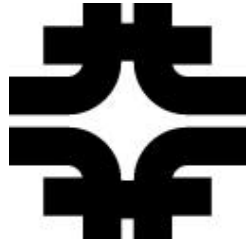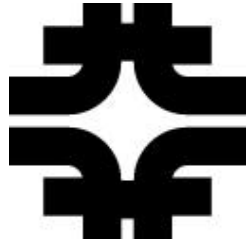# *October USLHCNET meeting*

D. Petravick

Jan 12, 2007

Main Result

- Broad Understanding that the CMS computing model specifies that any T2 access any T1.

- Conflicts with current capabilities with US LHCNET.

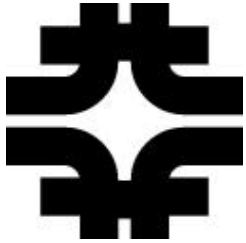- Incumbent provisioners -- ESNET -> GEANT -> NREN.

Phedex Plots

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.
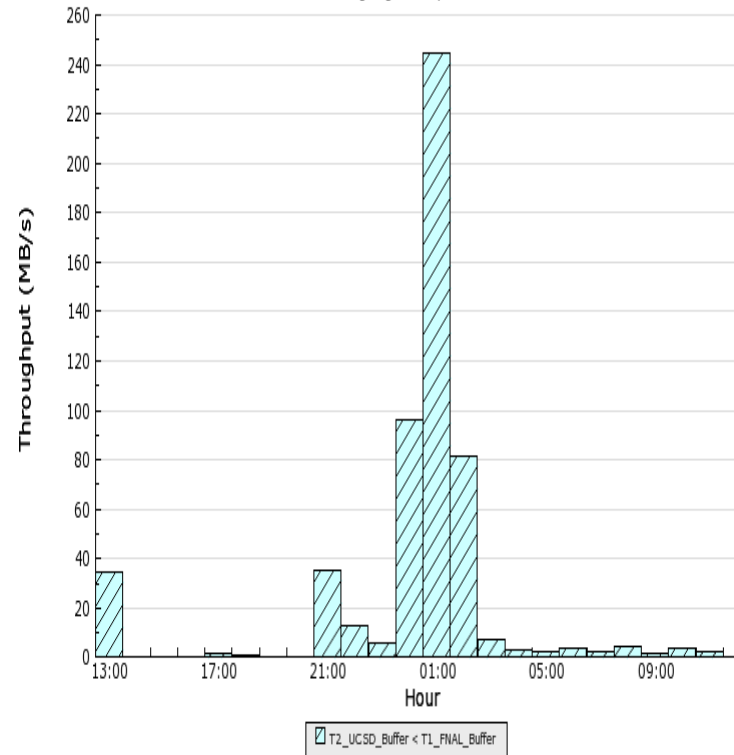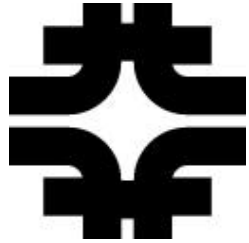
DLP -- LHCOPN meeting

UCSD

- While organized data transfers through Phedex are still technically limited in their raw transfer capability, it is still very interesting how (fast) the individual and aggregate data transfers are moving up during CMS' CSA06 -

- More than 1 Gbyte/sec peak more than once last week, to many Tier1s and Tier2s, and now UCSD achieved the result as below.

- A separate point but perhaps an indicator for the future. Iosif's FDT (standard TCP; typically one thread per disk; all in Java) can read from a 1U node with 4 SATA disks at 230 Mbytes/sec, and write to a similar node at 120 Mbytes/sec, over the wide area network. It's just limited by the speed of the disks at the moment.

- Harvey

PhEDEx Prod Data Transfers By Link

24 Hours from 2006-10-16 13:00 to 2006-10-17 12:00 GMT

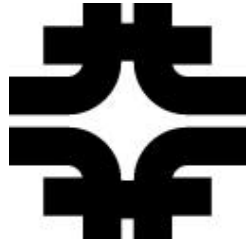Nodes matching regular expression 'UCSD'

T2_UCSD_Buffer < T1_FNAL_Buffer

T2_Spain_IFCA

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

1/12/2007   DLP -- LHCOPN meeting
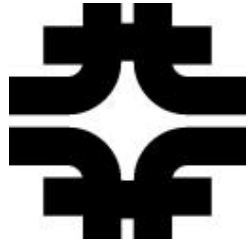
T2 Estonia

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

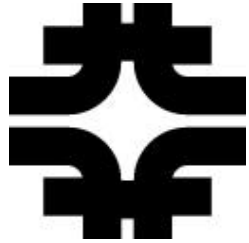1/12/2007   DLP -- LHCOPN meeting

Findings

- 1) Currently, all T2 connectivity is routed, and provided by (ESNET/Abilene) <-> GEANT.

- 2) CMS is committed to commissioning trans-atlantic T1 -> T2. Therefore, such traffic can be expected to grow starting immediately.

- 3) There were some notions that this transfer mode is also allowed by ATLAS despite common understanding to the contrary.
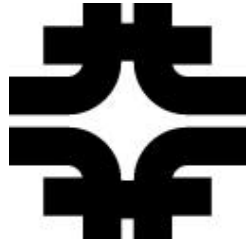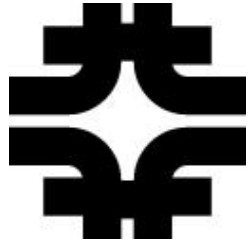
Findings

- 4) In the short term, the way forward is to continue comissioning the data model using routed networks.

- 5) David Foster is a voting member on the relevant GEANT "GCC" committee. The committee next meets in November.
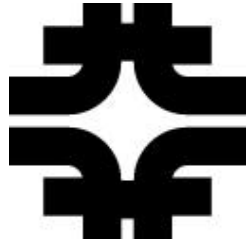
Findings

- 6) David will discuss the LHC Trans Atlantic T1 <-> T2 program of work with GEANT. It's likely no conclusions   would be reached, but it seems necessary begin a process by coming to the table with some specific request, eve if tentative. It seems evident we need to learn how to work with GEANT.

DLP -- LHCOPN meeting

Findings

- 7) With some policy level work, The US LHCNET MANLAN <-> AMS link can be made available for routed access to GEANT. David can mention this as a resource. He must recognize the difficulties (below, Item 8) as currently pending.

- 8) Difficulties: The US LHCNET AUP has to be crafted in a way to allow this.   This cannot be done unless HEP office agrees.

Findings

- 9) ESENT, Abilene, and CMS seem to think this is adequate for a year or so, long enough t gain substantial experience with the computing model.