



Outlook for broadband development in SEE region

Zagreb – March 6-7, 2007

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Cullen International

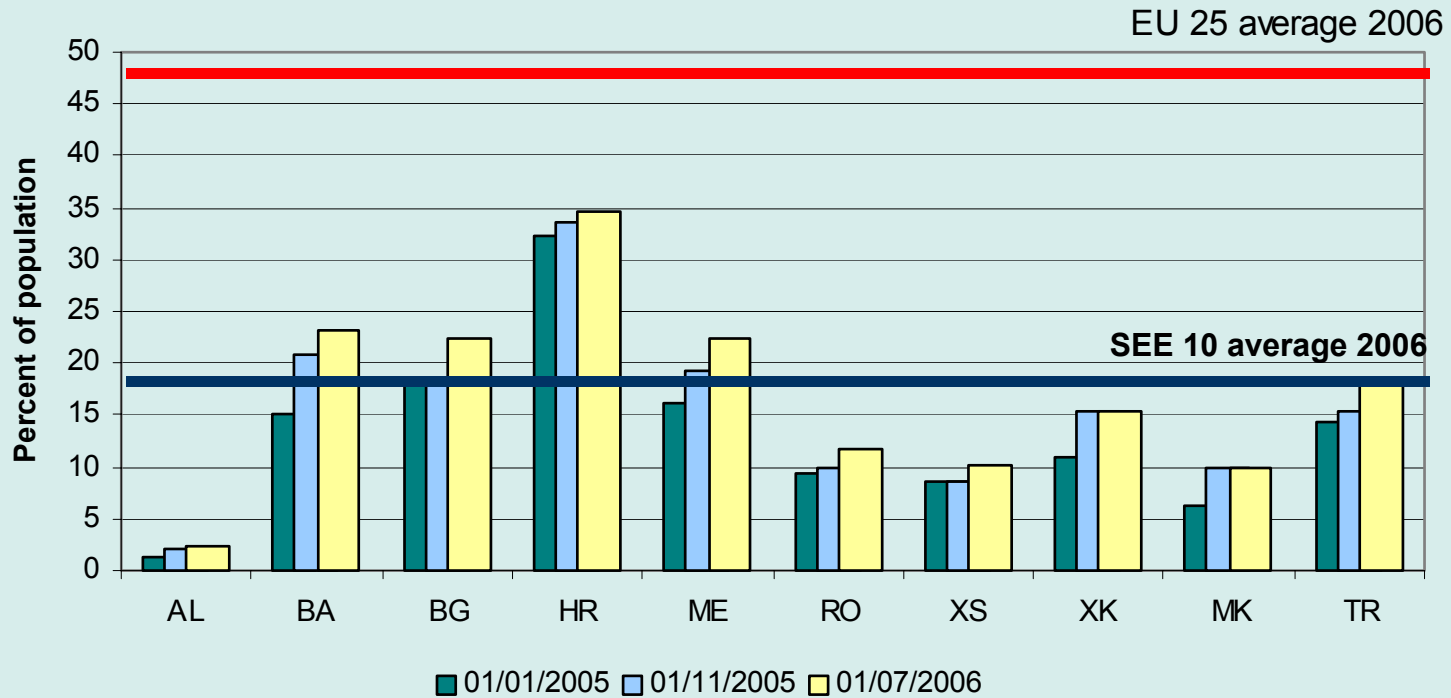
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SEE broadband in a rear-view window...

