

Welcome to the

16th TF-NGN Meeting

13th-14th January 2005

VUB, Brussels

Agenda – Thursday PM

- 13:30** **Opening/logistics/admin**
- 13:40** **GÉANT + GÉANT 2 update (Michael Enrico, DANTE) (20 mins)**
- 14:00** **GN2 research and service activity updates (various) (40 mins)**
- 14:40** **Optical networking work area in TF-NGN (Victor Reijs, HEAnet) (20 mins)**
- 15:00** **Lightpath provisioning: Is GMPLS the solution?
(Sten Hubendick, Wavium AB) (30 mins)**

- 15:30** **Break**

- 16:00** **Hands-on evaluation (of new router and switching hardware) in TF-NGN
(Marcin Garstka, PSNC) (20 mins)**
- 16:20** **Transport Protocols work area in TF-NGN (Radoslaw Krzywania, PSNC)
(30 mins)**
- 16:50** **IP Routing work area in TF-NGN (Mauro Campanella, GARR) (20 mins)**
- 17:10** **Impact of IS-IS changes on BGP: case study on the GÉANT network
(Bruno Quoitin, Université catholique de Louvain) (30 mins)**

- 17:40** **Close**

Dinner

7:30pm at:

Restaurant La Scala

Chaussée de Wavre 132

1050 BRUXELLES

Agenda – Friday AM

09:00 IPv6 (Tim Chown to lead) (75 mins)

10:15 Break

10:45 Ethernet Transport over Packet Switched Network for the Networking Community (Bertrand Duvivier, Cisco Systems) (60 mins)

11:45 Future meetings + AOB

12:00 TF-NGN Meeting Close

Followed by...

12:00 – 13:00 Lunch (canteen)

13:00 – 16:30 Mini-workshop on IP Routing

Update on GÉANT (1)

- Current GÉANT backbone will be extended until GÉANT2 is RFS and migration has been completed!
- Most significant operational update concerns a JUNOS upgrade (6.1 → 6.4)
 - Required as part of mcast IPv6 rollout
 - Ana Romero will update in IPv6 session

GN2 Contract

An INTEGRATED INFRASTRUCTURE INITIATIVE - I3

NETWORKING ACTIVITIES - NAs

(Human networks)

Management & Policy Making

Dissemination and outreach

User support (NRENs)

SERVICE ACTIVITIES - SAs

(Focus on services, not infrastructure)

Network Service Provisioning

Network Operation and Support

E2E QoS

JOINT RESEARCH ACTIVITIES - JRAs

(Focus on academic, technological research)

