

# **LITHUANIA.**

# **Information and communication technology**

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2007

# Lithuania



**Lithuania** – a country in northern Europe. Situated along the south-eastern shore of the Baltic Sea.

*Area* – 65.200 km<sup>2</sup>. *Population* - 3,575,439 (2007). *Capital* – Vilnius. *Currency* – Litas (LTL).



The Lithuanian landscape has been smoothed by glaciers. The highest areas are the moraines in the western uplands and eastern highlands, none of which are taller than 300 metres above sea level, with the maximum elevation being at 294 meters. The terrain features numerous lakes and wetlands; a mixed forest zone covers 30% of the country. The climate lies between maritime and continental, with wet, moderate winters and summers.

# Economy



In 2003, prior to joining the European Union, Lithuania had the highest economic growth rate amongst all candidate and member countries, reaching 8.8% in the third quarter. In 2004 — 7.3%; 2005 — 7.6%; 2006 — 7.4% growth in GDP reflected impressive economic development. Most of the trade Lithuania conducts is within the European Union.



It is a member of the World Trade Organization, and the European Union. By UN classification, Lithuania is a country with a high average income. The country boasts a well developed modern infrastructure of railways, airports and four lane highways. It has almost full employment, with an unemployment rate of only 2.9%. According to officially published figures, EU membership fuelled a booming economy, increased outsourcing into the country, and boosted the tourism sector.

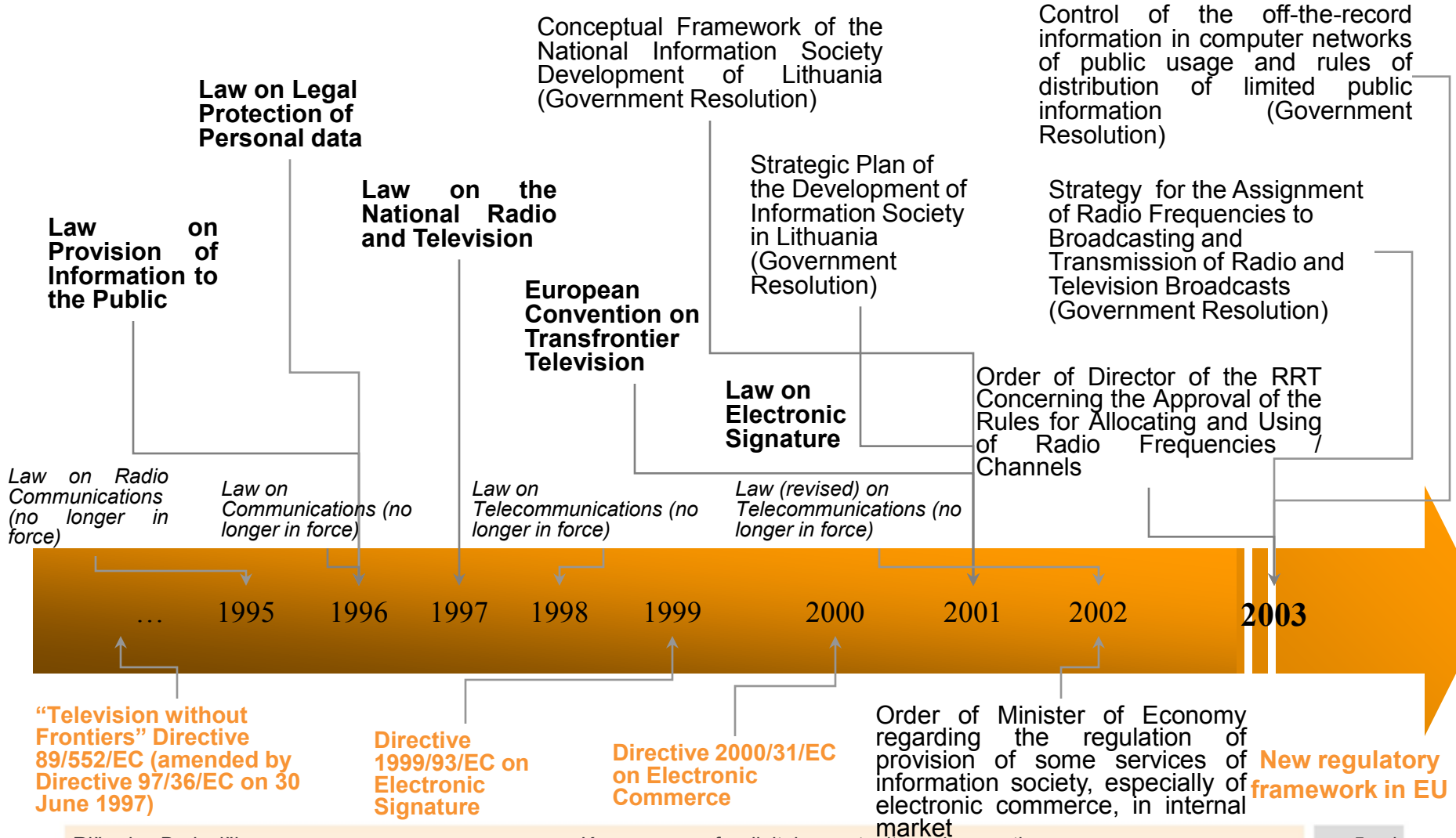
Like other countries in the region (Estonia, Latvia) Lithuania also has a flat tax rate rather than a progressive scheme. In 2006 income tax was reduced to 27% and a further reduction to 24% is expected in October of 2007.

The minimum wage currently stands at 600 litas (€174). The average wage in 2005 was 1453LTL (€420).

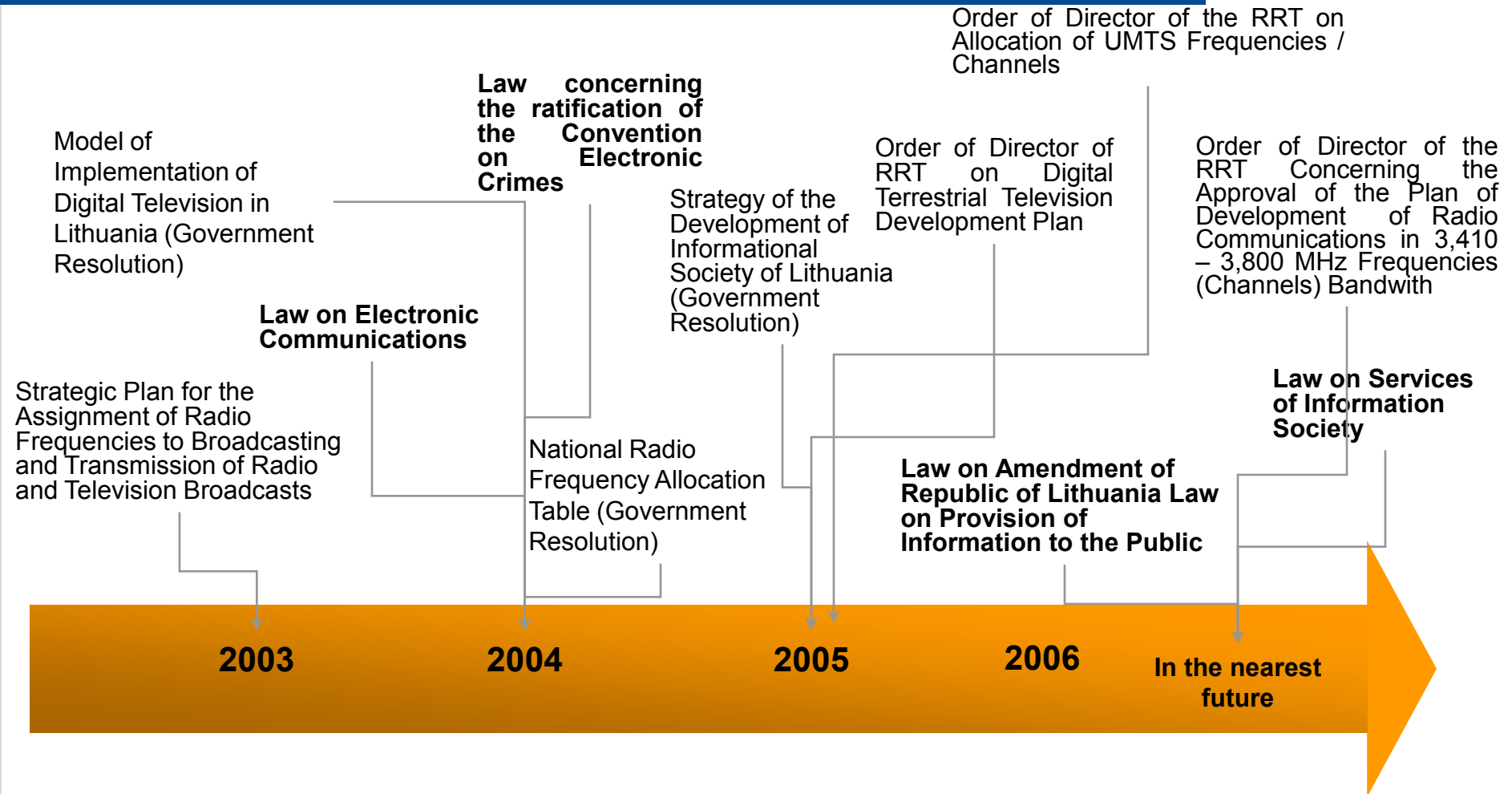
- In the 2006 report on global development of ICT, each year prepared by World Economic Forum, Lithuania ranked 39th among 122 countries (in 2005 Lithuania ranked 44th, in 2004 - ranked 43rd).
- The mobile communications segment in Lithuania's ICT sector still remains the most innovative. In February 2006, just upon awarding of the licenses, provision of third generation mobile radio communications (UMTS) services was commenced.
- June 2006 saw the arrival of high speed rate mobile Internet services by using HSDPA data communication technology. Lithuania is among the first countries, which applied the new technology commercially.
- Already for the third year in a row penetration of mobile communications in Lithuania was the biggest among the European Union (EU) Member States.



