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Broadband access technologies and their introduction in fixed networks of Uzbekistan

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Presentation outline:

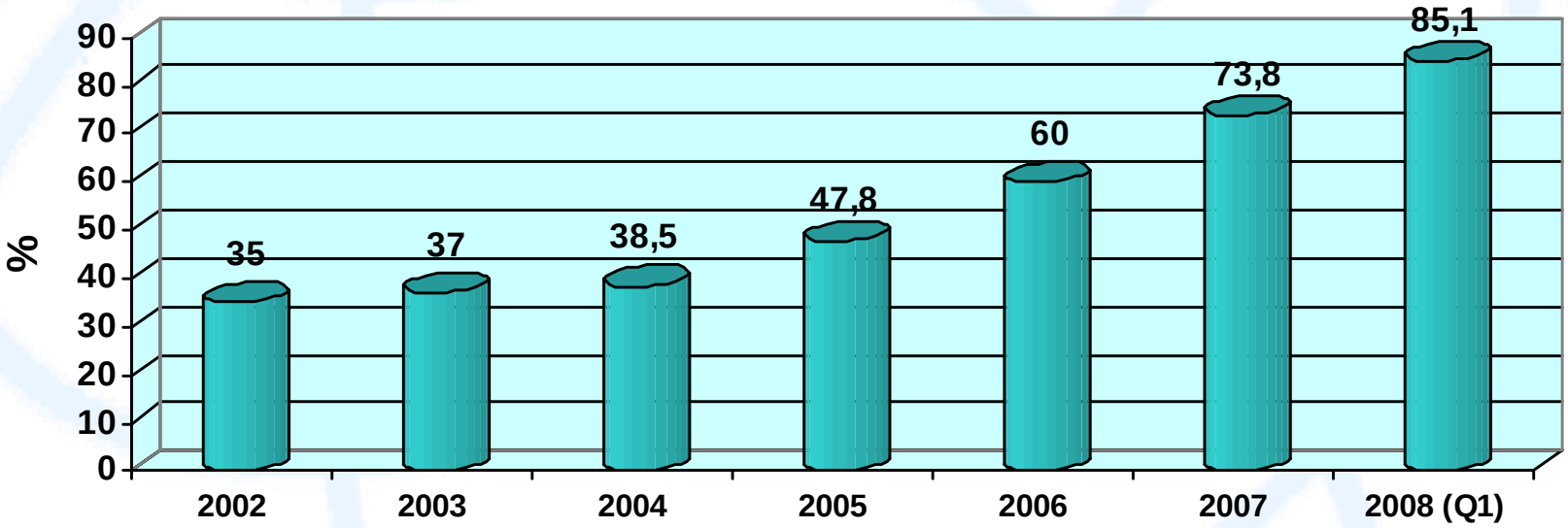
- ICT in Uzbekistan
- World Broadband statistics
- Why do We need broadband access?
- Broadband access technologies
- Importance of broadband access for Uzbekistan

«The program of computerizations and information and communication technologies development for 2002-2010»

- acceleration of development of advanced technical infrastructure of telecommunications and networks digitalization, as well as mobile communication networks development;
- National Internet segment development;
- creation of stimulation conditions of development of the computerization, domestic industry and software products export;
- preparation of high skilled personnel potential in ICT sector;
- development of competitive environment in ICT sector;
- further perfection of regulatory framework, standardization and certification.