- ✦ Three year project funded by the European Commission
- ✦ Managed by Cullen International
- ✦ Four nine-monthly cycles
- ✦ Benchmarking status reports
- ✦ Regulatory forums for NRAs
 - ✦ Brussels, July 2005
 - ✦ Zagreb, April 2006
 - ✦ Sofia, January 2007
- ✦ 3rd report reflects the market situation in July 2006



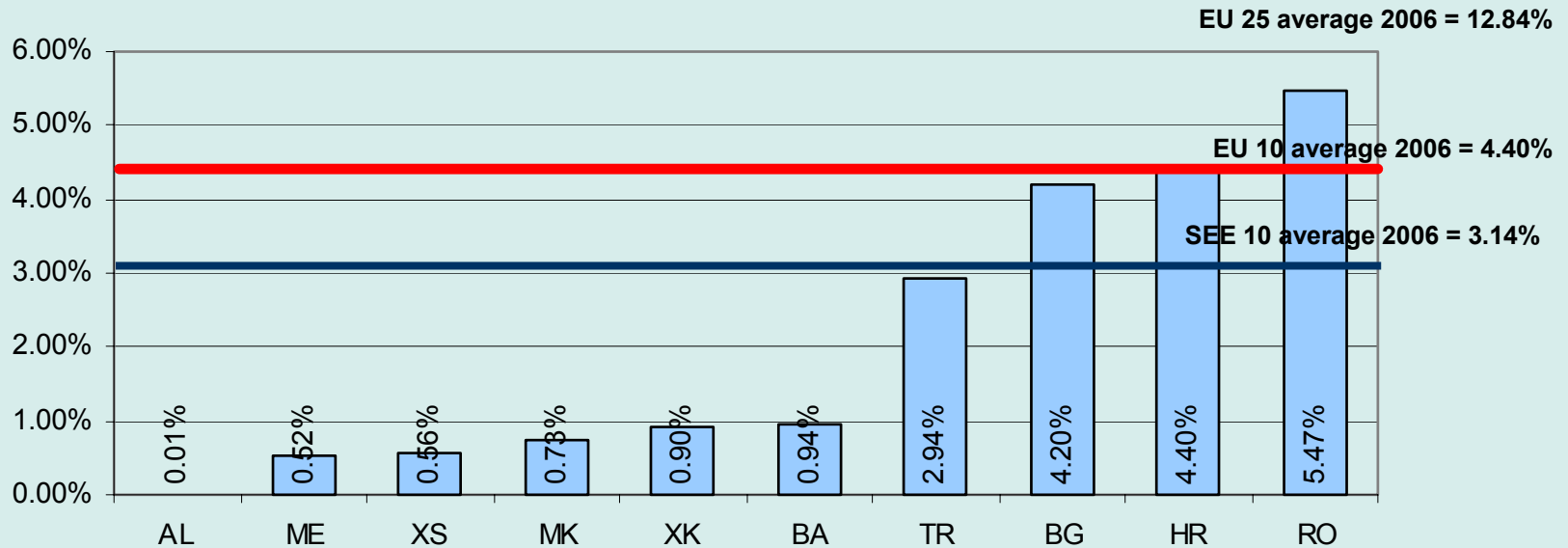
Internet penetration



- ▼ Croatia is leading in terms of Internet penetration
- ▼ SEE 10 average is 1/3 of EU 25