# ICT: Legal Aspects



# ICT: Legal Aspects



# ICT Market Development

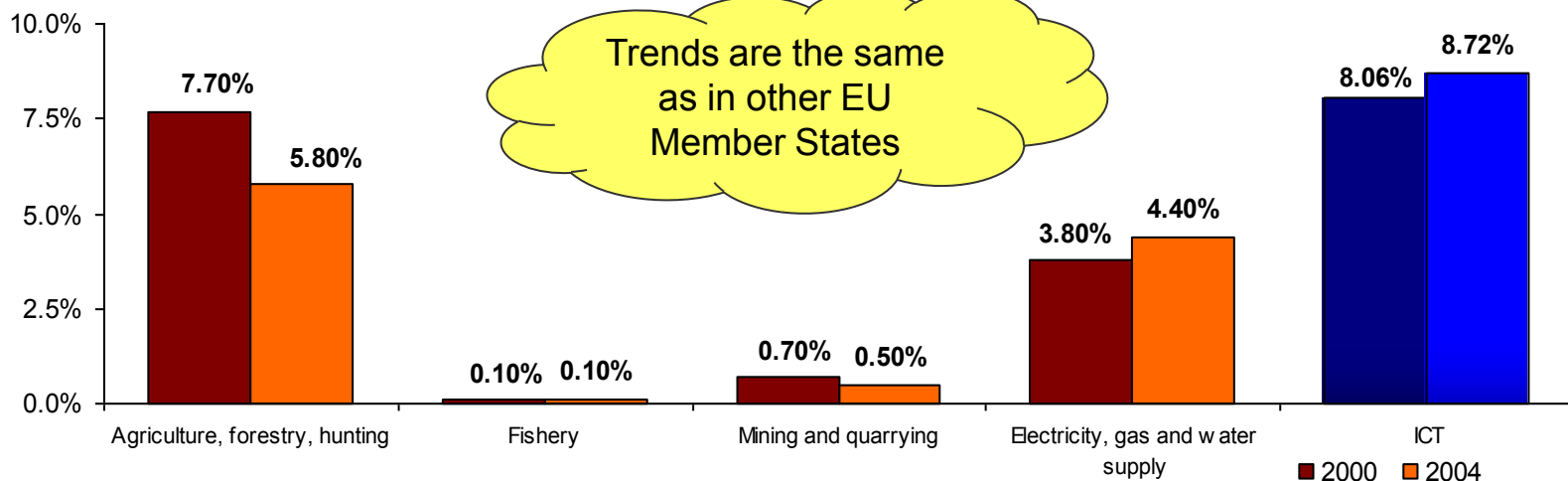


## European context:

- ICT represents 6-8% of GDP in EU, but it determines
  - EU productivity's growth by 40% and
  - EU GDP's growth by 25 %.

## Lithuanian context:

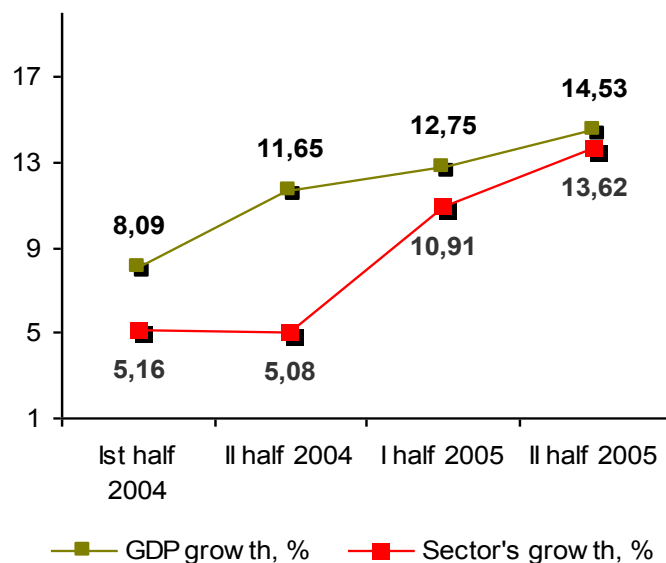
- ICT represents 8,72 % of Lithuanian GDP and approximates or even exceeds other traditionally important sectors



- 1 Jan 2003 - electronic market liberalization *de jure*
- Leading operators' market shares continue to decline and a steady growth of new market players' market shares indicates decreased market power of the incumbent operators
- Lithuania was one of the first EU countries to refuse the licensing system and to move to the general authorization system in the telecommunication sector
- Fully implemented fixed and mobile number portability and carrier selection and pre-selection stimulates competition as well
- Radio spectrum policy and effective management boosts successful development of wireless technologies
- Low administrative charges have created preconditions for the lowest service prices on the retail market as ITU indicates



**Electronic communication market is a fast developing sector, whose main driving forces are competition, general authorization regime and technological changes**



**Growth of Lithuania's GDP and electronic communications sector (comparing with the corresponding time period of the previous year)**

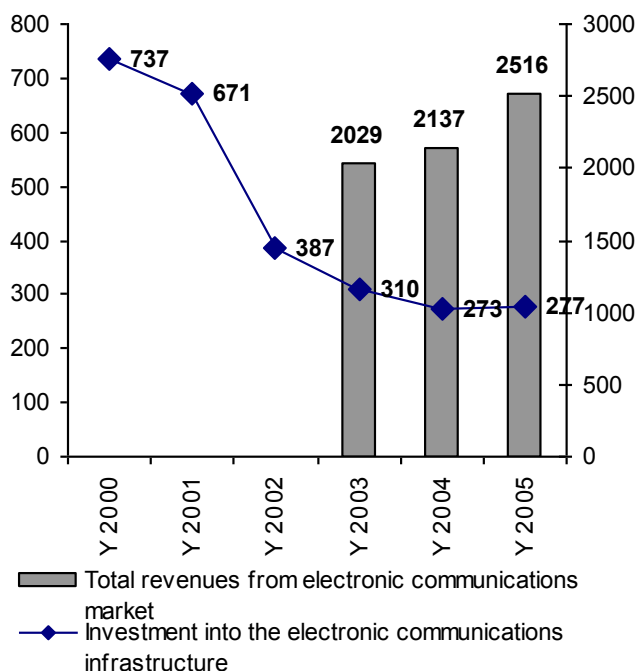
Source: Statistics Lithuania, RRT

- Even though the prices of communication services have been falling down the growth of the sector is substantial
- Electronic communications market's share within Lithuania's GDP structure in average amounted to 3,5 %.
- Lithuania's electronic communications market grew by 11.9 % in 2005 (comparing with 2004) and amounted 2.391 billion LTL in 2004\*

