



Regional Conference Regulatory Activity in Electronic Communication Sector

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Expanding Broadband Access and Acceptance in Albania



A K E P
AUTORITETI I KOMUNIKIMEVE
ELEKTRONIKE DHE POSTARE

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Market overview

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- During 2014, the electronic communications market has increased regarding the use of mobile networks services and broadband Internet access.
- On the other hand, the fixed telephony segment has suffered a decrease. This is a trend similar to that of the recent years where the fixed telephony has been decreasing and being replaced by the mobile telephony.
- The broadband access has grown in both its segments: from fixed and mobile networks.

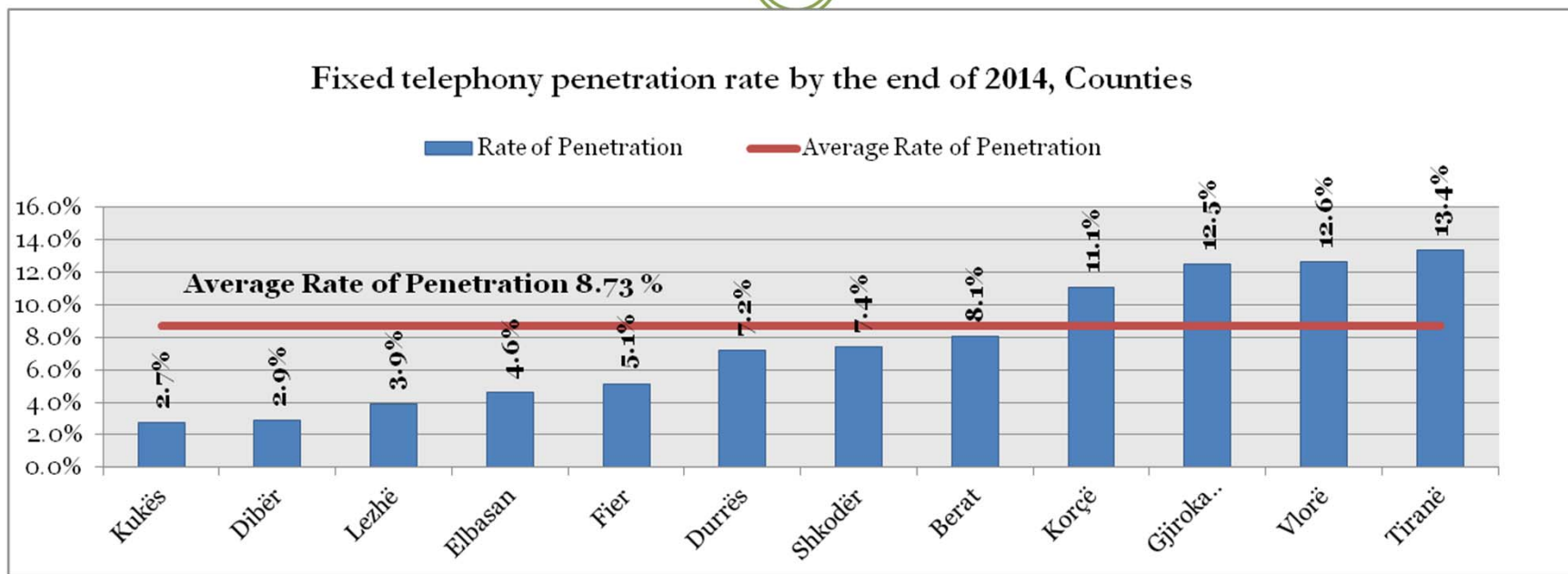
Background

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- Mobile operators, significant investment in 3G networks:
 - Coverage: 85% of territory / 92% of population
- Albtelecom significant investment in NGN/NGA:
 - 100% of subscribers connected to NGA (MSAN)
- Mobile broadband subscribers and traffic are growing.
- More effective use of spectrum; focus on the provision of quality services and competitive prices for consumers

Fixed telephony (2014)