Broadband penetration

Broadband penetration rate per 100 population - July 2006



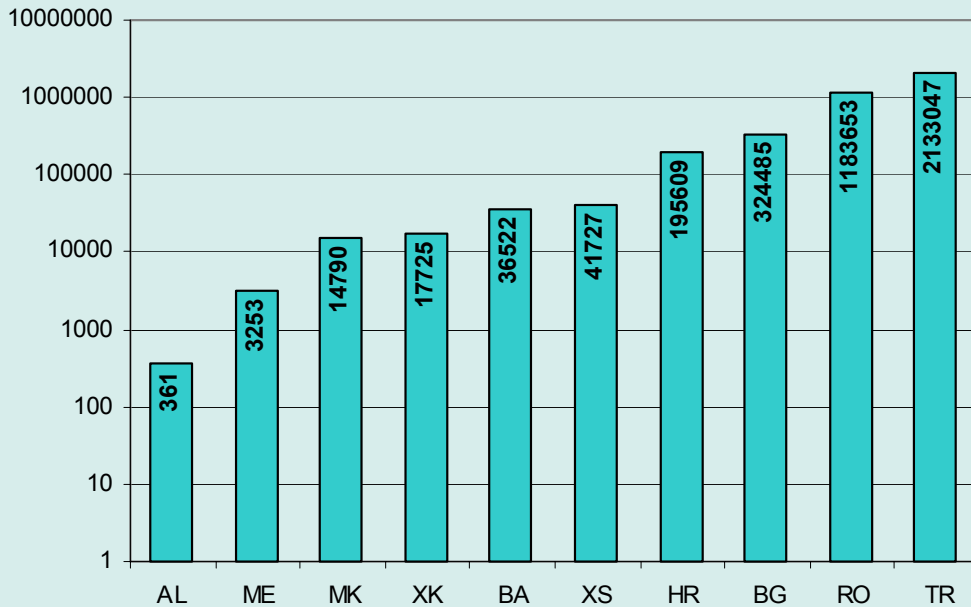
- ▼ Romania is the broadband leader, followed by Croatia and Bulgaria
- ▼ SEE 10 average is below EU 10 and about 1/4 of EU 25



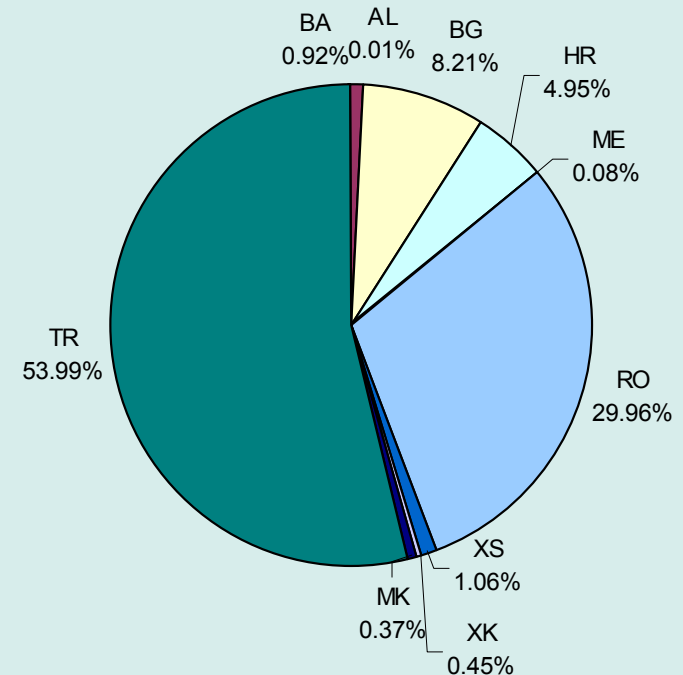
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Distribution of broadband lines by country

