.e. TV signals transmission, Internet access and voice. In 2005, 57 end-user complaints have been filed concerning the services quality and prices. The complaints have been finalized with drawing up 12 statements of establishment of administrative violations as part of the total number of 71 statements

drawn up on establishment of TA violations by that network type operators. In relation with the Ministry of Culture competence by the Copyright and Neighbouring Rights Act, 68 statement records have been forwarded to the Ministry on inspections of operators carrying out telecommunications through public telecommunication networks. On the basis of penal decrees into effect issued by the Minister of Culture and in relation with General License N 201 violations, 13 statements have been drawn up.

- 367 inspections have been carried out concerning observation the terms of individual licenses for establishment, maintenance and operation of PMR private mobile networks. The inspections have regarded as to license terms observance as well to the efficient radio frequency spectrum use by the operators in question. As inspections results licenses have been revoked on the grounds of inefficient RFS use established. Thus much in need radio frequency channels has been released. Basic infringements by that network types remain emissions with higher than permitted power and faulty radio equipment (very often) interfering other licensed operators telecommunication networks. 73 complaints concerning radio interferences in this telecommunication networks type have been filed and as result 12 statements of TA violations have been drawn up.
- 12 inspections have been fulfilled regarding operators carrying out telecommunication activity through fixed satellite service networks.
- 55 inspections have been performed regarding public telecommunication networks for data transfer without use of a scarce resource. The problems that have been encountered by the inspectors carrying out these inspections are regarding the collection of sufficient indisputable proofs in order to determine the networks public nature, submitting of customer agreements and financial report documents, concerning customer fees. The service providers have mostly no agreements with the customers what is complicating and impeding the control efficiency. Despite of the big promotion activity fulfilled by the inspectors during inspections, there is impossible to control the provision of customer services at very low prices, provided the customers are not interested in service quality. As result 22 statements of TA violations for that networks type have been drawn up. With the Ordinance N 17 adoption at 03.06.2005 the rules have been set on establishment of cable telecommunication networks and corresponding equipment. After the Ordinance LANs are regarded as construction by the order of Regional Development Act (RDA) as well as the rest of telecommunication networks. At establishment by inspection the lack of construction permission and right after RDA, CRC notifies the Directorate on the National Construction Supervision (DNCS) by forwarding the inspection records. As result of joint activities of CRC inspectors and DNCS employs, a significant number of illegal constructed networks or parts of them have been uninstalled.
- 84 telecommunication networks from the type “point-to-point” fixed radio service have been inspected. After the TA violations established 7 statements have been drawn up.
- Unfortunately, in 2005 the infringements concerning telecommunication networks failures and telecommunications disruption have continued. BTC AD subsidiaries have filed in CRC 104 statement records regarding cut-off telecommunication cables. As reference, in 2003 the statements records have been 64, in 2004 – 79, i.e. increase of that infringements type is being observed.

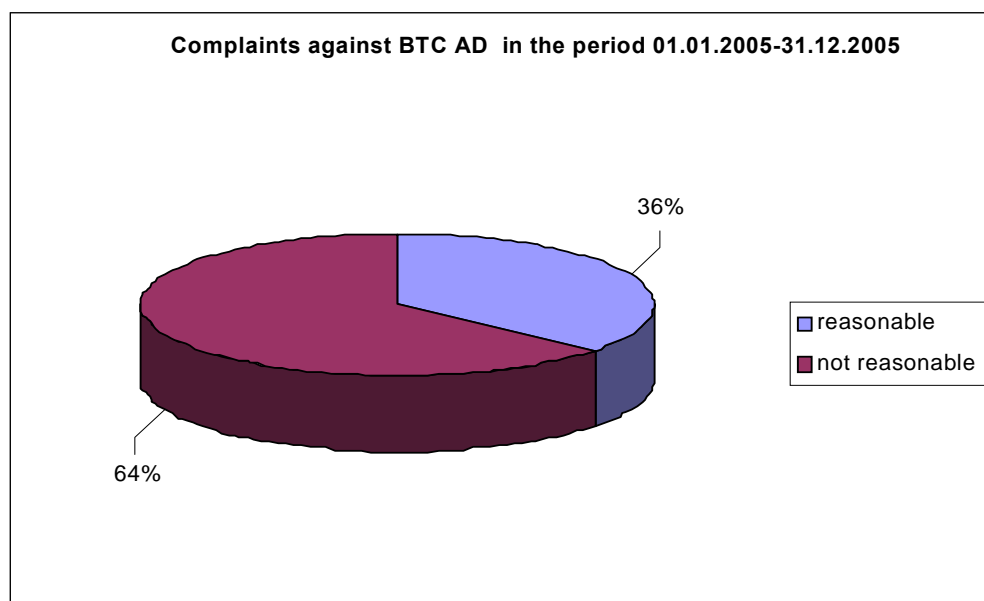
These are infringements of the BTC AD network mostly. As result 55 statements of establishment of administrative violations have been drawn up. The most of the violations have been established in the districts of Plovdiv and Veliko Tarnovo. There is a lack of cadastre on underground communications location at the most of settlement municipalities.

