

10 Years of Regulation in the Romanian Electronic Communications Sector







### A decade of regulation

2012 is the year when the Romanian regulatory authority for communications celebrates its 10th anniversary. It has been ten years from Authority's first regulations, issued with a view to the full liberalisation of the Romanian electronic communications market, as of 1 January 2003.

Telephone, internet, radio and television are but vital ingredients of modern life, they are the very instruments that help people interact, send and receive information, express their views and opinions, pay taxes and invoices, manage their business and daily work, communicate with family from miles away, learn, develop, make informed decisions and be a vibrant part of the society they live in. If several years ago access to a fixed telephone could be a problem, the question of 2012 is whether there is life without mobile telephony and internet.

ANCOM has undertaken the responsibility of facilitating the Romanians' access to quality communications services, at reasonable prices. In these 10 years, the Authority has systematically and consistently pursued promoting competition, maximizing the users' benefits, and fostering efficient investments in infrastructure, by means of an independent, balanced, proportionate and legitimately, objectively justified regulation. Several cycles of market analyses and the imposition of proportionate remedies for the identified competition deficiencies, the regulation of the tariffs of certain key services for the competitive functioning of the markets, the designation of the universal service providers, as well as a series of symmetrical interventions, such as the implementation of number portability, the closing of the national numbering plan, the adoption of measures dedicated to informing and protecting the end-users, these all have been the regulatory streamlines of the last decade. The proportionality, fairness and legitimacy of the regulations intertwined with their independence a in an independent institution.

Thus, due to a correct regulatory strategy, based on constant analyses and consultations with the public, with foreign fellow-regulators and with the European Commission, and nonetheless due to the operators' investments, Romania has developed one of the most competitive communications markets in the European Union, characterised by low tariffs, high quality services and rising penetration rates. The dynamics of the Romanian communications sector may be read as a success story.

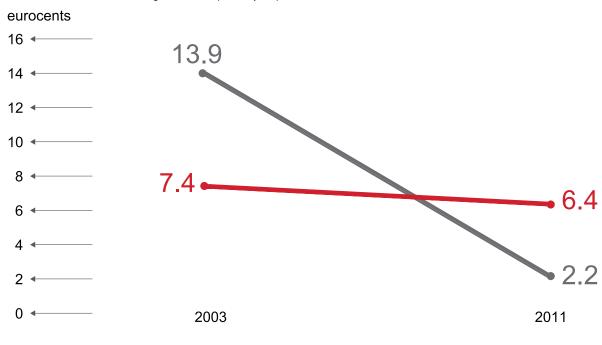


## Figures speak for themselves

Between 2003 and 2011, the average tariffs per minute for mobile telephony dropped by 84%, from approximately 13.9 eurocents in 2003 to approximately 2.2 eurocents in 2011, while the average tariffs per minute for fixed telephony dropped by 14%, from approximately 7.4 eurocents in 2003 to approximately 6.4 eurocents in 2011, also counting the revenues from subscriptions and extra-options.

#### Average tariff per minute (eurocents)

Source: ANCOM, according to the data reported by the providers



■ mobile telephony ■ fixed telephony

Despite the relatively low penetration of fixed broadband internet, the connection quality and rate rank high in world surveys. Moreover, according to the European Commission's latest report, Romania ranks first among the Member States as regards the weight of broadband connections with speeds of at least 30 Mbps.

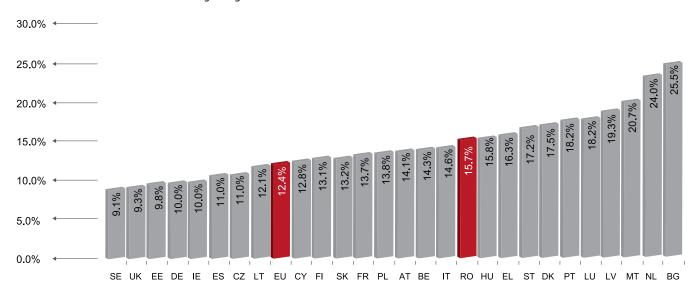
The total revenues from the provision of electronic communications networks and services amounted to approximately EUR3.5 billion in 2011, i.e. approximately 2.6% of the GDP.