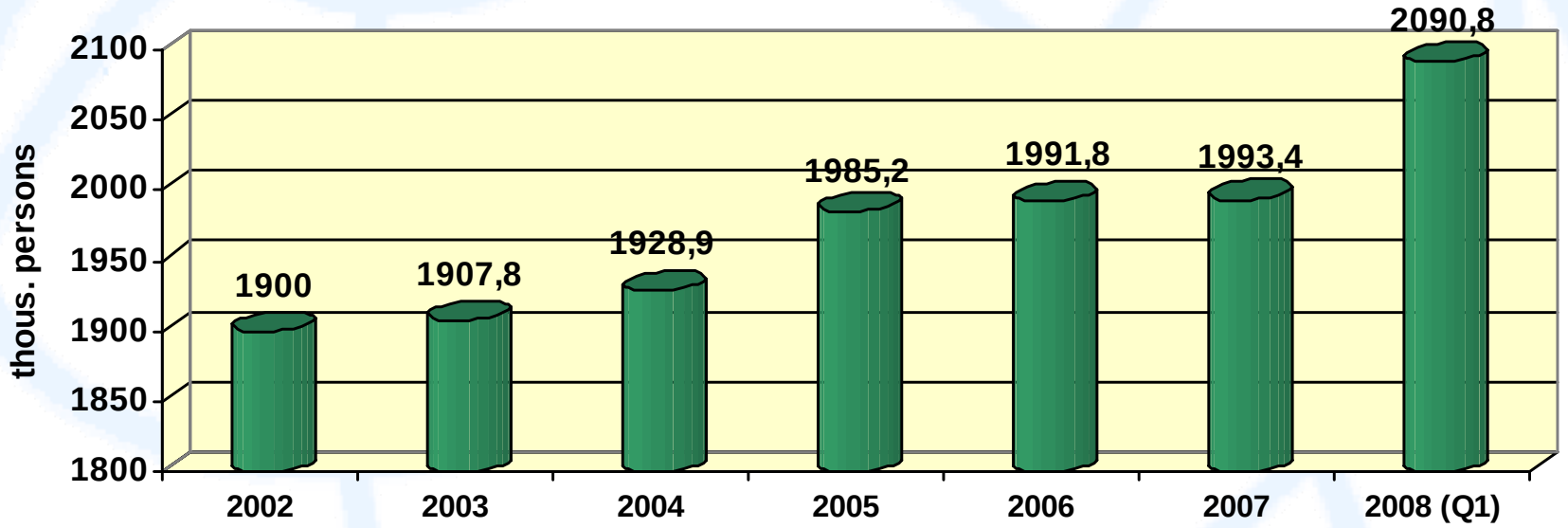
ICT in Uzbekistan

Digitalization level of exchanges



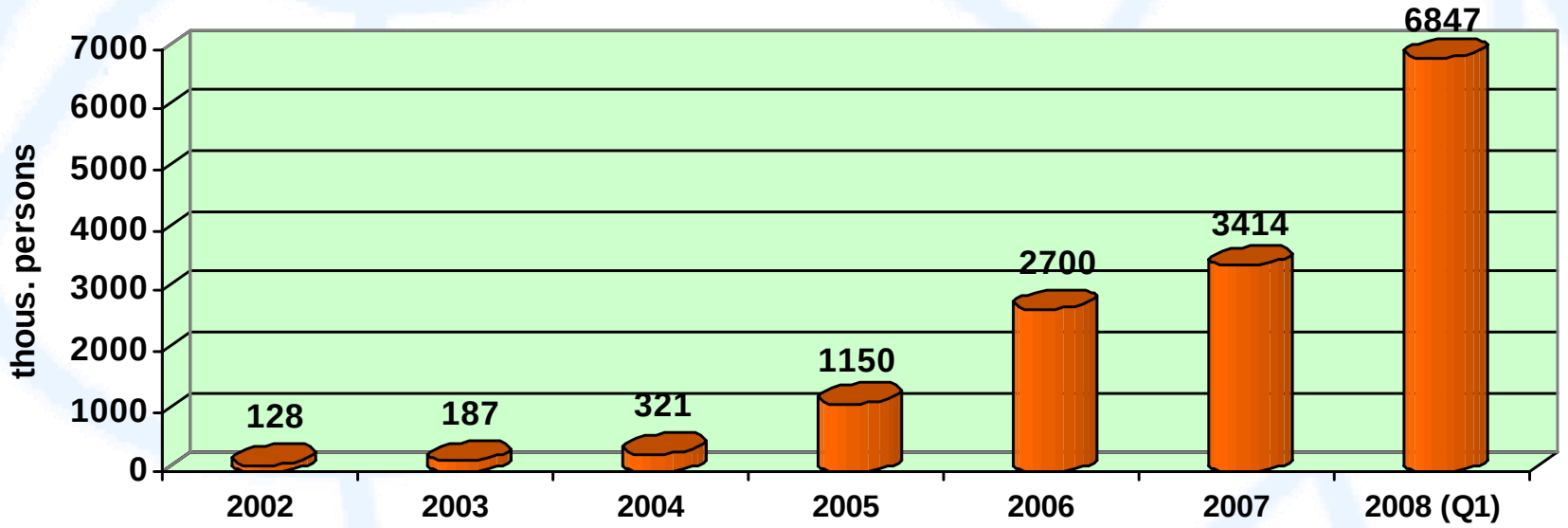
ICT in Uzbekistan

Number of fixed telephone subscribers



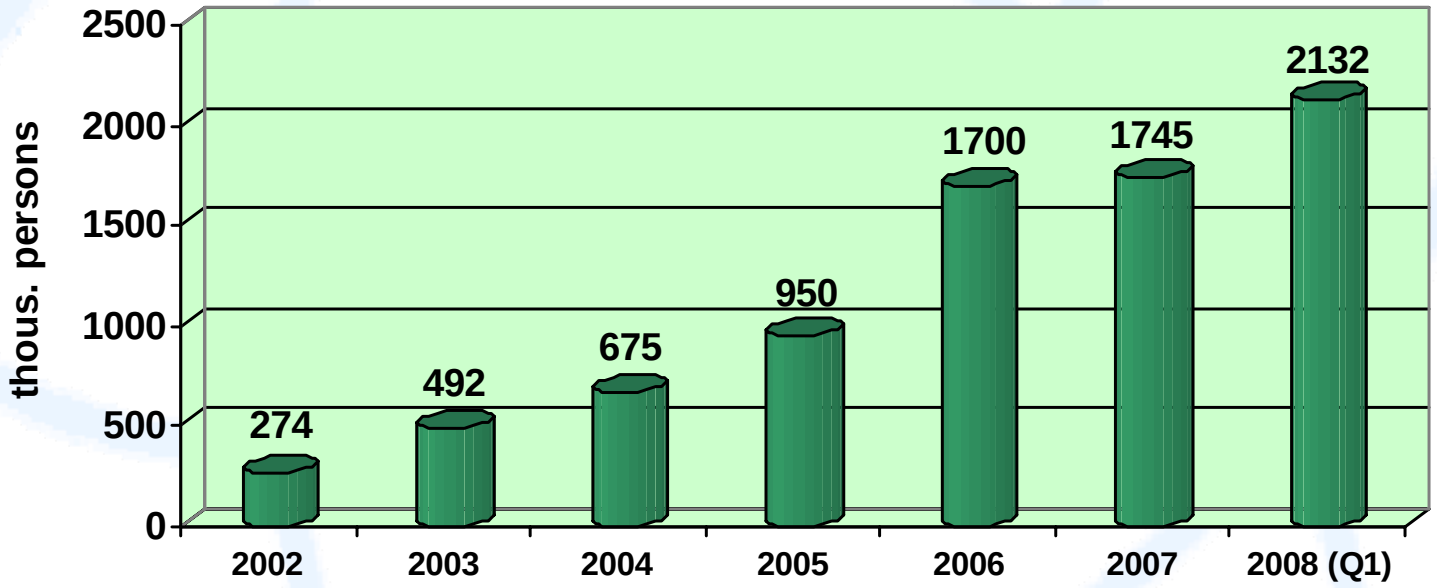
ICT in Uzbekistan

Mobile cellular subscribers



