Virtually There
The Control Room of the Future

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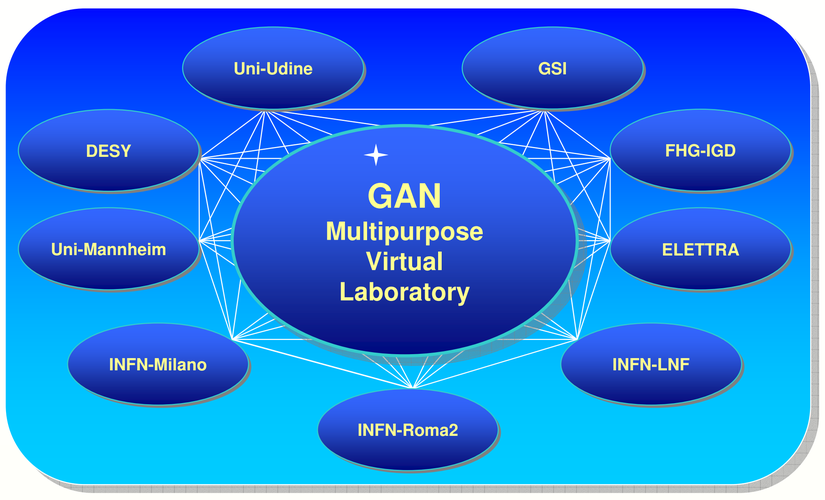
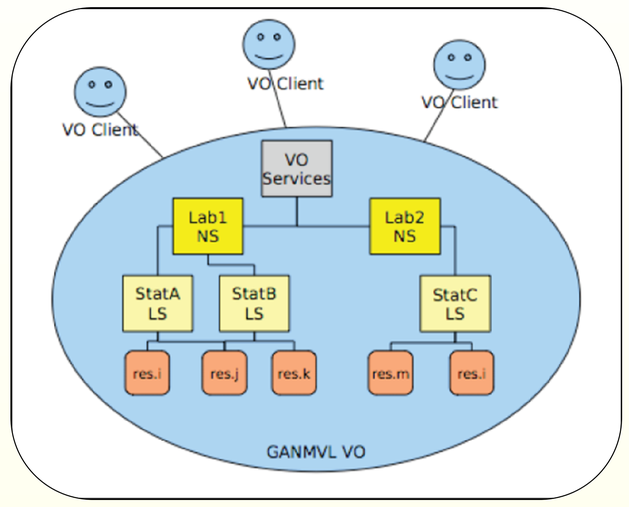
The EUROTeV Project



- The most likely scenario of a linear collider is that it will be built by a collaboration of existing laboratories, which will remain involved during the operation of the accelerator.
  - Prototypes will be developed in one institution and tested with beam in another laboratory
  - Equipment will be built and delivered by one partner and needs to be integrated into the accelerator complex by another partner
  - Whole parts of the facility will be provided by a remote partner and need to be commissioned and possibly operated with the experts at their remote home institutions
  - In situ trouble shooting and repairs needs to be performed with the support of off-site experts
- Advanced means of communication will be necessary to support efficient collaboration.
- The GANMVL project will design and build a novel collaboration tool and test it in existing accelerator collaborations.
- The Multipurpose Virtual Laboratory is a tool to implement the Global Accelerator Network, a Virtual Organisation (VO) connecting international laboratories doing research in the field of accelerators
- The GANMVL project will provide valuable experience of a new way in designing, building and operating large accelerator complexes, and will address the important psychological and sociological issues of the Global Accelerator Network.
- Remote control of an accelerator facility has the potential of revolutionizing the mode of operation and the degree of exploitation of large experimental physics facilities.

- The tool will be a mobile communication centre which provides immersive video and audio capture and reproduction of an accelerator control room, a laboratory workplace environment or an accelerator hardware installation.
- The tool should be able to connect to standard measurement equipment (scopes, network analyzers etc.) and to elements of accelerator controls and make these connections available to a remote client.
- The remote user should be enabled to participate in accelerator studies, assembly of accelerator components, trouble shooting of hardware or analysis of on-line data as if he or she would be present on site.

GAN Architecture



- Web portal interface for all types of users (remote, laboratory admin, station admin) and all usage scenarios
- Fine grain control on authorization
- Resource or capabilities can be associated to different levels
- Awareness feature: tunnel monitoring and control, resource enable / disable
- Knowledge management tab with e-log, help, download area
- GANMVL tab with an integrated resource and people browser
- Different kind of capabilities: High resolution cameras, file manager, chat, audio and video conference (skype, VRVS), Web tools (LabVIEW, IVI instrument integration), VNC tools (Control Room Panels), Wizards
- Open source, modular distribution, plug-in architecture