In 2010, Romania was above the European average regarding the telecom investment as a percentage of the revenues obtained by the telecom operators, featuring 15.7% (compared to 13.7% in 2011).



#### Telecom Investment as % of revenue, 2010

Source: 2012 Digital Agenda Scoreboard



These figures reveal one of the most competitive electronic communications markets in Europe, given the persistently high investment in networks and the high quality, affordably priced services. This is the result of competition, generated and fuelled by ANCOM's regulatory measures. No new entrant could have set up, operated and endured in the market if the big player's termination tariffs had not been constantly regulated, so as to reflect the costs.



### Back to the roots of Romanian regulation

The liberalisation of the Romanian electronic communications market, as of 1 January 2003, is one of the last decades' milestones in the field. Hardly ever has one legislative package succeeded in engendering so many benefits to the citizens of a country. Once the market liberalised, the rampant competition brought about a broader range of electronic communications services, increased accessibility and higher penetration rates, together with lower tariffs and better quality levels.

The liberalisation saga commenced in the early 90s, with a first set of services: terminal equipments - 1991; data transmissions - 1992; mobile communications - 1992; satellite communications, transport and retransmission of radio and television programmes and VSAT - 1992. Finally, the last restrictions regarding the fixed voice telephony and the provision of leased lines were removed as of 1 January 2003, when the market of telecommunications networks and services was fully liberalised.

At the European level, the liberalisation of the telecommunications sector set out around 1990. The first European directive for this purpose has been adopted in 1990, upon the European Commission's issuing, in 1987, the *Green Paper on the Development of the Common Market for Telecommunications Services and Equipment*, which represented the onset of the liberalisation process in the telecommunications sector. The second EU Directive dedicated to market liberalisation in this sector was adopted in 1996 and established the day of 1 January 1998 as target date for the EU15 Member States' implementing the liberalisation process. A 5-year transition period was granted to the states with less developed infrastructure. Thus, most of the Member States had their markets open for competition by January 1998: Great Britain in 1991, Sweden and Finland in 1994, Denmark in 1996, The Netherlands in 1997, and Italy, Germany, France, Belgium, Austria, Spain, Luxembourg and Ireland in 1998. Malta and Portugal followed in 2000, Slovenia, the Czech Republic, Greece and Estonia - in 2001, and Hungary and Cyprus - in 2002.

A new and reviewed framework, for electronic communications, was adopted at the EU level in 2002: the *Telecom Package*, with its 5 main directives – framework, access and interconnection, authorisation, universal service, private life and electronic communications. The purpose of this package was to establish homogeneous, harmonised legislative provisions for the provision of electronic communications networks and services throughout the European Union, with a view to creating the single European market in the sector. An essential role was assigned to the national regulatory authorities, which were to contribute to the harmonised implementation of the regulatory framework in all the Member States.

In January 2002, the Government of Romania adopted the Emergency Ordinance no.79/2002 on the general regulatory framework for communications. ANRC was set up on 25 September 2002, as an independent institution to ensure the implementation of the national policy in the electronic communications and the postal services fields, by means of the secondary legislation. In November, Romania closed the 19th chapter of negotiations on accession to the European Union.

On the very establishment date, the Authority launched for consultation its first normative project, the Draft Decision regarding the General Authorisation for the provision of electronic communications networks and services. Thus, Romania became the first country to adopt the new European regulations in the electronic



communications sector. This decision, published in the Official Monitor of Romania by the end of the year, set the premises for the free provision of electronic communications networks and services starting with 1 January 2003, at the same time with Latvia, Lithuania, Poland, Bulgaria and Slovakia.

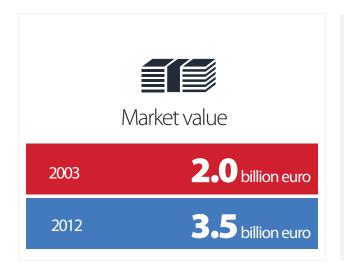
A period of intense regulatory activity followed, with a view to the market liberalisation. By the end of 2002, the Authority launched for consultation 23 normative drafts, among which: the general authorisation procedures for the provision of electronic communications services, the regulations for the identification of relevant markets in the electronic communications sector, the procedure for conducting market analyses, the decisions for the designation of the providers with significant market power, the proposals for the 2002 National Numbering Plan (NNP), the general procedure for requesting and granting licences for the use of the numbering resources (LURN), and the licence for the use of the numbering resources.

