

Overview of broadband development in Czech Republic

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2nd BReATH Workshop, Prague, 7th November 2006

Agenda



- main BB milestones
- analysis of relevant market no. 12
- penetration, BB availability
- consumer issues

Milestones



October 1999	cable Internet starts in CZ
March 2003	ADSL starts (both incumbent and AO)
August 2004	ADSL overtakes cable in penetration
January 2005	government approves National Broadband Strategy
May 2005	new (EU) regulatory framework implemented in CZ
August 2006	analysis of relevant market no. 12 (wholesale broadband) finished

Analysis of relevant market no. 12 (wholesale broadband market)



- how was the relevant market defined?
 - at first: as "all broadband"
 - this would have included Wi-Fi and all other types of BB, present on the retail market
 - (would be) result: market is sufficiently competitive
 - 40% ADSL, Wi-Fi 35%, cable 17%, ...
 - no SMP !!!

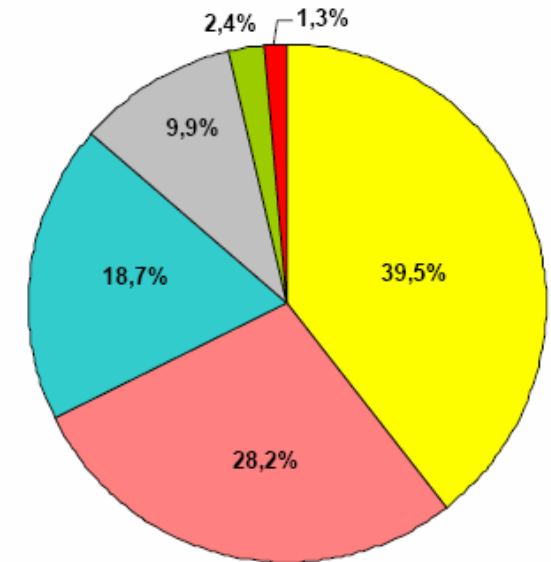
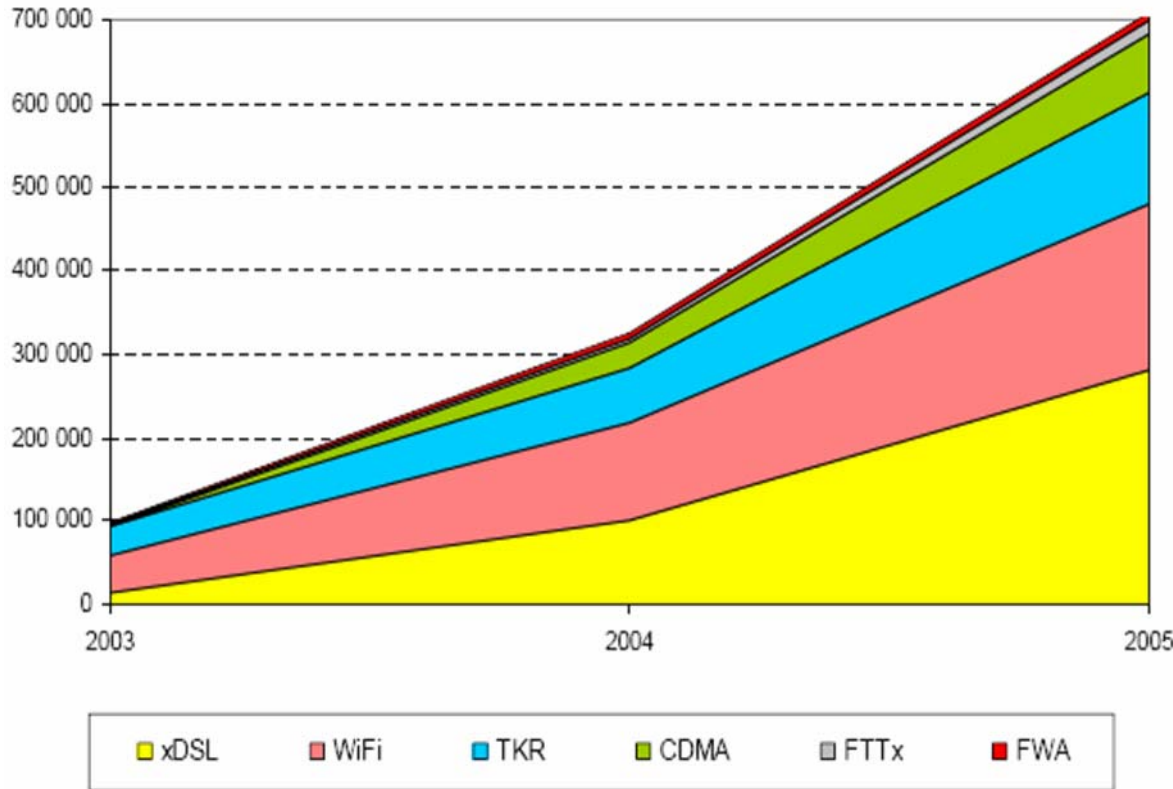
 - later: as "bitstream and equivalent"
 - only xDSL and FTTx included
 - result: incumbent has SMP, market not sufficiently liberalized

