## **Optimizing Innovation for Global Commercialization**



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Email: riid2013@melaka.uitm.edu.my Web: www.riidmelaka2013.com

### **Optimizing Innovation for Global Commercialization**

Research, Invention, Innovation Design

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**Chairman** Assoc. Prof. Dr Roaimah Hj Omar

Chief Editor Shafezah Abdul Wahab

Writers Siti Najah Raihan Sakrani Shahril Anuar Abd Ghalim

### Abstracts

Sulaiman Mahzan Mohd Ab Malek Md Shah Nur Syuhada Mohamad Mohd Fajil Abdul Batau Khalilah Ibrahim

#### Design

Anith Liyana Amin Nudin Norsharina Samsuri

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Division of Research, Industrial Linkages & Alumni (PJI&A) Universiti Teknologi MARA Melaka, Km 26 Jalan Lendu, 78000 Alor Gajah, Melaka

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## background of RESEARCH, INDUSTRIAL LINKAGES & ALUMNI

### Objectives

- To promote word-class research.
- To administer, coordinate and provide service for research development, consultation and research publication.
- To provide assistance in exploring new subjects and identify niche area of interest.
- To disseminate information and provide ample training in research, consultation and publication of research.
- To ensure innovation, quality research, consultation and publication are maintained.
- To assist in research publication for high impact journals.

### Vision

To become the leading administrative centre for research, development, consultation and world-class research publication.

### Mision

To enrich the academia, creative ability and innovation through quality service.

Division of Research, Industrial Linkages and Alumni or known as PJI&A started as the Research Management Unit (RMU) or IRDC and was formerly known as Planning, Research and Development Centre which was established in April 1980. However in September 1987, IRDC was restructured with its heightened importance in research and consultation in UITM and was divided into two units, Research and Consultancy Centre (RACC) and Planning and Evaluation Unit. This centre was then renamed to Research and Consultancy Bureau in 1994 and went through another name change to become Institute of Research, Development and Commercialisation (IRDC) on 15 July 2003.

With the mooting of the post of Deputy Vice Chancellor in March 2008 to take over the intellectual property and commercialisation portfolio, IRDC was given the responsibility to maximise innovation and increase the number of research which will later be published in high impact journals. Ensuing this, on 31 July 2008 IRDC was changed to Research Management Institute (RMI) to synchronise with UiTM's aspiration to become a Research University that will develop innovation activities and new research. It was only in 2011, that RMI became the Research, Industrial Linkages and Alumni Division (PJI&A), headed by its Deputy Rector, Associate Professor Dr. Roaimah Omar. Under her tutelage, Invention, Innovation and Design (IID) was born in 2009.

The different divisions or units in PJI&A are responsible to manage, monitor and conduct research in science and technology, management and social sciences, consultation, financial assistance for consultation, innovation, publication and Information for Research and Consultancy (INFORAC). PJI&A also conducts seminars, workshops and roadshows to encourage, motivate and train the academic and non-academic staffs in research and consultation, securing research grants and projects, to manage good financing and publish research in a responsible and ethical manner.

## RIID2013 **OBJECTIVES**

### **General Objective**

To display research, invention, and design from various institutions (IPTA/IPTS) that can be commercialised for global benefit

To culturalise research and innovation through the sharing of expertise and commercialised, creative and innovative ideas

To instill interest and encouragement to the public towards research, invention and innovation that poses as a medium for the nation's development.

### **Specific Objective**

To identify and promote new and inventive discoveries that are commercialised, creative, and innovative from various institutions (IPTA/ IPTS) all over Malaysia.

To select discoveries and new invention to be contested in the national and international level.

To uphold the reputation and image of UITM as a well-known pioneer in innovation and invention in the national and international level.

## RIID Showcase

**OF RIID** 

: 5

> 7 August 2009, Dewan Kuliah 2, LITM Melaka.

**CHRONOLOGY** 

# LET'S III

13 August 2009, Dewan Bendahara. UITM Melaka.

2 IID Enculturation Of Research & Innovation

> 5 October 2010, Dewan Bendahara, UITM Melaka.