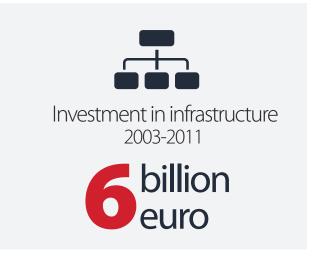
By the beginning of January 2003, 367 companies had submitted notification for the provision of electronic communications networks and services and – by the end of the month – more than 500.

So far, ANCOM has a record of 1,603 authorised providers of electronic communications networks and services.



### **Electronic communications market 2003-2012**

















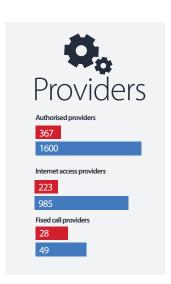


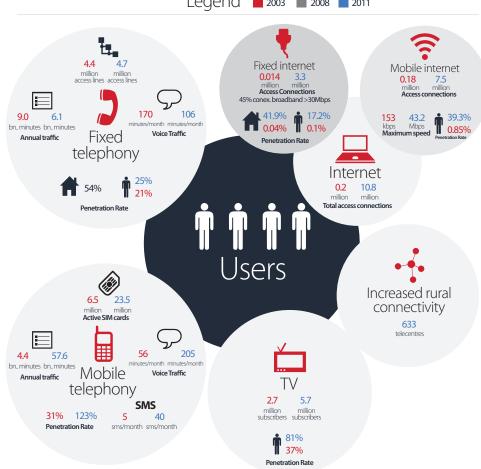




# **Evolution of the Romanian Electronic Communications Sector: 2003-2011**













### Mobile telephone services

Mobile telephone services witnessed a spectacular growth in Romania starting with 1997, the number of users and the market value rising by tens of percentage points every year. This was due to the accessibility of the services provided by the harshly competing operators, especially from the moment when OTE and Vodafone became main shareholders in Cosmorom and, respectively, in Mobifon. In time, competition alongside with the demand for services fostered the emergence of new mobile technologies and services and determined a perpetual adjustment of the service packages to the users' individual needs.

### **Providers**

Since 1 January 2003, the mobile market structure has undergone important changes. If, at the beginning, there were 4 operators in the market (Mobifon, Mobil Rom, Cosmorom, Telemobil), now 3 major international groups – Vodafone, Orange and OTE (which controls 3 mobile telephone service providers - Cosmote, Romtelecom and Telemobil) – compete alongside a local operator, RCS&RDS.

#### Market value

In financial terms, the market value has doubled, from EUR0.9 billion in 2003 to EUR1.8 billion in 2011, with a peak in 2008 (EUR2.7 billion). Compared to 2003, the structure of the revenues obtained in the mobile telephony segment was preserved, approximately three quarters of these coming from the retail market and one quarter from the wholesale market.

#### Users

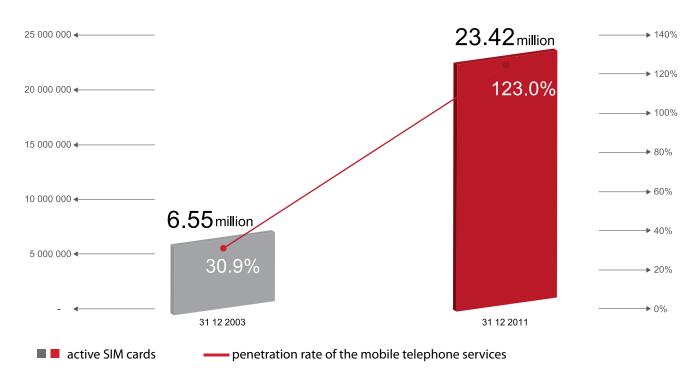
Mobile telephony spread rapidly throughout Romania, the years 2001-2008 featuring an upsurge in the number of users and in the penetration of mobile telephone services. Nevertheless, once the number of active SIM cards exceeded the population of Romania, these trends stalled or even sunk. The number of users (active SIM cards) amounted to 23.4 million at the end of 2011, by 257% higher than in 2003, when there were 6.6 million users. The percentage of prepaid card users of the total number of mobile telephone users was constant through the years (59% at the end of 2003 and 60% at the end of 2011). The mobile telephone services penetration rate at the population level grew from 31%, at the end of 2003, to 123% at the end of 2011.

