OPTICAL NETWORK TESTBEDS
WORKSHOP 3 (ONT3) – An Overview

Joe Mambretti,
International Center for Advanced Internet Research,
Northwestern University
(www.icair.org)
Co-Chair ONT3

Tomonori Aoyama, University of Tokyo
Co-Chair ONT-3,
JET Meeting
August 15, 2006
Motivation

- ONT3 provides a forum to discuss activities currently being conducted on optical network research testbeds and the migration of new methods to production networks.
- Optical testbed research is being sponsored by major organizations world-wide.
- The importance of this research to next generation network services and architecture has been widely recognized.
- These new concepts are beginning to transition from testbeds to pre-production prototypes and to production implementations.
Ref: Compendium of Requirement Drivers from iGRID 2005 FGCS Vol 22 Issue 8 Oct 2006 Now Available
Workshop Organizational Background

- 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 and A Series of Recommendations
- Ref: http://www.nren.nasa.gov/workshop7
Workshop Organizational Background

- 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](http://www.nren.nasa.gov/workshop8)
ONT-3 Workshop Objectives

ONT-3 Is Being Designed

- To Continue the Efforts Initiated Through ONT-2
- Emphasize the Theme of Next Generation International Optical Communications
- Indicate the Contribution of These Concepts To the Wider Networking Context, e.g., Next Generation Designs and Experimental Testbeds (e.g., GENI, FIND, Other International NG Networking Initiatives)
ONT-3 Workshop Objectives

- The Forum Will Present – In an *International Context*
  - Progress Made This Year In Moving Toward
    - Long and Near Term Objectives
    - In Achieving Roadmap Milestones
  - Progress Made This Year In Establishing Processes
    - Activities That Can Achieve Goals Over Time
    - Mechanisms That Can Ensure Continuing Forward Process
  - International Exchange Points, Multilayer Services, Interoperability Across Domains
Contributions In a Wider Context

- Discussions Will Include Considerations of How These New Services, Architecture, and Technologies Will Contribute to Broader Contexts
  - For Example, the Next Generation Internet (Ref: GENI)
  - Networking in General
  - Non-Traditional Networks (e.g., All Optical Networks)
Sponsorship

- 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)
- Organized in cooperation with the Federal Large Scale Networking Coordination Group (LSN).
- NASA Ames Research Center Is Hosting the Web Site
- Ref: [http://www.nren.nasa.gov/workshop9](http://www.nren.nasa.gov/workshop9)
Overview of ONT3-GLIF

- ONT-3 Will be Held Conjunction/Partnership with the Global Lambda Integrated Facility (GLIF) Annual Meeting (www.glif.is)
- Schedule Spans 5 Days
- ONT-3 = Two Structured Days
- GLIF = Three Structured Days
- Venue = Akihabara in Tokyo
- Next Series of Slides Created By NICT
Global Lambda Integrated Facility (GLIF)

Visualization courtesy of Bob Patterson, NCSA.

www.glif.is
SCHEDULE OF EVENTS

Sept. 7 (Thursday)
ONT3 (invitation-only)
AM

Sept. 8 (Friday)
ONT3 (invitation-only)
AM

Sept. 11 (Mon)
GLIF Meeting
PM

Sept. 12 (Tues)
GLIF Meeting
PM

Sept. 13 (Wed)
GLIF Meeting
PM
6th Annual GLIF Workshop
11-14 September 2006
Tokyo, Japan

Local Hosts

NiCT
National Institute of Information and Communications Technology

JGNII

WIDE
AKIHABARA – Tokyo’s Electronics Town Near Univ of Tokyo
AKIHABARA CONVENTION HALL

a new IT Center in the heart of Akihabara – opened spring 2005 housing 600 attendee capacity meeting facilities and the offices of AIST, Univ. of Tokyo, Univ. of Tsukuba, etc.
Train Routes

Shinagawa - 19,000-20,000 JPY (180 USD)
Narita Express link/Shinkansen link
9 min. to Tokyo / 12 min. to Akihabara

Shinjuku – 14,000-15,000 JPY (135USD)
Narita Express link
9 min. to Tokyo / 12 min. to Akihabara

Akihabara 11,000-12,000 JPY (110 USD)
3 min. from Tokyo,
2 min. walk from Conv. Hall and Electric Town