

## NEWS FROM TERENA (154)



### Annual GLIF meeting held in Nottingham, England

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3 September 2004

Some 60 persons assembled in Nottingham, England on 2-3 September 2004 for the annual GLIF workshop. Since 2001, a small international group of network managers, network engineers, scientists interested in applications of high-performance networks and middleware developers have been meeting annually to discuss the development of optical networks and the emerging global LambdaGrid. At its meeting in 2003, the group gave itself the name GLIF (Global Lambda Integrated Facility), realising that its informal partnership has, over the years, been growing into a virtual facility in support of persistent data-intensive scientific research and middleware development.

GLIF is a collaboration of institutions, organisations, consortia and national research and education networks that voluntarily share optical networking resources and expertise for the advancement of scientific collaboration. GLIF's mission is to create and sustain a global facility that supports leading-edge capabilities based on new and emerging technologies and paradigms related to optical networking. These capabilities will enable high-performance applications and services, including the timely transfer of massive amounts of data, distributed computing, data analysis, collaboration and visualisation, and control of remote instruments. GLIF aims to lead in advanced technologies and pre-production services on behalf of research and education networks, creating new models that they can implement. Once such services are available from national research and education networks and their consortia, GLIF will refocus on new emerging paradigms to support its communities.

The programme of the event in Nottingham, which was hosted by UKERNA, consisted largely of three parallel tracks. The Engineering Working Group, which is chaired by Erik-Jan Bos of SURFnet, consists of network engineers who spent the first half of the GLIF workshop describing the networks in their countries and how they are configured, in order to create an informative international network map. Discussion then turned to defining the types of links and the minimum/maximum configurations of optical exchange facilities in order to assure the interoperability and interconnectivity of participating networks.

The second parallel meeting was that of the Applications Working Group, which is led by Peter Clarke of the University of Edinburgh. The very demanding users who provide the application drivers for GLIF will demonstrate their scientific experiments at the SC2004 conference in November in Pittsburgh, and at the iGrid2005 event, which will be held in September 2005 in San Diego, California.

The third parallel track looked into organisational issues. It was agreed that GLIF's main goal is to be a collaboration where participating research networks join forces to make their lambdas available as a single, integrated, global facility that can be used by researchers with very demanding network requirements. But it was understood that GLIF is also a forum where engineers from the participating networks meet to exchange experiences, establish best-practices and bring the technology further. TERENA was asked to provide a secretariat for GLIF from the beginning of 2005, and an initial five participating network organisations agreed to guarantee the necessary funding.

