

**ONTOLOGY WITHIN FACULTY OF INFORMATION TECHNOLOGY AND SCIENCE
QUANTITATIVE (FTMSK) KNOWLEDGE REPOSITORY**

BY:

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**TAJUK PROJEK: ONTOLOGY WITHIN FACULTY OF INFORMATION
TECHNOLOGY AND SCIENCE QUANTITATIVE (FTMSK) KNOWLEDGE
REPOSITORY**

Dengan hormatnya perkara di atas adalah dirujuk.

Sukacita dimaklumkan bahawa Mesyuarat Jawatankuasa Penyelidikan ke-70 pada 20 Februari 2004 telah membuat keputusan:

- i. Bersetuju meluluskan cadangan penyelidikan yang telah dikemukakan oleh puan, Puan Fauziah Redzuan dan Puan Natrah Abdullah.
- ii. Tempoh projek penyelidikan ini ialah **12 bulan**, iaitu bermula **1 Mac 2004** hingga **28 Februari 2005**.
- iii. Kos yang diluluskan ialah sebanyak **RM 43,300.00** sahaja dari Geran MOE. Penggunaan geran yang diluluskan hanya akan diproses setelah perjanjian ditandatangani.
- iv. Puan perlu membelanjakan **50%** daripada geran penyelidikan yang telah diluluskan bagi projek puan dalam tempoh **6 bulan** pertama projek berjalan. Sehubungan itu, pihak IRDC akan memantau penggunaan geran penyelidikan puan untuk memastikan **50%** daripada jumlah geran yang diluluskan telah dibelanjakan sehingga bulan **September 2004**.
- v. Semua pembelian peralatan yang kosnya melebihi RM 500.00 satu item perlu menggunakan Pesanan Jabatan Universiti Teknologi MARA (LO). Pihak puan juga dikehendaki mematuhi peraturan penerimaan peralatan. Panduan penerimaan peralatan baru dan pengurusannya, dilampirkan.
- vi. Semua peralatan/kelengkapan penyelidikan yang dibeli adalah menjadi hak milik fakulti. Semua peralatan/kelengkapan hendaklah diserahkan kepada pihak fakulti setelah tamat penyelidikan untuk kegunaan bersama.
- vii. Seperti yang puan sedia maklum puan perlu membentangkan kertas kerja di Seminar Hasil Penyelidikan IRDC setelah projek tamat dijalankan nanti.

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Puan,

**LAPORAN AKHIR PENYELIDIKAN 'ONTOLOGY WITHIN FACULTY OF
INFORMATION TECHNOLOGY AND SCIENCE QUANTITATIVE (FTMSK)
KNOWLEDGE REPOSITORY'**

Merujuk kepada perkara di atas, bersama-sama ini disertakan 3 (tiga) naskah Laporan Akhir Penyelidikan bertajuk 'Ontology Within Faculty Of Information Technology And Science Quantitative (FTMSK) Knowledge Repository' oleh kumpulan Penyelidik dari Fakulti Teknologi Maklumat dan Sains Kuantitatif untuk makluman pihak puan.

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SURIYATI RAZALI
Ketua
Projek Penyelidikan

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ABSTRACT

The implication of information scarcity and unmanaged knowledge is an opportunity loss of organizations to gain competitive edge. In a knowledge-intensive organization such as a university faculty there is a pressing need to provide lecturers and administrators as well as policy makers and ultimately students with value-added services integrating information spread over distributed heterogeneous repositories into a centralized knowledge repository. Knowledge artifacts can be organized in the knowledge repositories either automatically or manually by users using organization taxonomy. In order to incorporate available knowledge artifacts of educational, research and quality programs into a powerful knowledge management system it is mandatory to identify and exploit their semantic relationship. For this purpose, we advocate an ontological approach that captures these relations that allows effective sharing and dissemination of knowledge artifacts. The ontological approach undertaken by this research, models the knowledge of the learning content and the lecturer's profile with ontologies whose vocabularies are inherited from standards situated on the Web as reference points to provide semantics. The research uncovers how ontologies can be used for integration, but it is not possible to have a single ontology for all the faculty's content and profiling organization structures. In addition the ontology evolution is crucial in any dynamic knowledge intensive environment. The initial version of the learning content ontology is presented as the core component of the faculty's knowledge repository adopting open source framework for the prototypal implementation to display the knowledge structure developed using Protégé knowledge model.

Keywords: Knowledge Repository, Knowledge Management, Knowledge Representation, Knowledge Model, Organization Taxonomy, Ontology, Knowledge Portal, Open Source