Number of broadband lines - July 2006



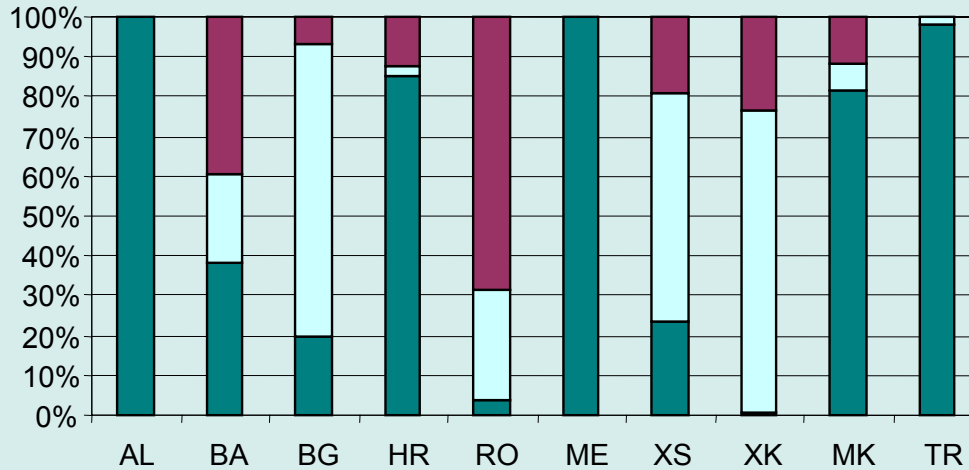
SEE 10 Total 2006 = 3.9 million



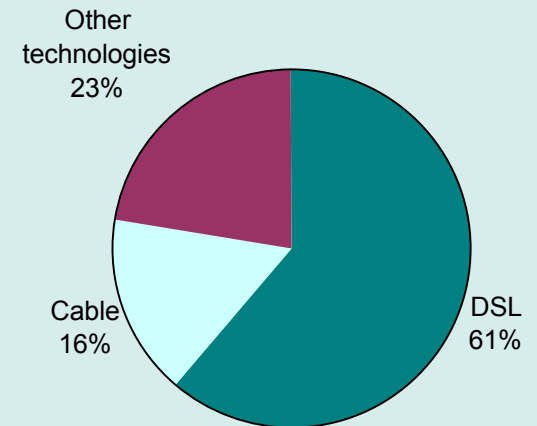
- Turkey accounts for more than 50% of all broadband lines in SEE 10, followed by Romania with 30%

Distribution of broadband lines by technologies

Broadband technologies by country

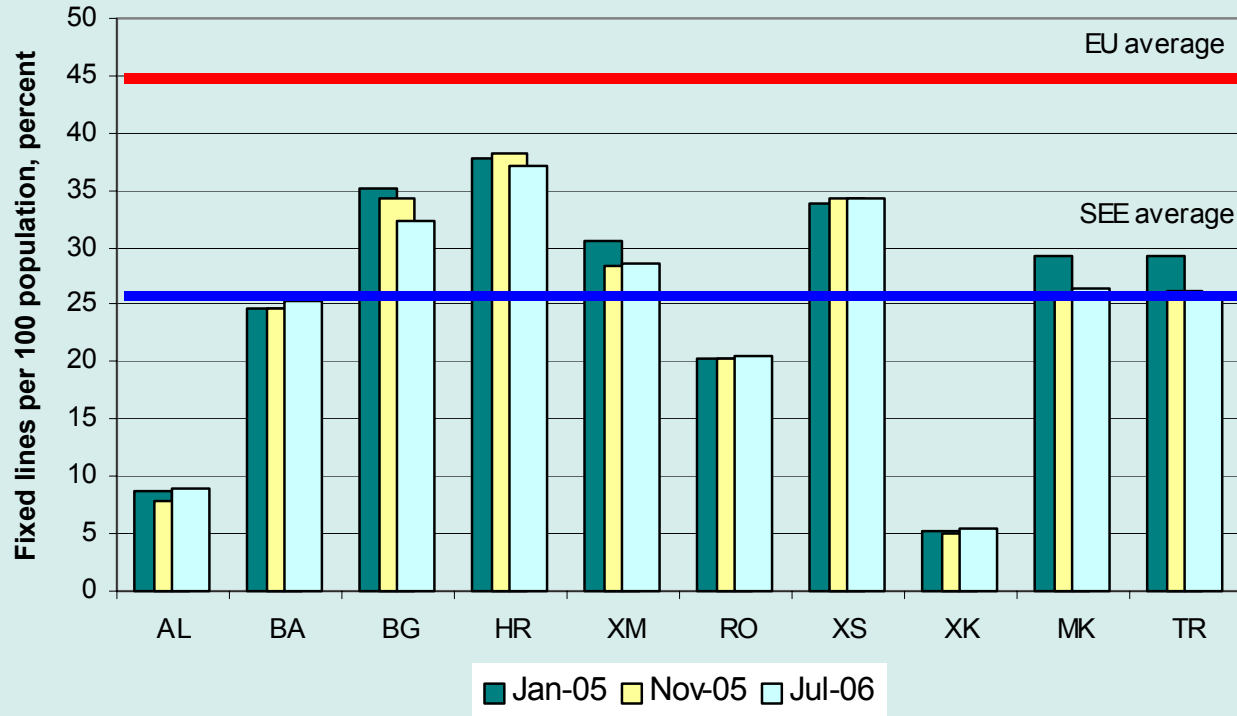


SEE 10 Total 2006 = 3.9 million



- ▼ DSL maintains dominance in broadband – also in EU 25 (over 80%)
- ▼ Cable prevails in Bulgaria, Serbia, Kosovo
- ▼ In Romania, CDMA accounts for about 70% of broadband connections

