

PIONIER

TF-NGN update

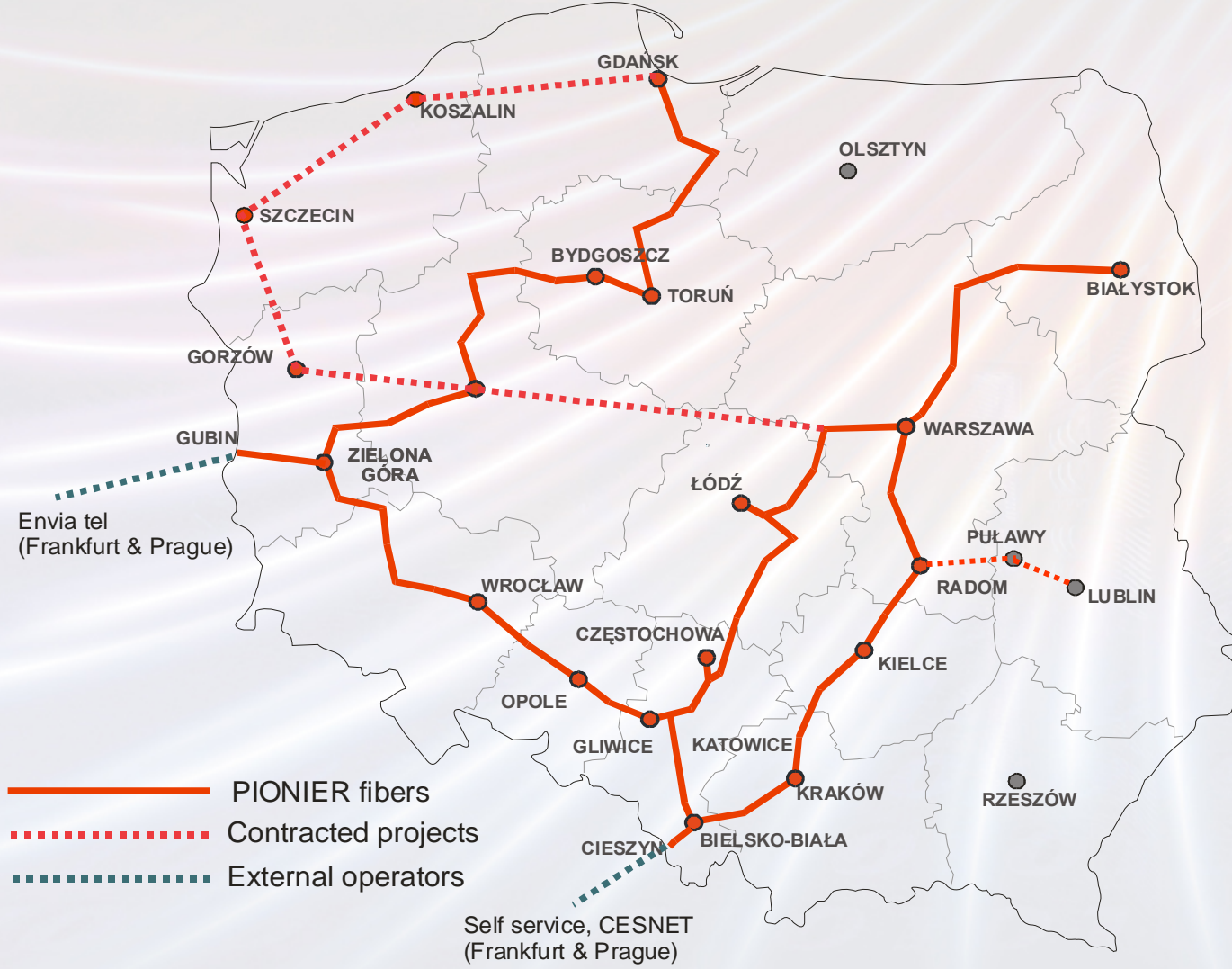
*Michał Przybylski
michalp@man.poznan.pl*

13th TF-NGN meeting in Madrid

Contents

- **current network (physical and logical)**
- **current construction work**
- **link optimization**
- **new network services**
- **network problems**
- **software**

Current network



10GE transmission



Maintenance

**Maintenance agreement with line operator, in case of major failure
24hrs to restore connectivity.**

Failures may result from:

- a) improper installation
- b) material defects
- c) Force Majeure
- d) others (aging... ?)