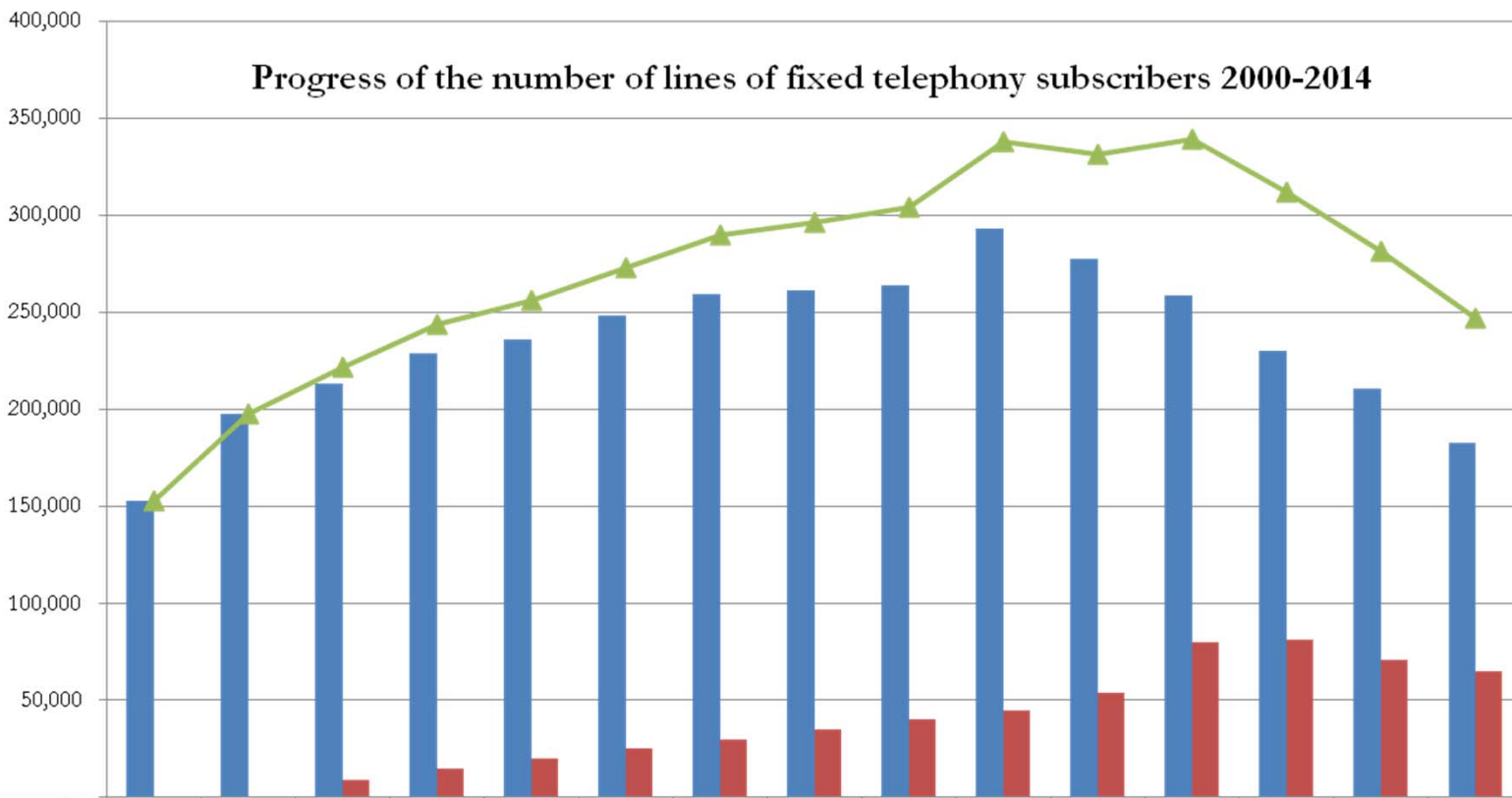
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Number of lines of fixed telephony subscribers	Albtelecom	Abcom	ASC	Nisatel	AMC Fixed	Other OA	Fixed Total
2010	277,763	19,975	7,408	5,900	n/a	20,456	331,502
2011	258,943	27,167	10,129	4,950	7,565	30,090	338,844
2012	230,397	33,000	7,649	5,500	6,119	28,996	311,661
2013	210,382	13,680	15,047	7,166	6,950	27,975	281,200
2014	182,591	15,531	15,047	9,236	2,550	22,115	247,070
Difference 2014/2013	-13%	14%	0%	29%	-63%	-23%	-12%