Performance Monitoring

Security

BW Reservation

Test Beds

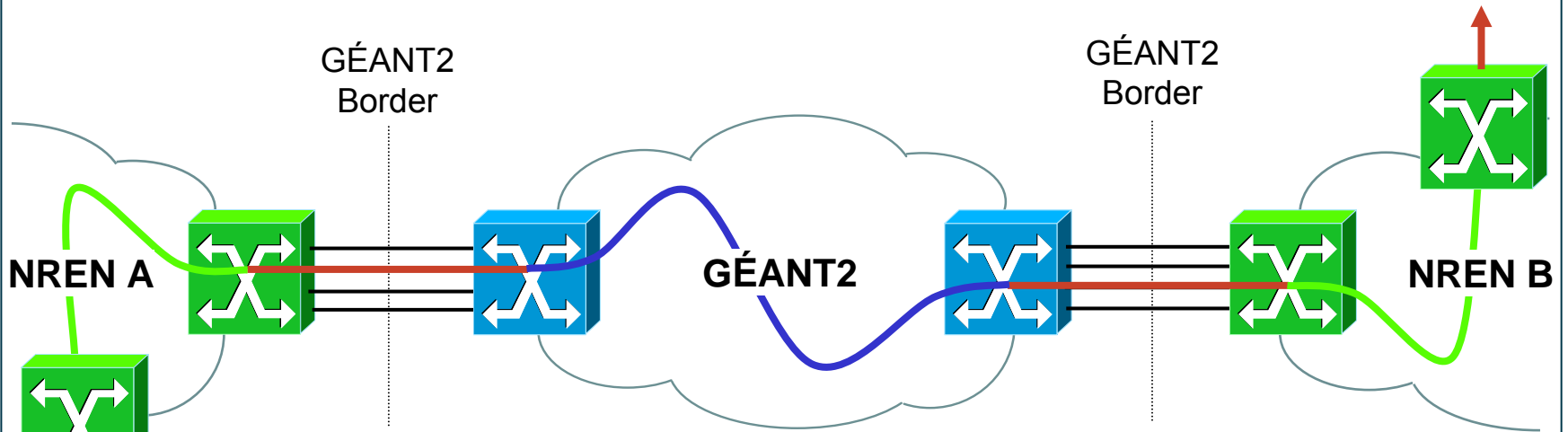
Mobility

SA1 – Procurement

GÉANT2 Procurement

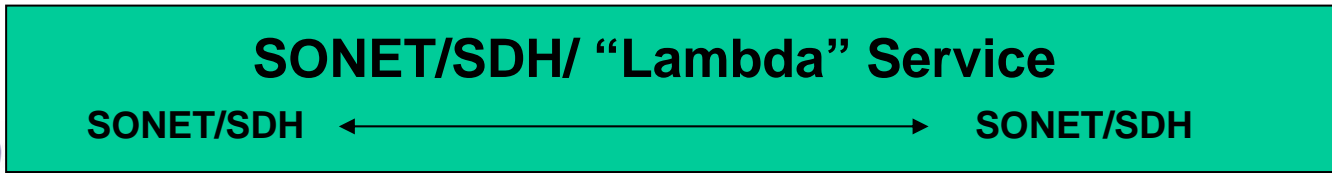
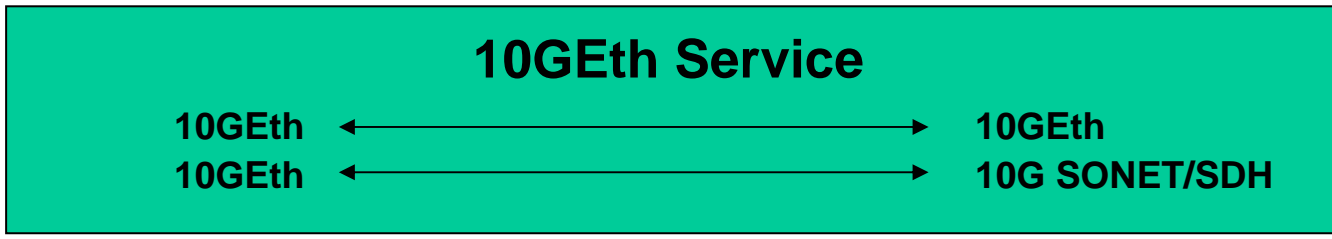
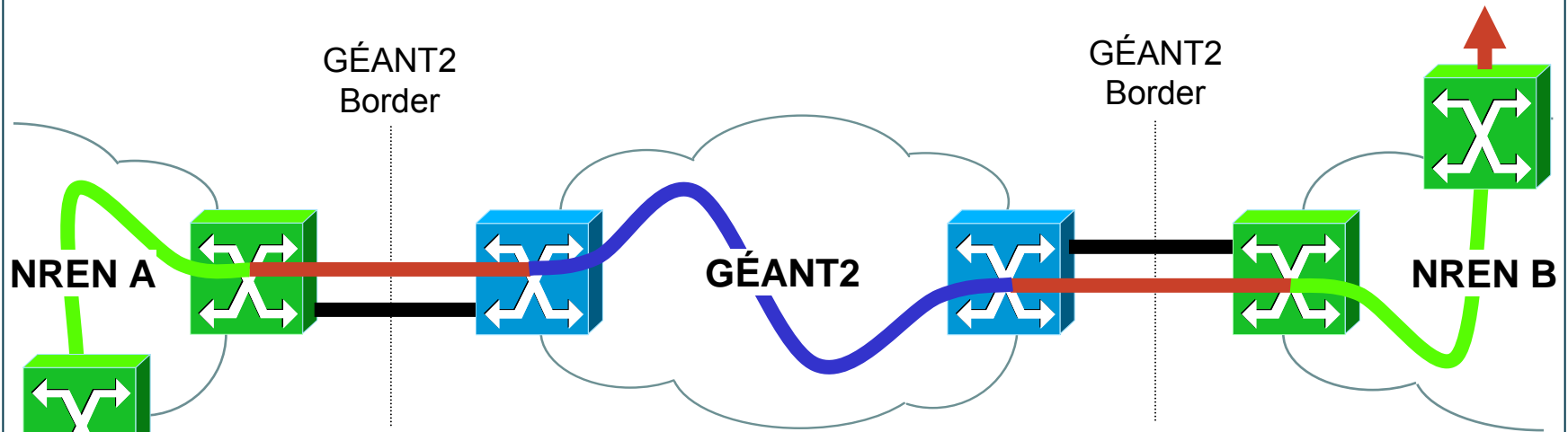
- Connectivity, equipment & NOC tenders still ongoing
 - but the end is in sight!
 - decisions now expected around March/April
- Connectivity (dark fibre & λ /SDH) suppliers: shortlisted (& waiting on equipment tender)
- Equipment suppliers: shortlisted & further assessment currently underway
- Also dependency on two other components:
 - an extended cost sharing model (work underway but no agreement yet)
 - establishment of GÉANT2 service portfolio (technical meeting held in Amsterdam on Dec 21st)

