



Contribution ID: 488

Type: not specified

## Networks for High Energy Physics and Data Intensive Science, and the Digital Divide

*Wednesday, September 5, 2007 11:00 AM (30 minutes)*

Networks of sufficient and rapidly increasing end-to-end capability, as well as a high degree of reliability are vital for the LHC and other major HEP programs. Our bandwidth usage on the major national backbones and intercontinental links used by our field has progressed by a factor of several hundred over the past decade, and the outlook is for a similar increase over the next decade. This growth is paralleled, and in some ways driven by the rapid development of national, continental and transoceanic networks serving research and education, which have recently made the transition from 10 Gbps to multi-10 Gbps optical infrastructures. Several of the major networks are currently working together towards a new “dynamic circuit” paradigm to meet the needs of HEP and other fields of “data intensive science”, while continuing to meet a broad range of other network needs.

I will review the recent developments, current status, and future directions for the world’s research networks and major international links used by high energy physics along with other scientific communities, and will touch on recent network technology and related advances on which our community depends and in which we have an increasingly important role. I will provide a brief update on the problem of the Digital Divide in our community, which is a primary focus of ICFA’s Standing Committee on Inter-regional Connectivity (SCIC), and highlight progress and approaches to solutions in some world regions.

**Presenter:** NEWMAN, Harvey (California Institute of Technology (CALTECH))

**Session Classification:** Plenary