They are repaired by the specialized company and are paid respectively by:

- a) installing company
- b) cable manufacturer
- c) PSNC
- d) PSNC....?

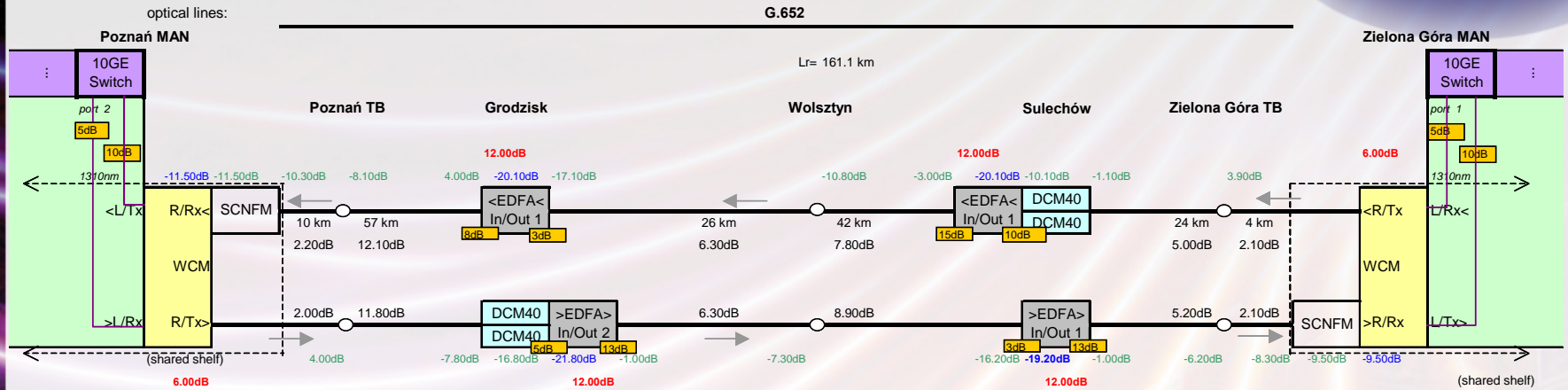
Monitoring infrastructure is being developed...

Link optimization

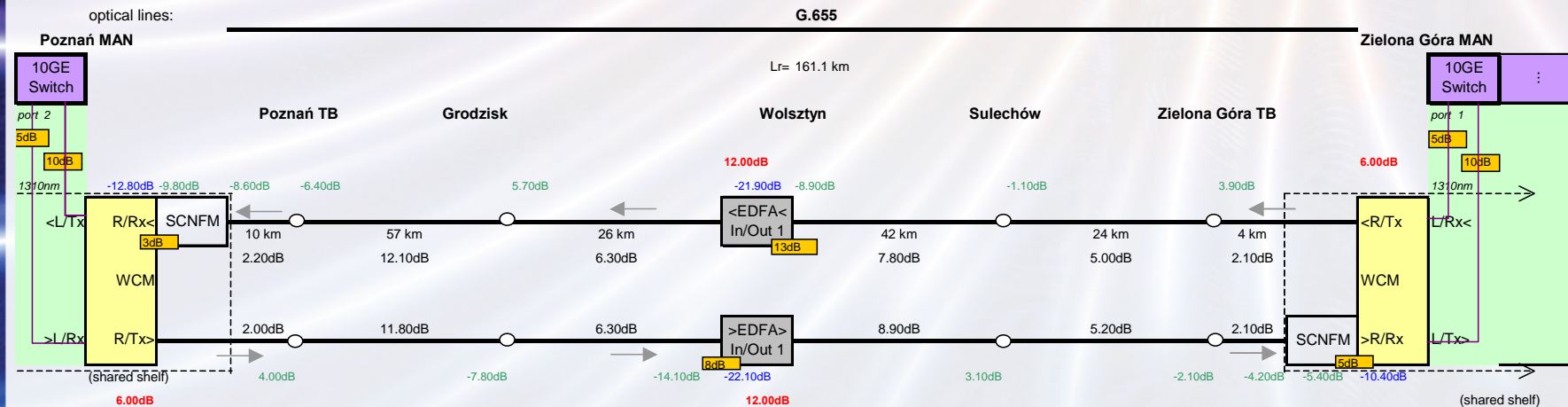
- a side effect of an urgent demand for DCM module ;-)
- replacement of G.652 fiber with G.655 fiber (NZDS)
- cost reduction via:
 - lower # of regenerators,
 - lower # of DCF modules