Fixed telephony (2014) - continued

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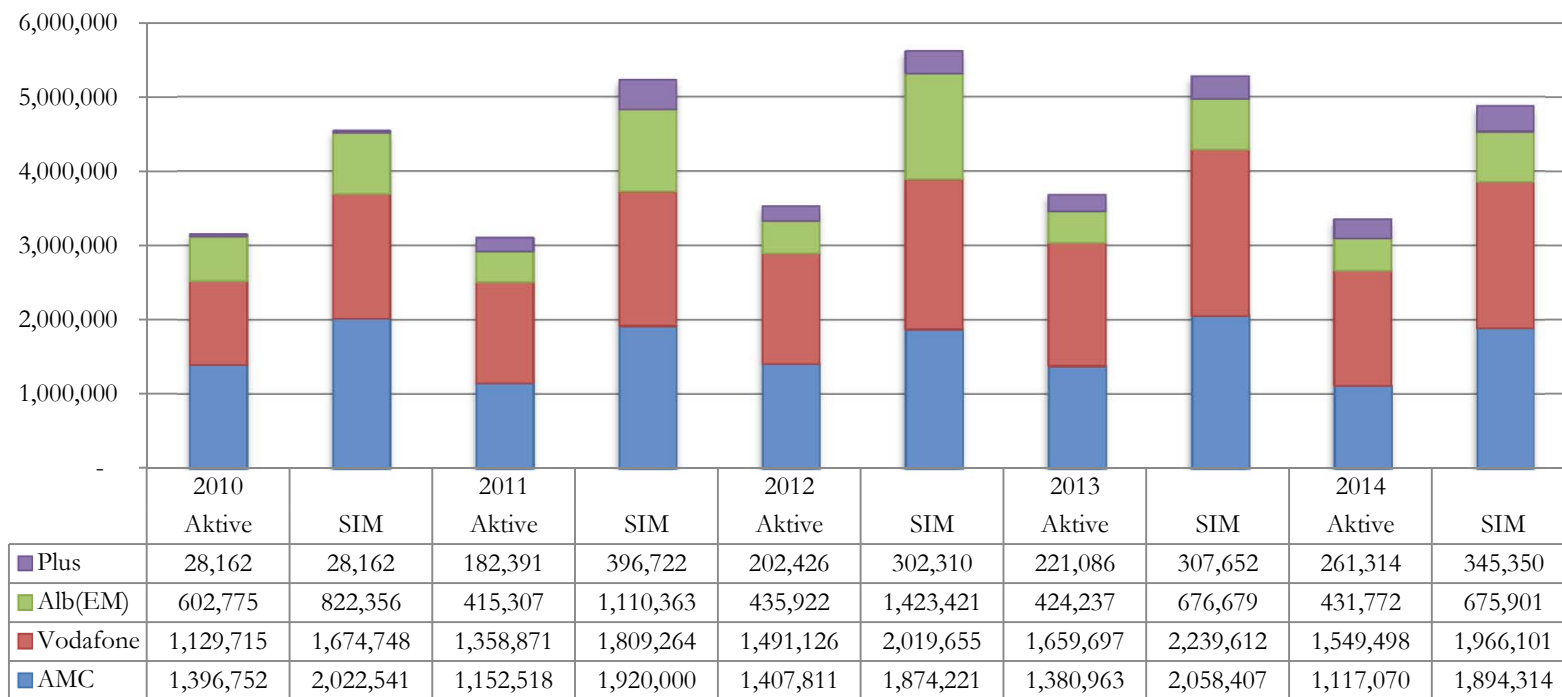


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Albtelcom	152,700	197,500	213,003	228,858	236,266	248,056	259,637	261,146	263,964	292,885	277,763	258,943	230,397	210,382	182,591
OA			9,000	15,000	20,000	25,000	30,000	35,000	40,000	45,000	53,739	79,901	81,264	70,818	64,479
Total	152,700	197,500	222,003	243,858	256,266	273,056	289,637	296,146	303,964	337,885	331,502	338,844	311,661	281,200	247,070

Mobile Telephony (2014)

