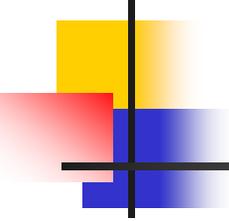


# OPTICAL NETWORK TESTBEDS WORKSHOP 3 (ONT3) Objectives and Agenda Overview

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**Joe Mambretti,**  
**International Center for Advanced Internet Research,**  
**Northwestern University**  
**([www.icaair.org](http://www.icaair.org))**  
**Co-Director, StarLight**  
**PI-OMNInet**

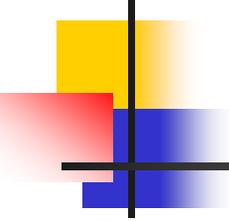
**Optical Network Testbeds Workshop 3 (ONT3)**  
**Tokyo, Japan**  
**September 7-8, 2006**



# Welcome Participants!

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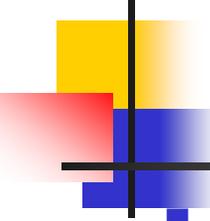
- Overview
- Agenda Structure
- Goals
- Future Research Plans



# Sponsorship

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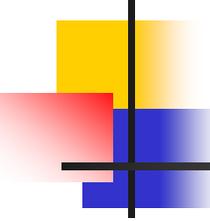
- Co-Sponsored by the US and Japan
- US: Department of Energy (DOE), National Science Foundation (NSF).
- Japan: National Institute of Information and Communications Technology (NICT)
- Co-Chair Is Tomonori Aoyama, University of Tokyo
- Organized in cooperation with the Federal Large Scale Networking Coordination Group (LSN).
- NASA Ames Research Center Is Hosting the Web Site



# Optical Services And Technologies

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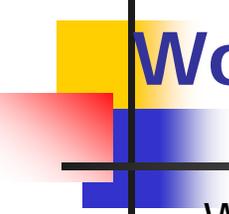
- The Basic Focus of ONT Workshop Focus Is On Optical Communications Services And Technologies L1, Lightpath Based (Wavelength-Based) Services,
- Not L3 or Other Networking Technologies, e.g., Wireless, Satellite, etc
- Optical Technology Has Been Widely Recognized As A Key Enabler Of a Wide Range of New Capabilities
- New R&D Continues to Make Advances By Discovery of New Methods
- This Area of Research Investigation Is A Key Initiative Related to Fundamental Reconceptualization of Basic Network Theory, Design, and Implementation



# Optical Services and Technology Topics

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- Topics
  - Future Research Plans (5-15 Year Horizon)
  - Basic Research and Experimentation (3-5 Year Horizon)
  - Early Prototypes (2-3 Year Horizon)
  - Early Pre-Production Implementations (1-2 Year Horizon)
  - Production Implementations (Current)
- International Issues
  - Services
  - Facilities
  - Exchange Points
  - Technologies



# Workshop Organizational Background

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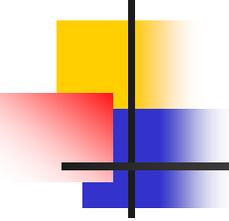
- Workshop Is Being Organized To Build On Prior Workshops: the September 2005 Workshop on Optical Network Testbeds (ONT-2) and the 2004 ONT-1
- ONT-1 Provided An Overview of Directions in Optical Communications
- ONT-1 Presented A Series of Recommendations
- Ref:<http://www.nren.nasa.gov/workshop7>
- **ONT-2 Was Designed As a Forum That Could Assist In Creating the Means to Transition the Community and Its Networking Infrastructure to Leading Edge, Next Generation Optical Networks.**
- ONT-2 Developed Specific Frameworks for Community Actions In the Context of 5 Year Roadmaps
- ONT-2 Presented These Roadmaps Within Categories of Development, From Basic Research Testbeds to Early Implementations to Initial Production
- ONT-2 Also Introduced the Theme of International Interconnection and Interoperability
- Ref: <http://www.nren.nasa.gov/workshop8>



# ONT-3 Workshop Objectives

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- ONT-3 Was Designed
  - To Continue the Efforts Initiated Through ONT-2
  - To Emphasize the Theme of Next Generation International Optical Communications
  - To Indicate the Contribution of These Concepts To the Wider Networking Context, e.g., Next Generation Designs and Experimental Testbeds (e.g., GENI)
- The Forum Presents – In an **International Context**
  - Progress Has Been Made This Year In Moving Toward
    - Long and Near Term Objectives
    - In Achieving Roadmap Milestones
  - Progress Made This Year (Basic Research, Demonstrations, Prototype Services, Early Implementations, New Testbeds etc.)
- An ONT3 Report Will Be Developed