A number increase of telecommunication equipment illegal use has been registered aiming benefit derivation and harm to the operator. This is especially usual in concern to the public cable telecommunication networks for radio- and TV signals transmission.

- The Chief Directorate started with certain delay inspections on license terms observance by the BTC AD alternative operators providing fixed voice service. The delay has been due to the fact that operators have not started to perform activity as per license. There have been obstacles to service start: economic conditions related to BTC AD infrastructure use - the operator with significant power on the market of fixed voice service; impeded signing of the networks interconnection agreements; issues concerning co-location, broadband access and “last mile access”.
- At the inspections fulfillment time in 2005: ORBITEL AD, SPECTRUM NET AD, TRANS TELECOM OOD, EAST TELECOMMUNICATION COMPANY AD and TELECOM PARTNERS NETWORK AD have been providing fixed voice telephony service. In 2005 CABLETEL AD started the provision of voice service, included in triple-service package (TV, data, voice). The service is provided to subscribers in the cities of Sofia, Russe, Burgas, Stara Zagora and Shumen.

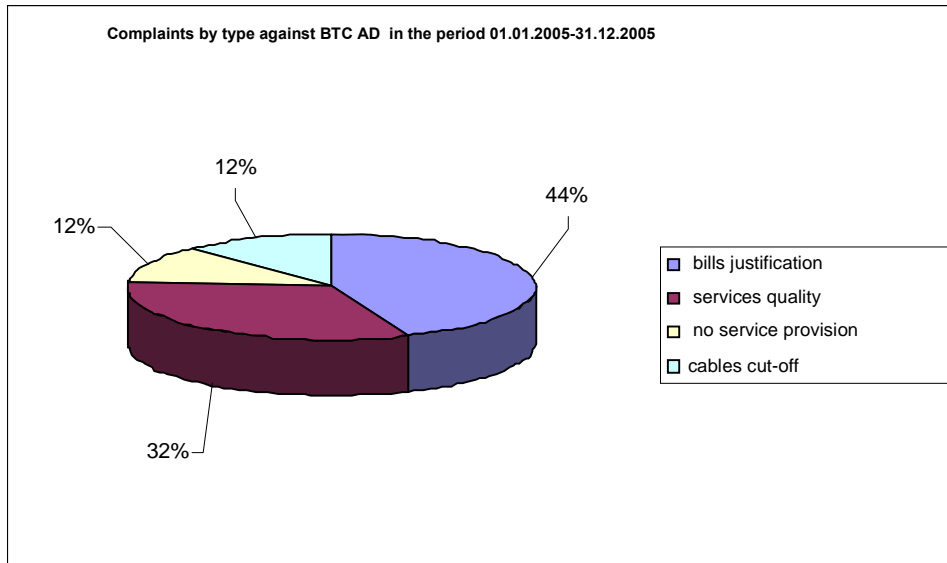
In the period from 01.01.2005 up to 31.12.2005, 25 complaints have been filed against BTC AD - the operator with significant power on the market of fixed voice service. From the total complaints number 9 are reasonable and 16 are not reasonable.