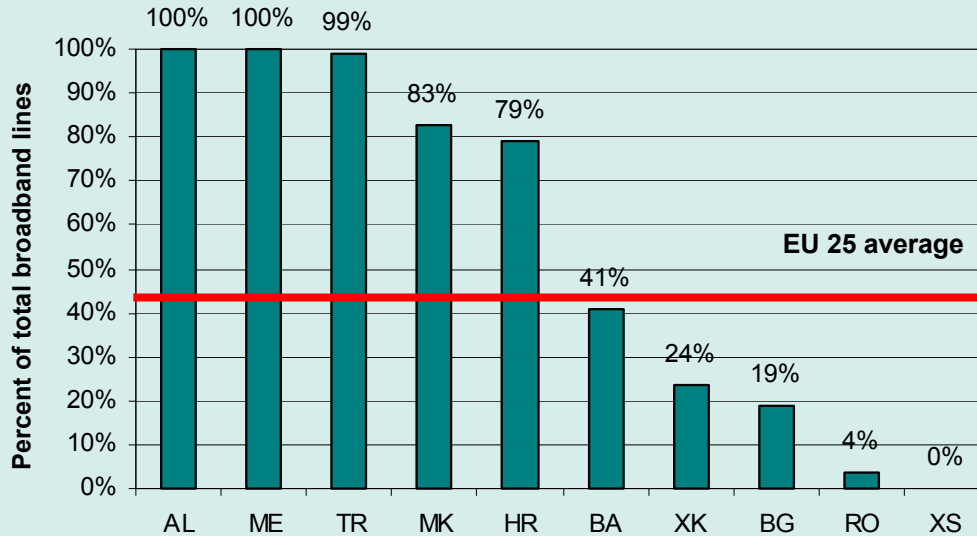
Fixed telephony penetration



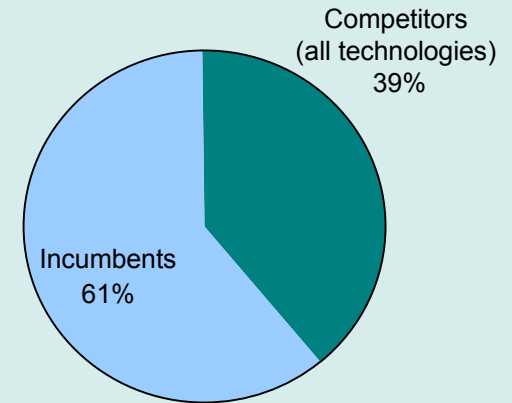
- ▼ Link between DSL rollout and fixed telephony penetration
- ▼ SEE 10 average is about 1/2 EU 25