### **RIID 2013** Optimizing Innovation For Global Commercialization

16 - 17 December 2013. Dewan Taming Sari, UITM Melaka.

## **RIID 2012** Innovation for Sustainable Growth

7 - 8 November 2012, Dewan Taming Sari. UITM Melaka.



## **DERIA 2011** Sound, Image & Object

21 - 22 July 2011, Mini Stadium Bistari. Ayer Keroh, Melaka.

## foreword message by CHIEF MINISTER MELAKA



### YAB Datuk Seri Ir. Haji Idris Haron

Chief Minister Melaka December 2013

### amualaikum wbk and est greetings Salam 1Malaysia,

nd foremost, I would like to congratulate Research, Industrial (es and Alumni Centre (PJIA), Universiti Teknologi MARA I) Melaka for yet another successful organisation of this rch, Invention, Innovation and Design Exhibition 2013 (RIID

era of globalisation, the Malaysian government is stepping efforts in developing the country and its people, be ucing a holistic socioeconomic development programme. our Prime Minister Datuk Seri Mohd Najib Tun Abdul Razak uced a massive transformation agenda in implementing the amme its approach and philosophy. The Prime Minister has outlined five-key strategic thrusts under the 10th Malaysia Plan (10MP) to enable Malaysia to become a high-income and developed nation by 2020.

Therefore, the National Key Results Area (NKRA) and the Key Performance Index (KPI) were introduced towards achieving vision 2020. While moving towards achieving a developed country status, Malaysia needs to draw up a new approach which emphasises on quality human capital, innovation and creativity. The government in addition has to operate as competitive corporation.

I would like to congratulate UiTM Melaka for supporting the country's vision by hosting RIID2013 competition and exhibition. With its theme Innovation for Sustainable Growth, this event is a positive initiative to encourage professionals and academicians alike to enhance their knowledge and practical skills and these are parts of their contribution for the nation's building.

When research activities are conducted continuously, it is expected that more innovations will be generated. UiTM Melaka's initiative is highly commendable as it manages to attract It 340 products to be displayed and competed at this event. It is hoped that this event will serve as a catalyst in enhancing the roles of professionals in various industries.

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# foreword by RECTOR



### Associate Professor Dr. Adnan bin Hashim

Rector Universiti Teknologi MARA Melaka December 2013

### Assalamualaikum wbkt, Salam 1Malaysia and Salam UiTM Sentiasa Di Hatiku.,

I would like to welcome our honourable guests, professionals, and academicians from schools, colleges and universities to the 5th Research, Invention, Innovation and Design 2013 (RIID 2013) competition proudly organised by the Research, Industry Linkage and Alumni Division (PJI A) Centre Universiti Teknologi MARA (UITM) Melaka.

In line with the government's aspiration to nurture and cultivate innovation, UiTM Melaka has taken the initiative to organise RIID 2013 Melaka Innovation Festival. One of the main objectives of the event is to raise the status of local universities globally. To achieve the status of a Research University (RU), one of the criteria is to emphasise on high impact innovation research which leads to invention of new business models, or innovative processes. This would result in an improved efficiency of the organisation and contributes towards better quality of life.

Since innovation is a vital catalyst to attain the status of developed nation in the year 2020, UiTM Melaka is heading the nation's call to attain aspiration through innovative programmes with staff and students. These creative and innovative abilities could be brought to greater heights through competitions and innovation exhibitions held annually. During this two-day event, a talk on innovation will also be held. Innovation is one of the key factors that could push the economy forward. In line with the strategic thrusts, the RIID 2013 competition will serve as a platform for researchers to expand their researches into innovations while becoming a venue for them to showcase their products, prototypes and new ideas.

This competition also serves as a platform for students, lecturer's administrative officers and the public to demonstrate their products or prototypes as well as sharing new ideas for commercial value. Therefore, PJIA decided the Optimizing Innovation for Global Commercialization as our theme for this year 5th Research, Invention, Innovation and Design 2013.