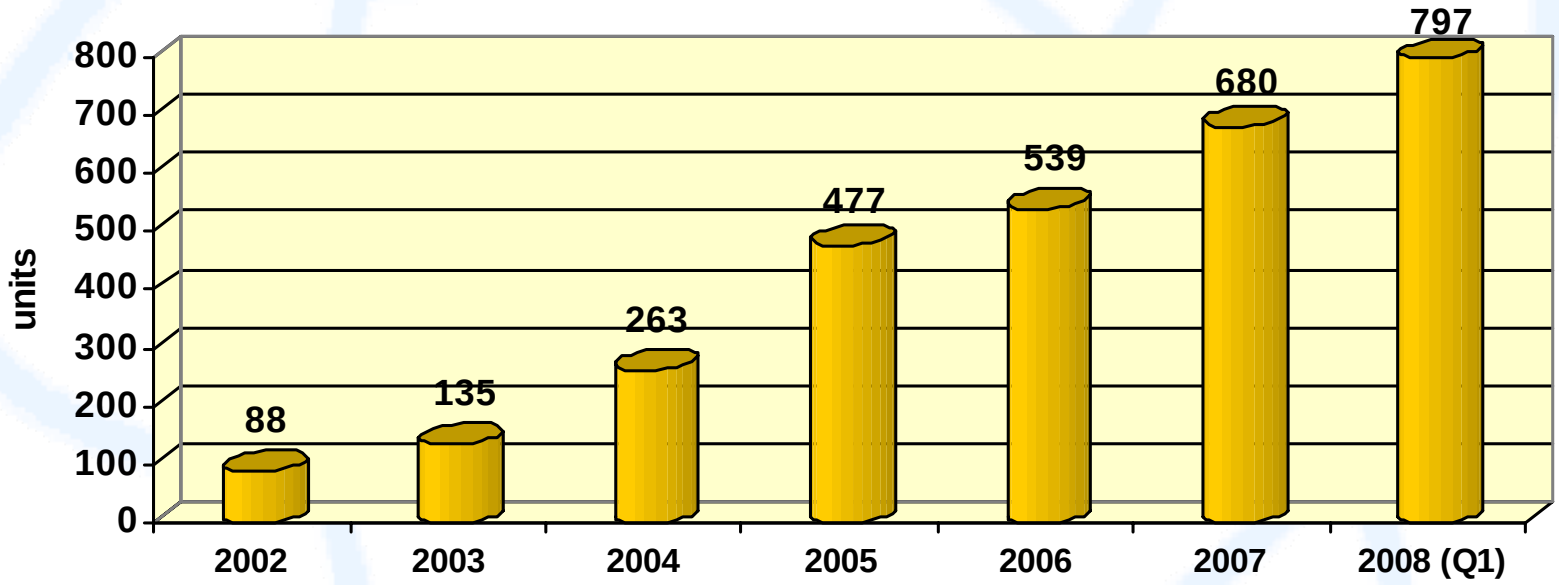
ICT in Uzbekistan

Estimated number of Internet users



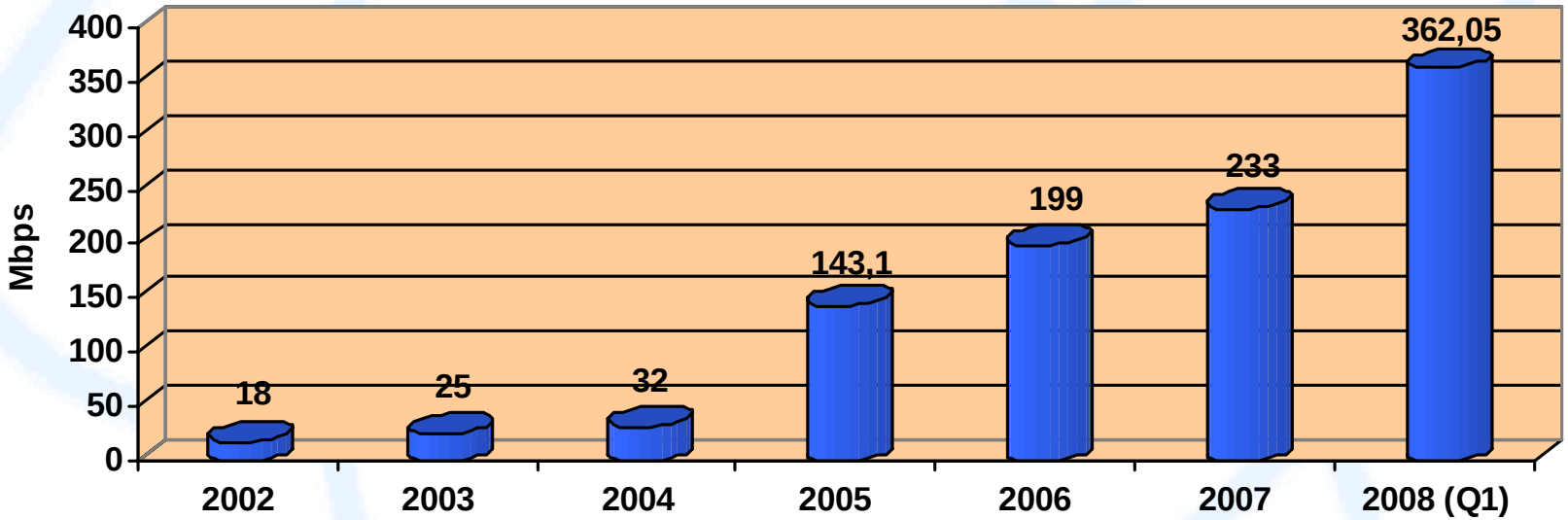
ICT in Uzbekistan

Number of operators and service providers



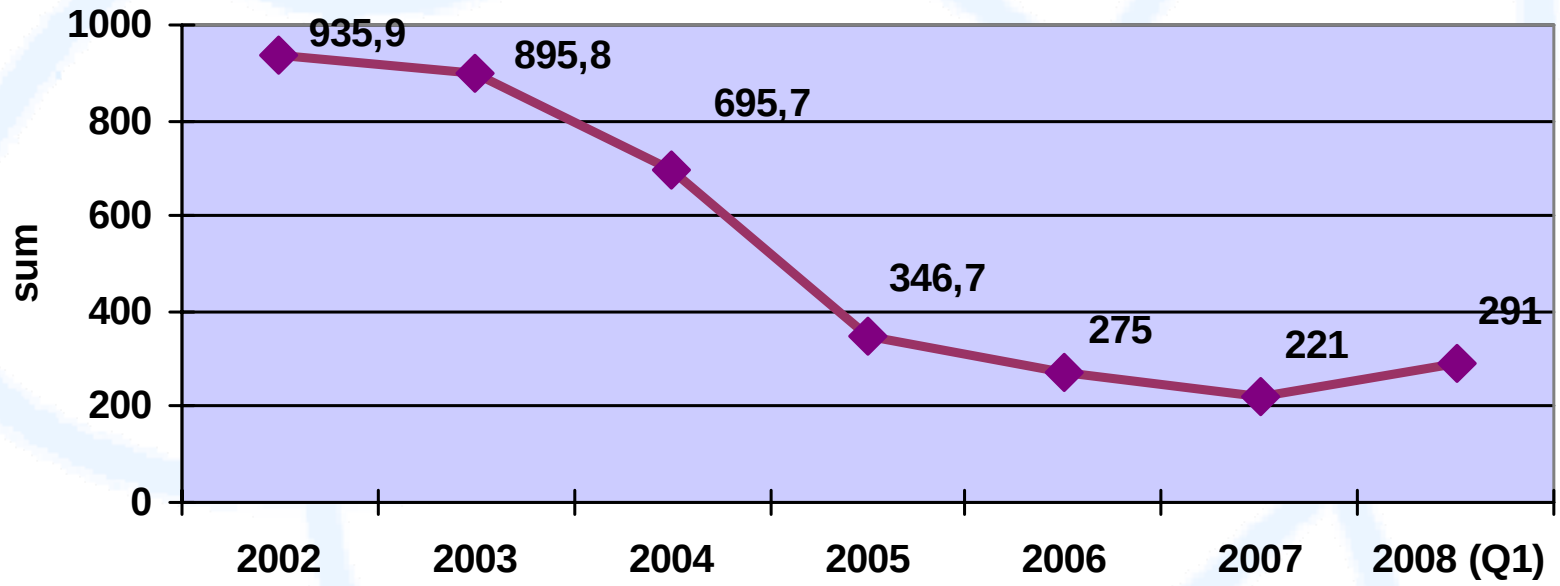
ICT in Uzbekistan