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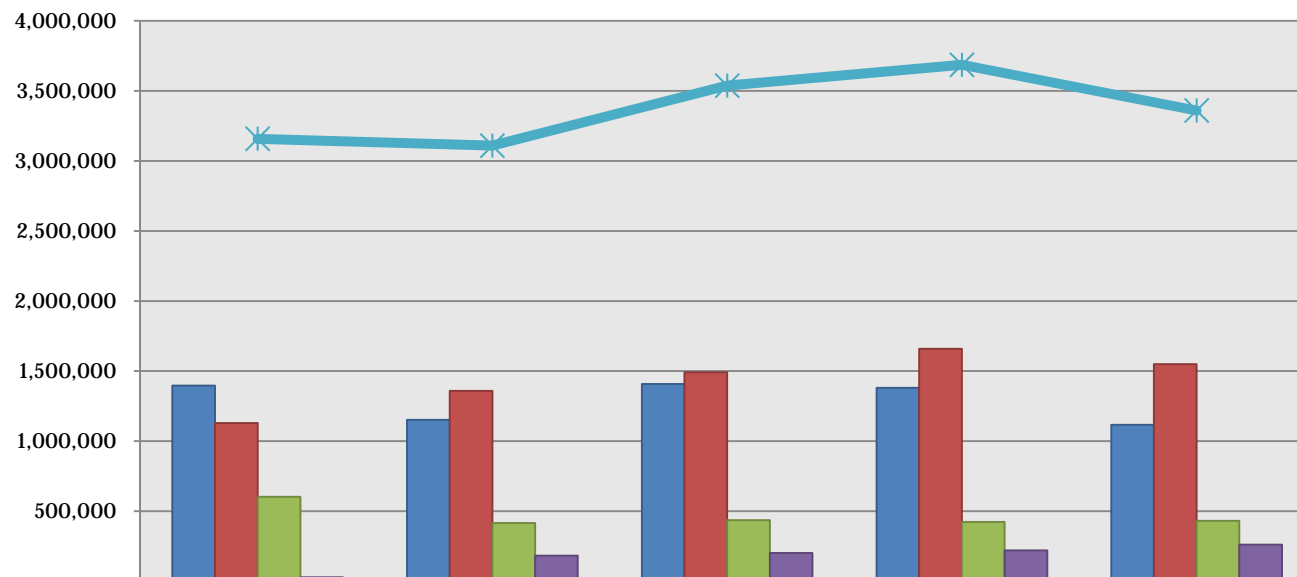
Active users and active SIM cards 2010-2014



Mobile Telephony (2014) - continued

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The number of active users



	2010	2011	2012	2013	2014
AMC	1,396,752	1,152,518	1,407,811	1,380,963	1,117,070
Vodafone	1,129,715	1,358,871	1,491,126	1,659,697	1,549,498
Albtelcom	602,775	415,307	435,922	424,237	431,772
Plus Communication	28,162	182,391	202,426	221,086	261,314
Total aktive	3,157,404	3,109,087	3,537,285	3,685,983	3,359,654

Broadband Access (2014)

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- **Broadband Access (fixed and Mobile 3G modem/USB):**
 - 329,000 subscribers:
 - ✦ 206,000: fixed broadband
 - ✦ 123,000: Mobile Broadband 3G USB/modem
 - Penetration 11.65 %

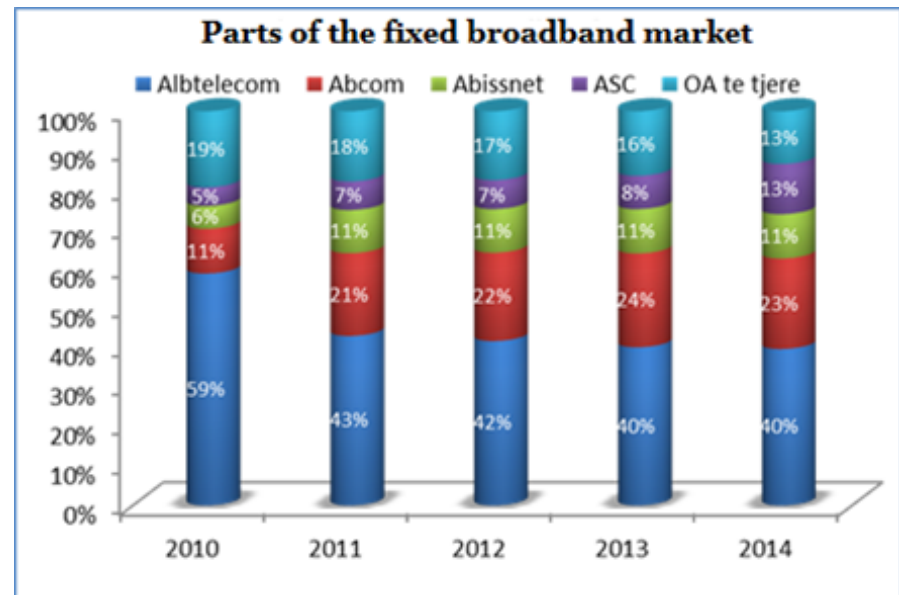
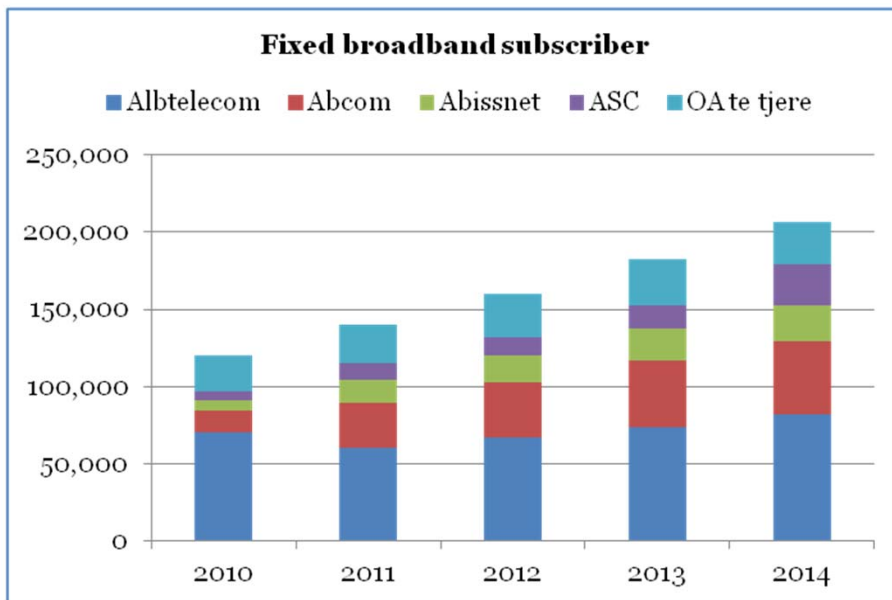
Number of subscribers and penetration rate	Number of subscribers			Penetration according to population		
	Fixed	3G	Total	Fixed	3G	Fixed +3G
2011	139,697	34,493	174,190	4.90%	1.20%	6.20%
2012	160,088	55,405	215,493	5.70%	2.00%	7.60%
2013	182,556	111,367	293,923	6.40%	3.90%	10.40%
2014	206,896	123,060	329,956	7.31%	4.35%	11.65%
Difference 2014/2013	13.3%	10.5%	12.3%			

