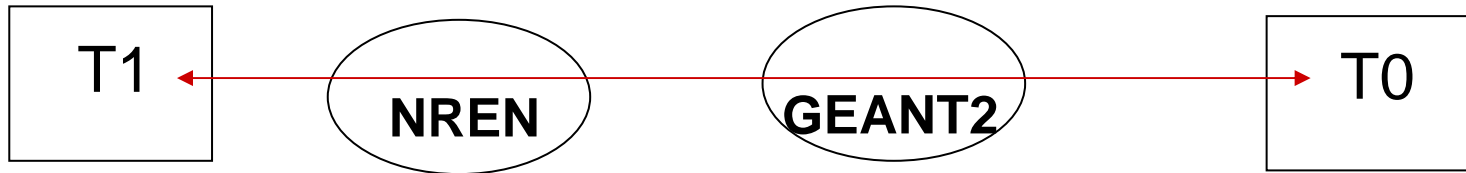


OPN operations

Roberto Sabatino

Dublin, 18 January 2006

What are we trying to solve ?



- Who is going to have a complete overview of this setup ?
- Who will be able to identify a fault ?
- How would fault fixing and reporting be co-ordinated ?
- How is change management dealt with ?
- How do we do basic performance monitoring ?

Relevant EGEE work on operations

- **GGUS:** Global Grid User Support
 - supporting EGEE and LCG
- **ENOC:** Network Co-ordination Service as documented in the EGEE documentation
 - Looks after network issues for EGEE and LCG
 - Receives network TTS from NRENs, interfaces with user (the LCG).
- Work done in co-operation with GN2 partners

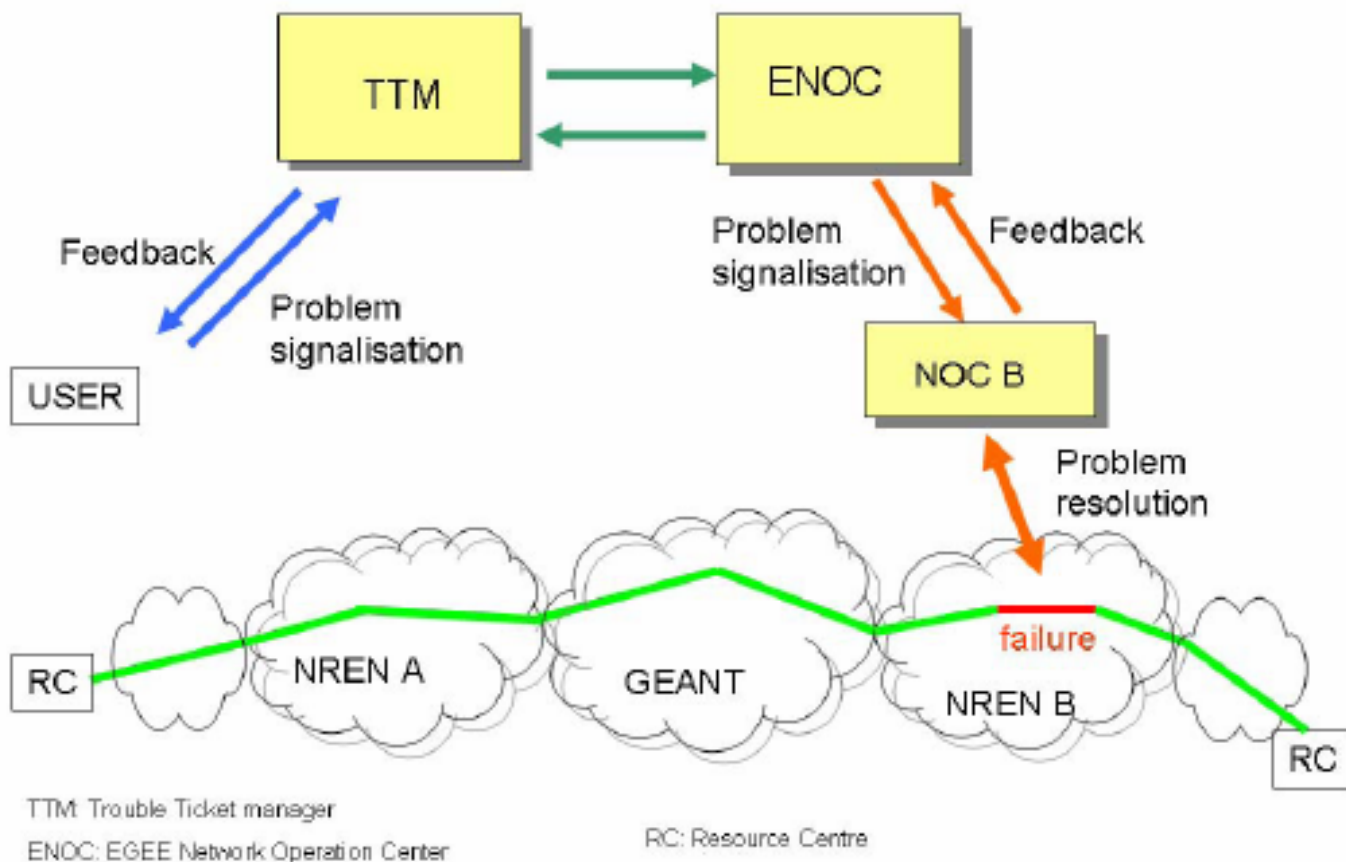
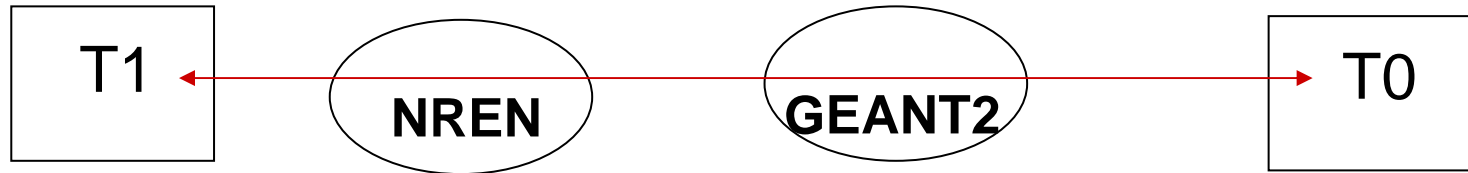