International Internet bandwidth



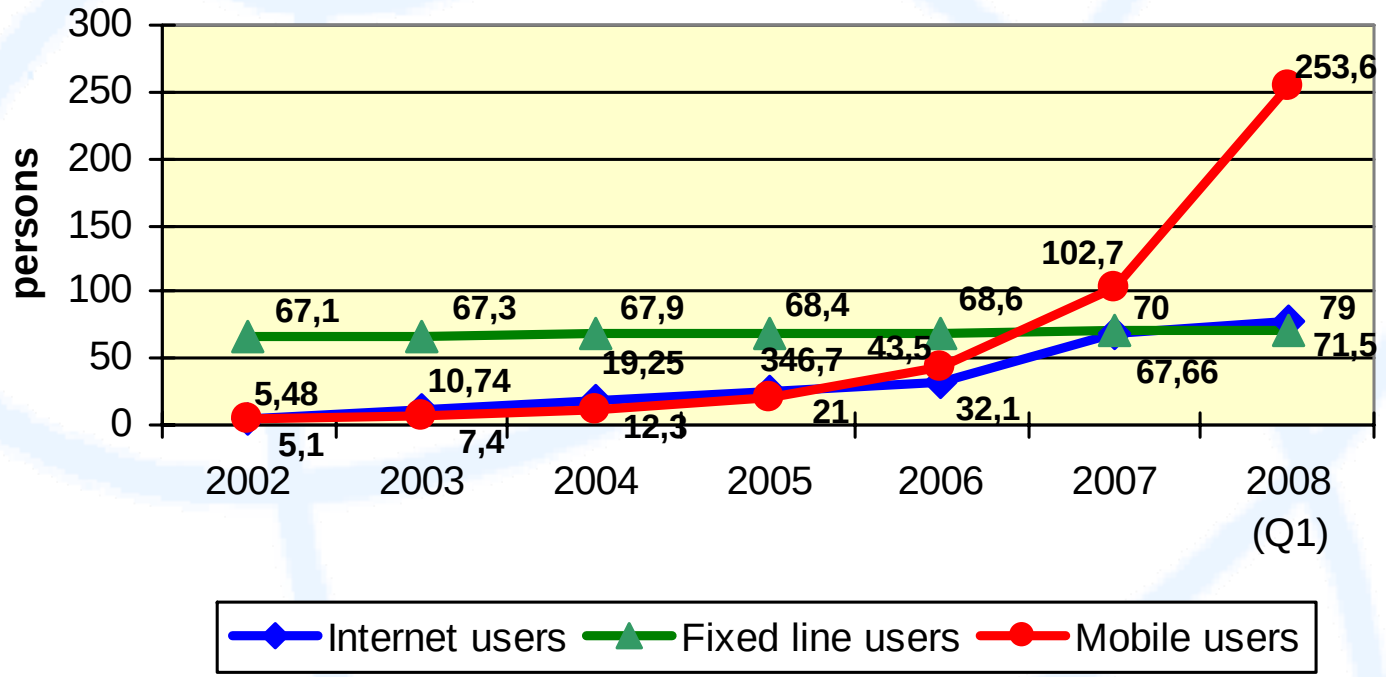
ICT in Uzbekistan

Internet access price per 1 hour



ICT in Uzbekistan

Number of Internet, mobile and fixed line users per 1000 residents

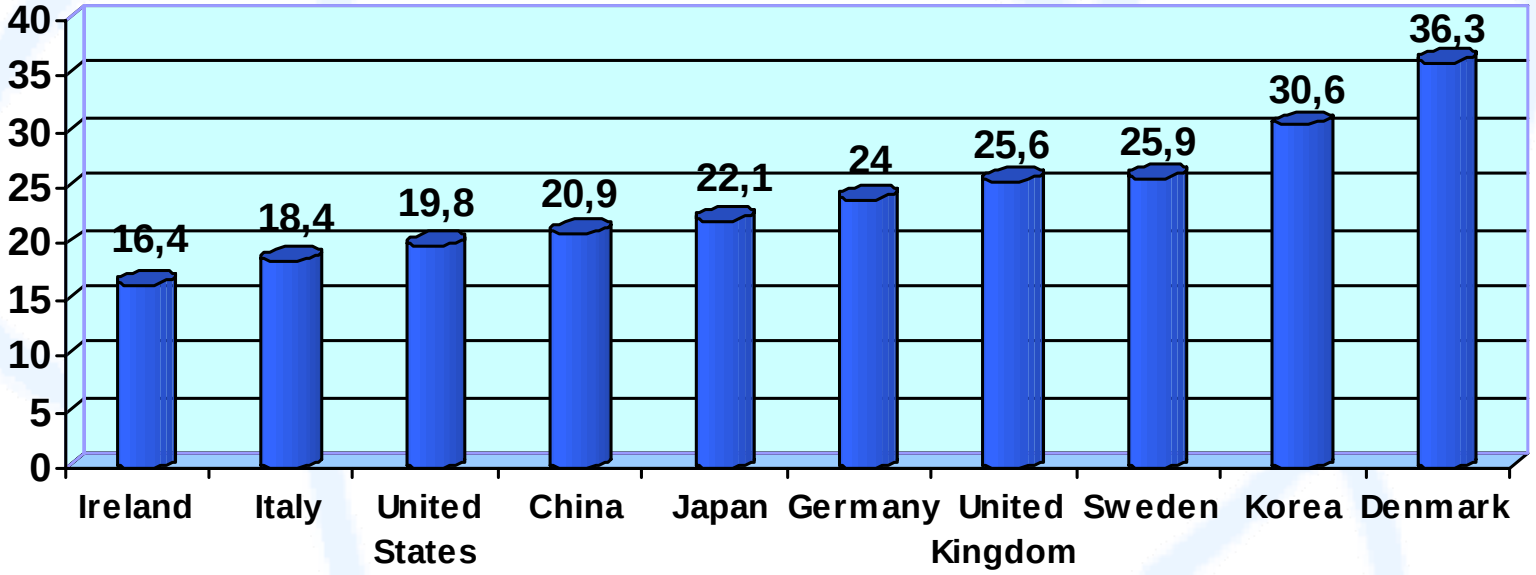


Why do We need broadband access?

- New services require broadband access
- Convergence of services
- Development of distance working and education
- Development of interactive video, gaming and other entertainment services
- Access to Internet and other data communication networks is becoming cheaper