Fixed Broadband Access

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- 207 thousand subscribers at the end of 2014
- 13% annual growth.
- Increase speed of access: 6 Mbps

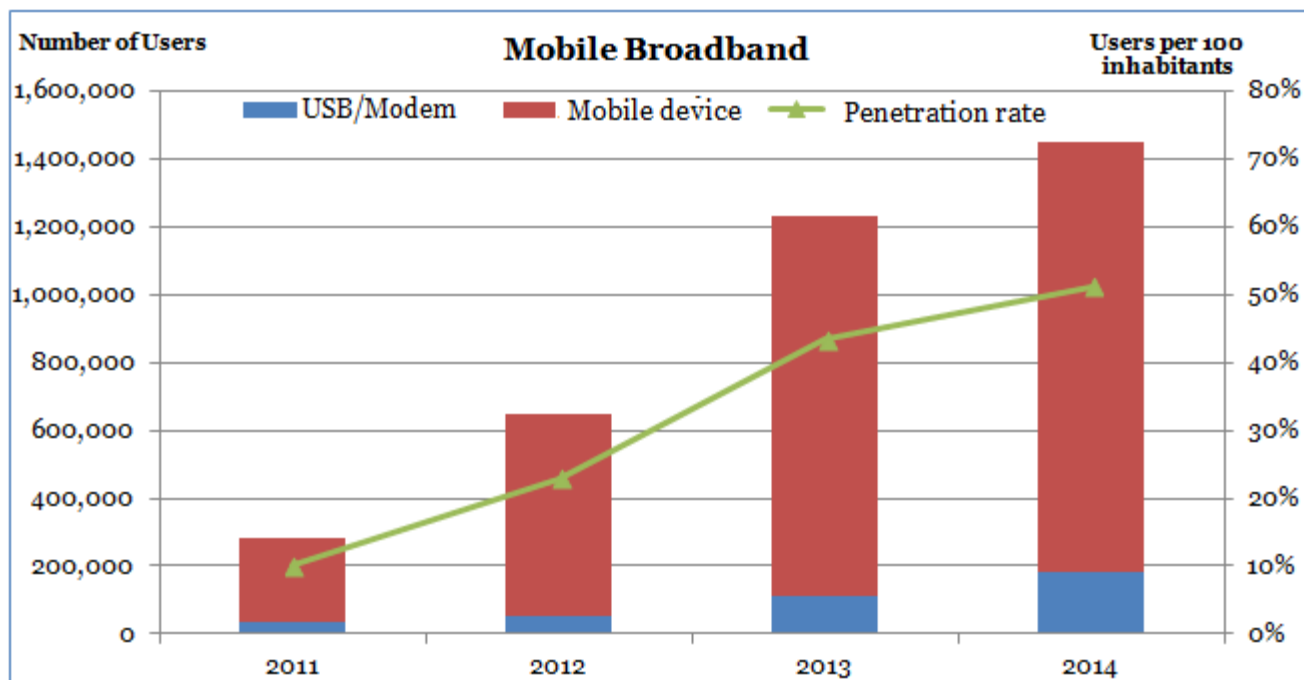
- Albtelecom: 40% market share
- Abcom: 23%;
- ASC dhe Abissnet: 11-13%
- Four leading operators with triple-play package (Internet, phone, TV)