In these ten years, the coverage of the GSM mobile telephone networks expanded from 78% of the territory, respectively 96% of the population - on 31 December 2003 -, to 91.9% of the territory, respectively 99.8% of the population on 31 December 2011.



### Dynamics of the number of active SIM cards and of the penetration rate of mobile telephone services, at the population level, as of 31.12.2003 and 31.12.2011.

Source: ANCOM, according to the data reported by the providers



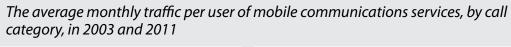
On 21 October 2008, ANCOM launched the portability of telephone numbers, which incentivized competition in the market. The users were given the freedom to choose the operator that best fulfils their price and quality requirements and thus avoid the inconveniences encountered when changing the telephone number. Starting with 2 September 2012, ANCOM reduced the porting interval from 10 to 3 working days. So far, more than 580 thousand mobile telephone numbers have been ported.

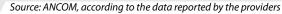
### Traffic

The considerable rise of the traffic volume on the mobile networks proves the Romanians' interest in mobile communications. During these ten years, the total voice traffic soared by 1,219% from 4.4 billion in 2003 to 57.6 billion minutes in 2011, once with the growth by 269% (from 56 to 205 minutes) of the average monthly voice traffic per user and of the number of users. Currently, Romania registers one of the largest volumes of voice per user among the EU Member States, which proves the fact that mobile telephony services are largely affordable in our country.

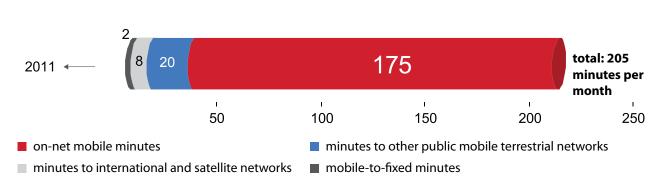
The SMS traffic also followed a rising trend, registering a boom in the period concerned, by 2,599%, from 0.4 billion, in 2003, to 11.2 billion in 2011, i.e. a growth of the average monthly number of SMS per user from 5 SMS in 2003 to 40 SMS in 2011.











### **Tariffs**

Following ANCOM's regulations, the operators designated as having significant power on the market for providing call termination services, at mobile locations, on their individual networks, were imposed the obligation to observe certain ceilings as regards the interconnection tariffs. Thus, the maximum tariff per minute charged by the mobile operators for such services dropped by approximately 70%, from 9.72 eurocents in 2003, to 3.07 eurocents from 1 September 2012. These steps taken by ANCOM seriously impacted the decrease by 84% of the average tariffs per minute paid by the end-users, from approximately 13.9 eurocents in 2003 to 2.2 eurocents in 2011, also taking into account the revenues from subscriptions or extra-options.

Starting from 1 July 2007, the European Commission regulated the tariffs applicable to the roaming services for mobile communications within the EU, triggering significant drops of these tariffs. The maximum amounts of the tariffs (without VAT) applicable from 1 July 2012 in roaming throughout the EU are: 29 eurocents/minute for initiated calls, 8 eurocents/minute for received calls, 9 eurocents/minute for SMS, and 70 eurocents/MB for data communications services.

#### ANCOM's cornerstone decisions and steps that impacted the mobile market

**The gradual shrinking of mobile call termination tariffs**, from 9.72 eurocents in 2003 to 3.07 in September 2012, following the designation of the operators with significant market power.