\* Revenues from data transmission, cable TV, MMDS, radio and TV transmission and cable radio are not included

## Investments

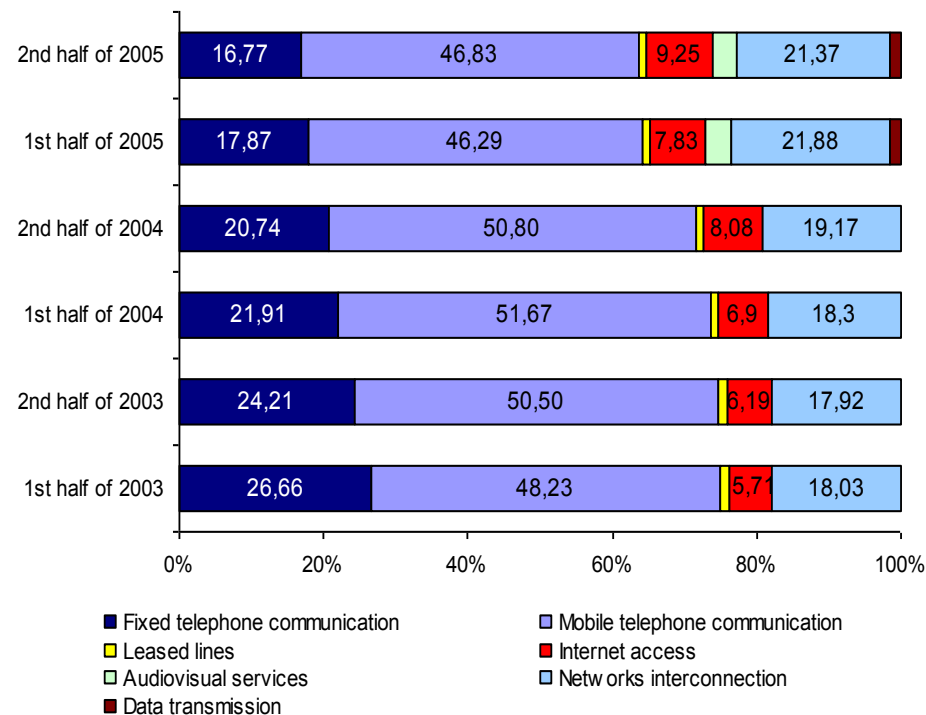
Electronic communications sector value and infrastructure investment dynamics in 2000-2005, LTL million



Source: RRT

## Market Structure

Distribution of 2003–2005 revenues according to the separate electronic communications sector markets, %



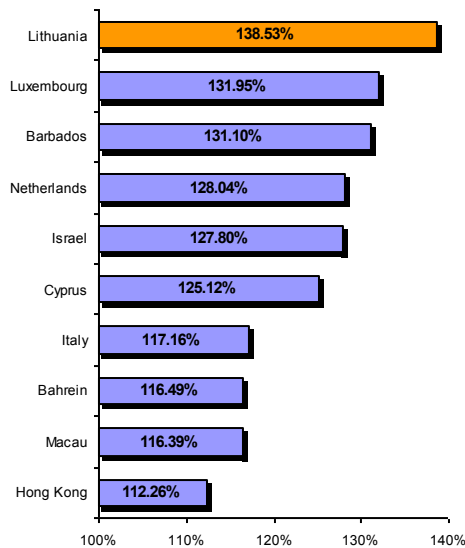
Source: RRT

# Mobile Communications



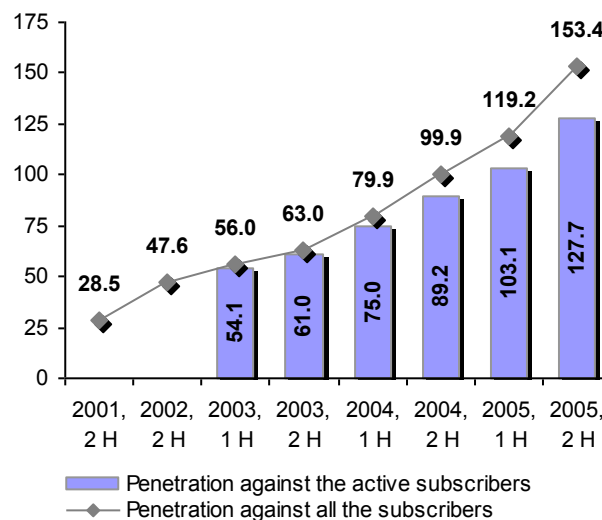
- "The direct economic contribution of industries using the radio spectrum is already considerable, between 1 and 2% of national GDP in the EU,..." said Viviane Reding, DG InfSo.
- In 2004-2005 growth of mobile communications penetration of in Lithuania was the fastest among all the EU Member States
- Penetration of mobile communication was the highest in the world in December 2005

Countries with highest penetration rates in the world as of December of 2005



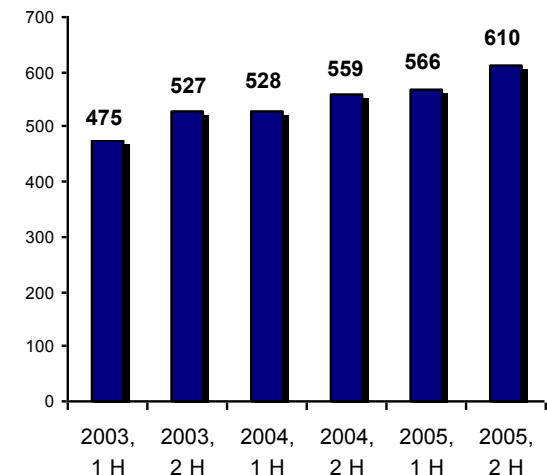
Source: Informa Telecoms & Media.