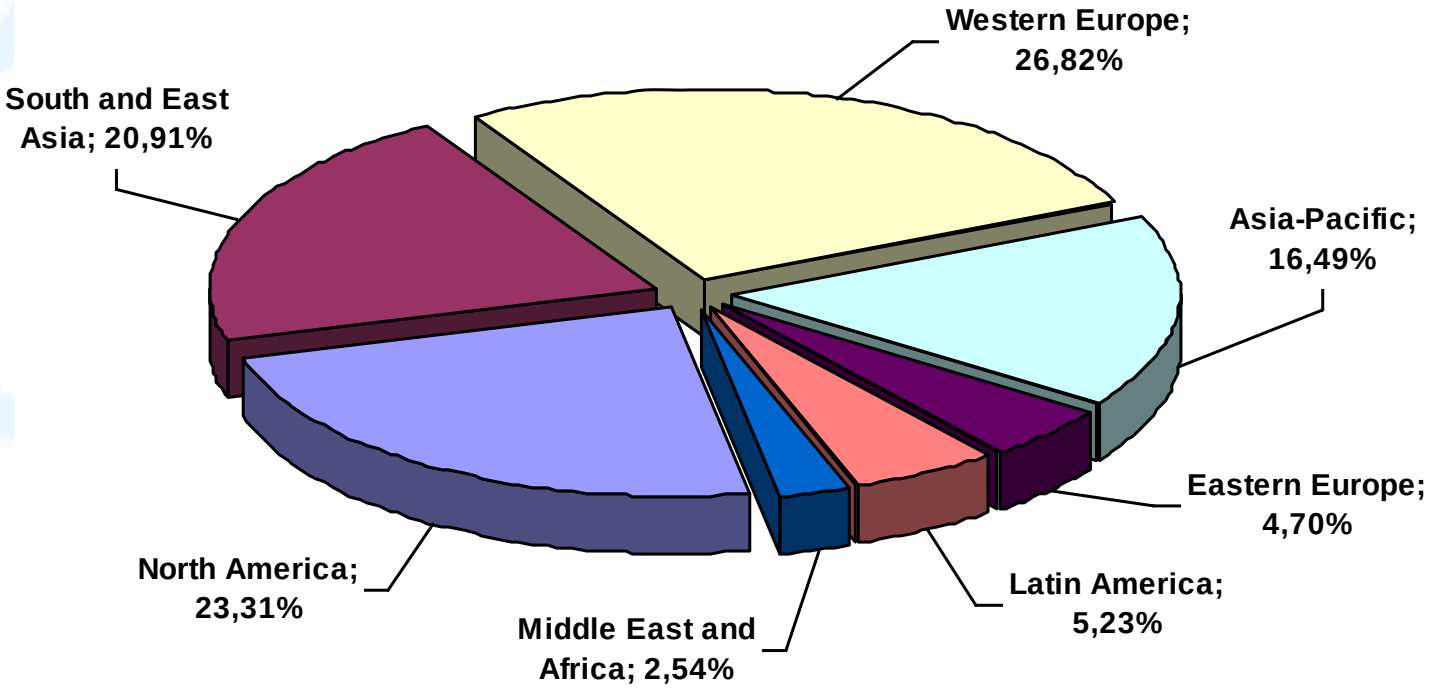
World Broadband statistics

Amount of broadband subscribers per 100 population, 2007/Q4



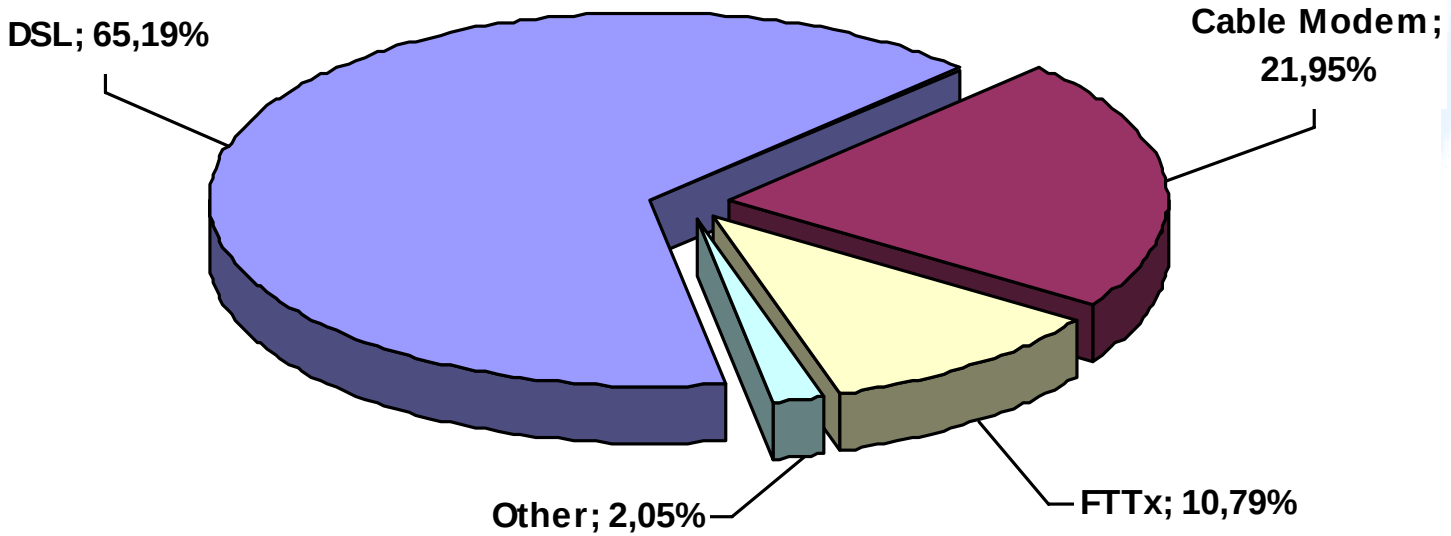
World Broadband statistics

Share of world broadband subscribers by region in Q4 2007