**Implementation of number portability**, more than 580 thousand mobile telephone numbers being ported so far.

**Allotment of the radio spectrum for voice and data communications**, by organising tenders, as well as by opening the 900 MHz and 1800 MHz bands for the 3G technology.



### Fixed telephone services

The liberalisation of the fixed telephony market in 2003 had favourable effects on the historical operator Romtelecom, which, found in the situation to compete with its main rivals RCS&RDS and UPC, diversified its range of services and lowered its tariffs. The users thus enjoyed diverse offers at affordable prices and a superior quality level of the bundled services. Nevertheless, in line with the global trend, the fixed voice services began to lose ground to the mobile ones ever since 2003. This decline is however slower in our country owing to the reduced historical penetration of the fixed networks.

#### Providers

At end-2003, Romania had 28 active fixed telephony providers which were offering voice call services, with 15 of these providing access services. At the end of 2011, the number of providers offering voice call services reached 49, out of which 31 provided access services.

#### Market value

In 2011, the market of fixed telephone services was worth EUR0.53 billion, by 30% less than in 2003, because of the 44% decrease registered in the retail market (from EUR0.68 billion in 2003 to EUR0.38 billion in 2011). The revenues in the wholesale market grew by 90%, from EUR0.08 billion in 2003 to EUR0.15 billion in 2011.

### Users

On account of the low penetration and of the development of fixed telephone services offered by the operators of mobile telephone networks, the number of fixed telephony lines rose by 7%, from 4.4 million access lines at end-2003 to 4.7 million lines at end-2011, of which 82% corresponded to the residential users (with 102 thousand lines less than at end-2003) and 18% corresponded to the business users (with 407 thousand lines more than at end-2003). The digitisation of the terrestrial public networks with access at a fixed location was achieved in a proportion of 100% ever since 2007, and the fixed telephone networks were digitised at the end of 2003 in a proportion of 74%.

In this timeframe (2003-2011), the penetration rate of the fixed telephone services per households maintained a constant course, ranging around 54%, whereas the penetration rate per population grew by 4 percentage points, from 21% to 25%, in particular due to the expansion of the number of lines allotted to business users.

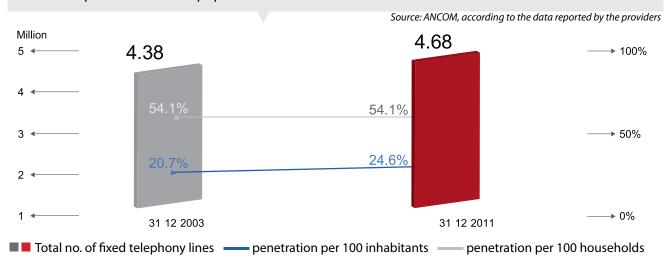
287 thousand fixed telephone numbers have been ported since the introduction of number portability, in the fall of 2008, and until 15 October 2012.

In the localities which were not connected to fixed networks, the universal service was ensured via 633 telecentres, installed and operated during 2004 - 2011 by seven operators designated as universal service providers following the tenders held by ANCOM.

At end-2011, the number of bundles of electronic communications services embedding fixed telephone services amounted to 2.8 million.



### Dynamics of the number of access lines for fixed telephone services and penetration rates of the fixed telephone services at population/household level as of 31.12.2003 and 31.12.2011

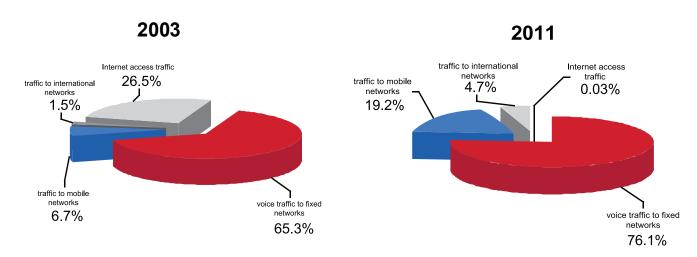


### Traffic

The total voice traffic achieved from fixed locations was by 32% lower in 2011 than in 2003 (6.1 billion minutes in 2011 as opposed to 9.0 billion minutes in 2003), because of the 43% decrease of the traffic to the providers' own fixed networks or to other operators' fixed networks, from 8.0 billion minutes in 2003 to 4.5 billion minutes in 2011. The other categories of traffic grew during this timeframe, by 41% in the case of the calls to mobile networks (from 0.81 billion minutes to 1.15 billion minutes) and by 53% with regard to calls to international networks (from 0.18 billion minutes to 0.28 billion minutes). The average monthly voice traffic achieved from a fixed telephony line counted 106 minutes in 2011, down by 64 minutes as compared to 2003, when a fixed telephony line registered a monthly average of 170 minutes.