Mobile communication penetration growth in Lithuania in 2002-2005, %



Source: RRT

Mobile communication revenues in 2002-2005, mln.LT

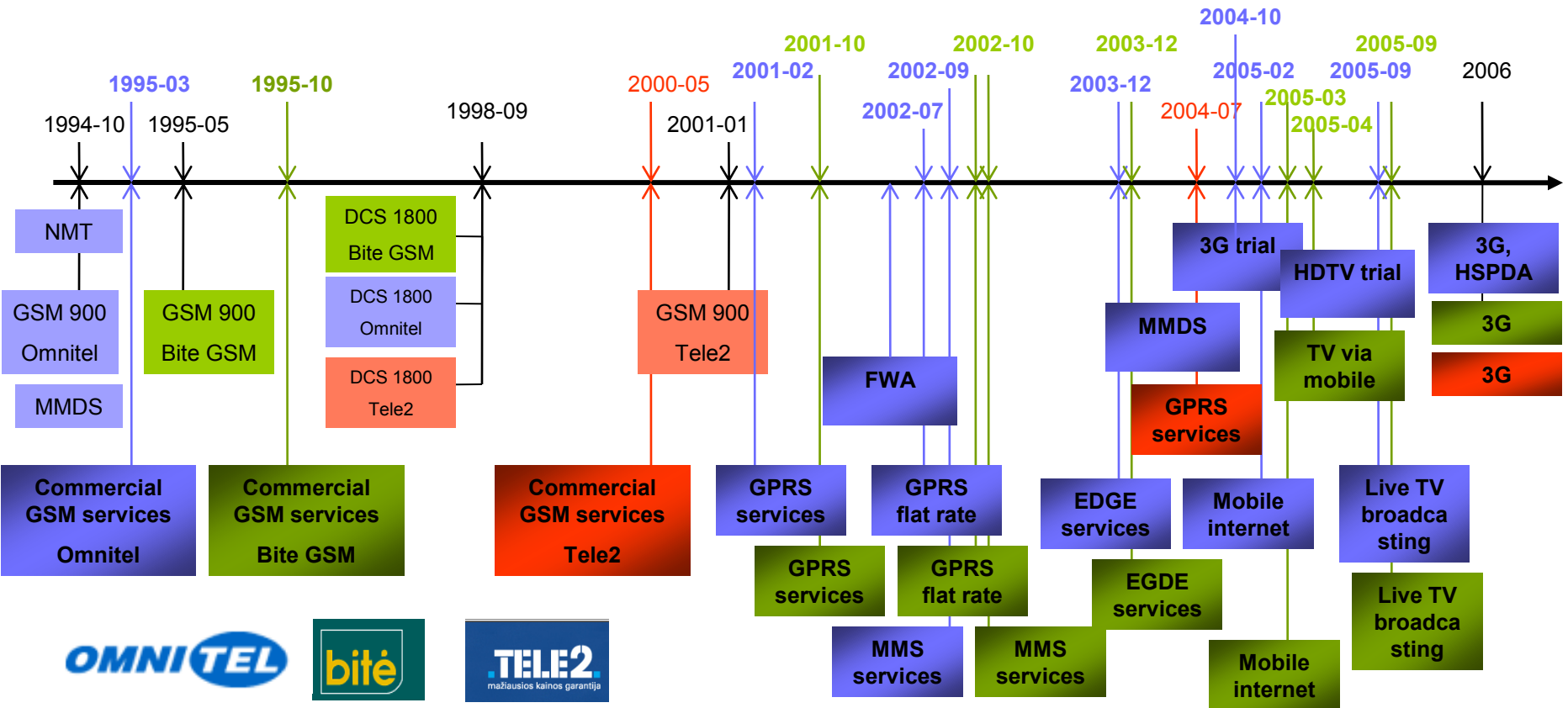


Source: RRT

# Mobile Communications



... and all that is just **10 years' story** ...

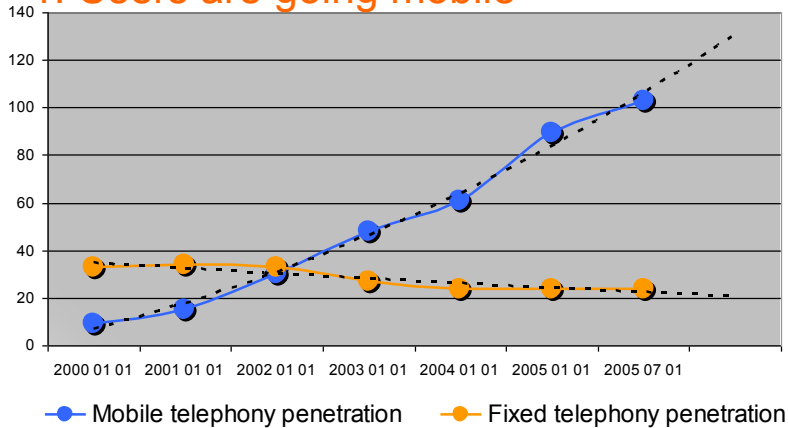


# Mobile Communications

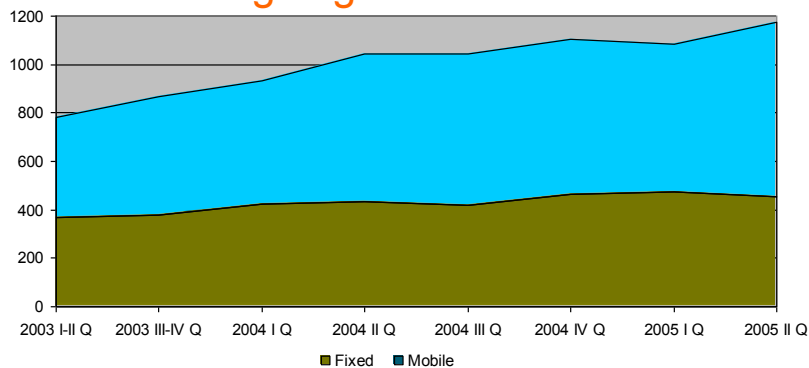


... having a clear tendency of going mobile ...

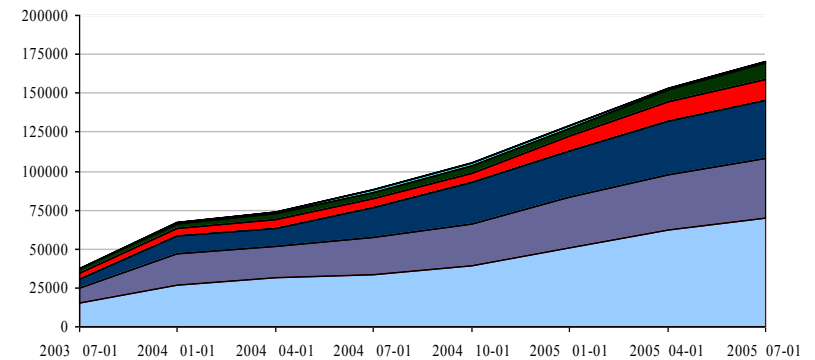
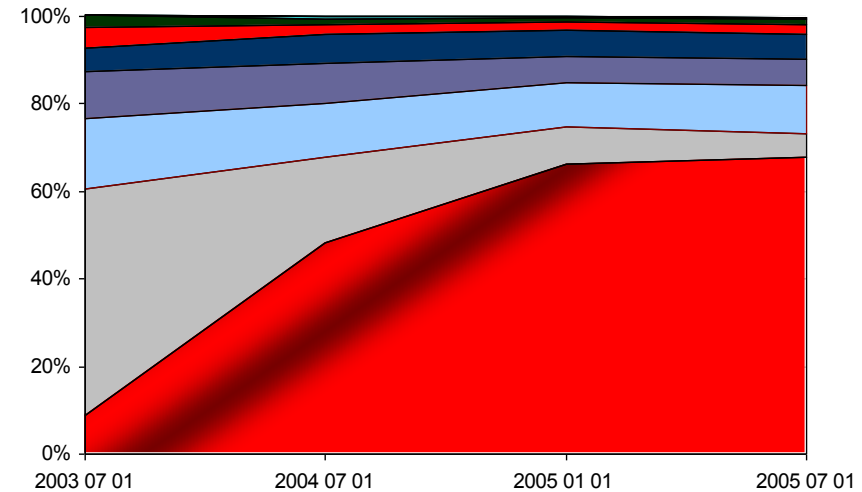
## 1. Users are going mobile



## 2. Voice is going mobile



## 3. Data is going mobile



- **UMTS development:**

- In beginning of 2006, UAB „Omnitel”, UAB „Bitė Lietuva” ir UAB „Tele2” were provided with a right to use radio frequencies in the UMTS bandwidth to build UMTS networks

- **3G services are provided in the market** since I quarter of 2006.

- In 2006, 3G communication is provided in 11 cities and cover ~35 % of Lithuanian population;  
Now, 3G be available to more than 50 % of Lithuanian population, and in 2008 – 75 %.

