

TransLight/StarLight

TRANSLIGHTSM

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What Has Changed Since TRANSLIGHTSM Ten Years Ago?

- NSF HPIIS Awards connect Europe, Asia 1999-2004
- Bandwidth increased from DS-3s to OC-192s
- The Grid emerged for distributed computing applications
- Lambdas became available at reduced prices
- 1GE and 10GE switching/routing became easy
- STAR TAP/StarLight funded by NSF for electronic and optical peering of international networks
- GLIF formed
- GLIF is building the LambdaGrid – lambda networks becoming a Grid resource, just like computers, data stores and instruments
- IRNC Awards announced 2005-2010

The National Science Foundation IRNC **TRANSLIGHT**SM Program Purposes

- Fund international network links to connect U.S. and foreign science and engineering communities,
- Encourage the investigation and incorporation of advanced architectures needed to support the advanced and developing needs of science and engineering,
- Encourage rational development and leveraging of deployed infrastructure to meet current and anticipated needs and,
- Enable network engineers to engage in system and technology demonstrations and rigorous experimentation.

The National Science Foundation IRNC Award ~~SCI-0441094~~ to UIC

- \$1,000,000 per year for 5 years for TransLight/StarLight, the US-to-Europe portion of its IRNC program
- In cooperation with US and European national research and education networks, Translight/Starlight will implement a strategy to best serve established production science, including usage by those scientists, engineers and educators who have persistent large-flow, real-time, and/or other advanced application requirements.

The National Science Foundation IRNC award to the University of Illinois at Chicago (UIC)

- Specifically, *two* OC-192 circuits are initially planned between NYC and Amsterdam
 - One to connect Internet2/Abilene and the pan-European GEANT via routed network connections, and
 - One to connect hybrid networks, such as provided over National LambdaRail and CA*net4, to similar European networks via switched lambdas
- Security and measurement/monitoring must carefully be addressed under this award for both circuits.
- SURFnet bv is a Key Institutional Partner of the TransLight/StarLight award, continuing an already long and successful partnership between UIC, StarLight in Chicago, and NetherLight/SURFnet in Amsterdam.

Planned IRNC 2xOC-192 Circuits between North America and Europe

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Related OC-192/OC-48 Circuits in 2005 for North America and Europe



US IRNC (black)
-20Gb NYC—Amsterdam

GEANT/I2 (orange)
-30Gb London, etc?—NYC

UK to US (red)
-10Gb London—Chicago

SURFnet to US (light blue)
-10Gb Amsterdam—NYC
-10Gb Amsterdam—Chicago

CERN to US (Green)
-10Gb CERN—Chicago

IEEAF (dark blue)
-10Gb NYC—Amsterdam

Canadian CA*net4 to US (white)
-30Gb Chicago-Canada-NYC

European (not GEANT) (yellow)
-10Gb Amsterdam—CERN
-10Gb Prague—Amsterdam
-2.5Gb Stockholm—Amsterdam
-10Gb London—Amsterdam

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