March 2006

Market share of all technologies (retail market, "at first" ARM 12)

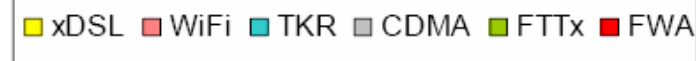


number of broadband connections

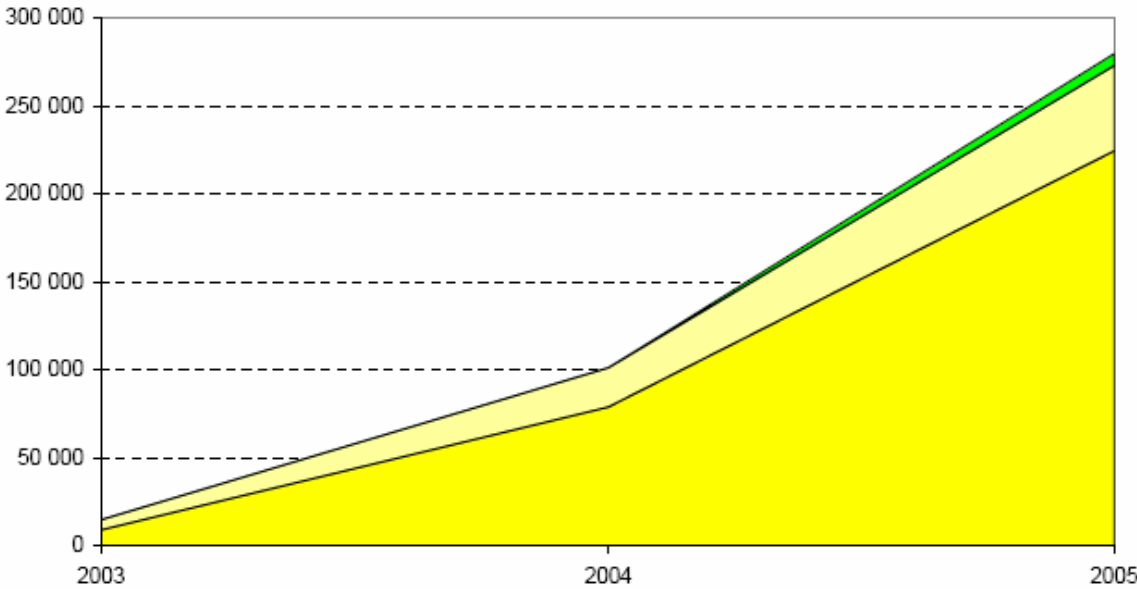


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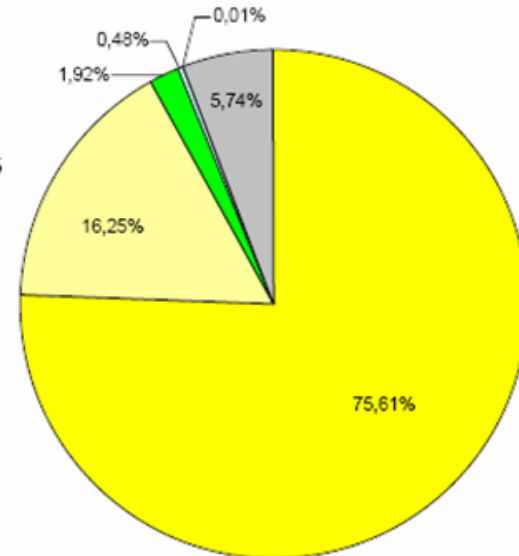


