

orabiographic

Poznan Supercomputing and Networking Center Expression of interest on NEM Summit 2014

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# PSNC Networked Multimedia research

- PSNC has a complete laboratory and equipment for Ultra High Definition (4K) and 3D network streaming. The laboratory integrates cutting-edge technologies as well as many new prototype devices. The lab will be upgraded to 8K (UHD-2) in 2014/2015
- PSNC is an operator of PIONIER (10/40/100Gbit/s)
  Research and Educational Network in Poland
  connected to other European networks such as
  GEANT, GLIF, HPDMNet
- PSNC is also a supercompiting center



PSNC .

# POZNAŃ SUPERCOMPUTING AND NETWORKING CENTER

4K 3D Research fields

**UHD 3D Visualization** 

- Visualization and presentation
  - UHD 4K 3D screening system
  - 16K tiled-display-wall (SAGE-based)
  - Full HD videoconferencing infrastructure
  - 8K 3D professional 6-meter-wide wall display (2015)
- Cluster-powered off-line and on-line rendering
- Network visualization
- Scientific access to UHD visualization infrastructure possible via VISIONAIR project (FP7)
  - VR, Synthetic Environment, UHD-NET; 25 partners; Free access, reimbursement; Trans-National Access
  - http://www.infra-visionair.eu





(PSNC)

4K 3D Research fields

### Software development

- Multimedia and streaming (4K, 8K, 3D, compressed/uncompressed)
- Novel network protocols, services and applications
- Future Internet
- Scientific **visualisation**
- Electronics development
- Telemedicine, videoconferencing
- HPC
- E-administration
- Other





Experiments and Demonstrations

### • Streaming 4K & 4K 3D

- Colchester,GB (HPDMNET), Vilnius,LT (TNC2010, ICT2013), Geneve,CH (GLIF2010, HPDMNet), Prague, CZ (TNC2011)
- Amsterdam,NL (Cinegrid), Poznan, PL (Future Internet Week), Barcelona, Spain (I2CAT, HPDMNet), Zagreb, Croatia (CARNet)
- Kortrijk, BE (FIA 2013 Dublin), Cardiff, UK (Univ. Of Bristol, medical applications), Amsterdam, NL (VISIONAIR) 40G demo
- Maastricht, NL (TNC2013) 40G demo,
- Chicago, US (US Ignite)- 4K 3D uncompressed streaming







## POZNAŃ SUPERCOMPUTING AND NETWORKING CENTER

### Collaboration

- R&D team of developers with various experience (networking, video streaming, electronics)
- Experience in ultra high resolution and 3D systems
- Technology partner (UHD, 4K, 8K, 3D/stereo)
- Own Educational TV team, 4K and 3D content production team
- Access to 10Gbit / 40Gbit / 100Gbit networks in Europe and world (GEANT, GLIF, HPDMNET)
- Active partner of many European projects
- Ready to cooperate as a partner in new H2020 & other European projects ("Networked Media" / ICT / FET / E-INFRA projects)