Figure 2. Summary of interactions between involved entities

Relevant work in GN2 e2e lightpaths



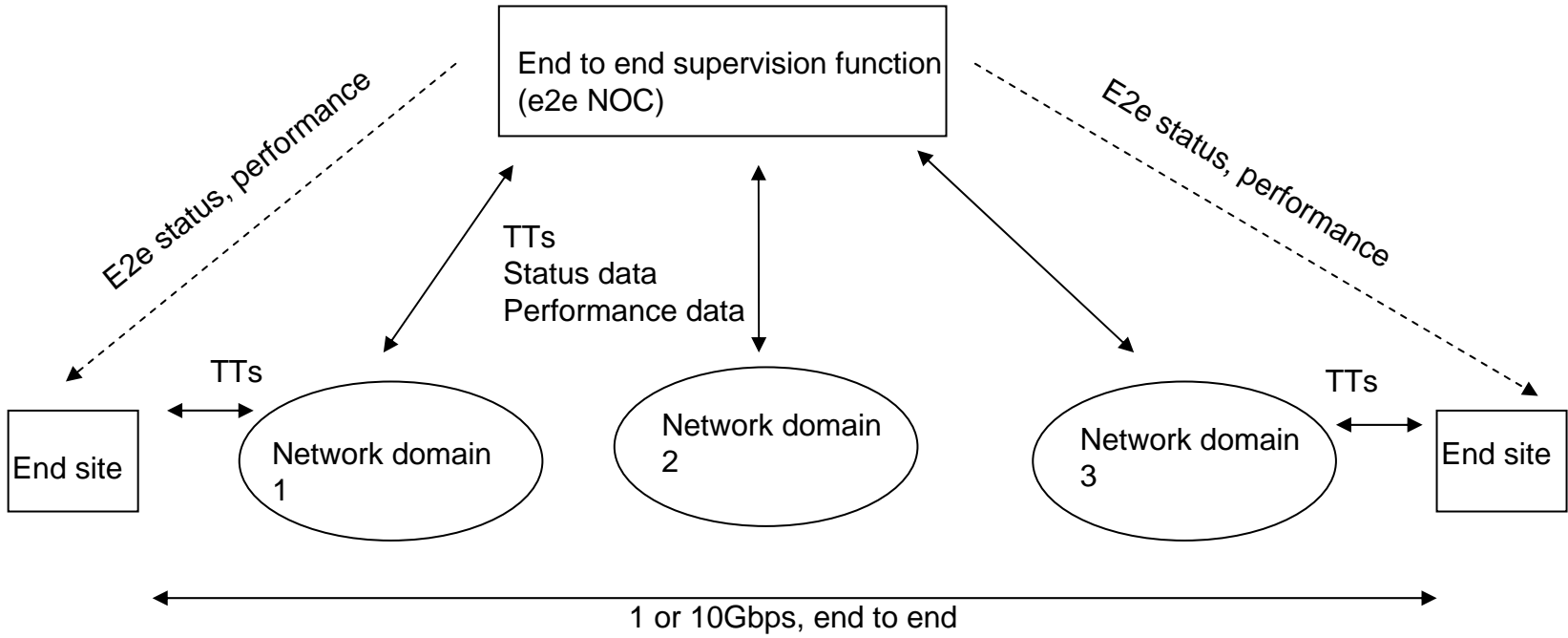
- The GN2 JRAs (JRA4 and JRA3) are looking at aspects of *monitoring* the status of such a construct
- An operational model for fault reporting and fixing is being defined in GN2 JRA4
 - A network co-ordination service performed by an operations centre

Planned GN2 work in more detail

- Operational processes between NOCs (i.e who calls whom to signal problems, who issues trouble tickets to whom, who “owns” a particular fault, what kind of reporting is performed etc);
- The networks must establish operational procedures with an operations centre performing the network co-ordination service for the e2e lightpaths .This operations centre will issue trouble tickets to their users based on the information it receives from the networks;
- database re multidomain setup of lightpaths;
- Identification of appropriate status information re connectivity and performance of lightpaths;
- Methodologies for extracting status information on lightpaths from networking equipment
- Methodologies for making available status information to the Operations Centre performing the network co-ordination service for the e2e lightpaths

The expected result

- The networks will establish operational procedures with the GGUS operations centre performing the ENOC. The GGUS will issue trouble tickets to their users based on the information it receives from the networks;
- database re multidomain setup of lightpaths;
- Identification of appropriate status information re connectivity and performance of lightpaths;
- Methodologies for extracting status information on lightpaths from networking equipment
- Methodologies for making available status information to the GGUS and ENOC



Who is the e2e NOC?

- In the case of LHC, it is the EGEE-defined ENOC
- In the case of European e2e circuits, it can be a function performed by the GEANT2 NOC
- In intercontinental cases -> TBD

Timelines

- EGEE work already defined
 - Pilot to send network TTs from NRENs to ENOC already underway
- GN2 work in progress, results expected between December and March

Next Steps

- Intensify liaison EGEE-SA2 and GN2
- Input from non-EU NRENs
- Input users (T1s)