Market share of "ARM 12" technologies (bitstream and equivalent)



without FTTx

■ ČESKÝ TELECOM, a.s. (self-supply) ■ ČESKÝ TELECOM, a.s. (wholesale)
■ Other providers (LLU)



■ ČESKÝ TELECOM, a.s. (self-supply) ■ ČESKÝ TELECOM, a.s. (wholesale)
■ GTS Novera Tel, s.r.o. (LLU) ■ RADIOKOMUNIKACE a.s. (LLU)
■ Czech On Line, a.s. (LLU) ■ FTTx

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ARM 12 remedies



- the NRA (CTO) imposed only "soft" remedies upon the SMP:
 - transparency
 - to publish wholesale offer, provide info ...
 - non-discrimination
 - equal conditions for self-supply and for new entrants
 - separate accounting
 - access to network elements
 - when notified, European Commission had no objections as to:
 - relevant market definition
 - SMP determination
 - but EC requested "harder" remedies
 - bitstream obligation
 - at DSLAM and ATM levels
 - since it is not offered on the market
 - price control
 - at wholesale level
- <E7> – to fight price squeezing

ARM 12 remedies



- the EC can veto only market definition and SMP determination
 - but not the remedies
 - here the Commission can only issue comments
 - *"to be taken into utmost account by national regulators"*
 - the final word is with the NRA
- the Czech NRA (CTO) decided not to change the remedies as the EC requested
 - with the following arguments:
 - bitstream (at DSLAM and ATM levels): is not offered by the incumbent and is not prospective
 - price regulation: *"price margins are increasing, not decreasing"*
 - new entrants argue: margins are already negative, when all costs are taken into account

Broadband connections ("local absolute" numbers)



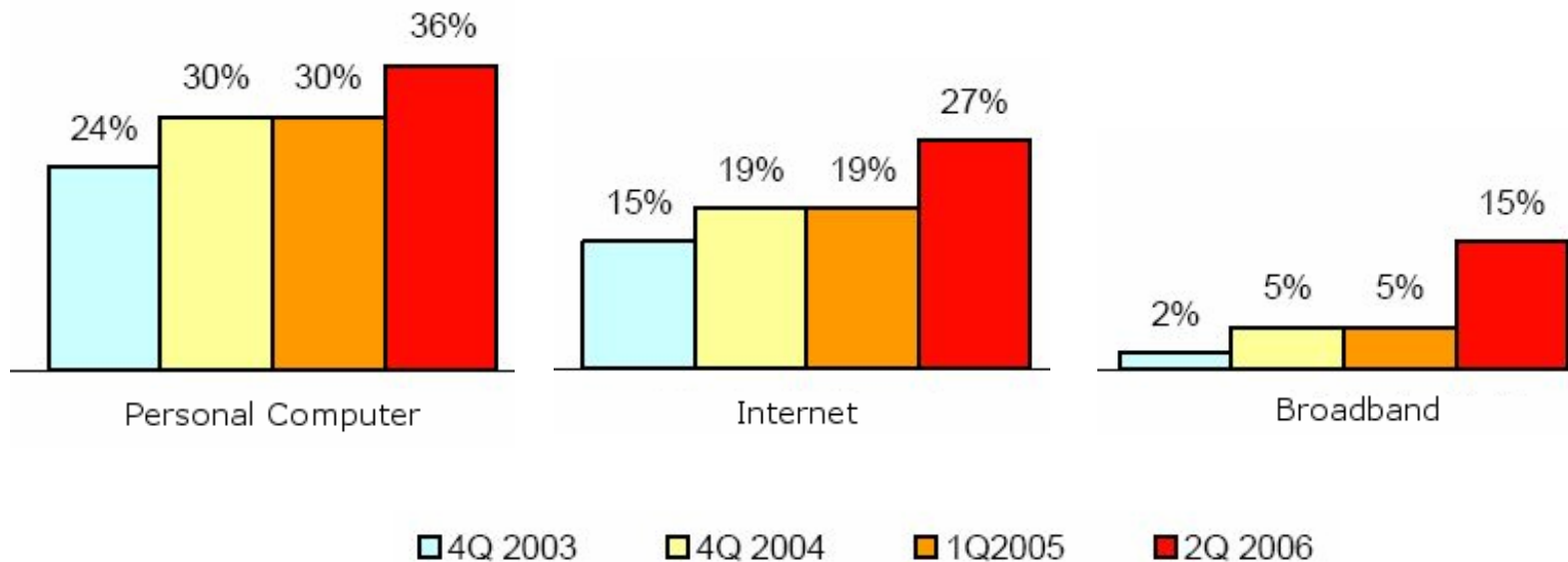
	12/2005	most current
Incumbent's ADSL (including "wholesale")	225 701 + 48 465 (self/supply + wholesale, incumbent)	427 000 (30.9.2006)
Other ADSL	7 151 (Source: ARM 12)	N/A (estimate: 12000)
cable Internet	132 944 (Source: ARM 12)	200 000 (PR ČAKK, 27.9.206)
Wi-Fi	200 000 (Source: ARM 12)	250 000 (7/2006, internetprovsechny.cz)
CDMA	70 342 (Eurotel)	90 000 (TO2 CR, 23.10.2006)
FTTx	17 049 (Source: ARM 12)	N/A
FWA	8 875 (Source: ARM 12)	N/A