7 P2P (“Lightpath”) Service Scenarios



GÉth Service	
Phys GÉth	Phys GÉth
Phys GÉth	SONET/SDH (GFP)
Phys GÉth	10GÉth (VLAN)
10GÉth (VLAN)	SONET/SDH (GFP)
10GÉth (VLAN)	10GÉth (VLAN)

7 P2P (“Lightpath”) Service Scenarios



Cross-border Fibres

- Neighbouring NRENs with fibre to the border team up to make inter-country lambdas available to DANTE
- Clearly of interest to those NRENs who have access to dark fibre
- May provide some cost savings to the project
- Decided to investigate further and maybe do some experiments
- Not perceived to present any significant further delay to the current procurement programme

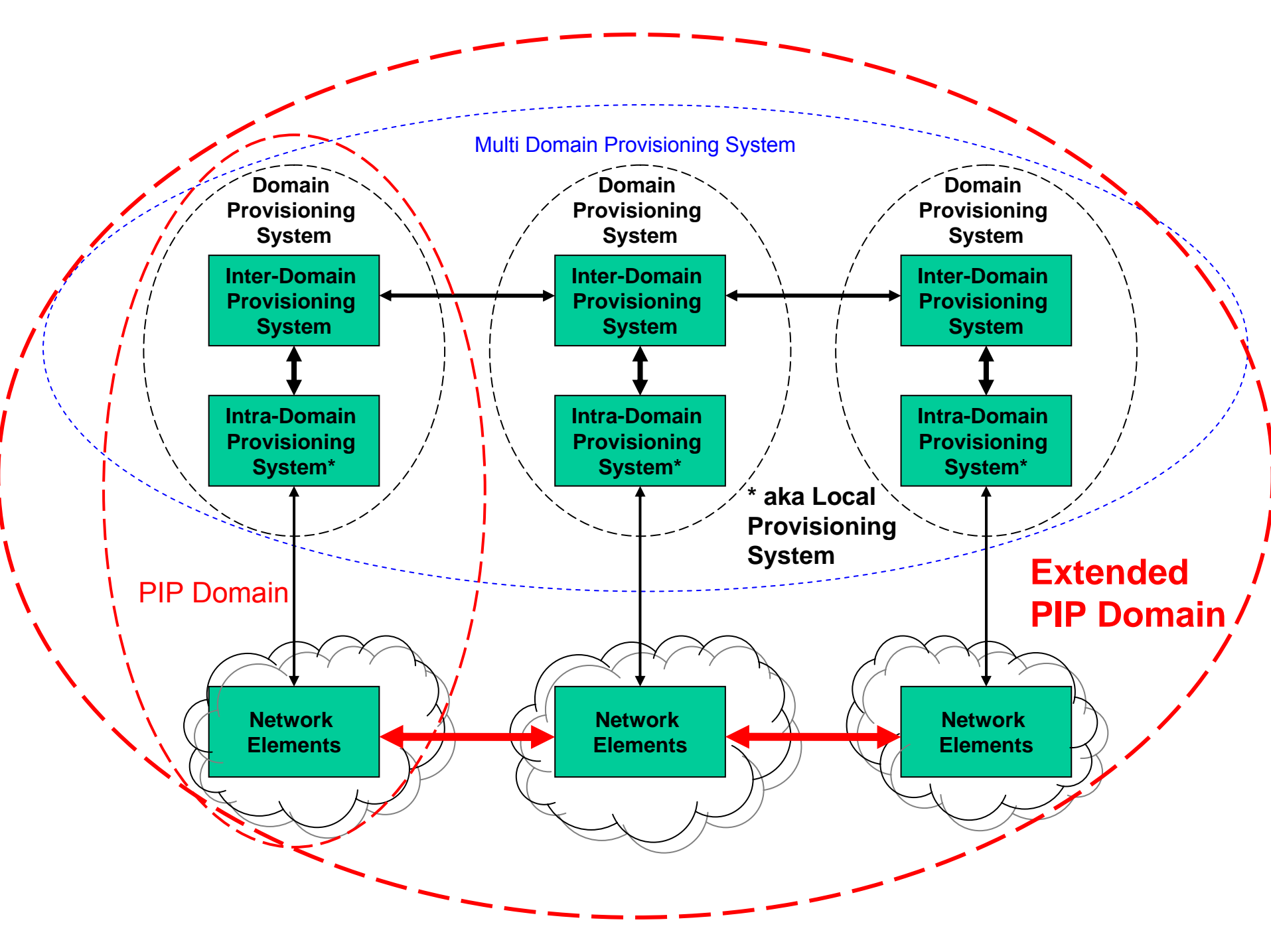
SA3 – End to End QoS

SA3 - PERT

- Pilot GN2 PERT started 1 Nov
 - Case Managers' diary accessible at <http://cemp1.switch.ch/cgi-bin/twiki/view/PERTDiary/WebHome>
 - PERT cases viewable at <http://roundup.geant2.net:8080/pert>
- PERT Ticket System expected to be complete end of Jan (PSNC)
 - Similar to standard NOC systems
 - Emphasis on long distance collaboration (e-mail dissemination, Instant Messaging logging)
 - Integrated Knowledge Base component

SA3 - PIP Provisioning

- EGEE/GN2 Interface specification (first version) delivered end of Sep – bulk of work done by DANTE within EGEE
- PIP Allocation Policy deliverable due end of February
- Multi-Domain Provisioning System high level architecture discussed and agreed at Provisioning System team meeting in Athens, December
 - Web services to be used
- SA3 to develop reference system and to publish interfaces to enable NREN-developed (intra-domain) systems to be take part in Multi-domain PIP provisioning



JRA1 – Performance Monitoring

JRA2 – Security

JRA2 Highlights

- 1st deliverable (DJ 2.1.1,1) is out:
 - “Initial Security Recommendation”
 - for securing GÉANT2 and NREN networks
 - overview of stuff (NEs) to protect (and how)
 - plan for implementing shared policies & procedures (pro- and reactive)
 - latter includes proposals for “Remote Triggered Blackholes & Sinkholes” (to defend against DoS attacks)
 - Deliverable planned to be updated in M14 (Oct)
- For more information...