But:

- higher fiber cost
- and
- optimisation is valid for selected cases only and is wavelength/waveset/link dependent.



Cost approximately 140KEuro



Cost approximately 90KEuro, cost savings (equipment only): 35%

Network problems

Some problems appeared during installation:

- few faulty modules (1 DCM, 1 AMP, 2WCMs) instantly replaced on-spot**
- on a stretched link the devices report transmission errors, which are corrected by FEC mechanism (working on 82km with 80km interface ;-). This is assymetric (one way) only. Problem can be fixed by additional regenerator.**

No significant network problems noticed during the network operation.

New network services

ATM transport in 10GE network

- continuation of former ATM network (still many customers connected with ATM)
- concatenation of Juniper CCC with 10GE 802.1p VLANs
- service in the deployment/testing phase
- approx. 20 connections between 5 MANs

New network services

Bandwidth on demand

- establishes channels with given QoS between edge nodes of backbone network
- bases on VLAN and 802.1p technology
- tagged VLANs in QoS profiles (profiles globally defined).
- own topology database (defined by operator) and presented in GUI (there is no topology discovery yet)
- automatic (BFS) or manual VLAN path setup
- all decision based on configuration information gathered from switches (via SNMP and telnet)

Contacts: Maciej Stróżyk
 mackostr@man.poznan.pl

New software

- **Multicast monitoring**
- **Trouble Ticket system**
- **Network Inventory**
- **MCast6**

Multicast monitoring (MUVI)

- **Multicast network topology discovery**
- **Network connections and routers availability monitoring**
- **Event messages**
- **Statistics**
- **MIB browser**
- **Multicast groups traffic visualisation**

Contacts:

Radosław Krzywania

<http://muvi.man.poznan.pl>

muvi@man.poznan.pl

Trouble Ticket system

- web interface
- problem groups
- two types of tickets:
 - trouble ticket
 - information ticket
- the ticket life cycle:
OPEN – [UPDATED] - CLOSED (CANCELED)

Trouble Ticket System was built on the basis of the Joshua Portal Framework (designed and realized in Java technology in PSNC).

Contacts:

Bartosz Belter

<https://cactus.man.poznan.pl/tts/index/tts>

bart@man.poznan.pl

MCast6

Multimedia streaming application with IPv4-IPv6 and unicast/multicast gateway

- **client/server**
- **distributed architecture with remote components**
- **support for a number of streaming servers**
- **client: multimedia streaming player**
- **server: web-based application composed of: access, AA, gateway, server management plug-ins, etc.**
- **own JMF-based streaming server**
- **wrapper for IceCast streaming server**
- **on-demand feature**