approximately 1 million

Broadband penetration (Czech Statistical Office)



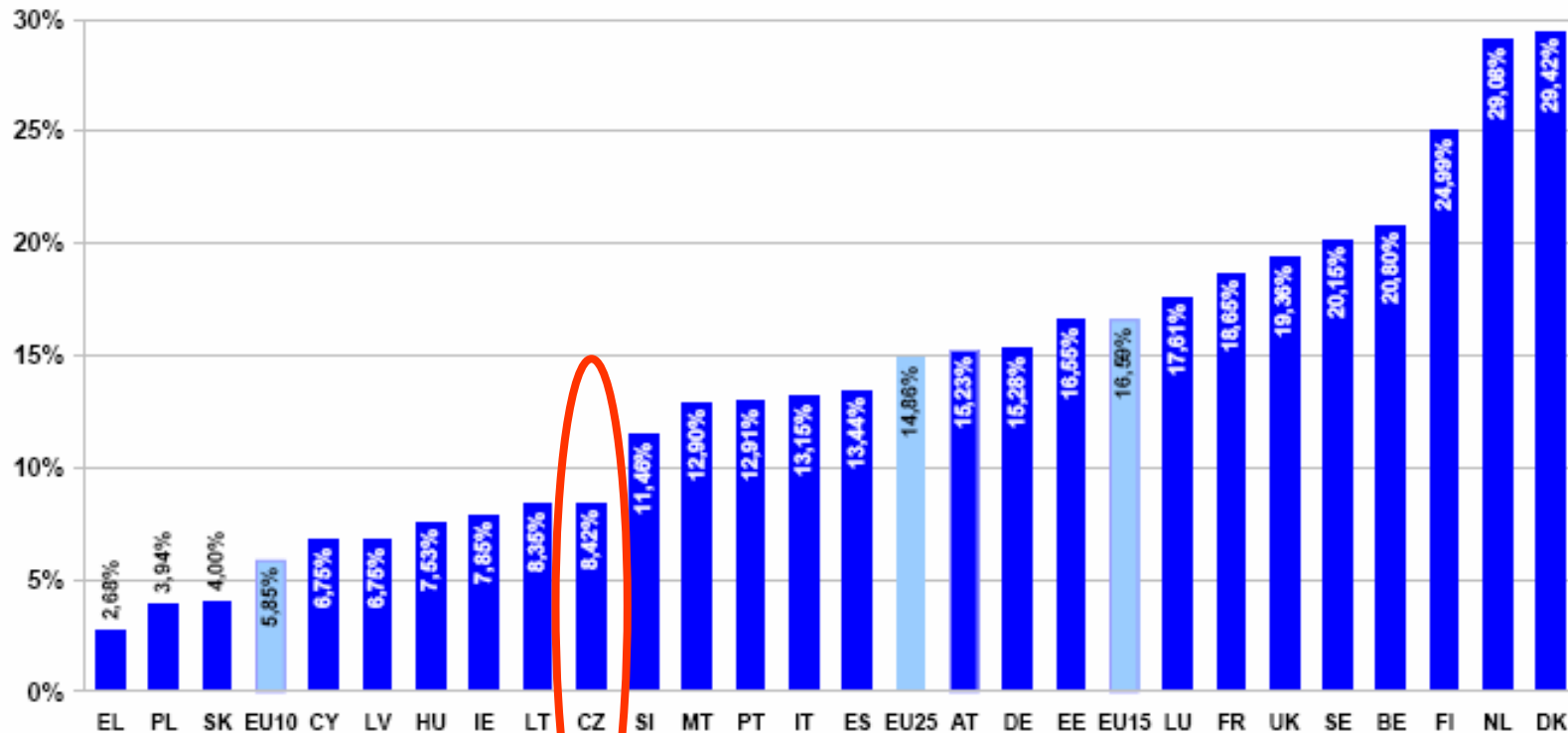
PCs, (narrowband) Internet and broadband
in Czech households
(survey, Czech Statistical Office)