 - TF-CSIRT meeting 27th-28th January, London
 - <http://www.terena.nl/tech/task-forces/tf-csirt/>

JRA3 – BW Allocation & Reservation (BoD)

JRA3 Highlights

- Kick-off meeting held in November
- Two of the work items now underway
 - WI-02: Reqs Gathering & State-of-the-Art
 - WI-03: Service Specification (Design)
- Other two WIs not yet started (largely dependent on results of WIs 2 & 3)
 - WI-04: Implementation
 - WI-05: Testing

JRA3 (WI-02) : Reqs Gathering

- Initial survey of potential BoD users (projects, applications):
 - 10 “users” currently identified (seems low)
 - Detailed service characteristics questionnaire compiled
 - Next step: circulate to “users” & process results
- Whole process taking longer than anticipated so some delay in output (including a deliverable – due M6/Feb) is expected

JRA3 (WI-02) : SoA

- Initial list of “transport” technologies compiled
 - e.g. fibre, lambdas, SONET/SDH, etc
 - assessment template being drawn up (identifies various issues relevant to BoD service implementation)
 - when complete, template will be used to compare and contrast the technologies
- Ditto for capacity management middleware (BW brokers)
 - comparing & contrasting already underway
- Ditto for control plane and AAI
- Deliverable (Review of SoA) due M7 (March)

JRA3 (WI-03)

- Service Specification (Design)
- Very early days for this WI
- Tasks that kicked off during December:
 - Study of integration of (heterogeneous) technologies
 - Initial work on framework and basic architecture specification
 - Specification of interface(s)
 - Specification of broker function and resource usage policies
- Bit of a slow start to this work...
- 1st deliverable (Phase-1 BoD Service Design) due M10 (June)

JRA4 – Testbed

JRA4 Highlights

- Build and operate an Enhanced Testbed facility
- Principle users: other JRAs, GN2 partners, other FP6 projects...
- Budget of €2.6M for equipment and connectivity
- Kick-off meeting held in November
- Questionnaire to poll user reqs now being compiled

- Testbed construction likely to be delayed...
- ...need to build production network (GÉANT2) first

JRA5 – Ubiquity (Mobility) & Roaming Access