



Cross Border Services within the GÉANT2 Project

CEF Workshop, 30.5.2006, Praha



Hans Döbbling, CEF Workshop, 30.5.2006, Praha



Project History

Competing Paradigms

Current Thinking
resulting from several CBF workshops
and discussion in the NREN PC

CBF based services

drivers for GÉANT2

- Saving project cost
- Enlarging GN2 fibre footprint
- Refining the mesh
- Shortening backup routes

CBF based services financial inclusion into GÉANT2

- Assumption: NREN DF footprint already exists, only short CB interconnect required
- incremental cost principle to be applied similar to GN2
- Reimburse additional equipment and interconnecting DF lease costs

CBF Based Services

Service Types

Service	Description
Type A	Wavelength provided between GN2 PoPs
Type B	Wavelength provided for projects, bypassing GN2
Type C	Bilateral services independent of GN2

Known CBF Projects, see JRA4-Wiki

- Type A
 - PL-DE, PL-CZ
 - PT-ES
- Type B
 - DE-CH-IT, DE-FR, DE-NL i.e. for LHC and DEISA
 - DK-DE, DK-NL ?
 - ... many more

Engineering requirements (1)

- Production services, not experimental
- Expandability to 8 wavelengths per route
- Signal Formats
- Overall SLAs comparable to GÉANT2