Broadband penetration (European Commission)



EU Broadband penetration rate, 1 July 2006



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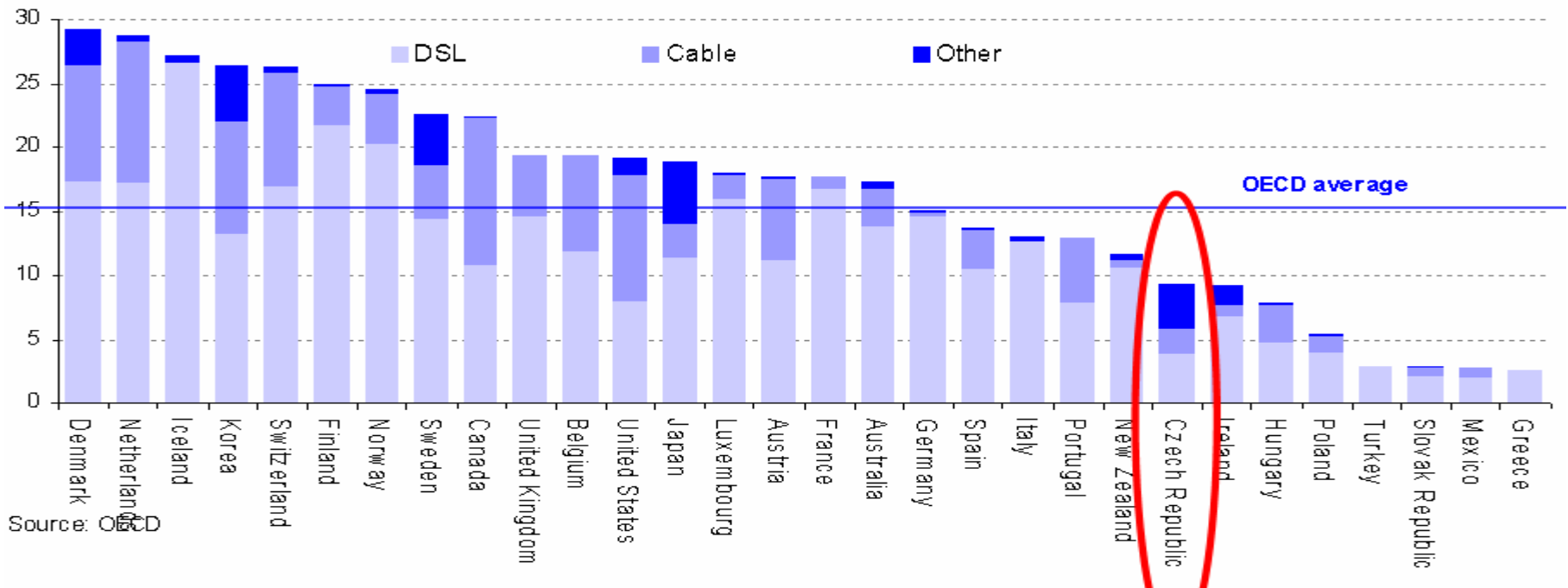
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Source: IP/06/1504