Mobile Broadband Access (3G)

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- 1.4 milion subscribers in 2014
- Increase by 18%:
 - 13% increasing access from mobile devices
 - 63% access from USB/modem
- Penetration rate: 51%
- The volume of data subscribers from mobile networks has increased by 148%



Infrastructure for Internet/Broadband

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- Broadband access services are provided through a variety of electronic communications networks. The most important electronic communications networks through which services of broadband access are provided are as follows:
 - Cable networks:
 - ✦ The existing telephone networks (xDSL - networks based on copper cables)
 - ✦ Next generation networks (FTTx - networks based on optical fiber cables)
 - ✦ Cable operators networks (networks based on coaxial cables)
 - ✦ Hybrid optical-coaxial networks (HFC).
 - Wireless networks:
 - ✦ GSM/GPRS/EDGE - second generation mobile networks,
 - ✦ UMTS / HSDPA / HSPA + - third generation mobile networks,
 - ✦ Wi-Fi - wireless local area networks,
 - ✦ LTE - fourth generation mobile networks (soon).

Ongoing Infrastructure Broadband

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- The draft law "On the development of electronic communications networks and high speed to ensure the right of way", aims to facilitate and encourage the provision / construction of electronic communications networks to high speed by promoting joint use of existing infrastructure as well as a more efficient development of new infrastructure by reducing construction costs of high-speed network.
- Public consultation for some additions and changes to the Regulation no. 22 dated 24.06.2011 "On the technical requirements for the construction of urban infrastructure of cable networks and networks with fiber optic for electronic communications".

Mobile Networks

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- A wide range of mobile communication services in Albania are provided through four terrestrial mobile communication networks.
- All four networks are based on the harmonized standards of the second generation, third generation and fourth generation.
- In all three operators, 3G and 4G networks operate integrally with an integrated core of network.

Spectrum licenses

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- In Albania, all four mobile operators have spectrum assignments in the 900 MHz and 1800 MHz bands,
- Three of them, ALBtelecom, Telekom Albania and Vodafone have been awarded spectrum in the 2100 MHz band.
- Two mobile operators (Telekom Albania and Vodafone) have spectrum assignments in the 2600 MHz band.
- The national frequency plan was amended in early 2013 to allow the use of 3G and 4G in the 900 MHz and 1800 MHz bands.
- Full neutrality started on September 2015

Re-farming Process

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- Spectrum re-farming is the process of re-deploying spectrum from available users and re-allocating it.
- A very good candidate for re-farming to LTE is GSM 1800 MHz band, which is presently commonly used for voice communication.
- The Albanian Government with decision Nr.300 dated 08.04.2015, in order to make the best possible use of the frequency spectrum for broadband networks will performed re-farming process and removing technological limitations.
- Well done re-farming optimizes overall network resources utilization without impacting legal users while providing an operator with a possibility to deploy LTE services.

Digital Dividend

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- At WRC-07, the band 790–862 MHz was allocated to the mobile service in Region 1 (Africa and Europe),
- Transfer to the digital TV frees up one very important radio-broadcasting frequency spectrum between 790-862MHz -> digital dividend.
- Completion of digitalization of radio-broadcasting in Albania was scheduled for 17 June of 2015, in the UHF band a total of 72 MHz of spectrum.
- The frequency band of 790-862 MHz is going to be assigned to mobile network operators

Future Challenges

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- It is widely recognized that in the future, networks will be mostly based on fiber and wireless technologies rather than cooper.
- Therefore the rules should be technologically neutral in order to support any technological development suitable for broadband provision.
- Liberalization of access to spectrum. Liberalization refers to the removal of technology restrictions on spectrum, to enable more flexible use.



Thank You

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