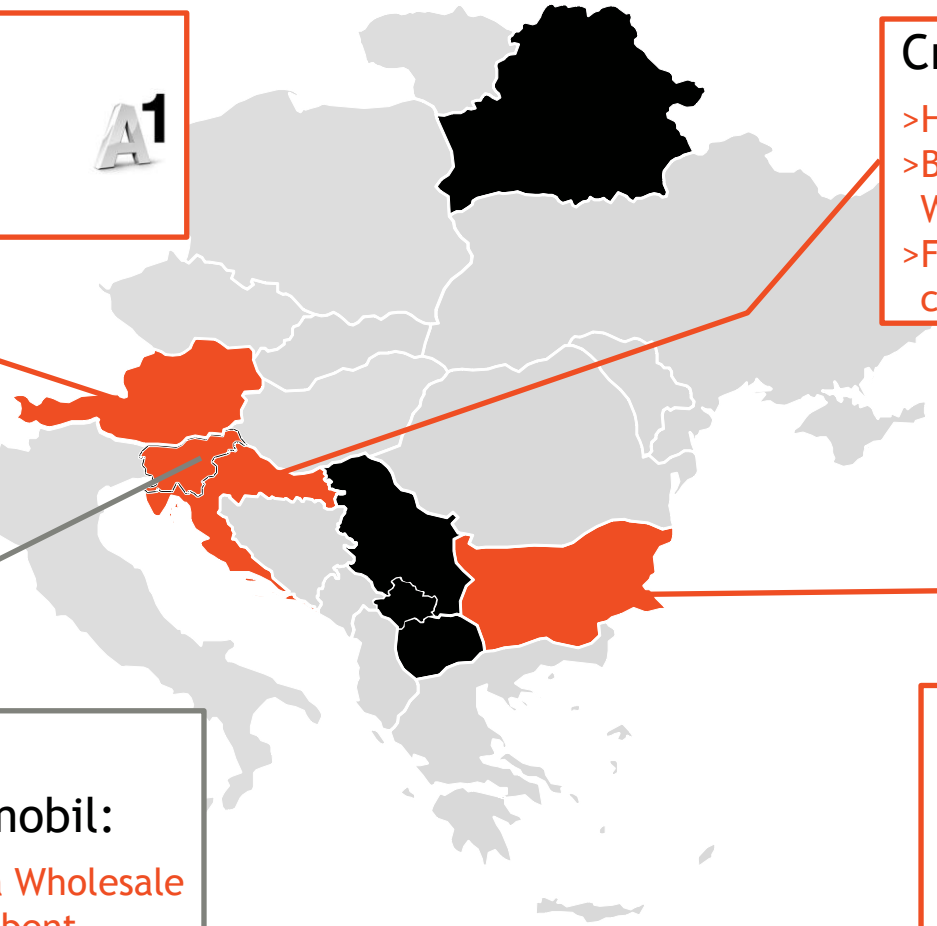
TELEKOM AUSTRIA GROUP

Fixed Access Overview

Capital Market Day, 15 January 2013

TAG – Fixed Access Footprint



Austria / A1:

>FTTEx/C/B:
DSL & Vectoring
>FTTH: GPON

Croatia / Vipnet:

>HFC (Coax Cable) Network;
>Bitstream (ADSL) - Wholesale Offer
>Fiber connections to corporate customers

Slovenia / Si.mobil:

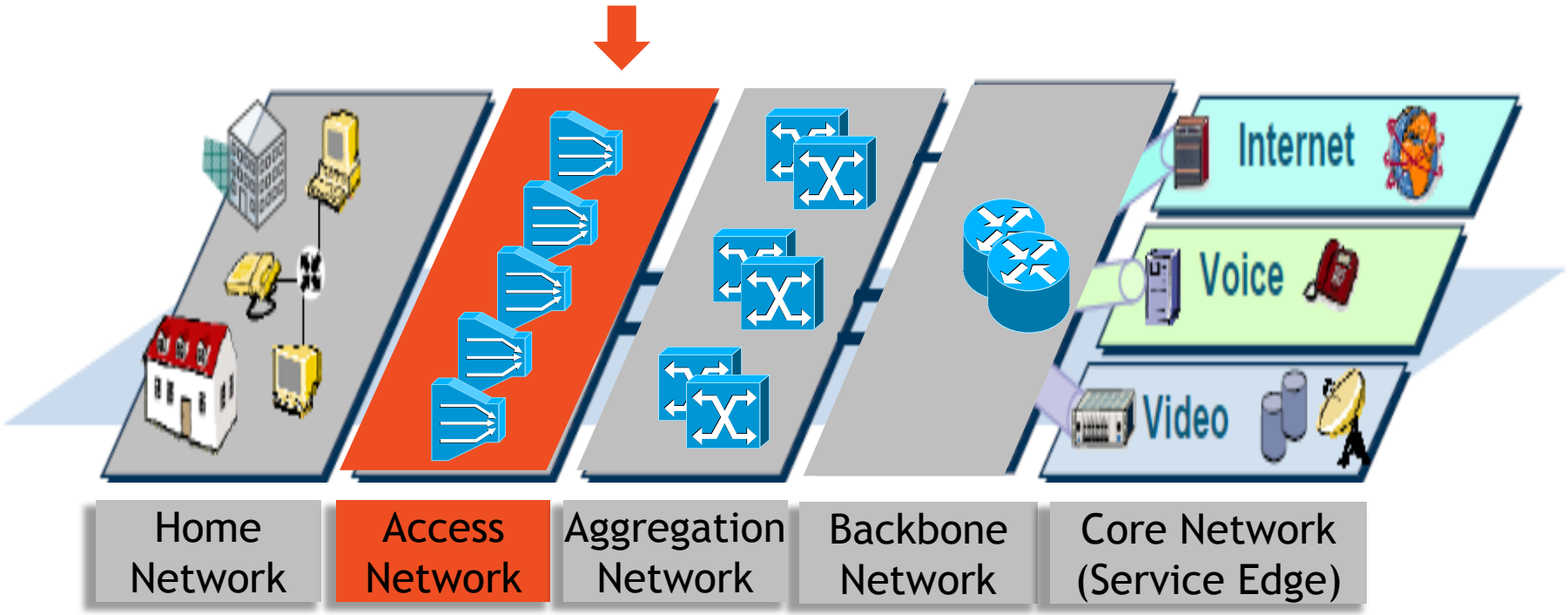
>Bitstream DSL via Wholesale offering of incumbent

Bulgaria / MTEL:

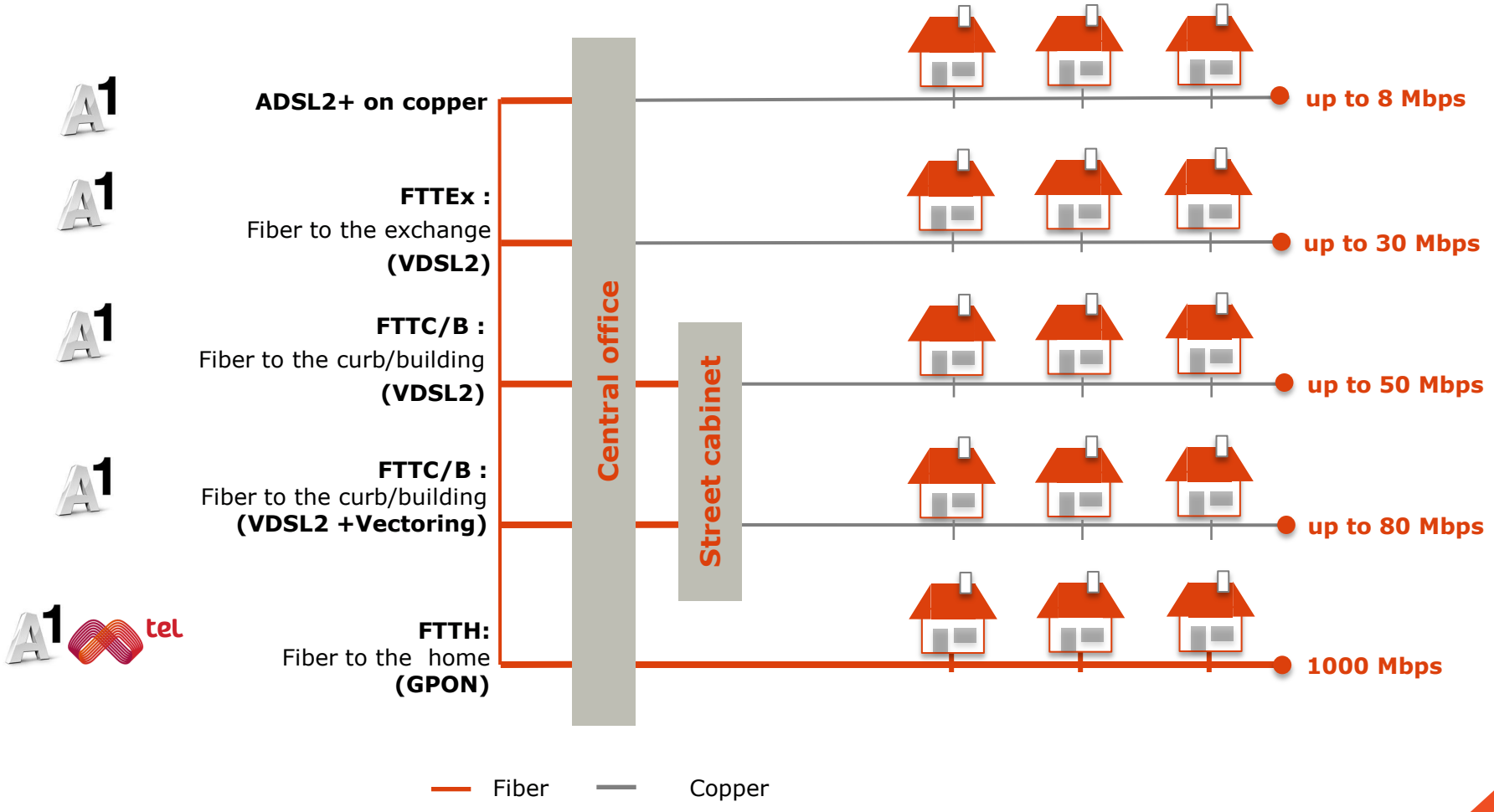
>FTTH (GPON)
>Active Ethernet

All-IP Network – Building Blocks

Different **Access Network** types