Broadband penetration



OECD Broadband subscribers per 100 inhabitants, by technology, June 2006



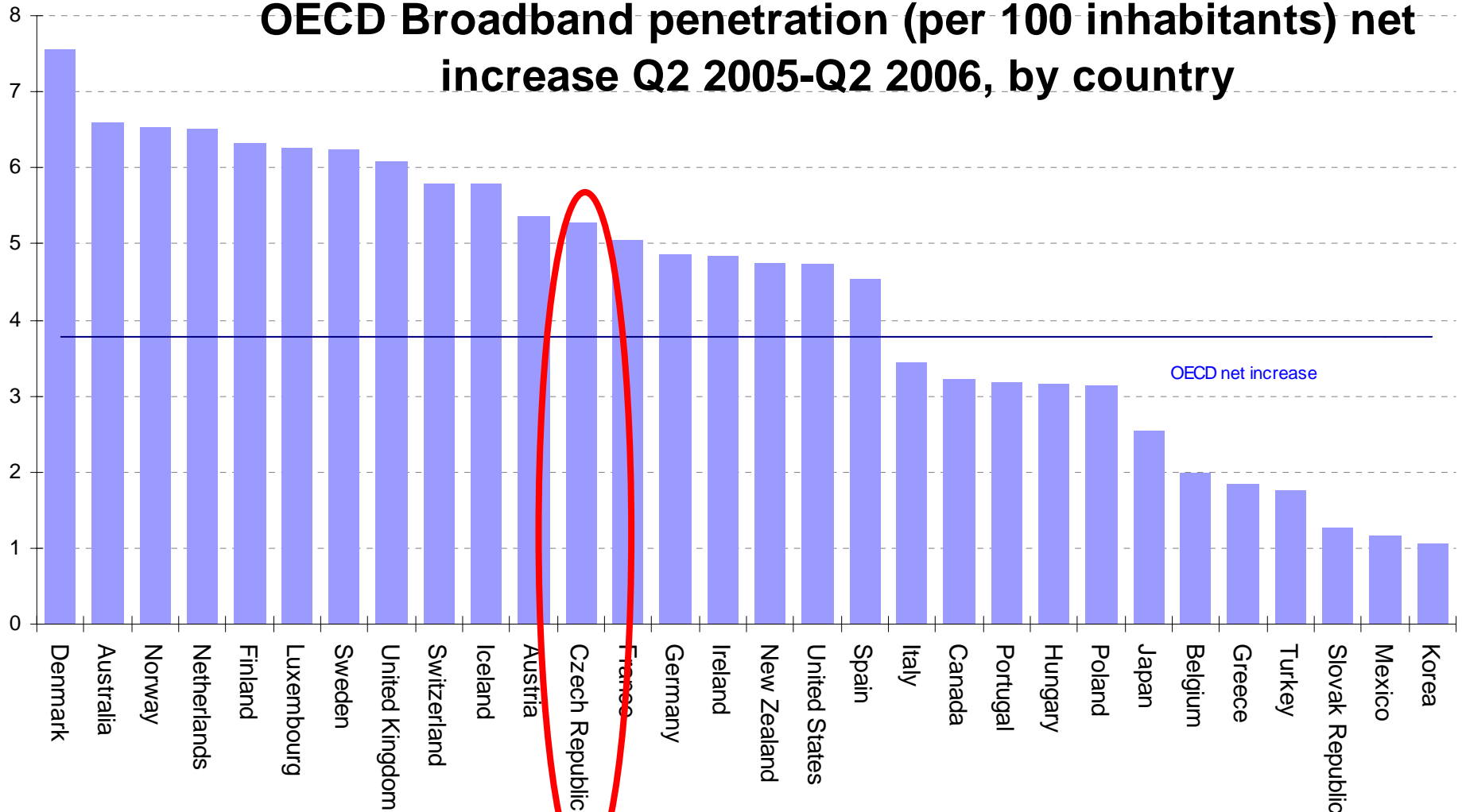
Source: OECD

The OECD statistics for the "Other Broadband" category of the Czech Republic include a large number of fixed wireless broadband connections provided over mobile networks. Broadband subscriptions over 3G networks are not included for other countries but an exception was made for the Czech Republic because the connections make use of "fixed" equipment in a home and offer speeds greater than 256 kbit/s to individual users. The Czech market is particular due to the high number of these wireless broadband connections as a percentage of total connectivity. It is important to note that there is continuing debate in international circles as to whether this type of wireless connection (numbering 188 000 in CZ) should be included in international broadband comparisons.

Broadband penetration



OECD Broadband penetration (per 100 inhabitants) net increase Q2 2005-Q2 2006, by country



Source: OECD Broadband Statistics to June 2006

National broadband strategy



Approved by the government on 26.1. 2005

Definition of Broadband:

- 256 kbit/s or more

Goals:

- All public institutions connected to Internet by the end of 2006, 50% of the population by 2010

