

## **A simulation study of data discovery mechanism for scientific data grid environment**

### **ABSTRACT**

Research in the area of grid computing has given us various ideas and solutions to address the requirements in a modern scientific computing community that managed massive amounts of a very large data collections in a geographically distributed environment. Data Grids mostly deal with large computational problems and provide geographically distributed resources for large-scale data-intensive applications that generate large data sets. A number of research groups are working on the data distribution problems in Data Grids and they are investigating the data replication approaches on the data distribution. This leads to a new problem in discovery and access to data in Data Grid environment. To address this problem we have developed a model to study various discovery mechanisms and investigate these mechanisms for Dynamic Scientific Data Grid Environments using our Grid Simulator. In this paper, we illustrate our model and our Grid Simulator.

**Keyword:** Replication; Data grids; Data discovery