Fig. 108



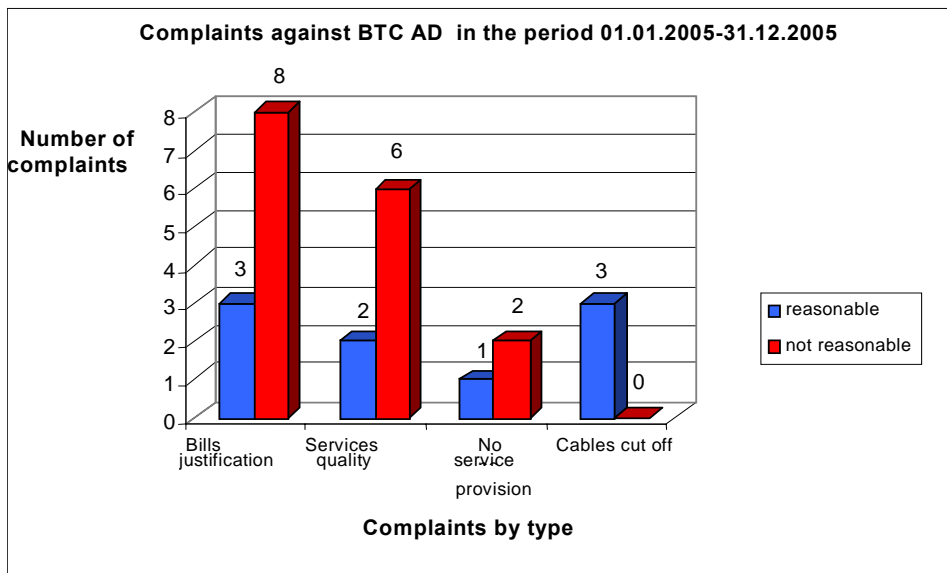
Source: CRC

The greatest complaints number is about bills justification followed by complaints concerning the quality of the services provided.



Source: CRC

Fig. 109



Source: CRC

Fig. 110

- A total of 33 requests from telecommunication operators have been filed concerning 102 cable routes. The requests are on imposing to BTC the by TA provided obligations for joint use of channels from BTC channel network 31 of the total requests number are regarding channel network use on the territory of Sofia and 2 – on the territory of Plovdiv. The limited number of cable routes available as well as the lack of duplicate routes have intensified further the arguments between the public telecommunication networks operators and BTA AD - major owner and user of the routes in question.

The inspections performed have established a technical opportunity for laying cables in some routes. As result corresponding CRC Resolutions have been adopted and BTC has been instructed compulsory by CRC to provide joint use of 16 cable routes from the town telecommunication network

In the period from 01.01.2005 to 31.12.2005, 74 inspections have been fulfilled on the individual license terms observance by BTC. As result 5 statements of establishment of administrative violations have been drawn up.

- In the period from 01.01.2005 – 31.12.2005 a total number of 13 complaints have been filed to CRC against the mobile operators: MOBILTEL EAD, COSMO BULGARIA MOBILE EAD and BTC MOBILE EOOD. There is certain decrease of total 2005 complaints number in comparison to complaints number from the last two years. The 3 reasonable complaints concern connections quality and bills justification. The greatest number – 6 are complaints against COSMO BULGARIA MOBILE EAD. The smallest of number are complaints against BTC MOBILE EOOD due to commercial activity start at 05.11.2005.