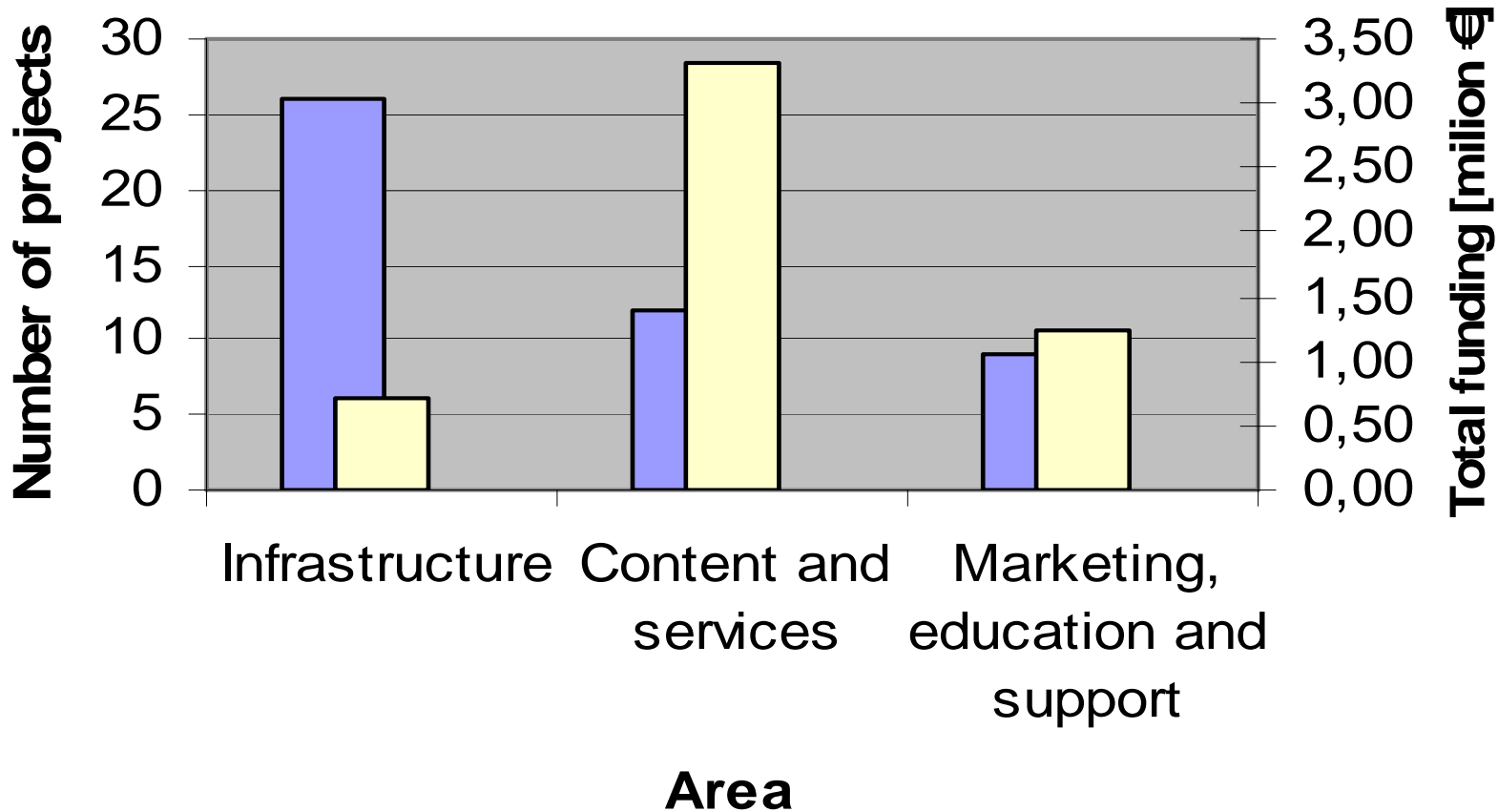
Main pillars:

- Broadband fund
 - to finance broadband-related projects
 - no tax deductions
- Broadband Forum
 - an advisory body to the Ministry of informatics, to define strategy, evaluate projects for funding, editorially manage the National Broadband server
- National broadband server
 - running since 31.5.2005

Funding of BB projects

- Structural funds and other EU instruments
- (Czech) Broadband Fund:
 - almost 30 mil. EUR assigned over 4 years
 - in 2006, over 5 mil. EUR awarded to 47 projects, 2 mil. EUR put aside for preparing transition to digital TV
 - support for development of content, e-services, education and building infrastructure in underserved areas