### Structure of the total traffic volume achieved on fixed public networks in Romania, by call destination, in 2003 and 2011

Source: ANCOM, according to the data reported by the providers





As a result of the accelerated growth rate of the Internet dedicated access, the dial-up Internet access traffic almost disappeared in this period. The volume went down by 99.9% during 2003 – 2011, from 3,225 million minutes in 2003 to 1.7 million minutes in 2011.

### **Tariffs**

Due to the regulations imposed by ANCOM, the maximum interconnection rates for fixed call termination on the network of Romtelecom fell on average by 60% as compared to 2003, and so since 1 July 2012 they do not exceed 0.73 eurocents/minute. Moreover, the alternative operators providing fixed call termination services, designated by ANCOM as having significant power on the market where these services are provided, apply a maximum tariff of 0.67 eurocents/minute.

These measures taken by ANCOM contributed to the lessening by 14% of the average tariffs per minute paid by the end-users, from approx. 7.4 eurocents in 2003 to about 6.4 eurocents in 2011, taking also into account the revenues obtained from subscriptions or extra-options.

#### ANCOM's cornerstone decisions and steps that impacted the fixed market

**Simplification of the providers' market entry**, by introducing and revising a general authorisation regime adapted to the market needs and evolution.

**Gradual reduction of the fixed call termination rates**, from 5.29 eurocents in January 2003 to 0.67 eurocents in July 2012 at regional level, upon the designation of the operators with significant market power.

**Implementation of number portability**, more than 280 thousand fixed numbers being ported to date.

**Designation of Romtelecom as operator with significant power on the market of access** to the fixed public telephone networks in view of call origination, termination and transit, the implementation of the procedures of carrier selection and pre-selection and of the access to the local loop, whereby other providers were able to provide services via the network of Romtelecom.



### Internet access services

The Internet access services have had an interesting course in the 10 years of regulation, and their evolution was owed mainly to the technological development and to the evolution of the Internet itself. Notwithstanding the obstacles Romania still has to overcome in order to reach a penetration rate of the broadband Internet services comparable with that of the European Union, we can pride ourselves with the fastest Internet in Europe and one of the fastest in the world. The global trends show that, in a few years, the Internet will become the main communication tool both for data and for voice and, similarly to the development of mobile telephony, the demand will lead to investments in infrastructure, higher accessibility and low prices.

### **Providers**

The statistical data gathered by ANCOM indicate that the number of active Internet access providers rose by more than 4 times during 2003-2011, from 223 providers which had a total of 0.2 million Internet access connections (fixed or mobile) at end-2003 to 985 providers with 10.8 million connections (fixed or mobile) at end-2011, i.e. by 55 times more connections.

#### Market value

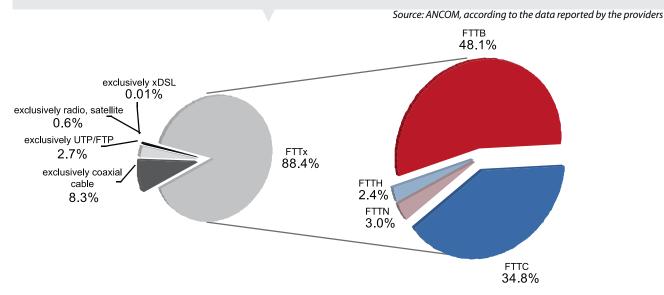
The revenues reported by the providers of Internet access and/or data transmission services grew by 496%, from EUR0.09 billion in 2003 to EUR0.55 billion in 2011, out of which 84% stand for the revenues obtained from the provision of Internet access services and 16% from the provision of data transmission services.