- The new services being offered by 3G operators include high speed internet access, information services, news, video messaging or conversations, games and music downloads

- Cheaper and smaller handsets for 3G available on the market are expected to be significant drivers of 3G take-up

- **Wireless broadband services in 3,5 GHz, 10 GHz, 26 GHz, 28 GHz :**

- Plan for development of **3,5 GHz** was publicly consulted, and soon a relevant order will be issued;

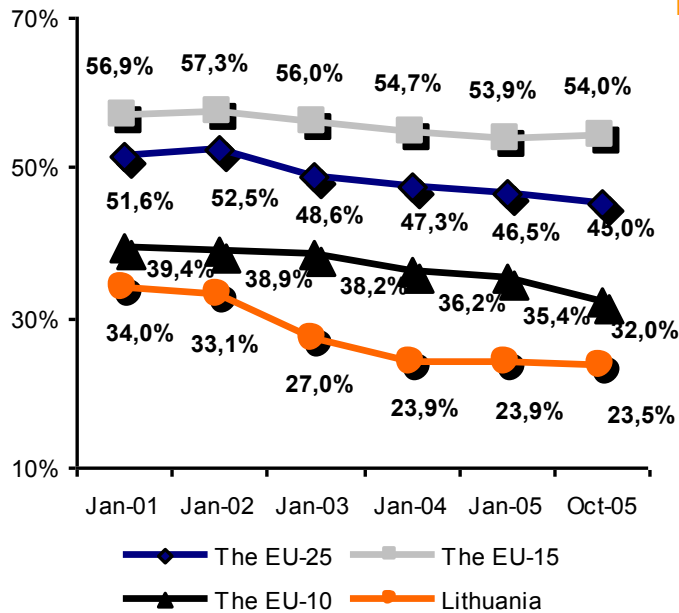
- In 2006, 2 operators had permissions to make activities in 3,5 GHz and 2 operators - in 10,5 GHz; 4 operators had permissions to make activities in 26 GHz.

# Fixed telephone communication



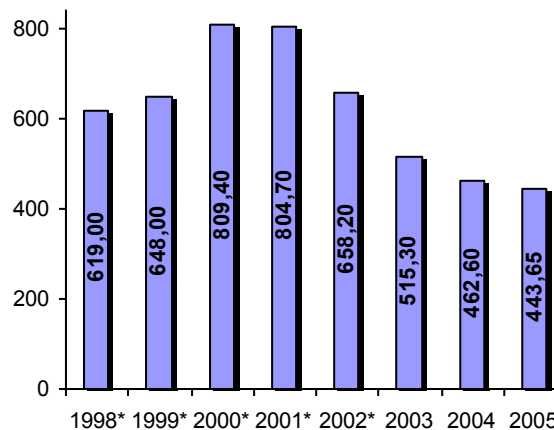
- The number of fixed telephone subscribers is reducing
- The subscribers' structure remains sufficiently stable – residential users form more than 90 %

Fixed telephone communication penetration dynamics in 2001–2005, %



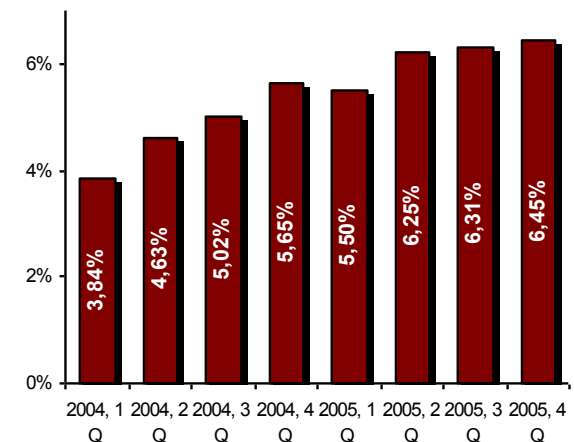
Sources: ANACOM, ITU, Regumatel, RRT.

Fixed telephone communication market revenue dynamics, 1998-2005, LTL thousand



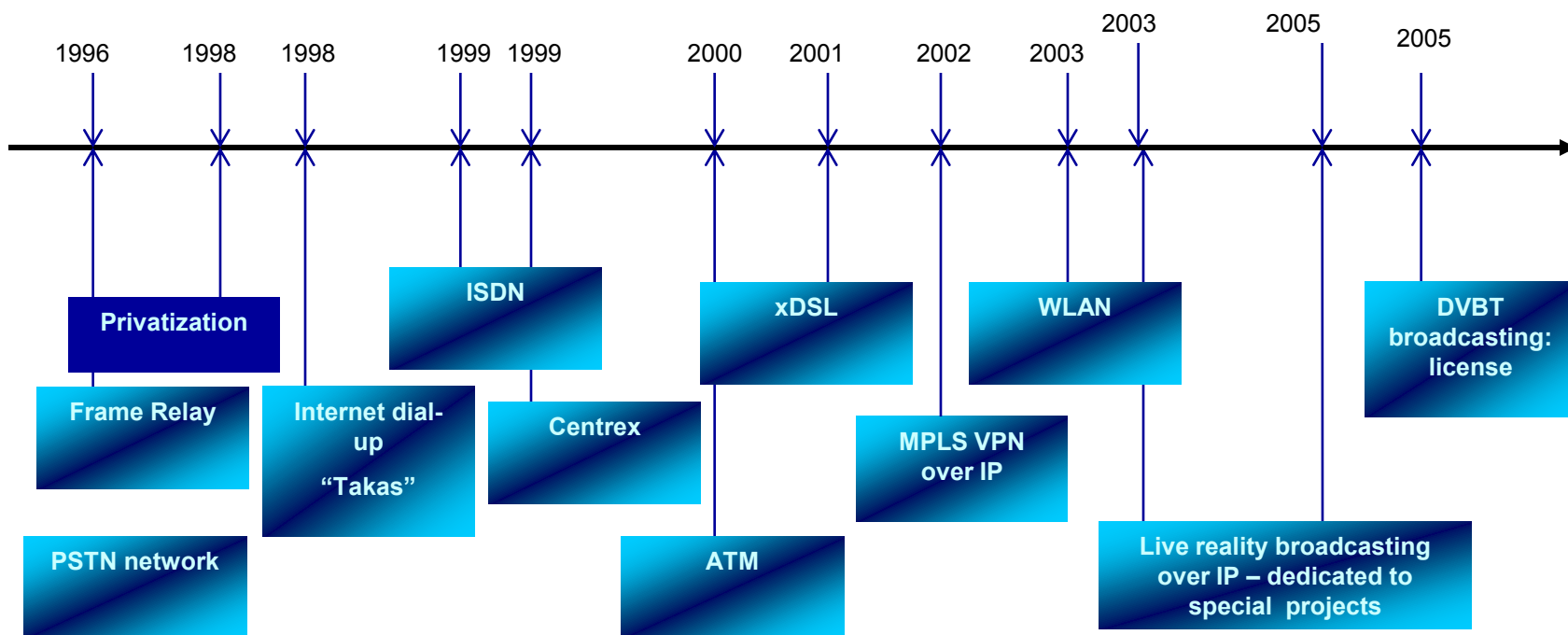
Source: RRT

Market share of new entrants, 2004-2005, %



Source: RRT

# Fixed communication



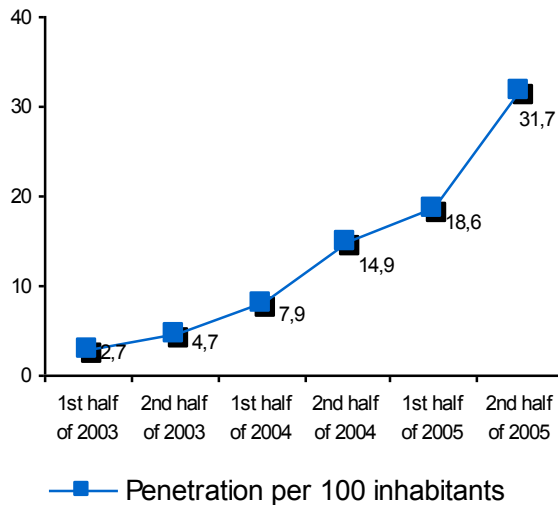


# Internet access



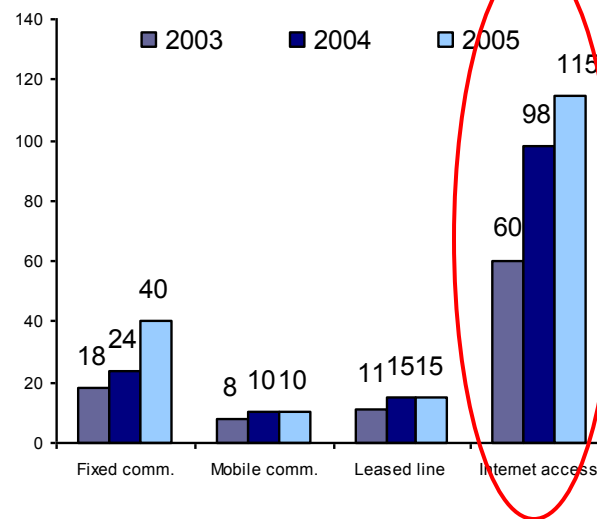
Internet access market is one of the fastest growing sectors and is attractive for business in a long term perspective