Source: CRC

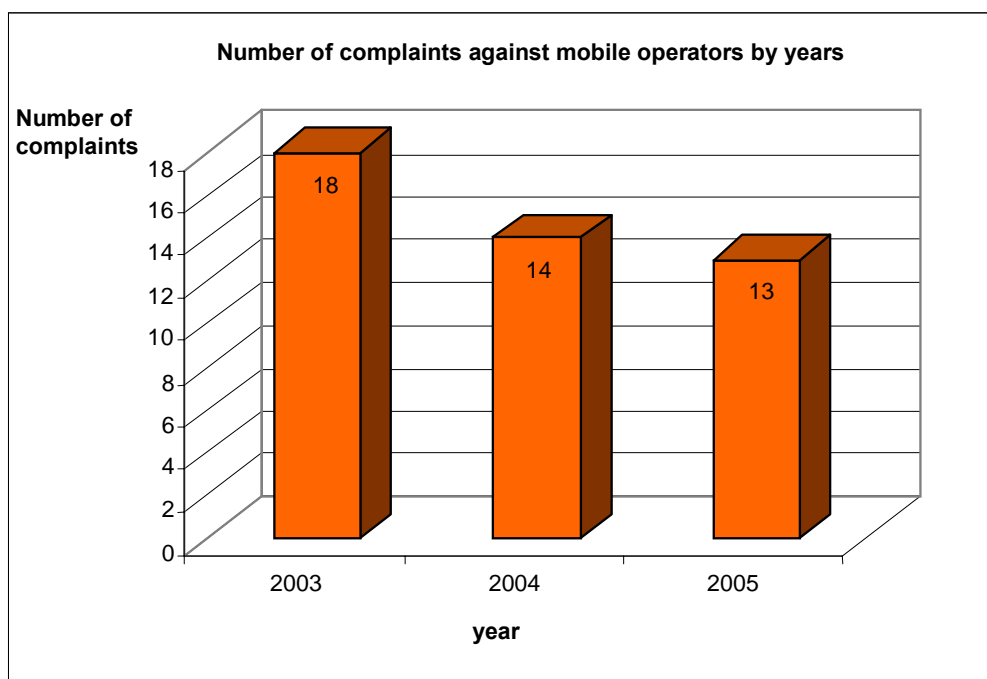
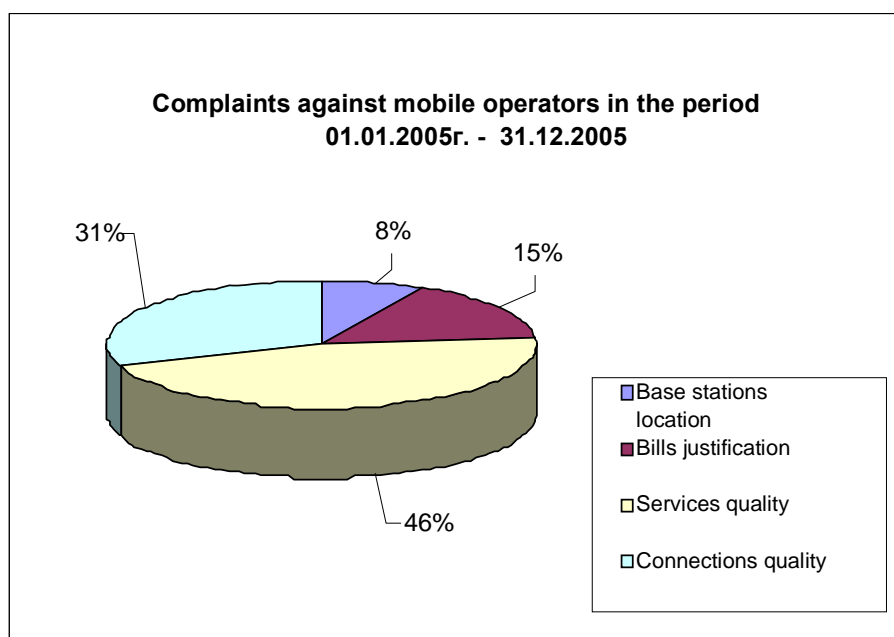


Fig. 111

According to CRC resolution regarding the end-users interests protection, inspections of MOBILTEL EAD and COSMO BULGARIA MOBILE EAD have been fulfilled on availability of subscriber complaints registers. The operators have been observing the obligation of registers maintenance.



Source: CRC

Fig. 112

In the period mentioned, 4 complaints have been filed to CRC against MOBILTEL EAD and BTC MOBILE EOOD regarding lack of coverage in certain country settlements.

- In accordance to the provisions of TA Chapter XIII the due inspections have been performed resulting in 236 administrative violations established and 236 statements served.