Broadband retail market shares by operators

Incumbents' market shares in broadband provision



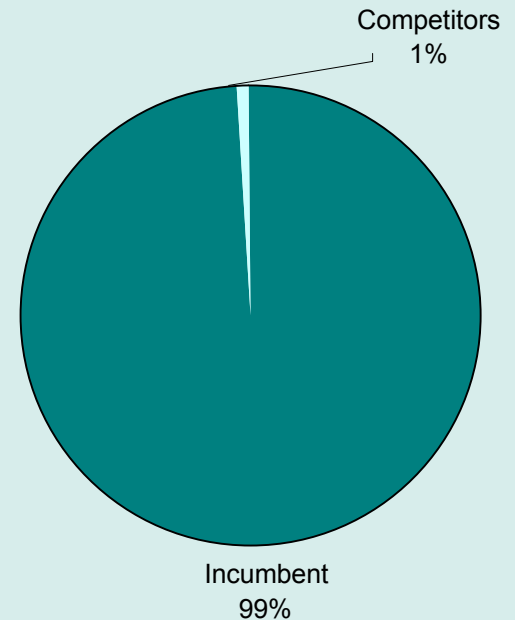
SEE 10 overall market shares



- ▼ Incumbents account for more than 60% in retail broadband in SEE 10
- ▼ With DSL rollout, incumbents' market share may increase
- ▼ In EU 25 incumbents' market share is about 46%

DSL lines by alternative operators

Country	xDSL lines - July 1, 2006		
	Total	Incumbent	Competitors
AL	361	361	0
BA	13,945	13,945	0
BG	63,475	62,000	1,475
HR	166,143	154,525	11,618
RO	44,855	43,591	1,264
ME	3,253	3,253	0
XS	9,830	0	9,830
XK	144	144	0
MK	12,058	12,058	0
TR	2,098,677	2,080,458	18,219

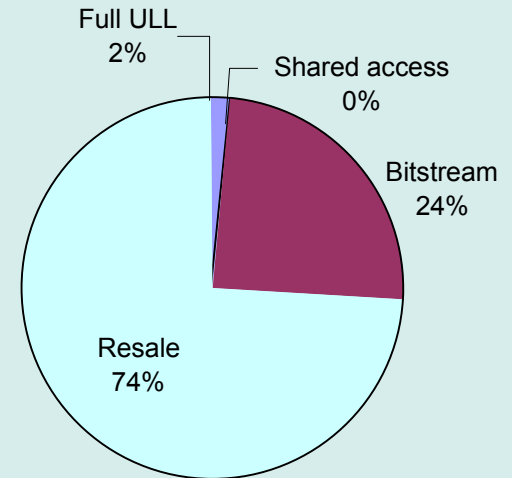


- Incumbents' dominance is much stronger in DSL
- In EU 25 incumbents' retail DSL market share is 57%
- In Croatia, competitors' market share is 7%

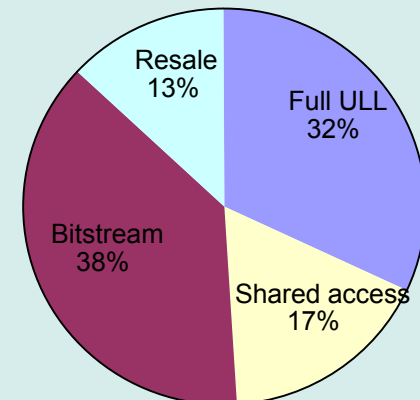
Competitive DSL lines by type of access

Country	New Entrant			
	Full ULL	Shared access	Bitstream	Resale
AL	0	0	0	0
BA	0	0	0	0
BG	0	0	0	13
HR	0	0	0	11,516
ME	0	0	0	0
RO	648	0	0	0
XS	0	0	9,830	0
XK	0	0	0	0
MK	0	0	0	0
TR	0	0	0	18,219

