

**LANGUAGE-BASED USER MANAGEMENT IN INTERACTIVE NETWORKED
COLLABORATIVE ENVIRONMENT**



**RESEARCH MANAGEMENT INSTITUTE (RMI)
UNIVERSITI TEKNOLOGI MARA
40450 SHAH ALAM, SELANGOR
MALAYSIA**

BY :

**ASSOC. PROF. SITI ZALEHA ZAINAL ABIDIN
DR. NASIROH OMAR
ZAINURA IDRUS**

NOVEMBER 2012

Contents

1. Letter of Report Submission	iii
2. Letter of Offer (Research Grant).....	iv
3. Acknowledgements	v
4. Enhanced Research Title and Objectives.....	vi
5. Report	1
5.1 Proposed Executive Summary	1
5.2 Enhanced Executive Summary	2
5.3 Introduction	3
5.4 Brief Literature Review	5
5.5 Methodology	14
5.6 Results and Discussion.....	16
5.7 Conclusion and Recommendation.....	18
5.8 References/Bibliography	19
6. Research Outcomes	20
7. Appendix	21

2. Letter of Offer (Research Grant)

Surat Kami : 600-RMI/ST/DANA 5/3/Dst (99/2010)
Tarikh : 10 Disember 2010



Prof. Madya Dr Siti Zaleha Zainal Abidin
Fakulti Sains Komputer dan Matematik
Universiti Teknologi MARA
40450 SHAH ALAM

Prof./Tuan/Puan

KELULUSAN PERMOHONAN DANA KECEMERLANGAN 11/2010

Tajuk Projek : Language-Based User Management in Interactive Networked Collaborative Environment
Kod Projek : 600-RMI/ST/DANA 5/3/Dst (99/2010)
Kategori Projek : Kategori G (2010)
Tempoh : 01 Disember 2010 – 30 November 2012 (24 bulan)
Jumlah Peruntukan : RM 6,400.00
Ketua Projek : Prof. Madya Dr Siti Zaleha Zainal Abidin

Dengan hormatnya perkara di atas adalah dirujuk.

2. Sukacita dimaklumkan pihak Universiti telah meluluskan cadangan penyelidikan Y. Bhg Prof./tuan/puan untuk membiayai projek penyelidikan di bawah Dana Kecemerlangan UiTM.

3. Bagi pihak Universiti kami mengucapkan tahniah kepada Y. Bhg. Prof./tuan/puan kerana kejayaan ini dan seterusnya diharapkan berjaya menyiapkan projek ini dengan cemerlang.

4. Peruntukan kewangan akan disalurkan melalui tiga (3) peringkat berdasarkan kepada laporan kemajuan serta kewangan yang mencapai perbelanjaan lebih kurang 50% dari peruntukan yang diterima.

Peringkat Pertama	20%
Peringkat Kedua	40%
Peringkat Ketiga	40%

5. Untuk tujuan mengemaskini, pihak Y. Bhg. Prof./tuan/puan adalah diminta untuk melengkapkan semula kertas cadangan penyelidikan sekiranya perlu, mengisi borang setuju terima projek penyelidikan dan menyusun perancangan semula bajet yang baru seperti yang diluluskan. Sila lihat lampiran bagi tatacara tambahan untuk pengurusan projek.

Sekian, harap maklum.

“SELAMAT MENJALANKAN PENYELIDIKAN DENGAN JAYANYA”

Yang benar


MUSTAFAR KAMAL HAMZAH
Ketua Penyelidikan (Sains dan Teknologi)

5. Report

5.1 Proposed Executive Summary

In interactive networked collaborative virtual environment (NCVE), users work in a group to involve in activities such as game, discussion and learning. However, their existence is not visibly presence. Therefore, there is a crucial need to represent the invisible users so that users know with whom they are interacting with (presence), when to communicate (state) and what to do (role) during the collaboration. Unlike any group work or organizations, users in virtual space are dynamic. They can change their role and states frequently such as joining or leaving the group work at any time. In short, they can engage in the collaboration only for a period of time or until the goals are achieved. Thus, managing users in virtual space is challenging especially because it involves permission to shared information resources. This research will investigate and model the generic way of managing invisible users (their presence, states and roles) with their dynamic features. The novelty lies on the new dynamic user management model which will be integrated into a form of language constructs. The language constructs offer faster and easier development of any collaborative applications (game, commerce, defence, banking, education) via the scripting language.

5.2 Enhanced Executive Summary

In interactive networked collaborative virtual environment (NCVE), users work in a group to involve in activities such as game, business transaction and learning. However, their existence is not visibly presence. Therefore, there is a crucial need to represent the invisible users so that users know with whom they are interacting with (presence), when to communicate (state) and what to do (role) during the collaboration. Unlike any group work or organizations, users in virtual space are dynamic. They can change their role and states frequently such as joining or leaving the group work at any time. They can engage in the collaboration only for a period of time or until the goals are achieved. This research will investigate and propose the generic way of managing invisible users (their presence, states and roles) through language-based approach. The novelty lies on the new design of language constructs for managing dynamic users. The language constructs offer faster and easier development of collaborative applications (game, commerce, defense, banking, education).