

CELEBRATING  
COMMERCIALISATION  
YEAR 2014

# iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention  
innovation  
& design  
exposition 2014

INNOVATEUR  
wannabe!  
2014

27<sup>th</sup> - 30<sup>th</sup>  
APRIL 2014  
DEWAN AGUNG TUANKU CANSELOR (DATC)  
UNIVERSITI TEKNOLOGI MARA  
MALAYSIA

*Bridging  
the valley of death :  
advancing the  
commercialisation  
of research*

RESEARCH BOOK

# iiindex2014

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innovation  
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## FOREWORD

The Honourable Minister of Science, Technology and Innovation (MOSTI) has launched 2014 as Malaysia Commercialisation Year 2014 (MCY2014) with the theme Science Technology and Innovation (STI) for Wealth Creation. In line with this theme, Invention, Innovation, Design & Exposition 2014 (iidex2014) is an annual exposition organized by UiTM and is the ultimate platform to highlight and commercialise new inventions and innovations. Researchers and inventors will exhibit their products which cater to the needs and wants of the community and the country.

The iidex2014 creates a new dimension by fusing two competitive concepts, a competition among innovative products and a competition to invite Innovateur Wannabes to perform live pitching of their products to the audience. The iidex2014 focuses on comprehensive commercialization and creating opportunities for entrepreneurs to carry out R&D as well as to provide avenue to commercialise their products. Through expositions such as iidex2014, MOSTI hopes to inculcate the culture of commercialisation of new technology designed and created by Malaysians.

I wish to congratulate all the participants of the iidex2014 and this is the opportunity for all researchers to show their ideas and exhibits their products and creativity. Apart from showcasing their products, innovators will have the opportunity to provide a window to the industry for business matching during the exposition.

Tan Sri Dato' Sri Sallehuddin Mohamed  
Pro-Chancellor, Universiti Teknologi MARA

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## MUSLIM CENTRED USER INTERFACE DESIGN PROTOTYPE

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There are challenges and dilemmas in recognizing values and ideals in culture on interface design. Every culture shares different experiences and values (Lakoff, G., Johnson, 1980). As value added in interface design related to the culture, the element of culture values should play an important role so that users are encouraged to feel the beauty of them in computer interface. Currently, majority of the designs are from USA, their interfaces have therefore been primarily based on American metaphors, representations, and associations logics. The standardization of information technology has the advantage of compatibility. Marcus recommends that designers “would do well to consider their own cultural orientation and to understand the preferred structures and process of other cultures” (Marcus & Gould, 2000). While some works have been reported on the development of metaphors and icons design based on Chinese culture (Shen, 2006) and African culture (Heukelman, 2006), none have been explored for desktop interface design for Islamic culture. Good Islamic values should be practiced all the time even in computer usage. Considering Muslims are among the computer users in everyday life, it comes as a big responsibility as a designer to insert values on interface design as to educate and as a reminder to the users. Thus the development of the interface prototype called Muslim Centered User Interface Design (MCUID) is created based on the Culture Centered Design (CCD) framework. The framework is an adaptation of Shen et. al (2006) work on cultural filter. There are two types of filters in the framework. The first filter dedicated for a designer. The designer comes from cultural origin, and then he identifies a target group, which are among Muslim users. Next, the designer understands the target user’s cultural data which is focusing on Islamic culture. Later, the designer creates visual images for the interface design based on personal experience and observation in particular socio-cultural background, knowledge from literature review including Quran and hadith. Other factors that shape up designer’s view include technology, usability and mental models. The second filter is dedicated to user, Whenever the mental model between designer and user are matched, the product (interface design) is considered successful. In developing technology, the question of the responsibilities of the designer as the ones with technological knowledge and expertise is very significant. Islam emphasis that all men should be responsible for their own doing. Designers should use their knowledge conscientiously for the good community. Through the interface prototype design called MCUID, the image of the mosque is used as background to represent an Islamic identity. Besides, metaphor icons are created to represent analogies in Islamic values. MCUID is hoped to educate or as reminder to computer user because MCUID enriched with values in Islamic culture. Therefore, possibly, technology could be shaped by Muslims designers by giving more meaningful user experience towards the interface design. The evaluation on MCUID was done among students from UiTM and students from Darul Quran. There were several patterns of findings were discovered. The findings were analysed using Atlas.ti 7.