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SVIJET U VAŠEM DOMU

CATV network – leverage to increase BB penetration fast

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B.NET - COMPANY DATA

- **Founded:** 2001.
- **City:** 6 biggest in Croatia (Zagreb, Split, Rijeka, Osijek, Zadar, V.Gorica)
- **Revenue:**
2008. => 15,5 mil EUR (114 mil kn)
2009. => 20,5 mil EUR (153 mil kn)
34% increase

B.NET infrastructure and platforms

- **Fiber optic network** > 700 km cables in the cities
- **HFC network:** >90% area
- **SDH platform, Metro ethernet, MPLS network**
- **DVB-C platform**
- **IPTV platform (2010.)**

Inovative services – residential market

- **TV (localized):** 2002.
- **Internet (Docsis):** 2003. (Eurodocsis 1.1)
- **Telephony:** 2006. (in partnership with company that own softswitch and billing engine)
- **3 Play:** 2007. (30 EUR => 40 TV ch. / 4 Mbps, FLAT RATE / telephony)
- **Digital Broadcast TV:** 2008. (more than 120 TV channels / 40 radio channels/ 5 HD channels)
- **Digital iTV:** 2010. (to be on by July 2010)

Inovative services – business market

- **Dark Fiber** 2003.
- **„Lit“ Fiber** 2004.
- **Metro Ethernet** 2005. (after market was liberized! – until 2005 => more than 50 mil EUR needed to get licence for leased line business)
- **SDH links** 2006. (highly reliable / SLA 99,99%)
- **MPLS** 2008.

Subscriber numbers:

- **No. HP:** >250.000
- **No. Of TV subs:** >105.000
- **No. Of Internet subs:** >35.000 (started in 2003)
- **No of telephony subs:** >20.000 (started in 2007)
- **3 play subscribers:** >30%

Twisted pair networks (ADSL) vs. Hybrid fiber coax (DOCSIS)

Technology:	ADSL	DOCSIS
Bandwidth	Low (12-24 Mbps)	High (50 Mbps per PAL channel, 80 ch.)
Triple play	+	+
Multiroom TV app.	-	+
Coverage (Croatia)	100%	15%

Broadband infrastructure competition

- CATV BB (DOCSIS) presence significantly increase the penetration of the BB
- Stimulating CATV can therefore significantly increase BB penetration
- In future, FttH infrastructure will have a main role, but this is very expensive infrastructure project

CATV – HFC network – enough resources for next 5 years

- Main reason for FttH instead of ADSL – video services
- CATV networks, using HFC networks (5-862 MHz) – 100 PAL channels
- DVB-C => 6-10 SD (3-5 HD) channels in one PAL channel / Broadcast! (multiroom)
- VoD on DVB-C platform

CATV – installing networks with more fiber

- For next 5 years HFC probably enough of BW
- Some application expected 5-10 years from now
- 3D TV could also rise BW demand significantly
- Fiber finish at node – should go deeper (building, home)

CATV – fiber networks

- Network deploying – main cost is human work
- Crisis effect lower the cost of work
- **Regulation of building construction** – each new building must have optical network inside

FttH –the long and winding road

- Decreasing margins and very long period for ROI, such investment is not attractive to telecomm operators
- Key for fast deployment of FttH is - local community
- FttH - to be treated as any other community infrastructure
- Will develop local communities (and increase real estate value)

Ducts – infrastructure of all infrastructure

- Local community have interes for:
 - ✓ Usage by multiple operators
 - ✓ Efficient usage of resources
 - ✓ Charging more operators – filling tubes as densed as possible
- Various infrastructure allows for rich offer
- It stimulate the competition

Non-discrimination defined in Framework Directive

Article 11 of the Framework Directive require:

Applications for granting the rights to INSTALL infrastructure shall be handled:

- Transparent
- Non-discriminatory
- Without delay

One could not expect such a conditions when right to install need to be issued by - incumbent

NRA role

- Recent activities of NRA in Croatia give hope to operators
- Status Quo always helps incumbent
- As most involved into the issues, NRA could initiate new mechanisms that will lead to common benefit
- There is no alternative to FttH in a long range, and NRA could help faster implementation of it

Broadband - target for society (NRA, operators, tax payers)

- High speed internet generally available
- Prices low / quality high
- Operators **fight for customer** not for monopoly



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THANK YOU !

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