Technical Programme for Two-day Workshop

on

An overview of Grid Computing and Some Indications Where we Are Heading (GC-SIWAH 2004)

Venue : *Auditorium,C-DAC,Pune;* *Workshop Coordinator : Dr.VCV.Rao NPSF,Pune*

July 22 (Thursday) ~ July 23, 2004 (Friday)

Day 1 July 22, 2004 (Thursday)

Time (Hrs)	Activity
0850 ~ 0900	**Registration for GC-SIWAH 2004**
0900 ~ 1000	**Introduction to Grid Computing:** What is grid? What is Globus ? Why should I care about this Grid Stuff? What is involved in the Globus project? Who is using the Globus Toolkit? Is'nt it a lot of work to use Globus in my application? An overview of Grid Computing
1000 ~ 1100	**An Overview of Globus Toolkit 2.4 and Ideal Grid Architecture:** What is in the Globus Tool kit 2.4? An overview of Globus Toolkit 2.4 Project, GRAM (Globus Resource Allocation Manager); GSS (Global Security Services); How does Globus project compare to *Condor* and *Legion*? Description of Five layered Grid Architecture - Fabric, Connectivity, Resource, Collective and Applications; Definitions- Grid Services
1115 Hrs ~ 1130 Hrs Tea break at C-DAC Roof Top Pavilion	
1130 ~ 1300	**Classification of Grid applications - Issues and Challenges:** Classification of Grid applications – Distributed, Collaborative, Data-Intensive, On-demand; Category of applications - Loosely Coupled, Pipelined, Tightly Synchronized, Widely Distributed; Compute and Data Intensive Applications
1300 Hrs ~ 1400 Hrs Lunch Break at C-DAC Roof Top Pavilion	
1400 ~ 1500	**Grid Programming and Some Indications**: Grid Programming-Indications; Challenges; How to design Grid aware applications? (New Programming models, tools and languages; Developers - Grid, tools, & Applications); Grid Programming models (Communication models: Shared data and Shared nothing); Grid Global Compiling System
1500 ~ 1600	**Building Grid Service using Globus 2.4 Toolkit Demonstration**
1600 Hrs ~ 1630 Hrs Tea Break at C-DAC Roof Top Pavilion	
1630 ~ 1730	**Grid Programming-An overview of tools and Environments Part I :** Grid enabled Message Passing libraries - (MPICH-G2, PACX-MPI, MetaMPICH); Role of Grid Middleware; Grid based Middleware Tools; (Network-enabled server - GRID RPC; Component based technology- CORBA, Enterprise Java Beans (EJB); XML-based technologies; Scripting languages)
1800 ~ 1830	**Grand PIZZA PARTY at C-DAC Roof Top Pavilion** *Subject to Sponsorship for GC-SIWAH 04*

Day 2 July 23, 2004 (Friday)

Time (Hrs)	Activity
0900 ~ 1000	**Grid Programming- An overview of tools and environments – Part II** : Grid Middleware (Frame work -Core Features of Problem Solving Environments; Open Source); Framework- Cactus Tool; Interoperability between various data parallel runtime libraries; Meta-Chaos Framework -Efficient distribution of data structures by user or Compiler; Current trends in Grid Accounting Framework; Towards a Global Grid Compilation System (GrADS) project; Portals (Gridscape, UNICORE, SDSC GridPort Toolkit; GRB Portal)
1000 ~ 1100	**Current Trends- An Overview of Resource Brokers:** Role of Grid Resource Broker; functionality; Resource Allocation, Resource Management, Quality of Services, Currently available resource brokers Nimrod/G, Condor-G
1115 Hrs ~1130 Hrs Tea break at C-DAC Roof Top Pavilion	
1130 ~ 1230	**Current Trends- Grid Benchmarks and Performance**: Grid low level benchmarks Grid Probe Benchmarks; Grid Synthetic Application Benchmarks, Grid Compute intensive and Data Intensive Benchmarks
1300 Hrs ~ 1400 Lunch Break at C-DAC Roof Top Pavilion	
1400 ~ 1500	**Current Trends- Globus 3.0 version:** An overview of Globus 3.0; Web Services XML, SOAP; Introductory concepts of service-oriented grid architecture; OGSA and OGSI; GT3 architecture;
1500~1515	**Grid Computing**-DAC efforts e-commerce applications (M.V.RajaGoplan, C-DAC Chennai)
1530~1630	**Invited Lecture**: How Tera Grid works? ~ Present Status
1645 Hrs ~ 1700 Hrs Tea Break at C-DAC Roof Top Pavilion	
1700 ~1800	***Panel Discussion on*** *Technical Challenges of GRID Computing & C-DAC Contribution* **Panel Members**: Dr.V. Sundararajan, Mrs. Rajlakshmi, Mr. Seetha Rama Krishna, Mr. Vinod Kumar; *Moderator:* Dr.V.C.V Rao **Conclusions of the Workshop**