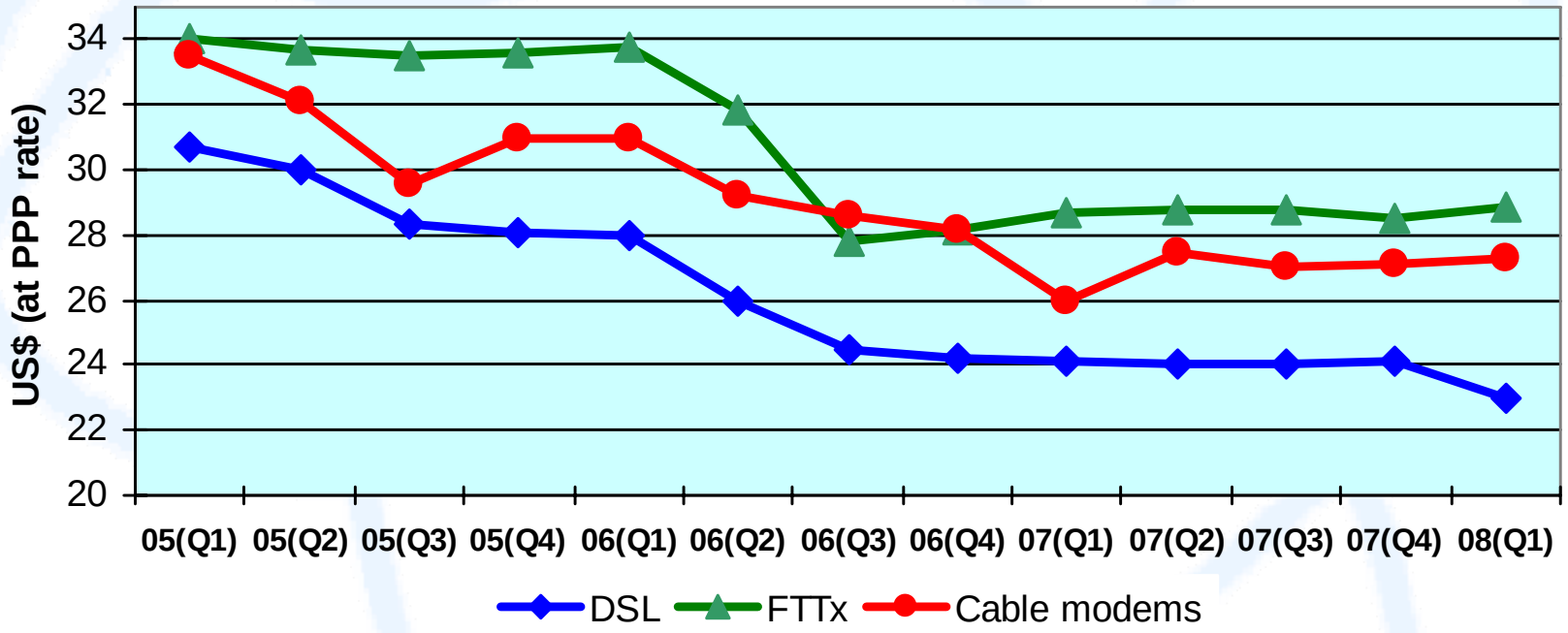
World Broadband statistics

Share of broadband technologies in Q4 2007

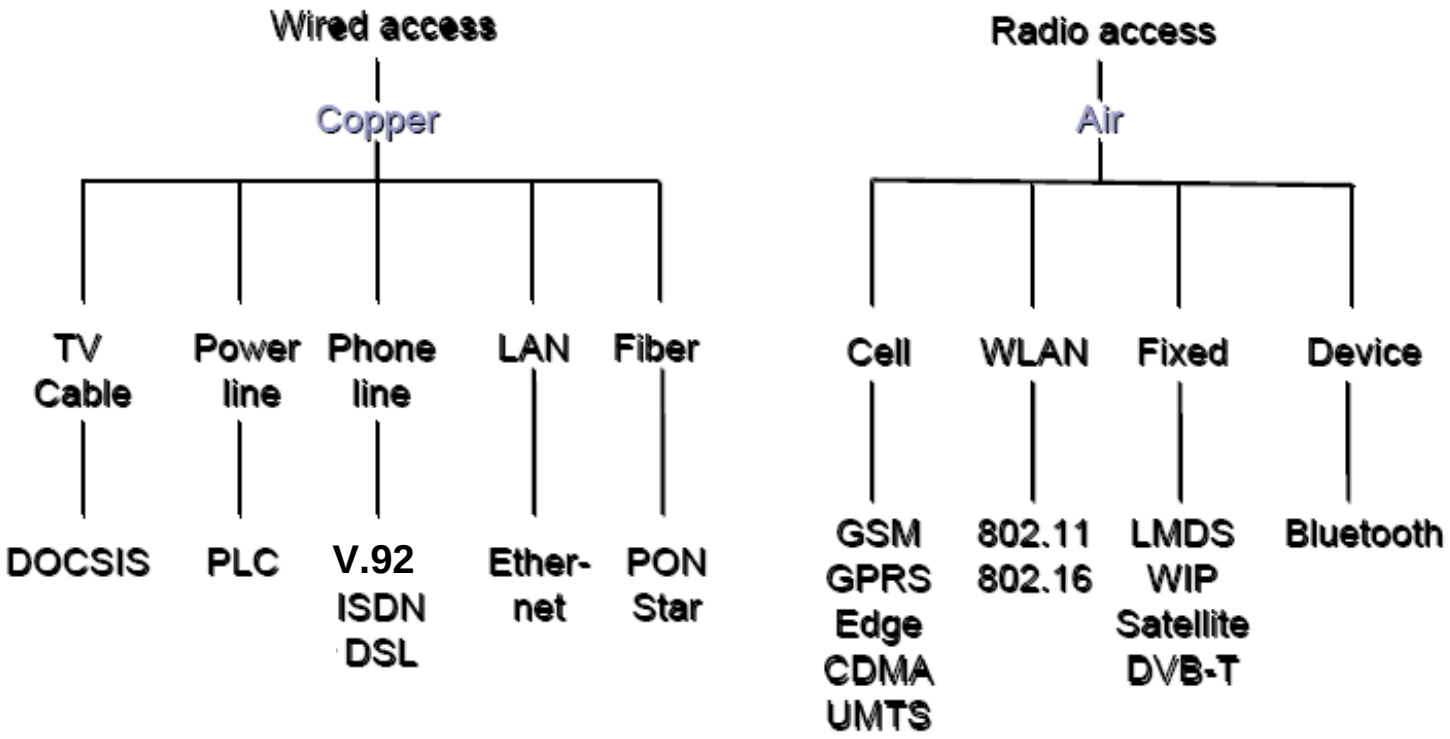


World Broadband statistics

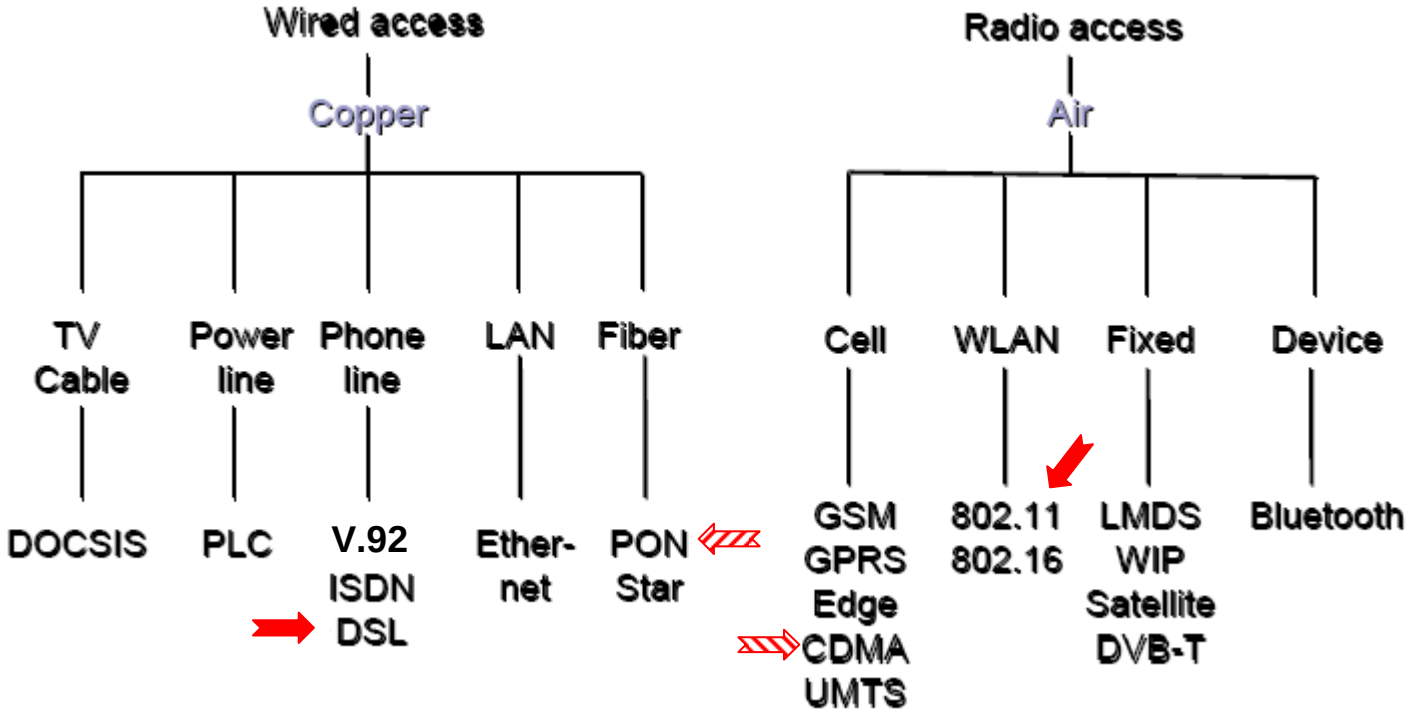
Average entry level broadband service tariff



