

# GENI Quarterly Status Report

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## GENI Project 1718

“GENI-IMF: Integrated Measurement Framework and Tools for Cross Layer Experimentation”

a.k.a. “IMF”

Prepared by:

Rudra Dutta, George Rouskas, Anjing Wang (NCSU), Ilia Baldine (RENCI), Keren Bergman (Columbia U)

Document Version	Date	By	Notes
0.1	7/17/10	Anjing Wang	Initial draft
0.2	7/19/10	Anjing Wang	Minor updates, rephrases
1.0	7/30/10	Rudra Dutta	Rebalance between documents – split of detailed demo description

## **I. Major accomplishments ¶**

### **A. Milestones achieved ¶**

- S2.g Protocol between SILO and UMF
- S2.c First GENI instrumentation and measurement architecture

### **B. Deliverables made ¶**

- Updated architecture document
- GEC8 demo poster
- GEC8 demo document

## **II. Description of work performed during last quarter ¶**

### **A. Activities and findings ¶**

- Finalized XMPP as the convergence point of the IMF, defined additional mechanisms of rendezvous of measurement data and measurement consumer.
- Redesigned and implemented the MH as a standalone Perl module, for a better integrated approach.
- Designed and implemented the NetFPGA controller for the SOA, as part of the Substrate Control Handler.
- Designed and implemented SILO to SCH communication, using XML-RPC and Matlab scripts.
- Teams from each of the three campuses met at RENCI in July 2010, integrated a SOA and an attenuator in the BEN testbed in front of an Infinera DTN.
- Attended GEC8, demonstrated real-time reactive IMF system, consisting of SILO service reacting to optical port power measurements and adjusting Semiconductor Optical Amplifier gain in real-time.
- Some IMF team members attended a perfSONAR workshop in order to understand the framework better, for identifying a potential future convergence.
- Coordinated with GPO personnel to disseminate through wiki.

### **B. Project participants ¶**

Rudra Dutta, George Rouskas, Anjing Wang, Ahmet Can Babagolu (NCSU), Ilia Baldine, Shu Huang, Yufeng Xin (RENCI), Keren Bergman, Michael Wang, Caroline Lai, Cathy Chen (Columbia).

### **C. Publications (individual and organizational) ¶**

- Updated architecture document
- GEC8 demo report

## **D. Outreach activities ¶**

Within the GENI community, participants of the IMF team attended GECs as well as meetings of the Instrumentation and Measurement Working Group. We also disseminated the results of our project with the use of a dedicated project website in addition to the GENI wiki for our project. Some IMF team members also attended a perfSONAR workshop, as mentioned above.

## **E. Collaborations ¶**

The IMF team collaborated with Deniz Gurkan and Debjyoti Majumder of the GENI project LEARN in order to redefine the MH, and to understand the perfSONAR framework with a view to eventually designing a convergence point with perfSONAR.

## **F. Other Contributions**

None.