

CELEBRATING  
COMMERCIALISATION  
YEAR 2014

# iiindex 2014

AN INTERNATIONAL EXPOSITION ON RESEARCH AND INNOVATION

invention  
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& design  
exposition 2014

INNOVATEUR  
wannabe!  
2014

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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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## A USABLE MOBILE CALENDAR FOR THE ELDERLY

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As people age memory capabilities are reduced, thus a reminder system can benefit older adult users. However, the uptake of reminder system is still low. In our previous work, we proposed a mental model of older adults for a reminder system. We presented this model using design principles: simplicity, flexibility, recognizability and familiarity. However, in this research, the researchers investigated the simplicity element of the user model. To do this, two reminder applications were evaluated. Calendar and Task which were chosen based on other design principles: flexibility and familiarity. There were six older adult users who evaluated the interfaces based on usability principles: ease of use, ease of learning and user friendliness. The results indicated that none of the reminders were considered as easy to use thus classified as unfriendly. From the study it was observed that older adults only considered it easy-to-use if the interfaces were perceived simple enough for them and producing simple design requires a hard work and is a time-consuming process. Three different interfaces were tested for mobile calendar with a group of elderly users. Other than these evaluations, we made three significant changes to the interfaces: colour, the number of button and the language. The background colour was changed from white/blue to green because some of them did not like blue and preferred green. The colour in this prototype was actually chosen by the participants themselves. Although they could read English, all of them preferred our native language, Malay. For this prototype, we used Malay language on the button as text label such as "PAPAR SEMUA PERKARA" that means display all items. With the previous interfaces, we had three buttons, but now we only have ONE big button called "PAPAR SEMUA PERKARA" at the bottom of the main screen. Our adult users requested to have only one button that can show all the events or activities recorded in the system and that button should be placed at the bottom of the screen. As for functionality, any recorded events will be shown in red colour and have some mark on that date. A shortcoming of this interface is that there is no exit button, so the users still need to click on the default android home button to quit the application. We learned some valuable lessons from our study: Based on our methods, to design simple for the older users was a hard work: it was a time-consuming and an expensive process. It took almost one year to develop a usable prototype of the elderly calendar. This methodology is definitely not an attractive choice for technology manufacturers. So, perhaps a quicker method of prototyping is absolutely needed to save cost and time, yet usable for the elderly population. Perceptual cues such as a bright background colour and calendar borders are significantly usable in the calendar interfaces especially for the older populations. So design appropriately! Calendar means dates to our adult participants. Each time they use a calendar, they want to be able to see dates because dates remind them of something important. This is another reason why the subjects wanted to see the dates more clearly apart from their vision decline problem.