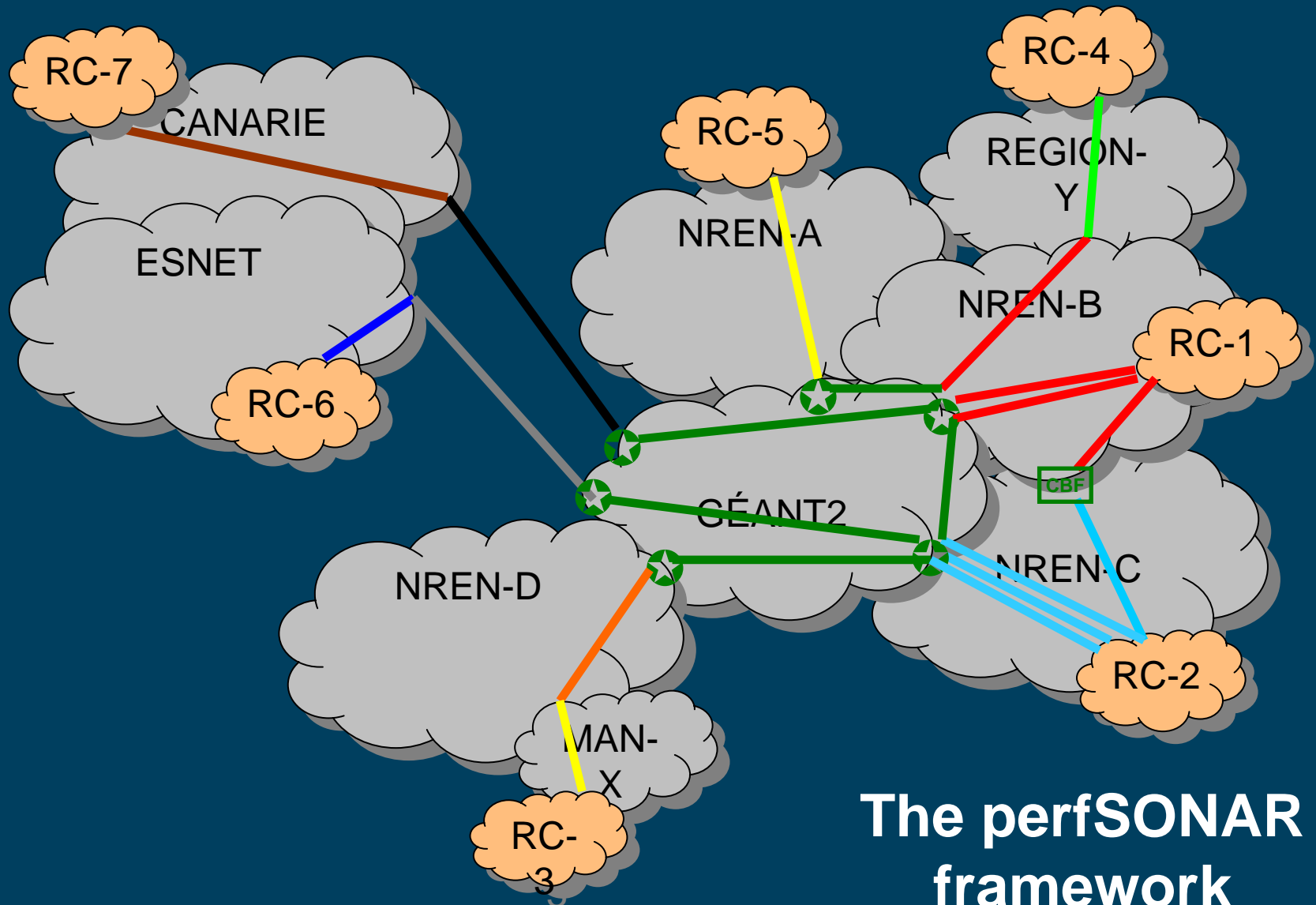


Engineering requirements (2)

- Maintenance Agreements
 - 4-8h in in route terminals & PoP sites
 - NBD for in line equipment
 - Fibre break repair guarantees
- Optical link engineering
 - sufficient margin to avoid reengineering during CBF lifetime

Engineering requirements (3)

- Equipment standards
 - IEEE 802.3 10GE LAN-PHY, GE
 - ITU-T G.707 SDH client signals
- Monitoring
 - System compatible with the perfSONAR framework
 - Web services (MPs, MAs,...)
 - Support multi-domain operational model



The perfSONAR framework

Engineering requirements (4)

- Operational Model
 - Requirements identical for CBF as for any E2E link
 - demarcation points between operational domains
 - responsibility for inter-domain links
 - support the GN2 or project E2ECU (ENOC)
 - accept TTs from E2ECU

End User

Ops Staff

is customer of
reports general fault

is customer of
reports WLAN fault

Project-NOC

Trouble Tickets

reports WLAN fault

**Other ..
NOC**

**NREN ..
NOC**

**GÉANT2
NOC**

E2ECU

**Weathermap
Project View**

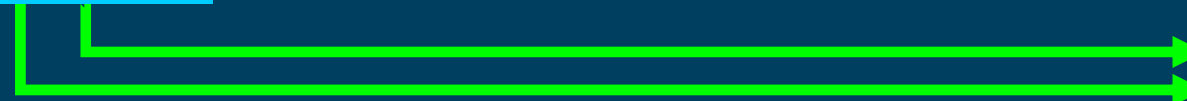
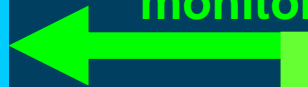
TT System

MSR

Project-OPN

Provides
monitoring data

**automated
perfSONAR
framework**



Charging onto the GN2 Project

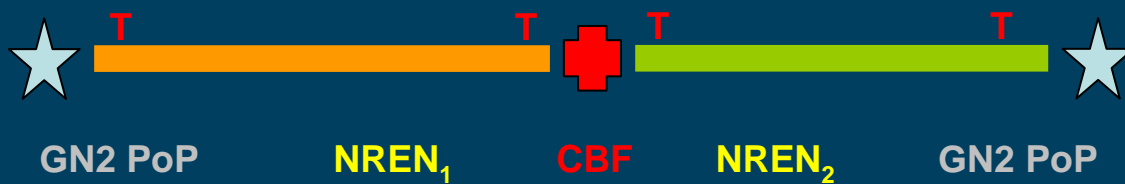


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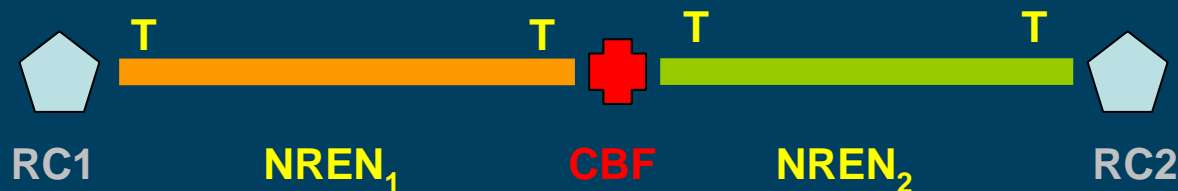


