

# STATUS OF NETWORKING FOR HIGH ENERGY PHYSICS IN THE UNITED STATES

"STATUS OF NETWORKING FOR HIGH ENERGY PHYSICS IN THE UNITED STATES," Paul F. Kunz Stanford Linear Accelerator Center:

"FUTURE U.S. HEPNET

As a result of the recent HEPAP Subpanel on Computing, it has been realized that a coordinated approach to networking within HEP might be better than the ad hoc growth being experienced so far. It would allow sharing and central funding of much higher speed lines and avoid the duplication of effort and apparent waste in having so many transcontinental leased lines. It would also provide the needed coordination for eventual leased lines to Europe and Japan.

An example of what a U.S. HEPNET might look like is the following. 56K baud trunk lines would run between SLAC, Fermilab, and Brookhaven. LBL and Argonne would use their existing microwave links to SLAC and Fermilab, respectively. University sites would have 9600 baud feeders to one of the laboratories, but not necessarily the nearest one. This is because the costs don't vary with distance that much, so university groups will want to connect to the laboratory of their prime 'interest.

There are a number of issues that need to be resolved before a U.S. HEPNET comes into existence. The choice of protocol or protocols needs to be made. A management structure needs to be setup with appropriate funding mechanisms. Equipment choices may need to be made at a national level instead of locally. One will also need to make choices on an international scale for the connection to Europe and Japan."