

# CHEP 2007 Abstract

## **A Scientific Overview of Network Connectivity and Grid Infrastructure in South Asian Countries**

The future of Computing in High Energy Physics (HEP) applications depends on both the Network and Grid infrastructure. Some South Asian countries such as India and Pakistan are making progress in this direction by not only building Grid clusters, but also by improving their network infrastructure. However to facilitate the use of these resources, they need to overcome the issues of network connectivity to be among the leading participants in Computing for HEP experiments. In this paper we classify the connectivity for academic and research institutions of South Asia. The quantitative measurements are carried out using the PingER methodology; an approach that induces minimal ICMP traffic to gather end-to-end network statistics. The PingER project has been measuring the Internet performance for the last decade. Currently the measurement infrastructure comprises of over 700 hosts in more than 130 countries which collectively represents approximately 99% of the world's Internet-connected population. Thus, we are well positioned to characterize the world's connectivity. Here we present the current state of the National Research and Educational Networks (NRENs) and Grid Infrastructure in the South Asian countries and identify the areas of concern. We also present comparisons between South Asia and other developing as well as developed regions. We show that there is a strong correlation between the Network performance and several Human Development indices.