

Brief summary of network assets

December 5th, 2012

Fiber Optics

- Own backbone fiber network of approximately 5,350 km
- Own Metro fiber network of approximately 7,170 km
- Own duct pipe of approximately 3,550 km
- Metropolitan fiber infrastructure in 48 biggest cities of Poland

Transmission

- Over 140 C/DWDM sites in all major cities
- SDH network based mainly on Alcatel (Huawei and Lucent is also used)
 (2000+ SDH sites with STM -16 and STM -64)

Carrier/Metro Ethernet and IP Network

Two independent networks (Ethernet and IP) carrying all packet traffic

- Carrier Ethernet and Metro Ethernet for L2 services
- 320+ Ethernet nodes with 10Gbps uplink
- 120+ Ethernet nodes with 1Gbps uplink
- IP core network for other services
- 39 Core IP nodes with 100Gbps, 40Gbps and 10Gbps uplink
- 4 POI (in 3 major cities) with 2 International IP Transit Providers

Voice Network

• 6 VoIP Switches, 28 PSTN Switches

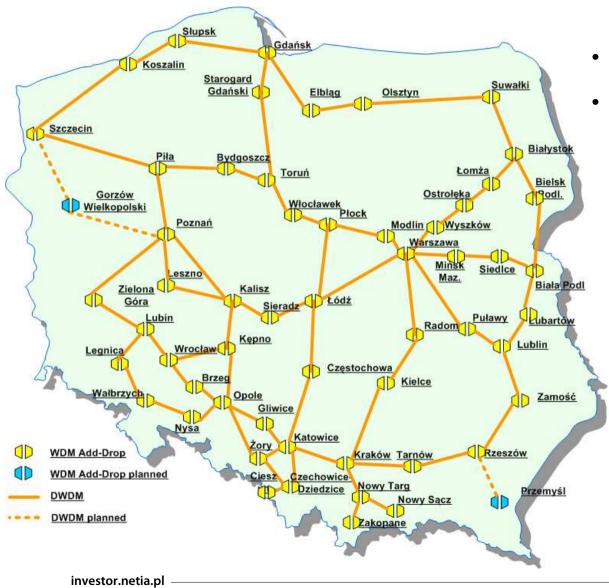
Access Network

- FTTH, FTTB, ETTH, VDSL2, ADSL2+ solutions
- 1450+ access nodes with 1Gbps uplink (870+ ADSL and 580+ VDSL), 713 LLU nodes
- Point to multipoint systems 189 sites + Wimax 133 sites

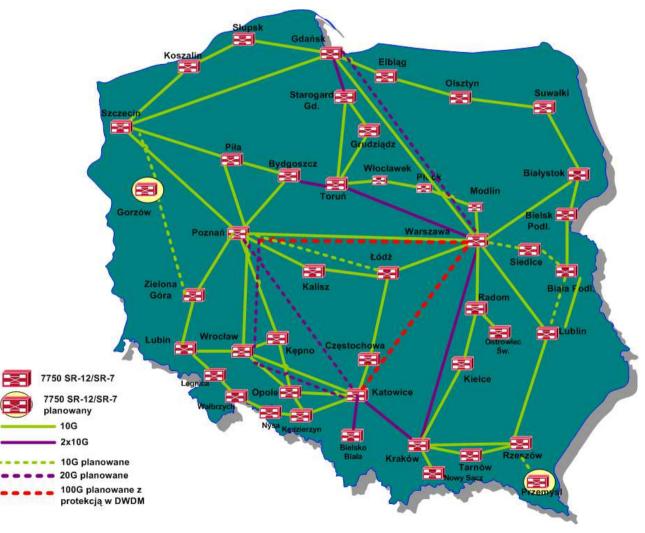
Other (5 Collocation Centers (Tier III class), International interconnect in Cieszyn (route to Prague and Frankfurt)



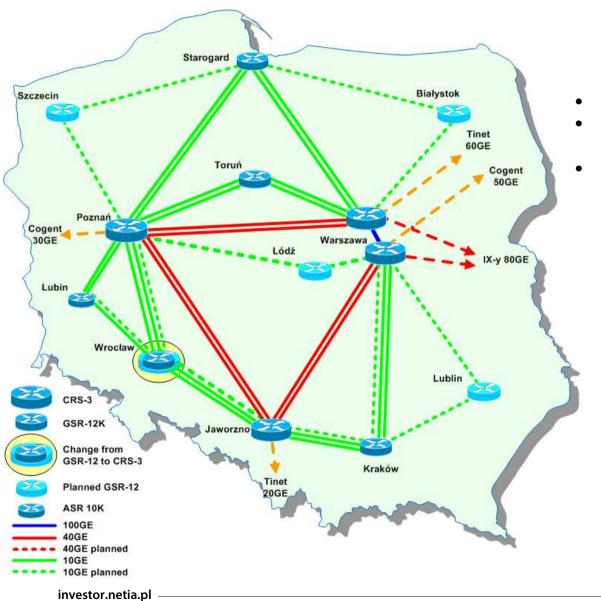
- Backbone fiber network of approximately 5,350 km+ 4153 km leased
- Metro fiber network of approximately 7,170 km
- Own duct pipe of approximately 3,550 km
- Metropolitan fiber infrastructure in 48 biggest cities of Poland
- Copper network approximately 13k km



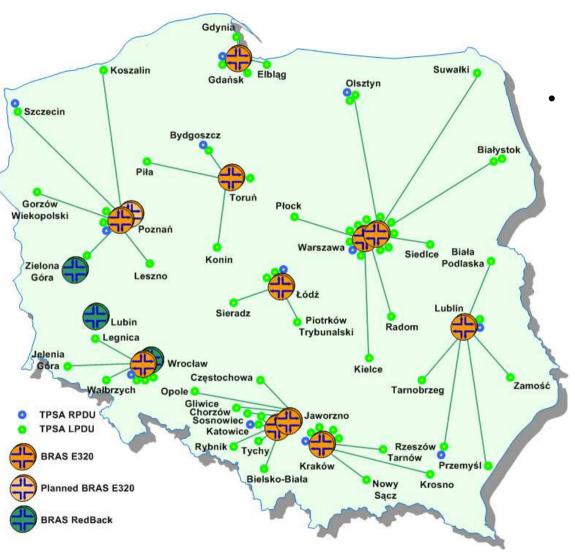
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- Carrier Ethernet and Metro Ethernet for L2 services
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- 120+ Ethernet nodes with 1Gbps uplink
- 1450+ (870+ ADSL and 580+ VDSL) access nodes with 1Gbps uplink



- IP core network for other services
- 39 IP nodes with 10Gbps uplink, 40Gbps and 100Gbps.
- 4 POI (in 3 major cities) with 2 International IP Transit Providers



Access network base on variety solutions: FTTH, FTTB, ETTH, FITL, VDSL, ADSL. Traffic is aggregated at the BRAS routers. In Netia Networsk Juniper and RedBack BRAS are used.