Internet penetration dynamics in 2003-2005, %



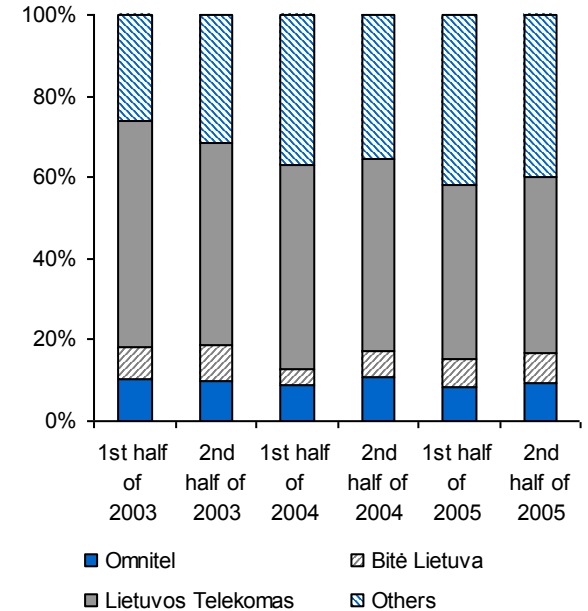
Source: RRT

Active market entities, 2005



Source: RRT

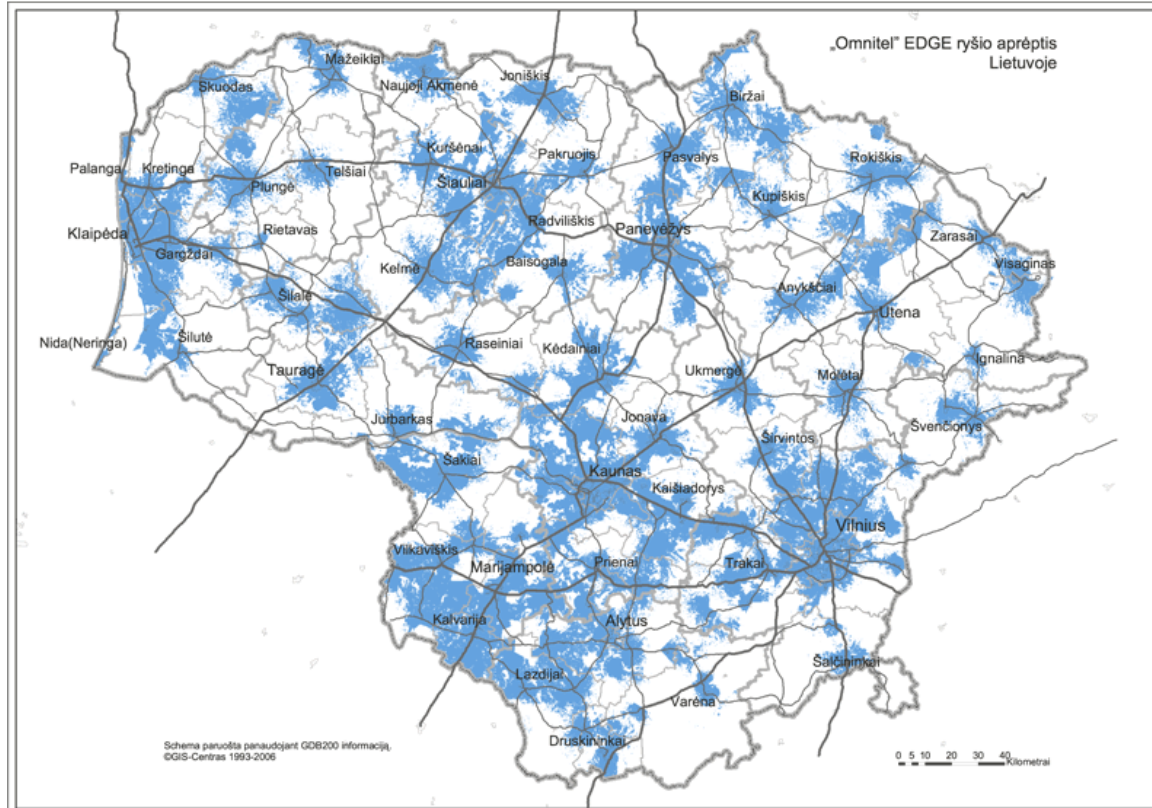
Internet access service providers market shares according to the revenue in 2003-2005, percent



Source: RRT

# Internet access

A significant part of Lithuanian territory is covered by EDGE networks



**UAB „Omnitel“ EDGE network, 2007**

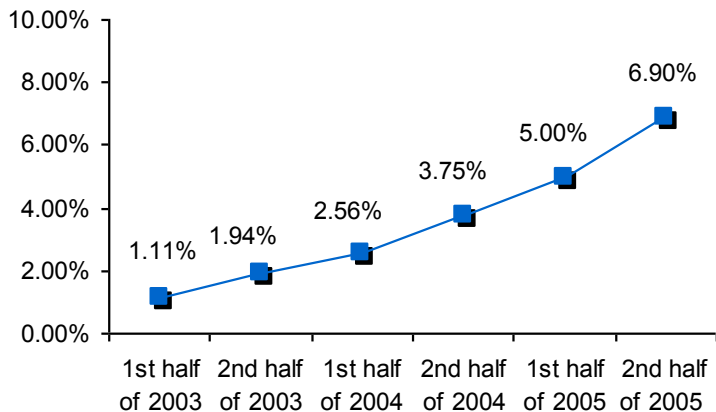
Source: [www.omnitel.lt](http://www.omnitel.lt)

# Broadband communications



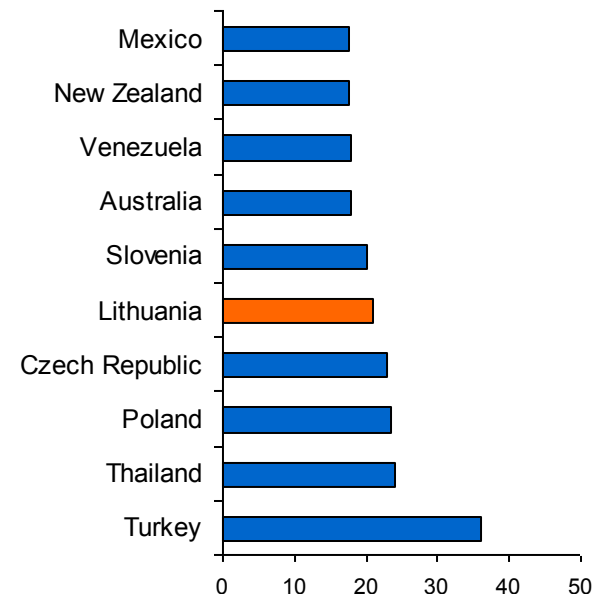
Each year the broadband communication penetration in Lithuania nearly doubles (during 2005 the number of broadband Internet access subscribers grew by 81.4 %)

Broadband communication penetration dynamics in 2003-2005, %



Source: RRT

The ten world's countries with fastest growing broadband penetration, as of 1st Q, 2005



Source: World Broadband Statistics Q1 2005 // Point Topic Ltd., 2005.