Recoverable cost types

Type A



Type B
CBF



Type B
Transit



Cost Claims

Equipment, fibre or equivalent services charged against GN2 must have been procured according to EC rules

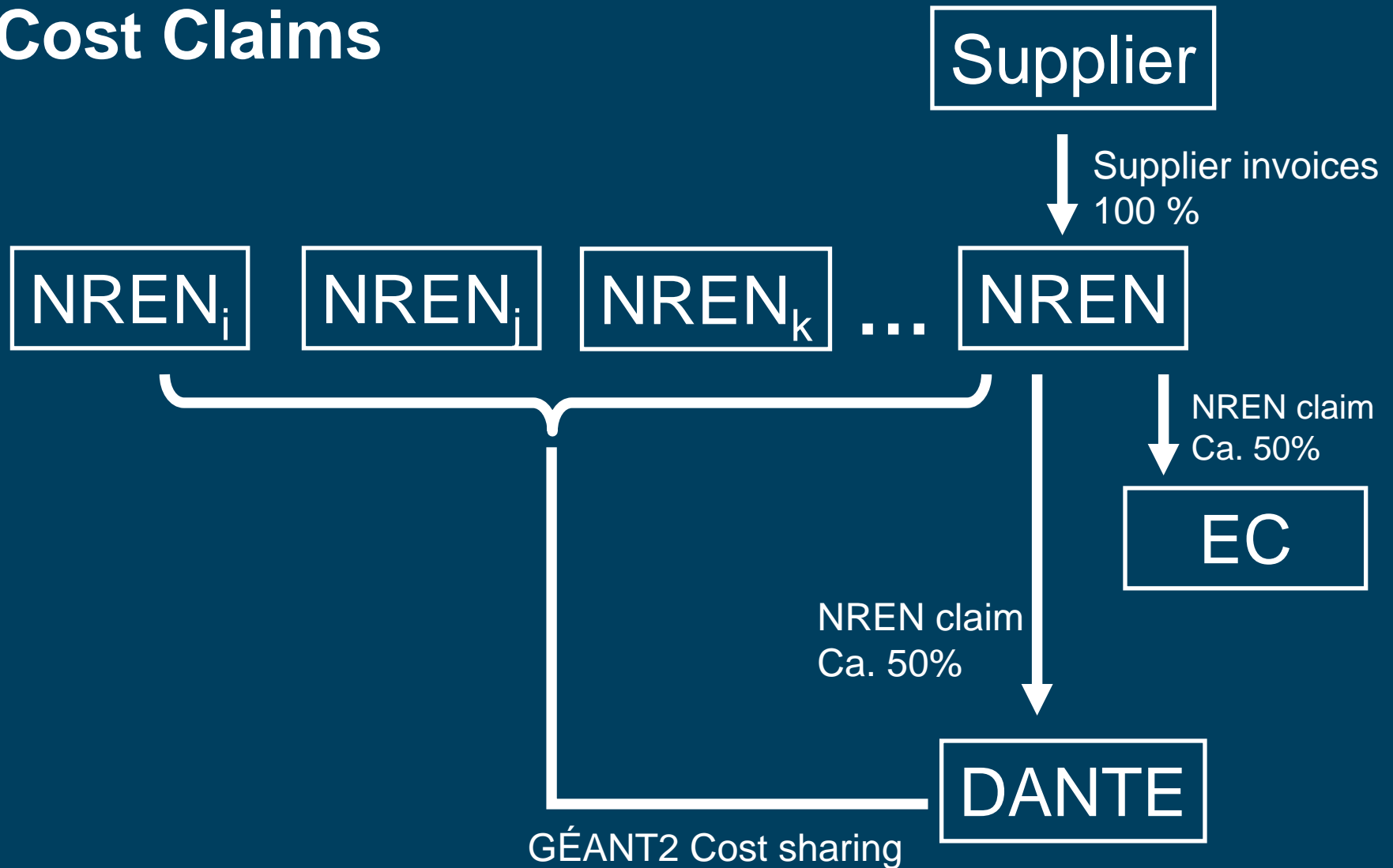
Ownership

Although equipment procured by the GN2 partners for the purposes of CBF will be the property of those partners, equipment procured that is funded by the GN2 project will remain under the control of the project

