

## **CALL FOR CHAPTER PROPOSALS**

**Proposal Submission Deadline: October 31, 2008**

### ***Grid Technologies for eHealth: Applications for Telemedicine Services and Delivery***

A Manuscript edited by Dr. Ekaterina (Eka) Kldiashvili  
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#### **Introduction**

“Grid” computing has emerged as an important new field, distinguished from conventional distributed computing by its focus on large-scale resource sharing, innovative applications, and, in some cases, high-performance orientation. Grid computing is increasingly being viewed as the next phase of distributed computing. Built on pervasive Internet standards, Grid computing enables organizations to share computing and information resources across department and organizational boundaries in a secure, highly efficient manner. Organizations around the world are utilizing Grid computing today for a whole host of different applications such as collaborative scientific research, drug discovery, financial risk analysis, product design, etc. Grid computing enables, for example, research-oriented organizations to solve problems that were infeasible to solve due to computing and data-integration constraints. Grids also reduce costs through automation and improved IT resource utilization. Finally, Grid computing can increase an organization’s agility enabling more efficient business processes and greater responsiveness to change. Over time Grid computing will enable a more flexible, efficient and utility-like global computing infrastructure. From its inception, the goal of telemedicine has been to overcome the time and distance barriers that separate the caregiver from the patient. Widespread adoption of the technology has been hampered by a number of technological, regulatory and other barriers. Innovations such as computer-based patient records, remote consultations, clinical information systems, computer-based decision support tools, mobile and wireless terminals, community health information networks, and new ways of distributing health information to professionals and consumers are supported by, and in some cases reliant on, the widespread use of networked telemedicine technologies. Grid technology acquires more importance today. The main advantage of application of Grid technology for eHealth is the new and effective opportunities for establishment and creation of eHealth networks as well as of implementation of clinical information systems and databases.

#### **Objective of the Manuscript**

The proposed publication will present a new model of Advanced Grid Technologies, Systems and Services to implement a new model of Virtual Organization for healthcare support. eHealth faces a growing need for large computations, pre-operative planning, medical interventions simulation, the building of anatomical and physiological models, surgery support in real time, etc., all of which could be successfully implemented through Grid technology. This publication aims to describe completed and ongoing research eHealth projects and activities in this field. It is planned to present Data/Information/Knowledge Grids as well as Collaborative Grids. Special emphasis will be placed on the following topics: clinical information system; distribution of computational resources; ensuring image processing algorithm’s accessibility; combining image data with other medical data, facilitating data access; bringing affordable solutions to respond to real problems in healthcare. Special attention will be paid to the following areas: ePharmacology, eImaging, eClinic and eLearning. Emphasis will be placed on presentation of: organization of clinical information system; timely and secure access of patient data; interoperability of medical databases of heterogeneous content; computing intensive applications and knowledge discovery, eDiagnosis, Virtual Epidemiology.

**Target Audience**

The target audiences for the present publication are: healthcare professionals, eHealth and telemedicine specialists and researchers, IT specialists, healthcare authorities and managers.

**Recommended topics include, but are not limited to the following:**

- Clinical information system
- Clinical diagnosis
- Medical databases
- eLearning
- Simulation
- eHealth networks
- Standardization
- Virtual Epidemiology

**Submission Procedure**

Researcher and practitioners are invited to submit on or before October 31, 2008 a 2-3 page chapter proposal clearly explaining the mission and concerns of his or her proposed chapter. Authors of accepted proposals will be notified by November 30, 2008 about the status of their proposals and sent chapter guidelines. Full chapters are expected to be submitted by February 28, 2009. All submitted chapters will be reviewed on a double-blind review basis. This book is scheduled to be published by IGI Global (formerly Idea Group Inc.), publisher of the "Information Science Reference" (formerly Idea Group Reference) and "Medical Information Science Reference" imprints. For additional information regarding the publisher, please visit [www.igi-global.com](http://www.igi-global.com).

*Inquiries and submissions can be forwarded electronically (Word document) to:*

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