within TAG's fixed network footprint



Access Scenarios and Bandwidth Speed for Fixed Broadband Infrastructure



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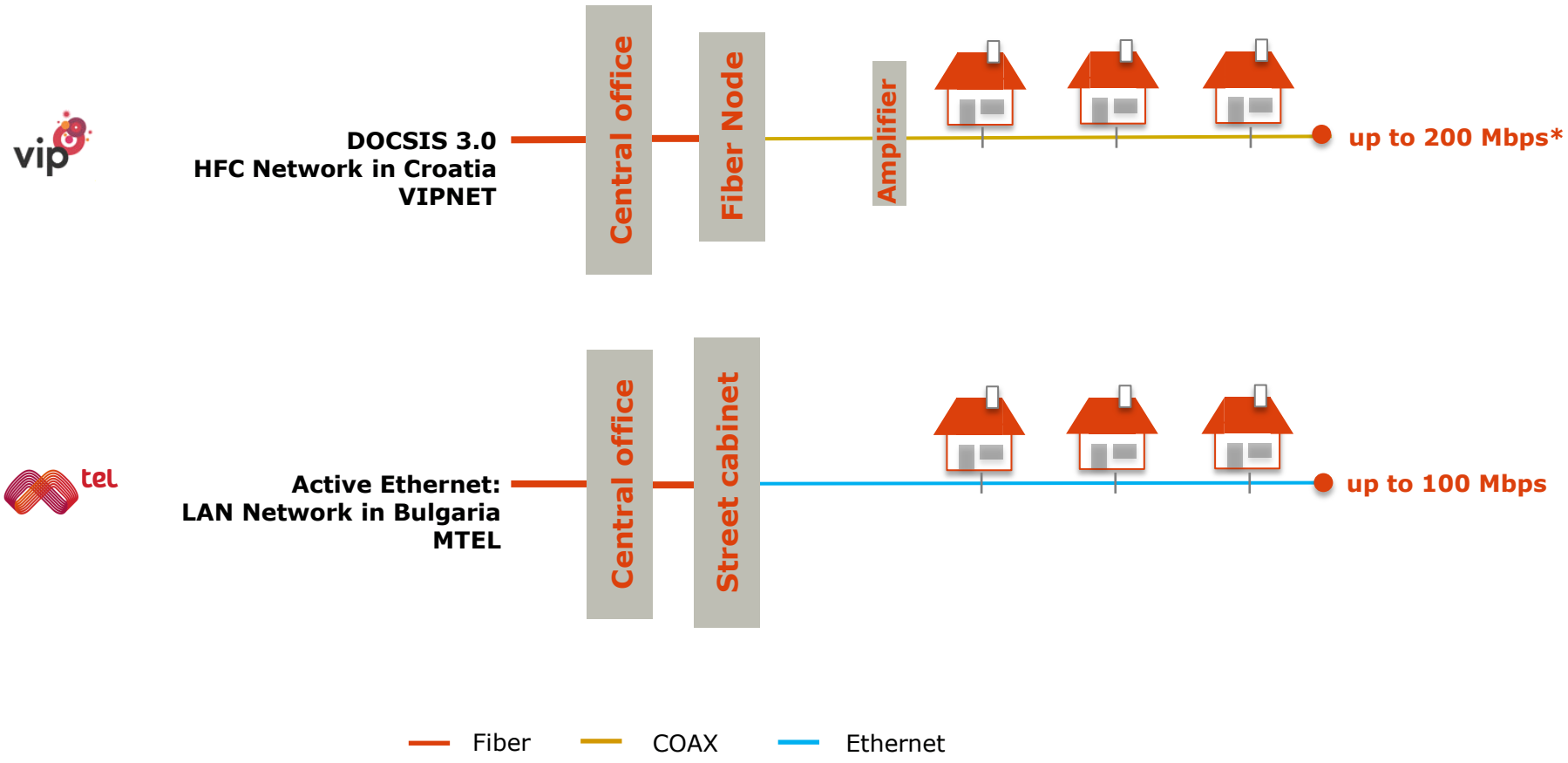
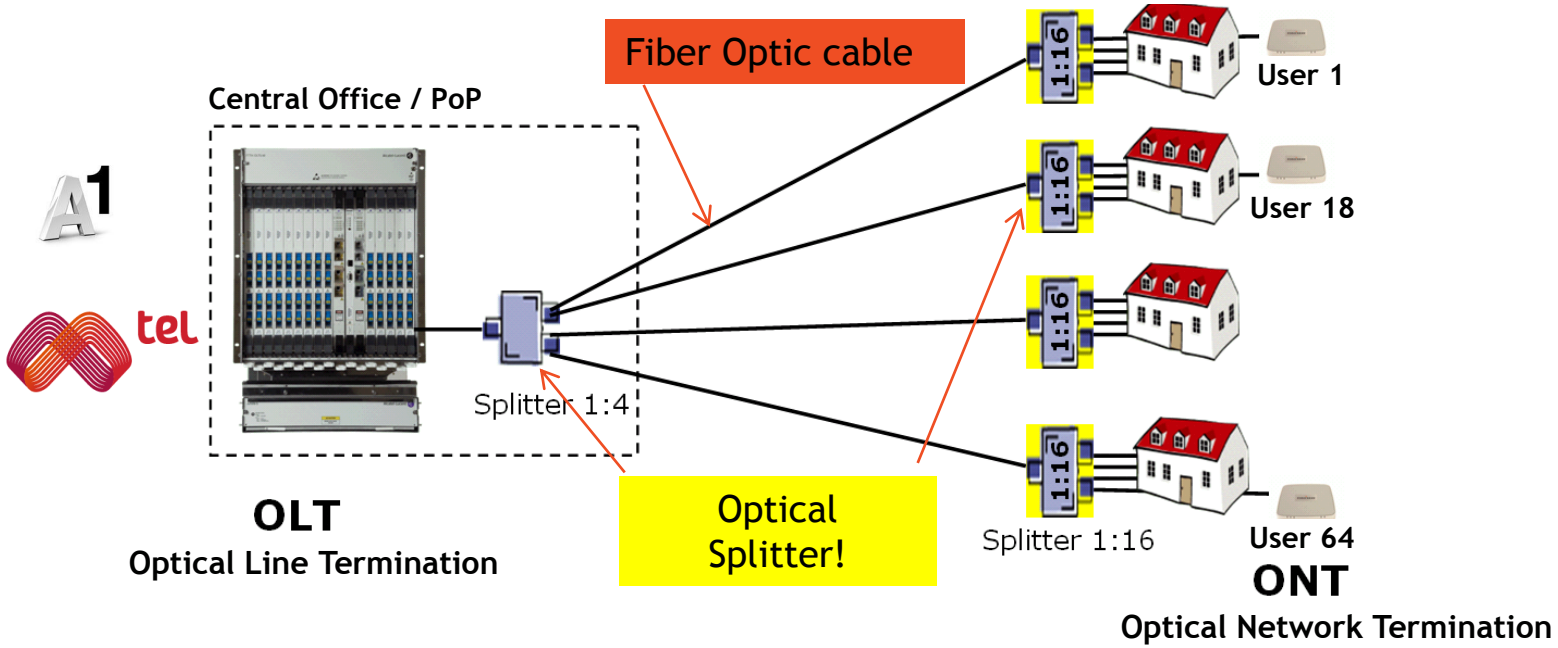