#### **Fixed Internet Users**

The number of fixed broadband Internet access connections grew from 14 thousand, as reported at the end of 2003, to 3.3 million at the end of 2011. The structure of the number of connections in terms of technology experienced a major change in this period. If the coaxial cable was holding the largest share (36%) within the total number of fixed broadband connections at the end of 2003, at end-2011 almost 90% of the connections were FTTx.



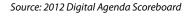
### Structure of the total number of fixed broadband Internet access connections, by support, as of 31 December 2011

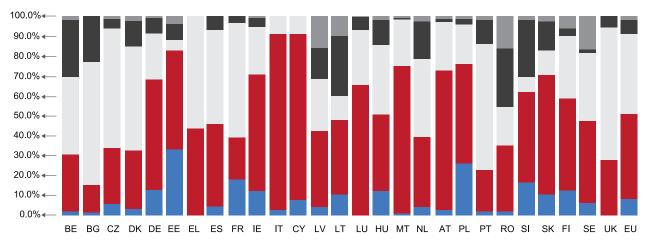


Between 31 December 2003 and 31 December 2011, the penetration rate of the fixed broadband Internet access services augmented from 0.1% to 17.2% per population, respectively from 0.04% to 41.9% per households.

Romania was ranked first in Europe in early 2012 in terms of share of the high speed connections, of at least 30 Mbps, this accounting for approx. 45% of the total fixed broadband connections.

### Structure of the fixed broadband Internet connections in the EU Member States, by speed, as of 31 December 2011





- Above 144 Kbps and below 2 Mbps
- 20 14
- 2 Mbps and above and below 10 Mbps
- 10 Mbps and above and below 30 Mbps
- 30 Mbps and above and below 100 Mbps

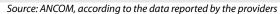
■ 100 Mbps and above

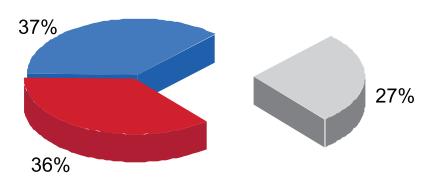


#### **Mobile Internet Users**

Following the introduction of new technologies, the structure of the active mobile Internet access connections registered important changes. Thus, as opposed to 2003 when all the mobile Internet access connections (181 thousand) were made by means of the HCSD and GPRS technologies, in 2011, out of the 7.5 million mobile connections, the majority was provided over EDGE, CDMA, EV-DO, 3G, 3G+ technologies (4.2 million).

Structure of the total number of mobile Internet access connections over EDGE, CDMA, EV-DO, 3G, 3G+, by support, as of 31 December 2011





On the mobile phone, of which

- based on a dedicated subscription/extra-option for Internet access
- based on a payment per "consumption unit"
- on modems/cards/dongles

73% of the 4.2 million connections over EDGE, CDMA, EV-DO, 3G, 3G+ were achieved on the mobile phone (3.1 million connections) and 27% were achieved on modems/cards/dongles (1.1 million connections). The connections on mobile phones are structured approximately even, 1.54 million being paid for by a dedicated subscription/extra-option for Internet access and 1.56 million being paid for per "consumption unit".

As for the mobile broadband Internet access connections, at end-2011 the penetration rate per population reached 39.3%, which is by 38 percentage points higher than the one in 2003, i.e. 0.85%. At present, the highest available speed for mobile Internet access is 43.2 Mbps, while in 2003 CDMA was the most advanced mobile technology and it was reaching a maximum speed of 153 kbps.

Since the launch of 3G services in 2005, more and more users access mobile Internet. Therefore, today the more than 3 million active users of 3G/3G+ services benefit from networks with a territorial coverage of approx. 80%, more than 90% of the population living in this area.



### Tariffs

According to the European Commission's Report on broadband access services published in December 2011, the operators were offering in February 2011 to the Romanian users tariffs which were at the midlevel of the tariffs charged in the other European countries for fixed Internet – EUR14.91 as compared to EUR26.68 (calculated based on the cheapest offers in the market for subscriptions ranging between 4 and 8 Mps, weighted with the buying power).