MCast6 – future work

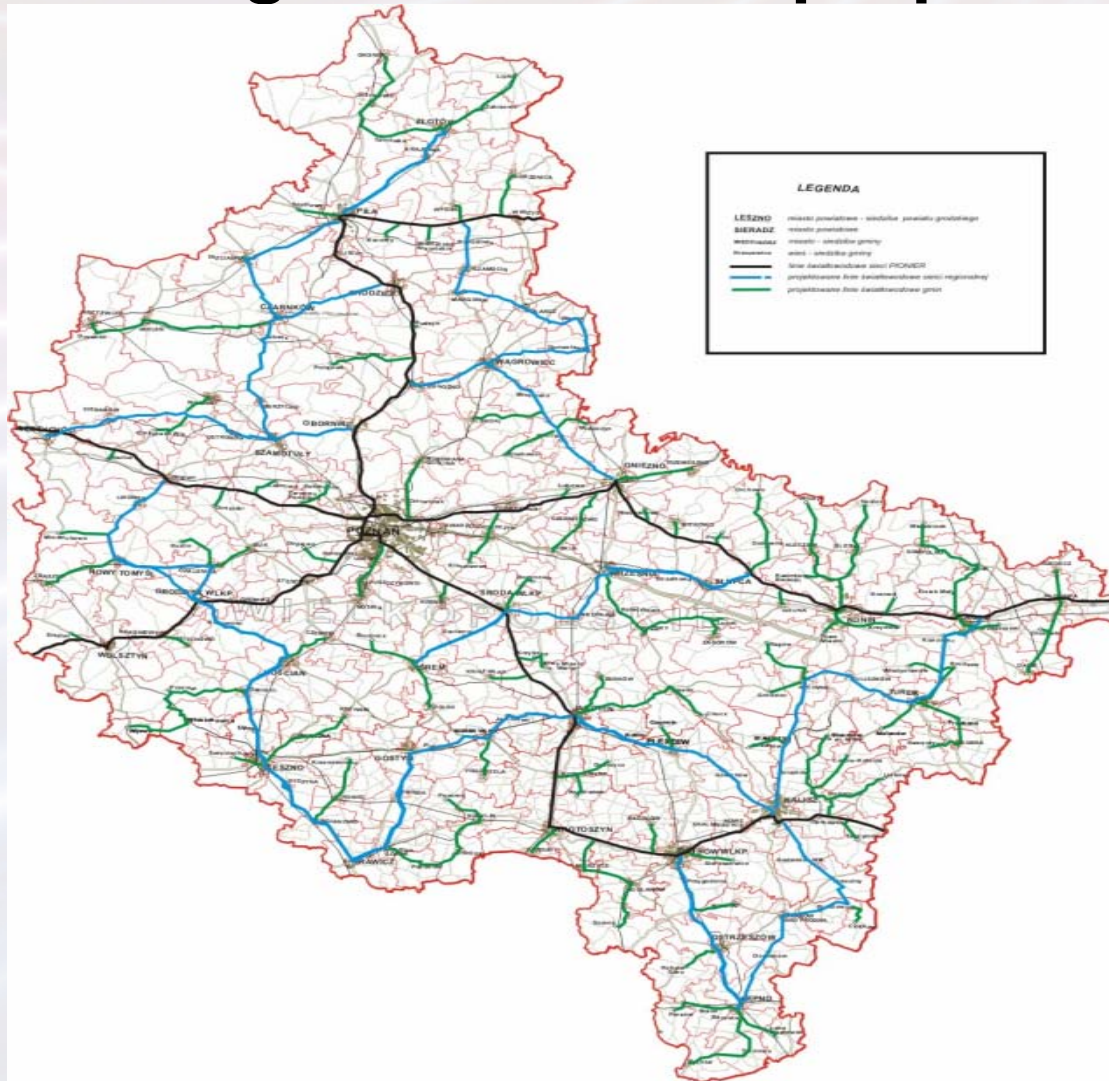
- implementation of RTSP protocol
- distributed content management
- dynamic timetable of streaming sessions (SAP/SDP)
- new wrappers, e.g. for Videolan
- streaming sessions capture module

Contacts:

Roman Łapacz

romradz@man.poznan.pl

Regional network proposal



Questions?

Thank you!

*Michał Przybylski
michalp@man.poznan.pl*