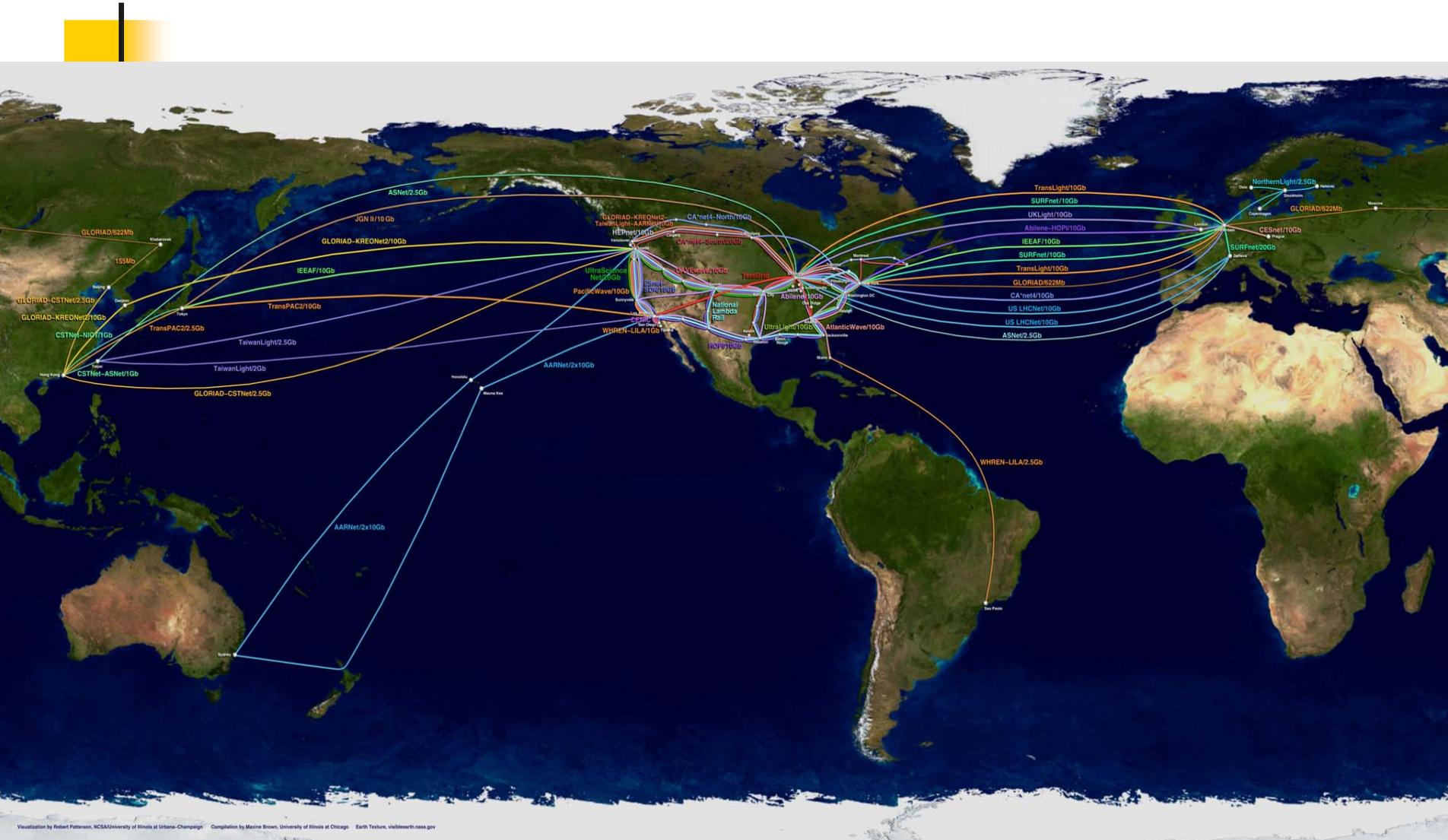


## Overview of ONT3-GLIF

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- ONT-3 Is Being Held In Conjunction/Partnership with the Global Lambda Grid Consortium Annual Meeting – Global Lambda Integrated Facility (GLIF) ([www.glif.is](http://www.glif.is))

# Global Lambda Integrated Facility (GLIF)

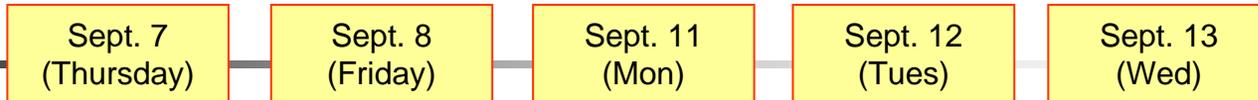


Visualization by Robert Patterson, NCSA/University of Illinois at Urbana-Champaign | Compilation by Maxine Brown, University of Illinois at Chicago | Earth Texture, vislabearth.nasa.gov

[www.glif.is](http://www.glif.is)

Visualization courtesy of  
Bob Patterson, NCSA.

# SCHEDULE OF EVENTS



AM

ONT3  
(invitation-only)

ONT3  
(invitation-only)

GLIF Meeting

GLIF Meeting

GLIF Meeting

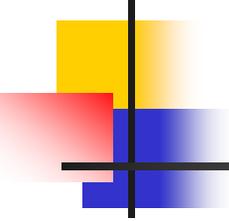
PM



6th Annual GLIF Workshop  
11-14 September 2006  
Tokyo, Japan

Local Hosts

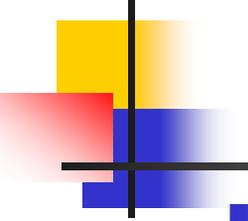




# ONT3 Thanks

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- Sponsors
  - Makoto Nagao, NICT
  - Guru Parulkar, NSF
  - George Seweryniak, DOE
  - Grant Miller, LSN, NITRD



# ONT3 Thanks

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- Organizers
  - Makoto Nagao, NICT
  - Kunihiro Kato, NICT
  - Tomonori Aoyama, NICT/Keio University
  - Akira Amemiya, NICT
  - Asako Toyoda, NICT
  - Masaki Hirabaru NICT
  - Hiroaki Harai, NICT
  - Takayuki Nakao, NICT
  - Koichi Hiragami, NICT
  - Kazuhiko Yamamoto, NICT
  - Yusuke Komatsuzaki, NICT
- Logistic Coordinators
  - Scott Macdonald, e-Side
  - Sally Miller, NASA
- All Participants!