## ANCOM's cornerstone decisions and steps that impacted the Internet access services

**Simplified market entry**, by introducing and revising a general authorisation regime adapted to the market needs and evolution.

**Allocation of the radio spectrum for voice and data communications**, by holding auctions, as well as by opening the 900 MHz and 1800 MHz bands for 3G technology.

**Designation of Romtelecom as provider with significant power** in the market of services of access to infrastructure facilities and the regulation of the conditions of access to Romtelecom's local loop.



### TV programme retransmission services

In the context of a massive appetite of the Romanian users for television programmes and in the absence of urban regulation, the cable networks developed quickly and strongly in the first years after the 1989 Romanian Revolution. The consolidation and diversification of the cable services then followed, by the offering of service bundles which included Internet and voice.

### **Providers**

During 2003-2011 a process of consolidation took place in the market of TV programme retransmission services, the total number of providers of such services decreasing by 29, from 489 at end-2003 to 460 providers at end-2011.

### **Market value**

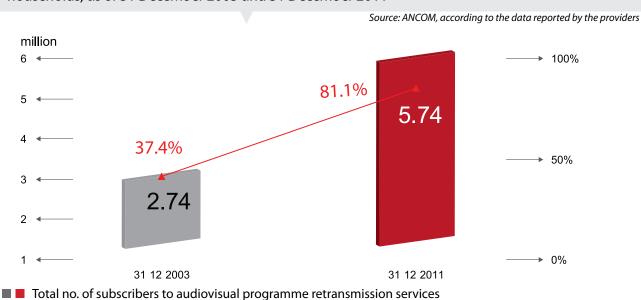
penetration rate per households

In 2011 the market of audiovisual programme retransmission services was worth EUR0.37 billion, by 287% more valuable than in 2003, i.e. EUR0.09 billion.

#### Users

The total number of subscribers doubled, growing by 110%, from 2.7 million in 2003 to 5.7 million in 2011, in particular due to the emergence of the DTH technology (which attracted 2.1 million subscribers until 31 December 2011, especially in the rural area, where the deployment of cable networks is regularly more expensive).

Total number of subscribers to TV programme retransmission services and penetration rate per households, as of 31 December 2003 and 31 December 2011

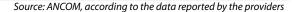


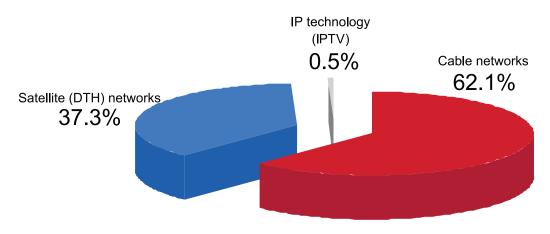
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In 2003, the retransmission services were entirely provided on analogue cable networks, but in the recent years certain providers have began to offer digital services – on satellite networks (DTH, which drew 2.1 million subscribers), over IP technology (IPTV, which drew 30 thousand subscribers), or on digital cable networks (which drew 0.9 million subscribers).

Structure of the number of subscribers to audiovisual programme retransmission services, by technology, as of 31 December 2011





The penetration rate per households of the audiovisual programme retransmission services evolved from 37% at end-2003 to 81% at end-2011, up by 44 percentage points.

### **Tariffs**

The average revenue per subscriber in the case of TV programme retransmission services increased from EUR2.9 in 2003 to EUR5.3 in 2011, due to the higher number of received programmes, to the quality of service as a result of transmission digitisation, and to the emergence of VoD services.

ANCOM's cornerstone decisions and steps that impacted the market of TV programme retransmission services

**Simplified market entry**, by introducing and revising a general authorisation regime suited to the market needs and evolution.

**Regulation of the services of analogue retransmission** by means of the terrestrial radio-electric systems of the public television programme services provided by the Radiocommunications National Company.



# Find out how much you would have paid for your mobile calls 10 years ago!

On the Authority's website – www.ancom.org.ro – is available an application allowing the comparison between the price paid today for the mobile telephone services and the price which would have been paid 10 years ago for similar services.



The widget can be implemented on your website by inserting one of the codes available on the Authority's website.



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