

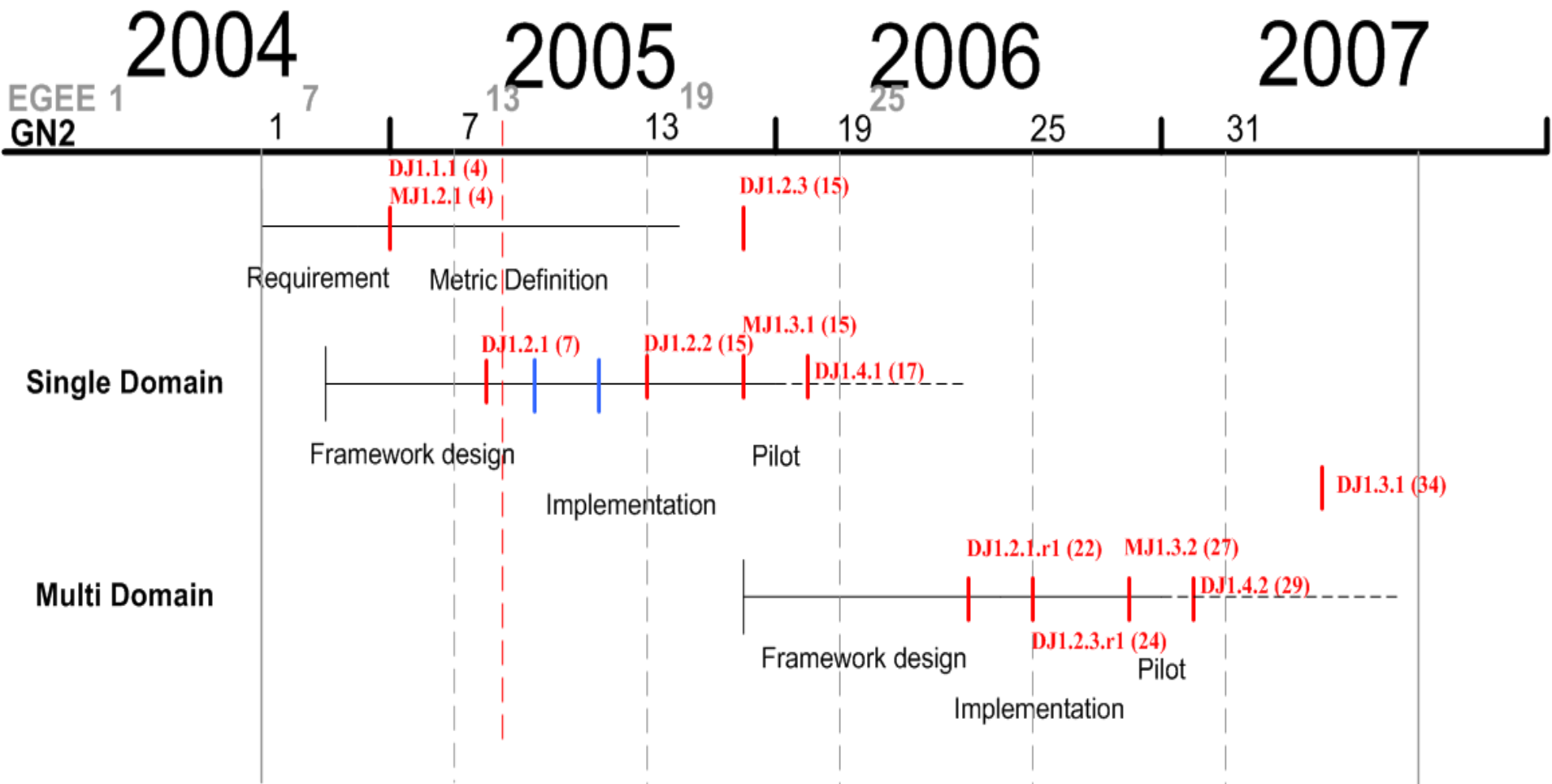
JRA1 Activity update

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TF-NGN meeting, April 2005 Zurich
DANTE**

JRA1 activities

- Provide the capability to *monitoring data* consumer tools to retrieve information from several networks (probe you got the proper credentials) using the same predefined message format across all the networks.
- Act as an abstraction layer to provide measurement data independently of the type of tool used to measure.
- Integrate a set of measurement tool for showcasing the concept. Enhance the tools.
- Enhance visualisation tool to show case the infrastructure.
- Deploy tools for tests/showcase.

- Very close collaboration with Internet2 piPEs.
- ESnet contributed to the GFD and follows the prototype work.



Status

- DJ1.1.1 – Requirement Report
 - Accepted
- MJ1.2.1 – Choice of Metric and First set of Monitoring tools
 - First set of metric:
 - OWD, OWPL, IPDV, RTT
 - Available bandwidth (IP available bandwidth, TCP achievable throughput)
 - Interface errors and drops.
 - Choice of tools – jointly chosen with SA3
 - Delay: DFN IPPM
 - <http://www.win-labor.dfn.de/cgi-bin/geant/auswahl.pl> (strange behavior seen, hardware not up to the job)
 - TCP/UDP throughput : iperf/BWCTL
 - IP available bandwidth: If link utilisation from existing RRD tools
 - Visualisation: CNM and nemo
 - <http://software.uninett.no/>
 - <http://www.cnm.dfn.de/>

Still pending

Choice of a netflow tool, packet capture tool

Status

- DJ1.2.1 – General Framework Design – Single Domain
 - First review (technical - passed)
 - Services Oriented Architecture
 - Recognise and facilitate the ability of independent network entities to set policies and limits on the use of measurement resources
 - Encourage and facilitate the use of measurement resources by users interested in network paths that traverse remote administrative domains.
 - Allow the framework to evolve over the time.

Next steps

- Prototype for June-July.
- DJ1.2.2 – “System Architecture Modules Design – Single domain” by the 15th of August 2005
- DJ1.2.3 – “Metric Report”, work on aggregation and concatenation (mid-October)

Thank you!

Requirements results

- Requirements
 - Three questionnaires were written targeting: the NRENs, the projects and the end-users.
 - Goal: get an overview of
 - the existing monitoring infrastructure (metric, tools used)
 - the visualisation of the data
 - the need to access monitoring information from other networks.
 - 45 answers were received in total (respectively 16, 14, 15)
- Strong interest to access monitoring information from multiple network.
 - NRENs: less than 5-10% of the problems they are encountering involves several domains (=> times 30 NRENs). They want to see improved the capability of localising the problems.
 - International projects want to have a view on what's happening between their sites (uses: troubleshooting, SLA and internal decision making).
 - End-user: less important than for NRENs or projects (uses: troubleshooting, service verification)

Requirements results

- Readiness to open access to measurement data
 - Some ready to show everything (or nearly so)
 - Some want to apply restriction (about what and to who)
 - Some don't want to
- Monitoring Information:
 - RTT and OWD
 - bandwidth utilisation and achievable TCP throughput
 - RTT and OWD packet loss
 - Delay variation
 - Interfaces error and drops
 - Routing/path information
- On-demand capability (to and from other domains)

Requirements results

- Be able to monitor the services deployed
 - IPv4/IPv6
 - Multicast/unicast
 - IP QoS
 - VPN/point-to-point connections
 - Emulate behavior close from the one from the application used
- Different tools used amongst the networks, need to abstract the data provided from the type of measurement tools used.
 - Provide data through a well define interface.
 - Inter-operability between tools.