2.2 Communications inspection regarding the postal services provision after the PSA

- In the period from 01.04.2005 to 30.04.2005 following the universal postal service quality as CRC priority, a surveillance has been performed on extract from 600 real home correspondence parcels regarding the quality norms observation. The quality norms have been adopted with Decision № 1546/29.07.04, promulgated in State Gazette. Only one of the Universal Postal Service (UPS) components has been monitored due to the limited expenses and Chief Directorate human resources – inspectors. Time for end-to-end delivery of home correspondence parcels up to 1 kg (test parcels) is regarded as the time for delivery from the access point (where the parcel is submitted) to the delivery point and at the receiver address. By the data processing the calculation rule, given 40 work hours per week, has been applied (Appendix B to BDS EN 13850 from 2004). Postal parcels submitted on Saturday/Sunday have been regarded as submitted on Monday. Postal parcels submitted on holidays have been regarded as submitted on the day after the holiday. The surveillance result is illustrated in Table 1.

Table 1

Time for end-to-end delivery	Norms of service quality	<i>Established service level</i>
<i>D + 1</i>	not less than 78 % of the correspondence parcels	81.63 %
D + 2	not less than 90 % of the correspondence parcels	94.93 %
D + 3	not less than 90 % of the correspondence parcels	97.82%

Source: CRC

On the basis of the due calculations and analysis of the 600 home correspondence parcels concerning the service quality indicator, i.e. time for end-to-end delivery has been established that the level achieved by BP AD is in compliance with the “Norms on the universal postal service quality and service efficiency” – section II (SG, N 71 from 2004).

- 41 inspections have been fulfilled regarding the universal postal service provided by the main postal operator “BULGARIAN POSTS” EAD. As result 1 statement of establishment of administrative violation by BP EAD has been drawn up.
- 20 UPS operators have been inspected regarding PSA provisions observance. Violations have been established again concerning UPS without license provision resulting in 3 statements of establishment of administrative violation drawn up.
- 16 complaints have been examined regarding the PSA enforcement.
- 8 statements of establishment of administrative violation have been drawn up.

2.3 Control on observance of the Electronic Document and Electronic Signature Act (EDESA) provisions.

- According to the time-schedule approved for inspections of the Service Providers (SP) registered after EDESA and in compliance with the by CRC approved SP Control Methodology, 2 inspections have been fulfilled in 2005 - an inspection on the activity of INFORMATION SERVICE AD (registered as SP with Resolution N 260/27.03.2003) and an inspection of BANKSERVICE AD (registered as SP with Resolution N 1113/25.09.2003). As inspections result statement records have been drawn up and signed. Non-significant inconformity to the norms requirements has been established. As result CRC instructed removal of the inconformity within a fixed term.

3. Logistic of the control activity

In 2005 the establishment of the National Monitoring System for Radio Frequency Spectrum Monitoring and Control continued further according to Telecommunications Sector Policy and CRC Regulation Policy on RFS for civil needs. The most substantial result is the extension of RFS control up to 26 GHz. The extension has been implemented as follows:

- Establishment of 2 radio monitoring stations: a fixed in Plovdiv and a remote controlled in Vratsa;

With the 2 stations put into operation the establishment of fixed RFS monitoring for the whole country has been completed. All the Regional Communications Control Stations now are operating monitoring equipment with corresponding monitoring, measurement and direction finding antennas in the frequency range up to 3 GHz.

- Implementation of remote controlled stations in Varna and Burgas;
- Further equipment of the all Regional Stations measurement equipment with the accessories necessary for measurements in the frequency range up to 26 GHz;
- Delivery and installation of geographic information software application resulting in significant extension of the fixed stations control software functionality, i.e. real time bearing results visualization on electronic geographic maps.

As result, by the end of the year 2005 CRC is operating 4 fixed and 3 remote-controlled radio monitoring stations dedicated for RFS monitoring/control up to 3 GHz. The mobile monitoring is carried out operating 9 mobile stations including control of the 3 public telecommunication GSM networks as well as control of the telecommunication services in the frequency range up to 26 GHz.

- Telecommunication quality control has been improved due to delivery and putting in operation of new equipment for measurement, analysis and record of major parameters of the public telecommunication cable networks for radio/TV signals transmission.
- The development of the fixed voice telephony service market set new tasks to that networks type control. On the purpose CRC supplied dedicated equipment measuring fixed voice telephony service quality parameters, i.e. “R indicator of voice transmission estimation” and “one-way-delay”.

All the above logistic activities performed in 2005 enhanced the control efficiency as whole.