* World Record by VIPnet's HFC network: 4.3Gbps (shown in May 2012)

FTTH – Technology: GPON
Gigabit Passive Optical Network

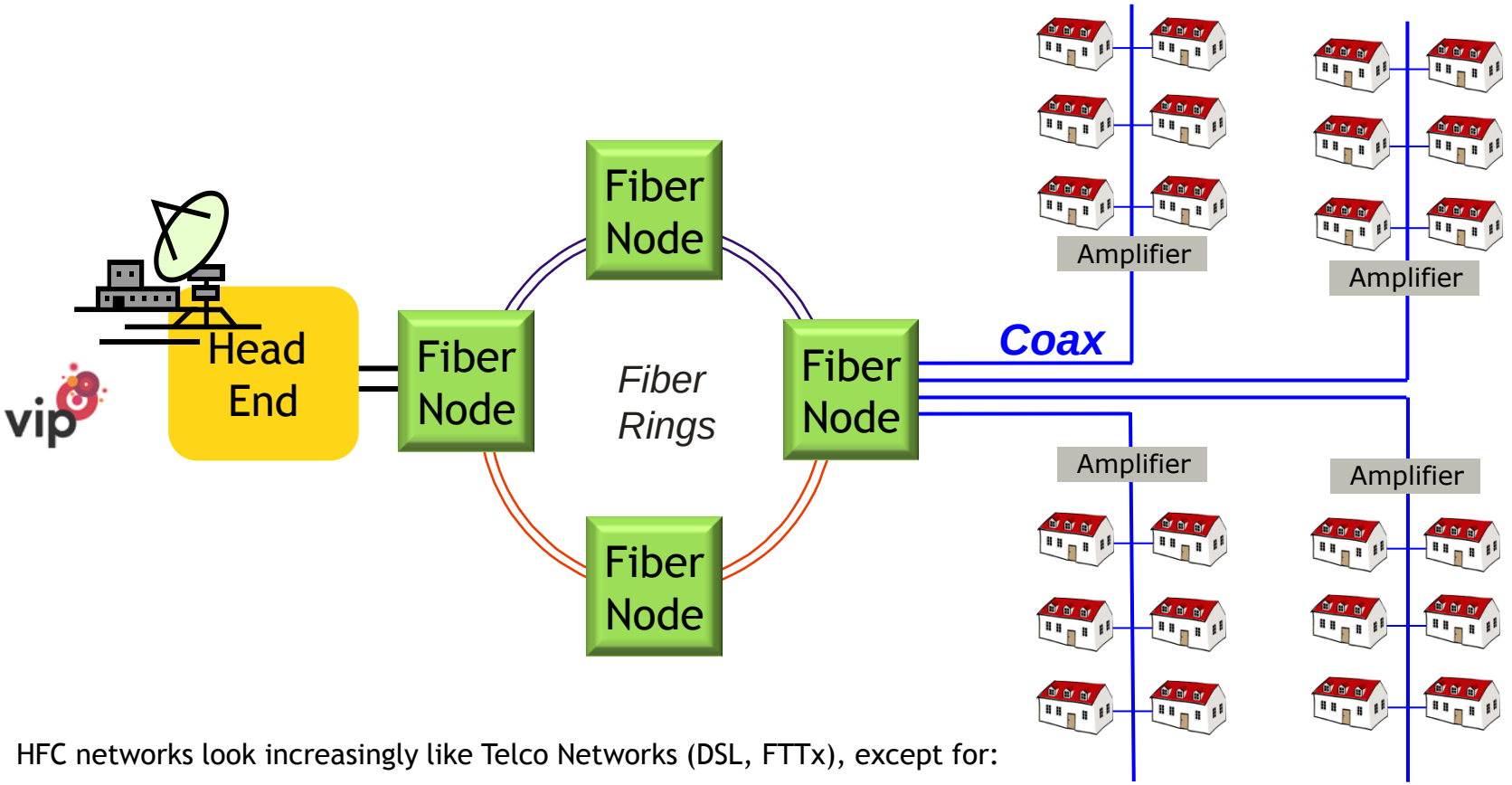


Maximum possible bandwidth

- Down: 2.5 Gbit/s
- Up: 1.25 Gbit/s

- Up to 64 customers connected to one fiber in the Central Office
- Fiber is split for each customer

HFC Network
Hybrid Fiber Cable Network ('Cable TV Network')



HFC networks look increasingly like Telco Networks (DSL, FTTx), except for:

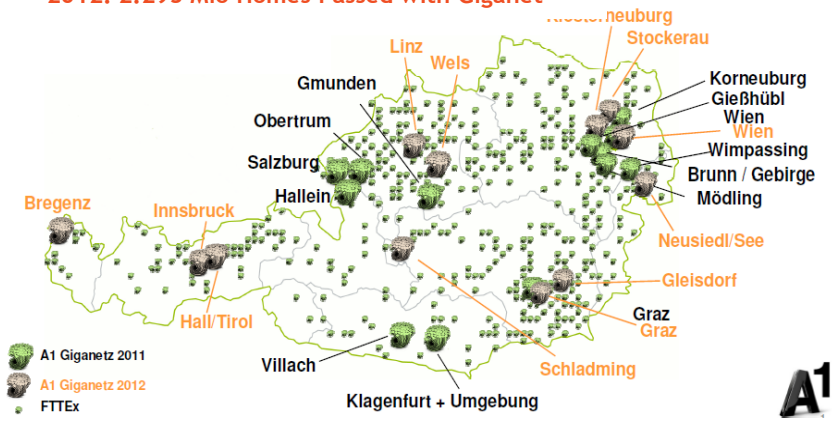
- Access Network (HFC)
- Service Delivery (DOCSIS, DVB-C and Analog RF)