Decision Procedure

- Cost Effectiveness and technical comparison
 - Contributing NRENs provide data to DANTE
 - Analysis by DANTE, comparison to
 - commercial leased services
 - alternate routing in existing infrastructure
 - potential additional GN2 DF
 - Use of EC funding
 - DANTE reports analysis to the GN2-EXEC
 - Individual case by case decisions by EXEC or NRENPC

Cost Claims

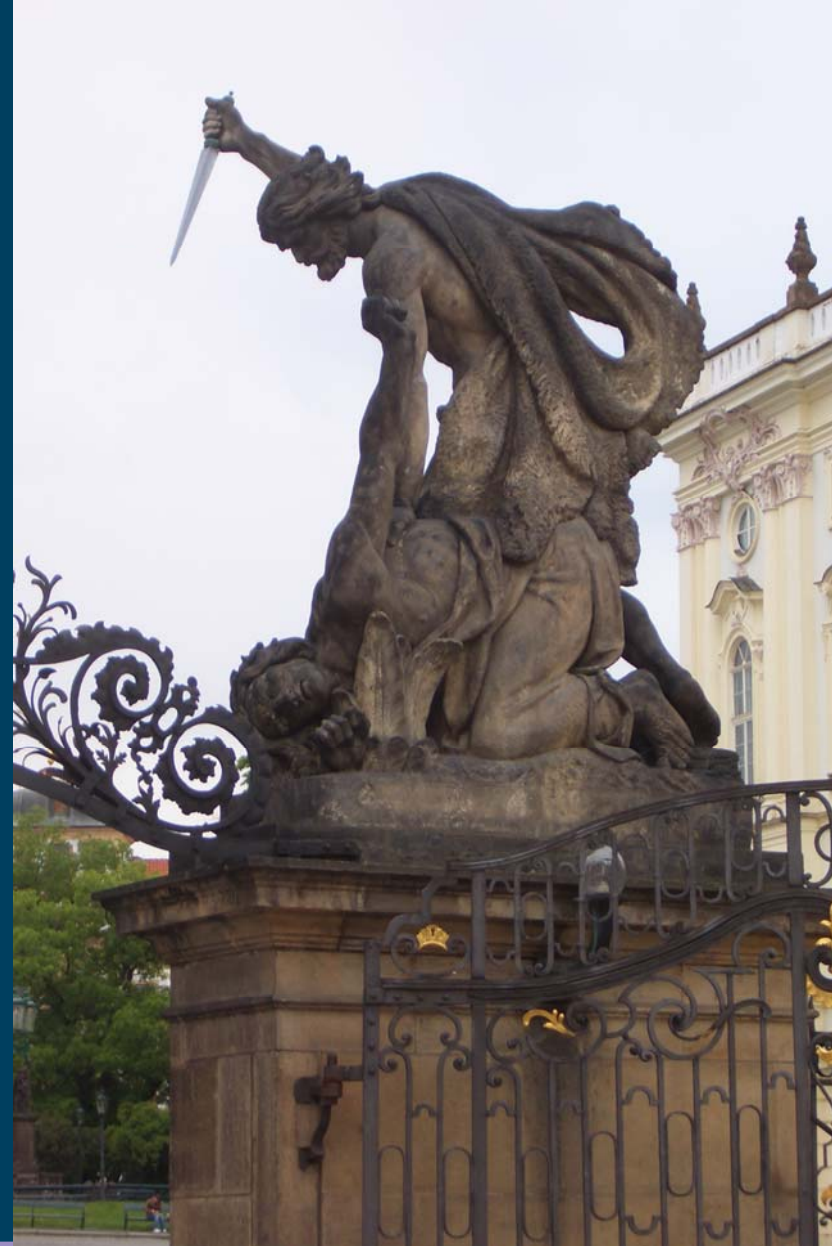


Developing a template MoU

**next CBF meeting: Wednesday 14.6.
in Cambridge
during GN2 Technical WS**

**Will CBF services
kill GÉANT2 ?**

**Is there a need for a
Pan-European
Network ?**



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