

GLIF Americas (GLIF-Am) Community Meeting
Monday, 25 September 2017 (1:30 – 5:30 pm)
Co-Located With the 16th Annual Global LambdaGrid Workshop
September 25, 2017
Organized by Joe Mambretti and Maxine Brown
DRAFT NOTES – August 26, 2018

ATTENDEES

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A. Meeting Objectives

1. Meeting logistics overview
2. Introductions
3. Review of agenda/meeting objectives
4. Review of key topics/conclusions from the GLIF-Am 2016 meeting in Miami, FL – Minutes available at <https://www.glif.is/meetings/2016/glif-am/>

B. Major Trends in Americas' International Connection Requirements and Communities Served

1. Presentation of the new GLIF global map – Maxine Brown
 See: <https://www.glif.is/publications/maps/>
2. Areas of potential new major technology-based opportunities, especially projections for resources required *beyond* bandwidth. (For example, *Software Defined Networks (SDN), SDN Exchanges (SDXs), Software Defined Infrastructure (SDI), Network Function Virtualization (NFV), Cloud Computing, Green Networking, Transoceanic Fiber Builds, Research Testbeds, Science DMZs, Distributed NOCs, Data Transfer Nodes (DTNs), etc.*

C. Key Initiatives Related to North and South American R&E International Networking

1. NSF IRNC Awards

For a list of current awards, see:

<https://nsf.gov/awardsearch/simpleSearchResult?queryText=irnc&ActiveAwards=true>

- a. **IRNC:** ENgage: Building Network Expertise and Capacity for International Science Collaboration – Steve Huter, Univ. of Oregon’s Network Startup Resource Center (NSRC)
Steve Huter did not attend the GLIF meeting; however, NSRC and University of Hawaii assisted University of Guam with elements of their NSF *CC* Network Design: Upgrading the University of Guam Network to Connect to Internet2 and Create a Science DMZ* grant, and suggested that principal investigator Rommel Hidalgo talk about it. Hidalgo did later in this meeting (see Section C.k).
- b. **IRNC:** ProNet: Americas Lightpaths – Jeronimo Bezerra, Florida International Univ. (FIU)
IRNC: Backbone: AmLight Express and Protect (Exp) – Jeronimo Bezerra, FIU
PPTs: [BEZERRA-GLIFAm2017-Amlight-Exp.pdf](#)
OpenWave is an extension of AmLight to deploy an alien wave. Plans to be implemented for SC 2017.
- c. **IRNC:** BackBone: TransPAC4 – Andrew Lee, Indiana University
IRNC: AMI: NetSage: An Open, Privacy-Aware, Network Measurement, Analysis, and Visualization Service – Andrew Lee, Indiana University
IRNC: ProNet: NEAAR: Networks for European, American, and African Research – Andrew Lee, Indiana University
PPTs: [LEE-GLIFAm2017-TransPAC_NEAAR_NetSage.pdf](#)
- d. **IRNC:** Backbone: SXTRANSPORT Pacific Islands Research and Education Network (PIREN) – Dave Reese, CENIC
IRNC: RXP: Pacific Wave Expansion Supporting SDX & Experimentation – Dave Reese, CENIC
No PPTs. Garret Yoshimi (U Hawaii) and Rommel Hidalgo (U Guam) will talk tomorrow. PIREN is on the new GLIF map. IRNC will increase Pacific Wave’s bandwidth. Pacific Wave’s Western Regional Network (WRN) will expand. At APAN 45 in Singapore, Pacific Wave plans to do a PRP/DTN workshop and deploy FIONAs and FIONettes to people. (They are currently seeking funding). Pacific Wave continues SDX work with StarLight.
- e. **IRNC:** RXP: AtlanticWave SDX – Jeronimo Bezerra, FIU
PPTs: [BEZERRA-GLIFAm2017-AtlanticWave-SDX.pdf](#)
Bezerra will give an SDX presentation on Wednesday at the GLIF meeting.
- f. **IRNC:** RXP: StarLight SDX – Joe Mambretti, Northwestern University
No PPTs. He will give a Global Research Platform (GRP) presentation and StarLight update this week. StarLight is building lots of capacity for SC 2017, as they are involved with about 6 related demonstrations at SC 2017. StarLight is looking to extend CENI (Ciena’s R&E network) from Hanover, MD to Washington DC (MAX).
- g. **IRNC:** NOC: Global Research Network Operations Center at Indiana University: Performance Engagement and Monitoring and Visualization – David Jent, Chris Robb or Luke Fowler, Indiana University
No one from this group attended the GLIF 2017 meeting.
- h. **IRNC:** AMI: The InSight Advanced Performance Measurement System – Buseung Cho, KREONET/KRLight
PPTs: [GREGOR-GLIFAm2017-InSight.pdf](#) (presented on behalf of Jens Gregor)

- i. **IRNC: AMI: Collaborative Research: Software-Defined and Privacy-Preserving Network Measurement Instrument and Services for Understanding Data-Driven Science Discovery** – Yan Luo, University of Massachusetts, Lowell
PPTs: [LUO-GLIFAm2017-AMIS.pdf](#) (Luo did not attend GLIF but provided this presentation)
 - j. **IRNC: Americas Africa Research and eduCation Lightpaths (AARCLight)** – Jeronimo Bezerra, FIU
PPTs: [BEZERRA-GLIFAm2017-AARCLight.pdf](#)
 - k. **CC* Network Design: Upgrading Guam Network to Connect to Internet2 and Create a Science DMZ, and GOREX** – Rommel Hildago, University of Guam
PPTs: [HIDALGO-GLIFAm2017-UOG-GOREX.pdf](#)
2. DOE ESnet international networking initiatives – Chin Guok, ESnet
PPTs: [GUOK-GLIFAm2017-ESnet-update.pdf](#)
 3. LHCOPN/LHCONE – Chin Guok, ESnet
PPTs: [GUOK-GLIFAm2017-LHCONE.pdf](#) (Slide developed by Bill Johnston)
 4. Internet2 international networking initiatives – Dale Finkelson, Internet2
Did not attend GLIF.
 6. CANARIE international networking initiatives – Thomas Tam, CANARIE
PPTs: [TAM-GLIFAm2017-CANARIE.pdf](#)
 7. RNP/SouthernLight international networking initiatives – Jeronimo Bezerra, FIU
PPTs: [STANTON-GLIFAm2017-RNP.pdf](#) (presented on behalf of Michael Stanton, RNP)
 8. A*STAR/NSCC/SingAREN international networking initiative– Alan Davis, A*STAR Computational Resource Centre
Did not attend the GLIF Americas meeting.
 9. Pacific Research Platform (PRP) – John Hess/David Reese
PPTs: [HESS-GLIFAm2017-PacificResearchPlatform.pdf](#)
 10. NORDUnet Update – Lars Fischer
Lars asked to give a brief update about NORDUnet and its international connections.
PPTs: [FISCHER-GLIFAm2017-NORDUnet.pdf](#)

D. Progress On Implementing International Control Frameworks, Specifically Migrating the Emerging Standard Network Service Interface Connection Service (NSI-CS 2.0) To Production

E. Wrap-Up

Final items, summary of identified key topics/issues/recommendations, plans for subsequent communications, schedule for next meeting
Brief discussion of “Tenant Networking.” We also discussed how R&E networks have to become part of cloud providers’ plans; i.e., R&E networks need to be integrated to provide their customers with access.