More information can be found on the GLIF website at

<http://www.glif.is/>



# Global Lambda Integrated Facility

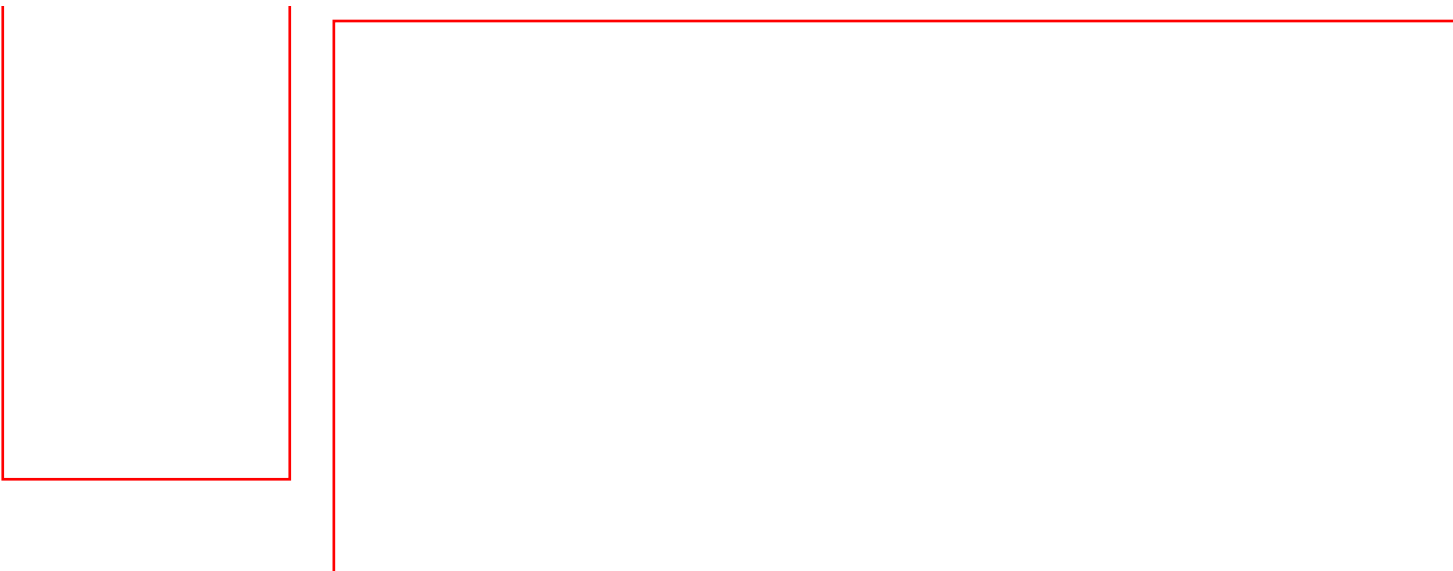
[about](#) [meetings](#) [working groups](#) [publications](#) [participants](#)

**GLIF**, the **Global Lambda Integrated Facility**, is an international *virtual organization* that supports persistent data-intensive scientific research and middleware development on LambdaGrids. In addition, GLIF brings together the world's premier Research & Education networking engineers who are working together to architect an international LambdaGrid infrastructure by identifying equipment, connection requirements, and necessary engineering functions and services. Its members are National Research Networks (NRNs), countries, consortia and institutions *who already have adequate bandwidth for research & education production traffic*, and have additional capacity they are willing to make available for use by discipline scientists and computer scientists and engineers.

GLIF was established by invited participants at the 3rd annual Global LambdaGrid Workshop, held August 27, 2003 in Reykjavik, Iceland. The term facility is key, as participants recognized that they are building more than a network. They are building an environment (networking infrastructure, network engineering, system integration, middleware development, application drivers), in which broad multidisciplinary teams can work together to understand and develop innovative solutions for a LambdaGrid world.



Global Lambda Integrated Facility Annual Meeting Attracts 60 Leaders in Advanced Networking and Scientific Applications...  
September 2004 -- The first week in September signifies the end of summer, but this year it also marked the start of a major global alliance to build the LambdaGrid, aptly named the Global Lambda Integrated Facility (GLIF). Network leadership, notably the managers and chief engineers of national research and education networks, countries, consortia and institutions, along with application scientists and industrial R&D representatives from all over the world, totaling 60 people, converged in Nottingham, England, September 2-3, for a two-day workshop to self-organize GLIF...[\[more\]](#) (Photo courtesy of Steve Wallace.)



This illustration of GLIF infrastructure shows the predicted international Research & Education Network bandwidth, to be made available for scheduled application and middleware research experiments, by December 2004. (Visualization courtesy of Bob Patterson, National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign.)

[GLIF Map PPTs \(404KB\)](#)

[GLIF World Map High Resolution JPG \(3.1MB\)](#)

[GLIF World Map Low Resolution JPG \(526KB\)](#)

[GLIF Atlantic Map Low Resolution JPG \(305KB\)](#)

[GLIF Pacific Map Low Resolution JPG \(476KB\)](#)

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GLIF is a collaboration of institutions, organizations, consortia and country National Research Networks who voluntarily share optical networking resources and expertise for the advancement of scientific collaboration and discovery, under the leadership of SURFnet and University of Amsterdam in The Netherlands.

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