TAG Fixed Access Networks: A1 - Austria

- Convergent Backhaul: more than 4.000 mobile sites connected to Fiber or IP Microwave
- All-IP NG-Voice Access completed by year-end 2013
- All-IP DSL-Access: Completed by year-end 2014
- IPv6: First business products out in 2013

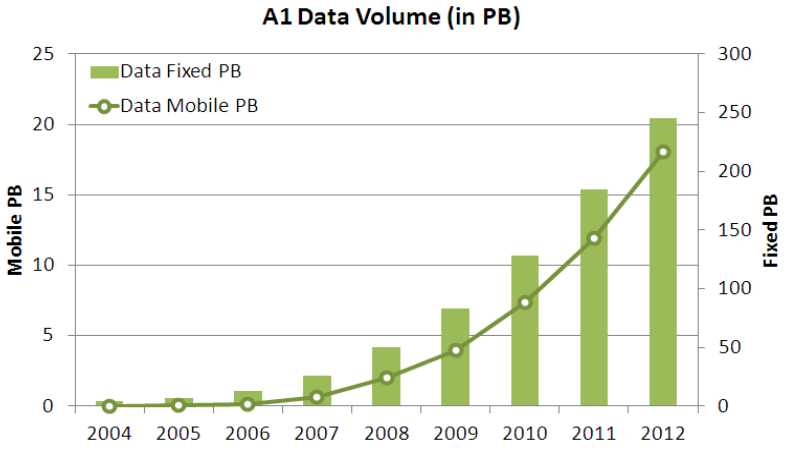
Fiber Rollout Austria

2012: 2.293 Mio Homes Passed with Giganet



NGA Strategy Focuses on Demand Driven Rollout

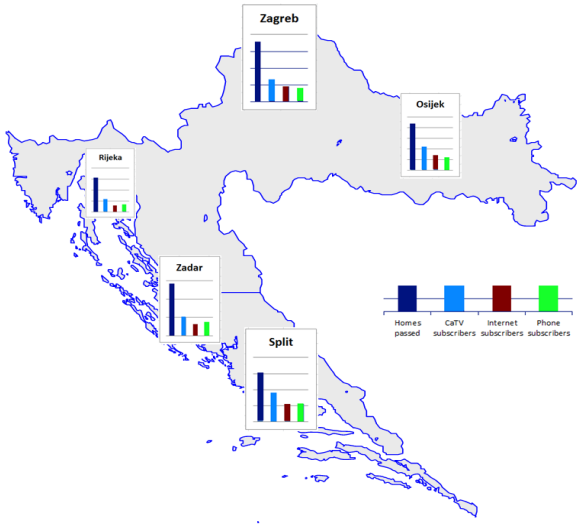
- Focus on FTTC-Rollout with „Vectoring-Ready“ hardware-equipment:
  - Giganet cities and areas
  - State-aided FTTC-Rollout in rural areas 2013 – 2014
  - Demand-driven activation of vectoring software
- Selected FTTH-Rollout in urban and suburban areas



(ELER = European agriculture fund for the development of rural areas)

TAG Fixed Access Networks: Vipnet - Croatia

- With the acquisition of B.net, Vipnet started offering first bundled quint-play packages
- Fastest access network in Croatia
- Synergies leveraged:
  - Reducing leased line OPEX significantly by using B.net's network to connect mobile sites
  - Merged 2 MPLS networks to one hybrid MPLS network
  - Merged Softswitch infrastructure of VIP and B.net
  - Merged Internet Uplink infrastructure
- First IPv6 products are recently launched



Strategy

Three main goals:

1. Smart Rollout: Extend fixed network rollout in close coordination with Marketing in order to offer bundled products
2. Convergence: Boost of mobile networks through fiber connections to the mobile sites
3. Efficiency: Exploit Synergies of fixed and mobile infrastructure in the most efficient way

- Dominant presence in main Croatian cities:
  - Zagreb (plus Velika Gorica)
  - Split (plus Solin)
  - Osijek
  - Rijeka
  - Zadar

TAG Fixed Access Networks: Mtel - Bulgaria

- New rollout is explicitly FTTH based
- Offering up to 1Gbps for residential (IPTV, Voice, Broadband Internet)
- Synergies leveraged: Combination of FTTH/GPON for residential, SOHO and mobile backhauling
- IPv6: network dual stacked till 2014

Strategy

After acquisitions 4 main goals remain:

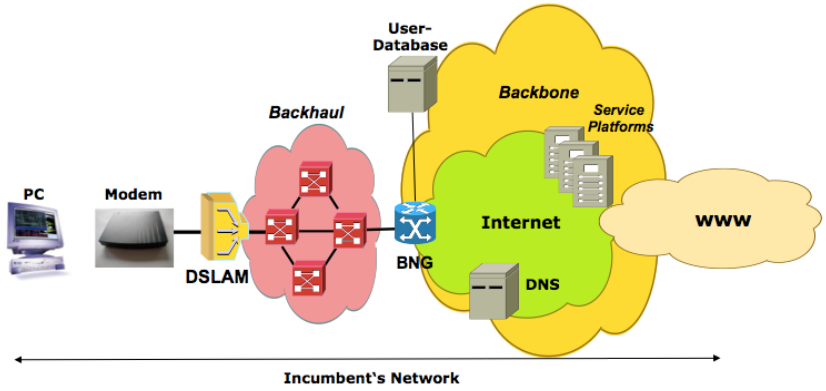
- Reduction of leased lines
- Faster connection of mobile sites through fiber
- Consolidate the transport network
- Reduce the number of PoP locations and network elements

- Dominant presence in main Bulgarian cities:
  - Sofia
  - Plovdiv
  - Varna
  - Burgas
  - Shumen
  - Veliko Tarnovo

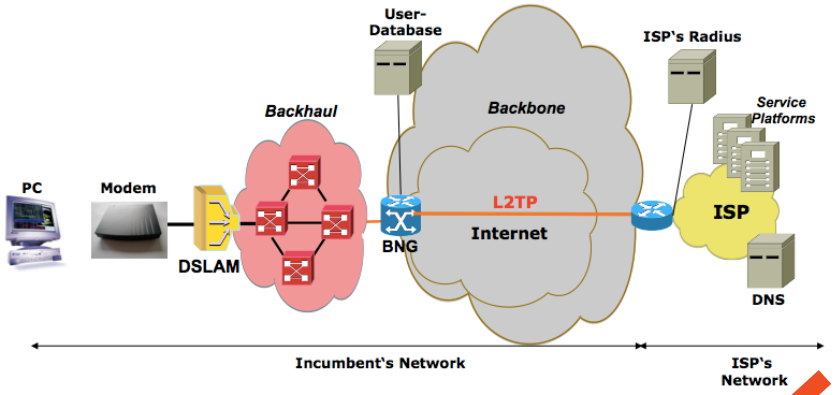
TAG Fixed Access Networks: Si.mobil - Slovenia

- Fixed line start up
- Current focus: business customers
- Wholesale offer used
- Broadband-technology: ADSL2+ and VDSL2; up to 10Mbit/s
- Access Infrastructure is ‘rented’ from incumbent or local providers

Retail Architecture



Wholesale Architecture (Bitstream)



The TAG Backbone – Fiber Connects All TAG Companies

- International MPLS backbone
- n*10Gbit/s Connections
- Dual Stack (IPv4 + IPv6) Internet Upstream connectivity
- TAG-BB now IPv6 ready

Thank you!