Variety of access technologies



Using of Broadband technologies in CIS



Broadband access technologies

1. access based on copper cable
2. access based on optical fiber
3. wireless access

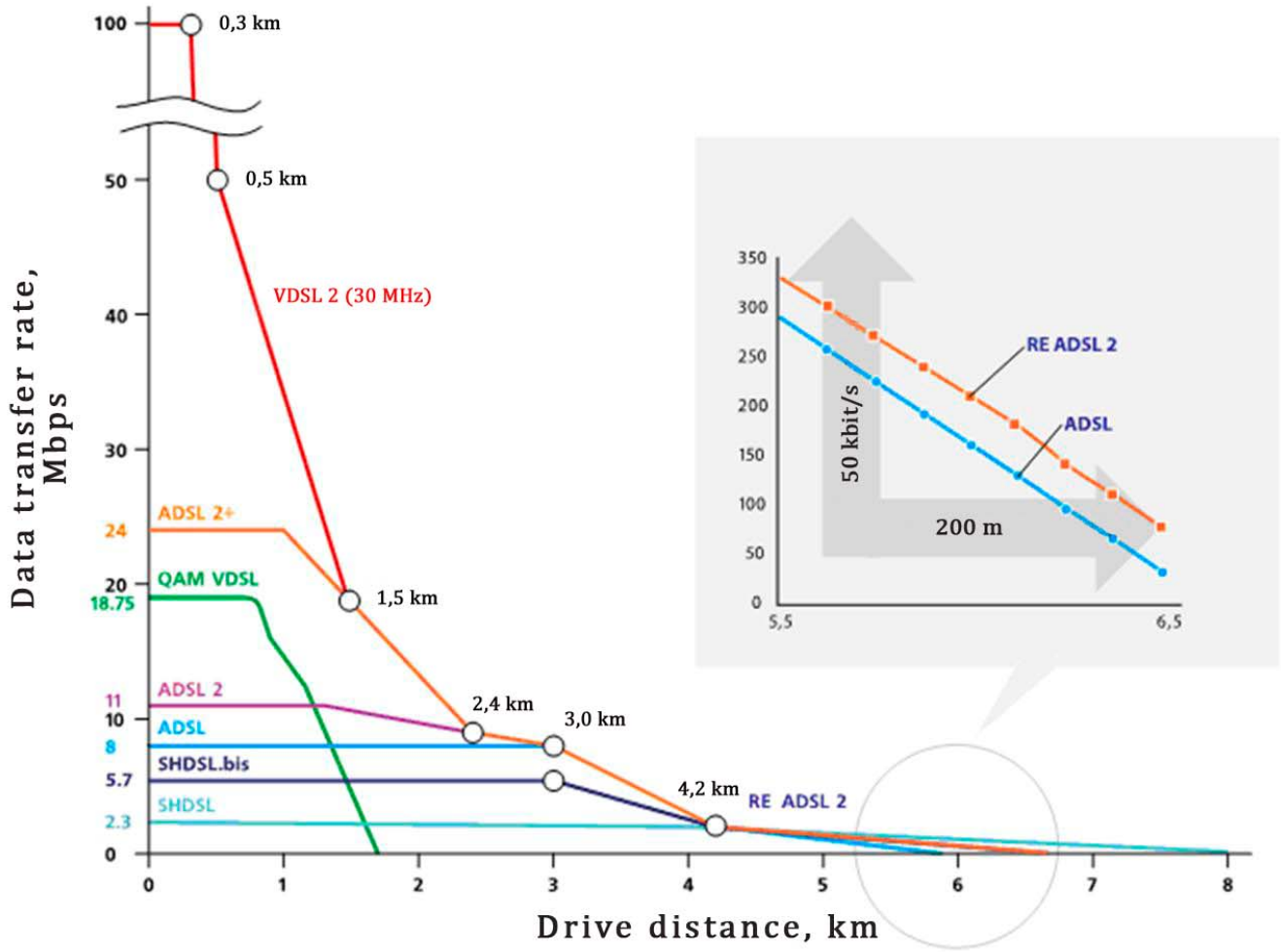
Broadband access technologies

1. ***access based on copper cable*** – one or several copper pairs are used between subscribers and operators. The best example of this is the plain old telephone system (POTS) where the customer is physically connected to the operator by a pair of twisted copper cable. Most popular technologies are different types of DSL such as ***ADSL, HDSL, SHDSL, VDSL*** etc.

Advantages & Disadvantages

- DSL simultaneously keeps your Internet connection and phone lines open
- You can have higher speeds than you would have with a regular modem (1,5 Mbps<)
- DSL uses the existing wiring infrastructure of your telephone lines
- DSL efficiency is related to distance
- DSL needs two copper pairs for developing HDSL and G.SHDSL technologies
- DSL is limited for a certain perimeter

Characteristics of xDSL technologies



Broadband access technologies

2. access based on optical fiber – this type of access is one of the effective method of access technologies, because of its possibility to transfer dates to long distances with VHS.

Advantages & Disadvantages

- very high speed
- variety of services simultaneously
- low prices of optical fiber
- very high operating costs
- difficulty of elimination of defects
- Lack of specialists

Broadband access technologies

3. wireless access – subscribers and operators are connected through radio channels. Mobility is one of the significant benefits of this technology. Widespread wireless technologies such **Wi-Fi** and **Wi-MAX** are more used nowadays.

Advantages & Disadvantages

- mobility of subscribers
- simplicity of network operating
- more convenient for business
- limited spectrum of used frequency
- network security is lower than fixed networks
- limited number of users in one access point

Importance of broadband access for Uzbekistan

- one of the basic factors in building of e- Government
- development of distance working and education
- implementation of modern ICT services
- improvement of productivity
- making contribution to development of telecommunication infrastructures

Thank you for your

Attention

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