SEE 10 by type of wholesale access

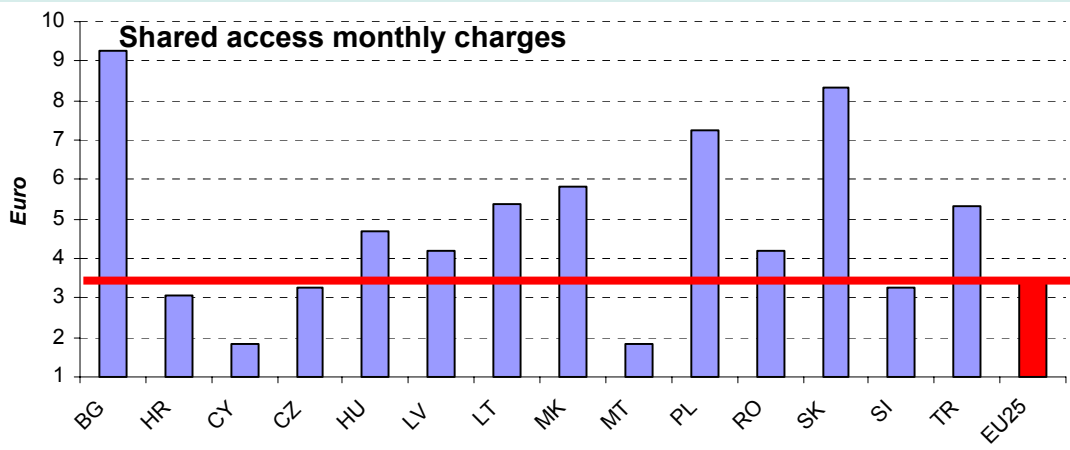
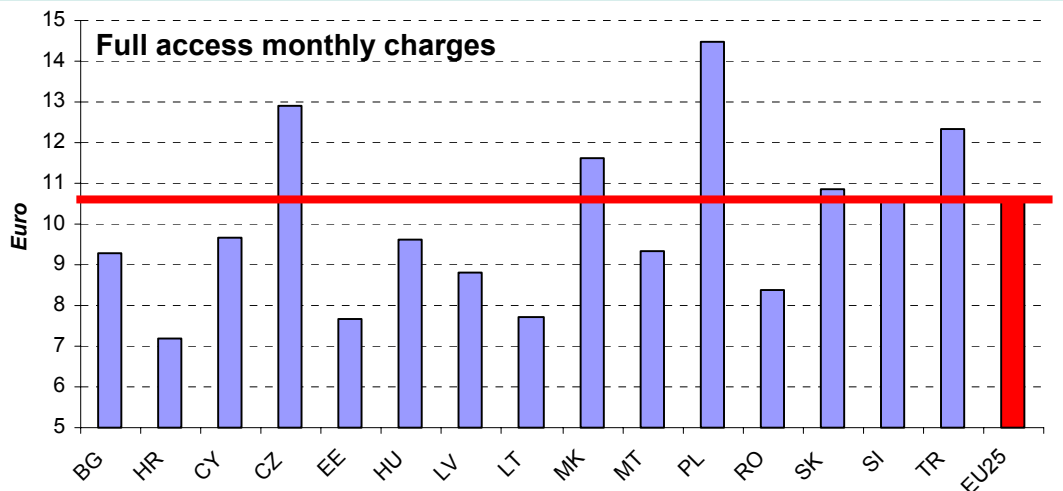


EU 25 by type of wholesale access



- ✓ Competitive DSL (where it exists!) dominated by resale-based offers
- ✓ The only exception is Romania
- ✓ In EU 25, competition is shifting from service- to infrastructure based

Local loop unbundling



RUO availability in SEE

Country	RUO mandatory	First RUO published
AL	No	-
BA	Yes	January 1, 2008
BG	Yes	January 1, 2005
HR	Yes	October 20, 2005
ME	No	-
RO	Yes	July 2004
XS	No	-
XK	No	-
MK	Yes	April 2006
TR	Yes	November 22, 2006

FWA as an alternative to LLU?

- **Bulgaria – 4 national licences in 3.5 GHz issued in October 2005**
 - **Auction proceeds – BGN 22,382,000 (€ 11,443,000)**
 - **One operator (M-Tel) launched commercial services**
- **Croatia – 74 concessions in 18 counties issued since September 2005**
 - **One operator (Novi-Net) launched commercial services**
- **Macedonia – tender for national and regional licences expected in 2007**
- **Montenegro – tender procedure under way**
 - **3 national licences in 3.5 GHz**
 - **Minimum one-off fee at EUR 172,500**
- **Romania – 2 national licences to be auctioned in April 2007**





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Thank you for your attention!

Hvala na pažnji!