Projects supported by the national broadband fund



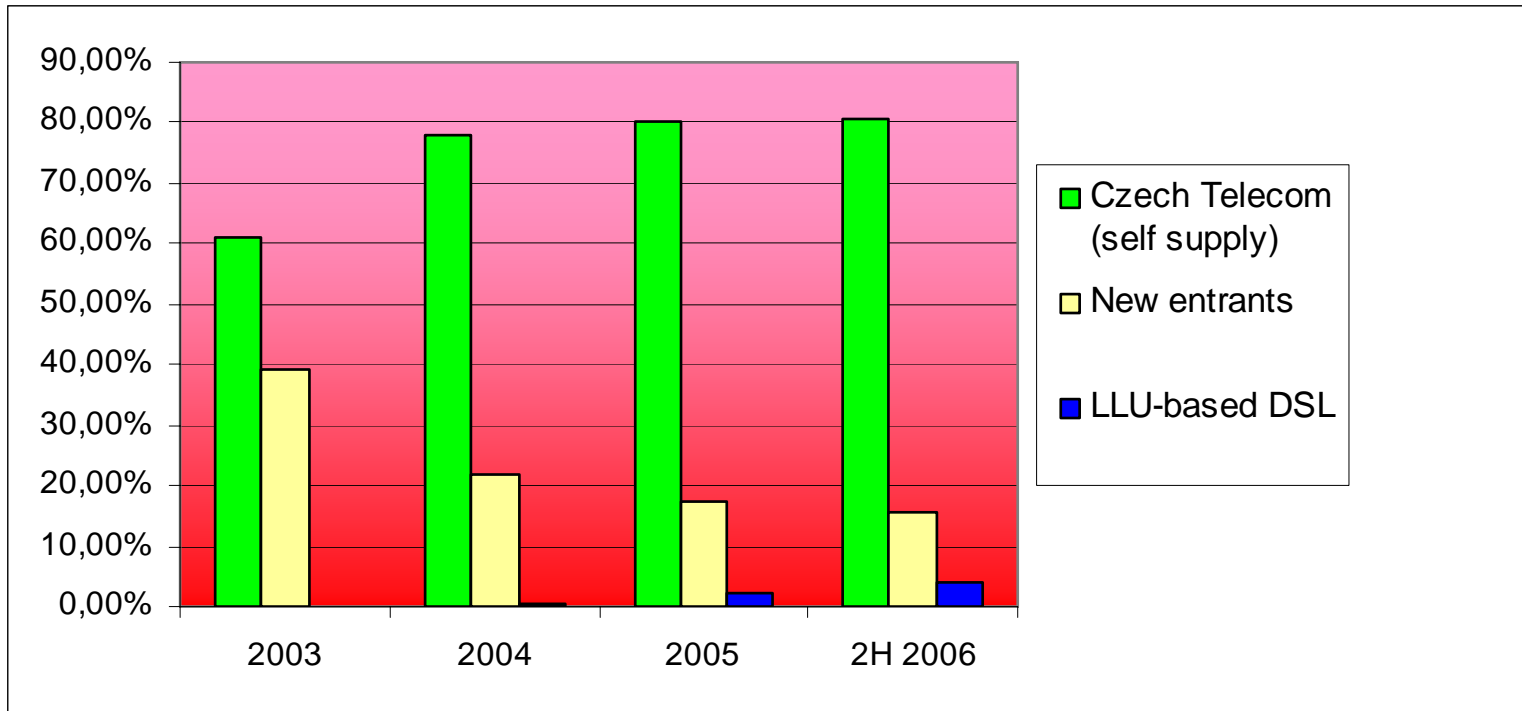
■ Number of projects ■ Total funding proposed [€]

(some) Issues



- public funding of infrastructure projects
 - currently, operators are strongly opposing
 - but do they really?
 - or do they only protest against one specific (and really big) project of the City of Prague, to offer free or cheaper Internet access (thanks to public funding)?
- market share of the incumbent: "high and rising"
 - the Czech incumbent (Telefónica O2 Czech Republic) is able to increase its market share in broadband (ADSL)
 - while elsewhere the incumbent's share is diminishing

Evolution of ADSL market share



(some) Issues



- bitstream (at DSLAM and ATM level) is nonexistent
 - and LLU is seen as the only viable alternative for new entrants
- Fair Use Policies (mainly data volumes) are very strict and limiting
 - and inhibit the usage of broadband
- No "Naked ADSL" on the market
 - users have to pay also for voice services, even if they want only ADSL



thank you for your attention