# Broadband communications

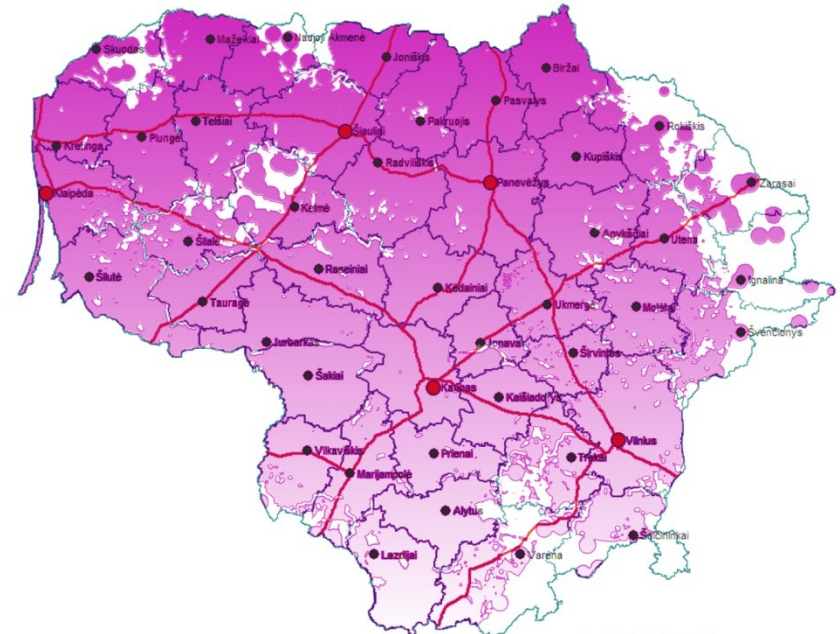
At the end of 2005 the broadband communication, according to its provision feasibilities was available to the absolute majority of Lithuania's residents and organizations.

Broadband penetration, 144 kbps and more

**2004**



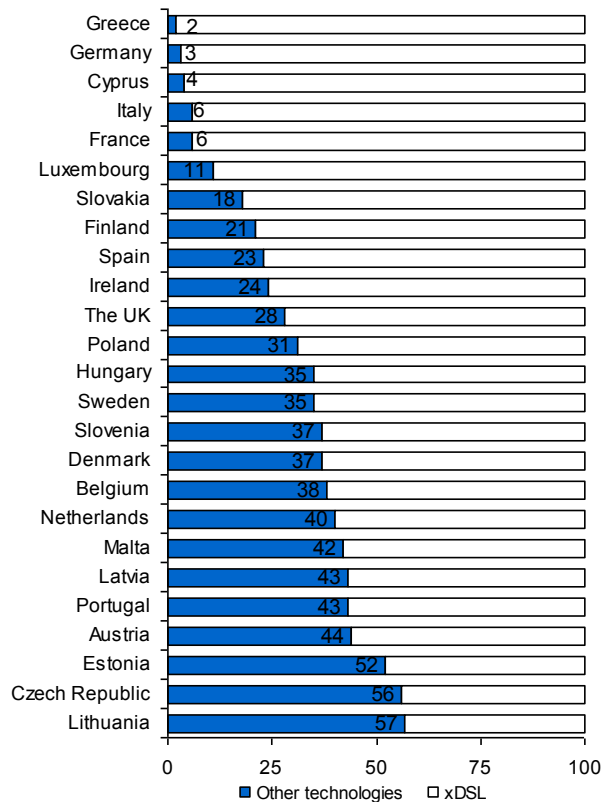
**2006**



# Broadband communications

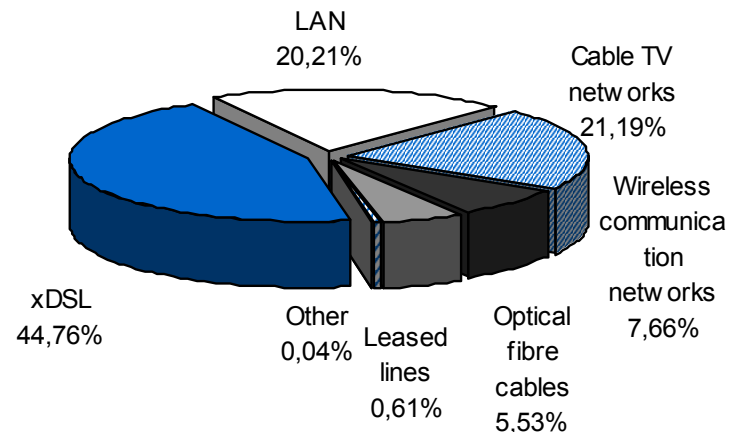


Competition between technologies in Lithuania in the broadband communications market is the most intense in the whole EU



Source: European Electronic Communications Regulation and Markets 2005 (11<sup>th</sup> Report), European Commission, Brussels, 2006.

Distribution of subscribers against the broadband technologies in Lithuania 2005, %

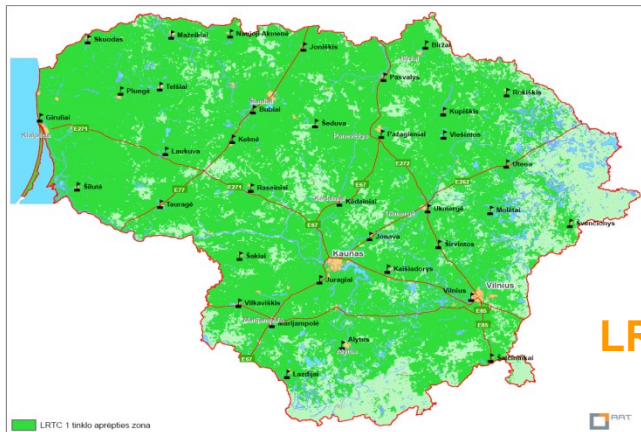


Source: RRT

- In 2003 first transmissions in DVB-T format started by LRTC;
- In 2005, digital TV station broadcasted 5 TV programs in Vilnius;
- In 2005, DVBT transmission licenses were distributed and two operators have commenced to develop digital TV infrastructure:
  - ✓ Before 2006 June 30, digital TV transmitters will be installed in Vilnius,
  - ✓ Before 2007 December 31, digital TV transmitters will be installed in five largest cities;
  - ✓ Before start-2009, at least one digital TV network will cover not less than 95% of the territory of Lithuania.
- Starting from 2012 – a gradual switch-off of the analogue TV shall be commenced in Lithuania

# Digital broadcasting

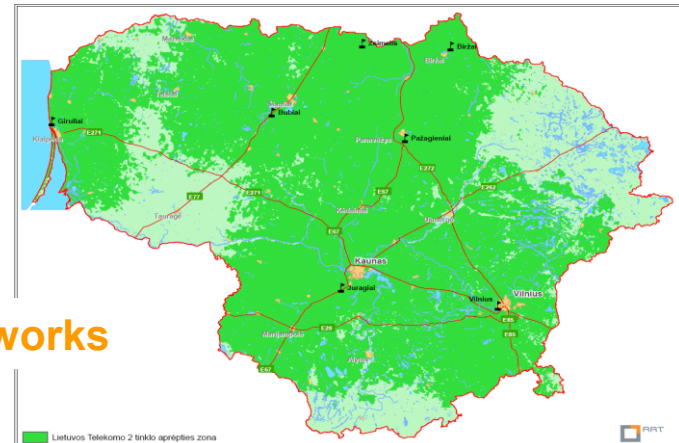
## Envisaged coverage by digital TV (DVB-T) networks



