

# Open, Sharing and Learning: “Future Digital Data”

## I. Introduction

Digital data in many areas is continuously being generated and its use is growing. The growth of this data, along with new compliance regulations such as OAIS, HIPAA, Sarbanes-Oxley, Occupational Safety and Health Administration (OSHA), and federal securities laws and regulations that require long-term viability of data, have opened the opportunities for new emerging research area. Data has always been fundamental and very important to many areas and it has become critical to more disciplines and especially in inter-disciplinary projects and grown substantially in scale, volume and complexity.

In data grid environment, many large –scale scientific experiments, involving large data volume and simulations generate large data formats in the multiple site distributed storages. Furthermore, these data are shared between the researchers, research organizations, users, and industries for data analysis, data visualization, and so forth. Data-intensive, high performance computing applications require the efficient management and transfer of terabytes or Petabytes of data in wide-area, and distributed computing environment.

The issues in digital data wave and distributed computing (cloud computing, high performance computing, and data intensive computing) become the advance challenges in the beginning of this year. In the future, it will be the challenges for scientist, engineer, CIO, and users to face the opportunities and risk in the research, implementation, and industry demands to meet the future digital world.

## II. Objectives & Overviews

### 1. The Importance of Long Term Access and Use of Data & Compliance with the Standards

This section will explain briefly about the changing of the data landscape, the standard requirements, and the major problem of digital data creation, use and access. It will highlight the industry needs on long term access and use of data and the existing standards that influencing the business, scientific and general data.

### 2. eResearch, Semantic Computing and The Cloud

This section will discuss the data tidal wave, moving upstream, integration into existing tools/ workflows, enabling semantic computing, provision of services in data analysis, collaboration and preservation-provenance issues, the potential for cloud services, and the role of software.

### 3. Research Challenges

This section will discuss the current challenges in future digital data and life by giving a sample project that has being running in several countries. It is also discussing the current challenges for researcher, CIO, engineer in playing major roles in the new challenges in digital future data.

### III. Schedule & Participants

**Date:**

February 10, 2010 : Information Technology Magister Program J. TETI, Faculty of Engineering UGM

<b>Time</b>	<b>Agenda's</b>
09.30-10.00	Registration & Opening
10.00-10.45	Presentation
10.45-11.30	Discussion & Closing

Expected Participants: Researcher, Lecturer, Students and Individuals.

### IV. The Presenter

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- Master in Engineering (Graduate from Information Technology Magister Program, JTETI, Faculty of Engineering, Universitas Gadjah Mada)
- PhD candidate & Researcher in Universiti Teknologi PETRONAS, Malaysia.
- Research area: Data Grid, Data Engineering and Discovery, Knowledge Management
- Member of CERN Asia Pasific CyberInfrastructure Team
- Member of MIMOS (Malaysian Data Grids Projects)
- International Developer Committee in SQL-Ledger Project (ERP software)