LRTC networks



TEO LT networks



# Conclusions



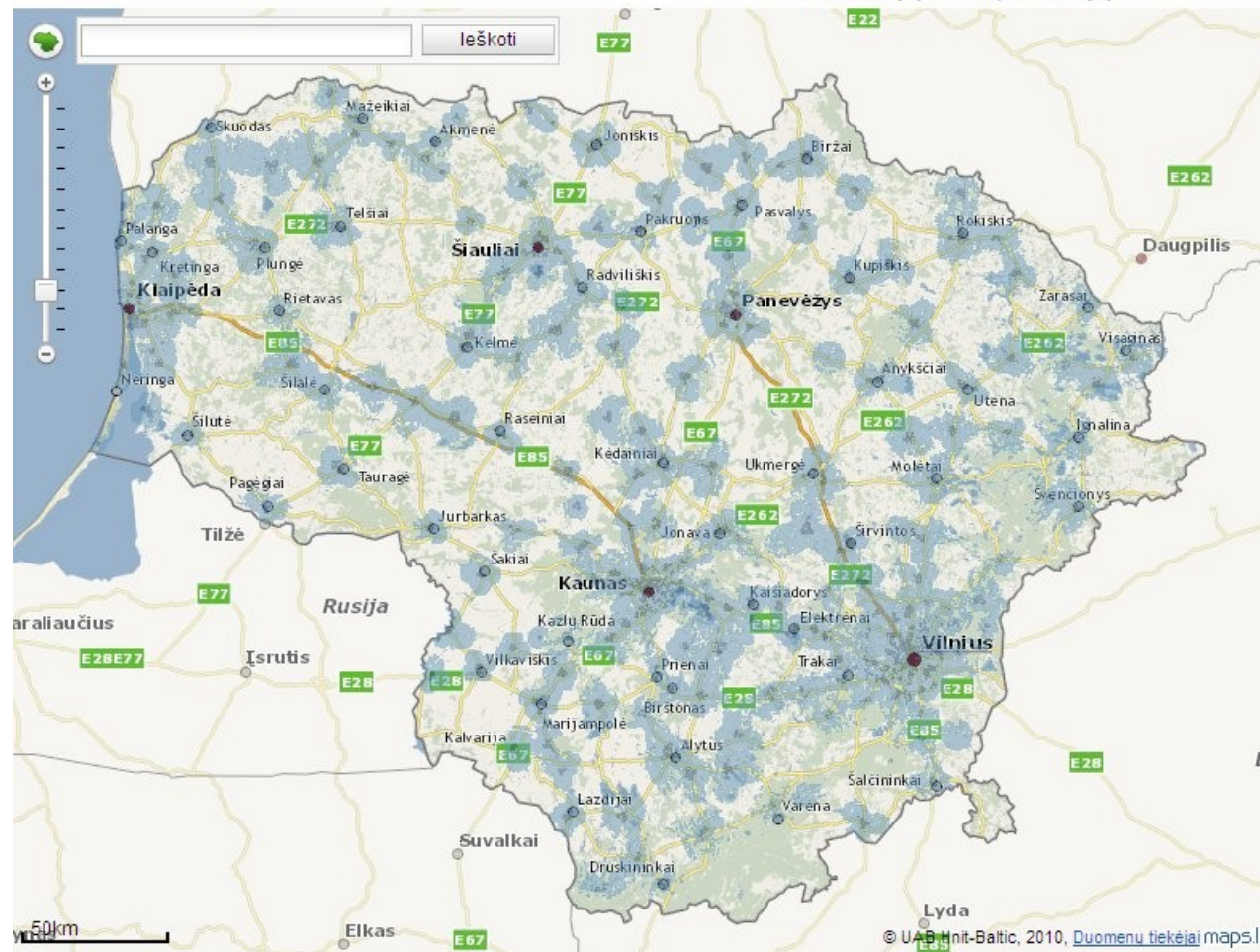
- ICT sector in Lithuania if fully open;
- ICT market trends:
  - Going to data
  - Going to wireless and mobile
  - Going to converged networks and services
  - Going to accessibility and affordability to everyone
- ICT market prospects:
  - New technologies already on their way will make tremendous shifts in the established market structure
  - Liberal view with regard to experimental use of certain bands for demanding entities allow to check possibilities to use implement new technologies
- Regulatory issues:
  - Alteration of the whole regulatory system to the changes in the sector
  - Apropos pro-/re- action to new threats in the electronic medium
  - Gradual introduction of spectrum trading
  - Wise management of radio resources: relevant spectrum ranges for new – more efficient – technologies to be ready timely without delay

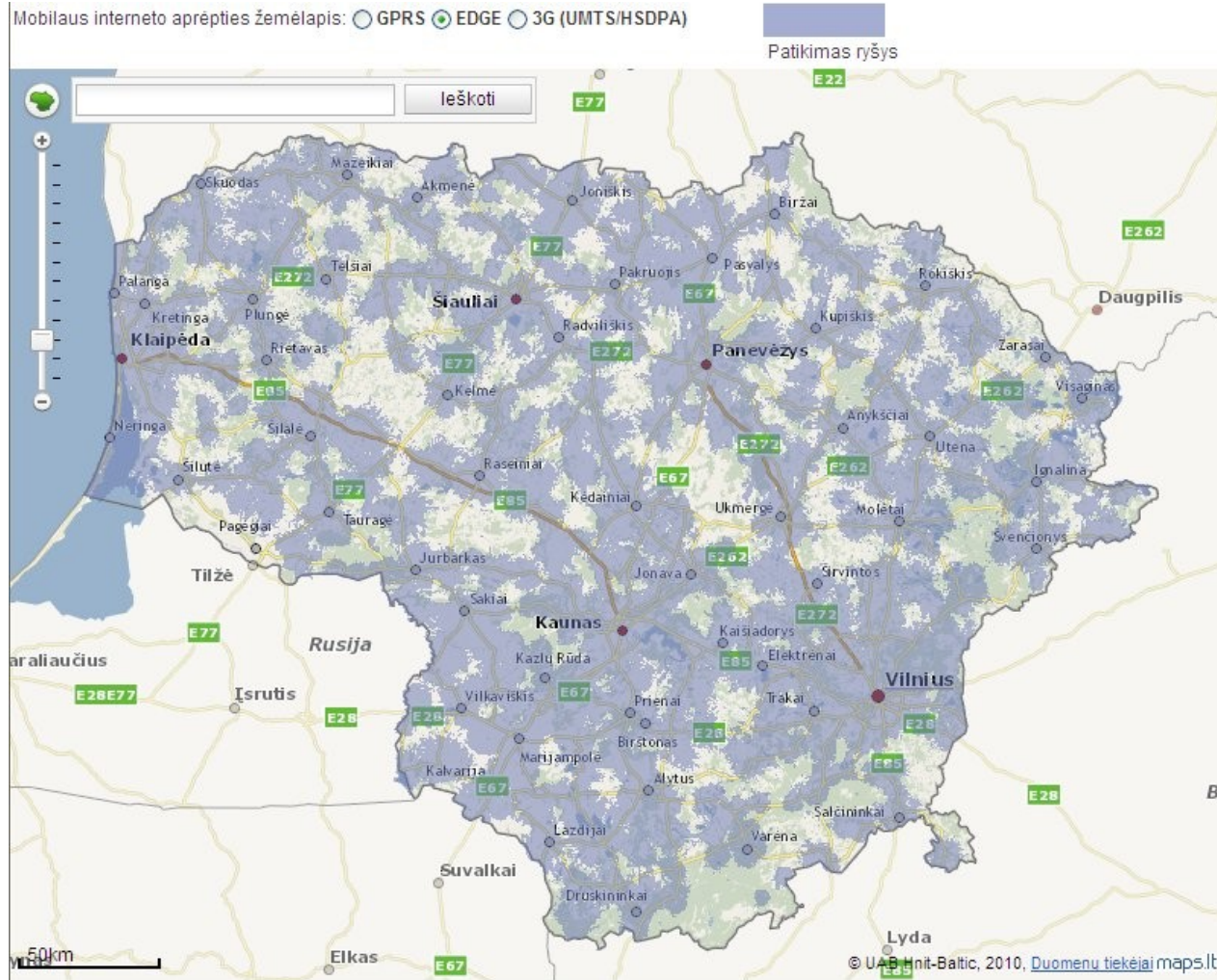


Thank you!

Mobilus interneto aprėpties žemėlapis:  GPRS  EDGE  3G (UMTS/HSDPA)

 Patikimas ryšys  Nepastovus ryšys





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