I am proud to announce that the number of participants in this event has increased to more than 300 participants compared to the previous year event. I would like to extend my sincere thanks and gratitude to the committee members who have persistently given their full commitment to this event.

I wish all the participants all the best in the competition.

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### Assalamualaikum wbkt and Salam 1Malaysia

First of all, I would like to congratulate the Research, Industry Linkage and Alumni Division (PJIA) Centre Universiti Teknologi MARA (UiTM) Melaka for yet another successful organisation of the Research, Invention, Innovation and Design Exhibition 2013 (RIID 2013).

This competition and exhibition is the fifth effort by the Research, Industrial Linkages and Alumni Centre in exhibiting the outcomes of research, invention and innovation by our versatile lecturers and students. It's encouraging to see that the competition has also attracted participation from other IPTAs, IPTS and schools. I believe this exhibition is definitely a good avenue for them to participate actively and progress collaboratively in the field of innovation and research. I am confident that the PJIA UITM Melaka will continue to address the various challenges that we are constantly facing with a view towards multidisciplinary solutions. This year's theme of Innovation for Sustainable Growth is appropriate timely and I am certain that this exhibition will bring about more collaborative research and publication.

I therefore would like to take this opportunity to extend a big 'Thank You' to the RIID 2013 organising committees and those who have contributed directly or indirectly in making this exhibition a big success. I wish all researchers, lecturers and students a meaningful and enriching experience in coming up with new and innovative inventions. I wish to end with a note of thanks to the Research, Industrial Linkages and Alumni Centre for a job well done.

## foreword by DIRECTOR OF AKEPT



Prof. Dr. Mohd Majid Konting

Director Higher Education on Leadership Academy (AKEPT) December 2013

## Information Investigation Autopsy (IIA) For Digital Forensics

Fakariah Hani Mohd Ali; Nurul Huda Nik Zulkipli; Muhammad Syazwan Kharani; Ahmad Wafiy Ahamad Zaki; Adnan Abeeb Jama Abdi

Universiti Teknologi MARA Shah Alam

Many enterprises built LANs with the assumption that internal users are trustworthy. Little thought was given to understanding exactly what devices are connected to the network, where these devices are located, and what users are doing with them. As a result, enterprises are finding themselves ill-equipped to deal with problems introduced by mobile end systems and end users. According to Digital Forensic Investigator from Malaysian Communication and Multimedia Commission (MCMC), if cyber crime occurs in the network, they have to bring all the computers to the forensic lab before they do investigation process. This approach is costly and time consuming. This project proposed Information Investigation Autopsy (IIA) which a tool that can monitor and analyze users' activities inside the client machine in the network. IIA will capture all the activities such as keystroke pressed, timestamp and IP address and save it in the server. IIA will be analyzing the files to detect any suspicious activities. If detected, IIA will encrypt the evidence and sent the evidence to the digital forensic department. This tool will ease and give benefit to the digital forensic investor and enterprises to identify and detect the evidence if any cyber crime occurs in the local area network environment.

### Economical And Friendly Products Innovation

Nur Fatiyah Bt Roslan; Ayuffeirah Bt Mislan; Noorul Huda Bt Zakaria; Nur Solihah Khadhiah Bt Abdullah; Norlida Bt Zakirai@ Zakaria; Rozarina Bt Johari

Universiti Teknologi MARA Kuala Terengganu

Banners, buntings and posters can be very useful in communicating message. Although there have been multimedia to replace these conventional communication, promoting information with banners, buntings and posters still have been used widely as an excellent way to convey a message or promoting a product due to the highly impact and inexpensive means of marketing. However, where do all these materials go after delivering the message? We often have discarded the banners, buntings and posters after we use them. However, there are several more ecologically friendly options than throwing them in the trash, where all these materials should be recycled. The purpose of this project is to recycle these materials to become soft furnishing such as shopping bag, apron, office partition, pencil case, kitchen curtain, hanging rack, picnic mat and also table cloth. All these products are suitable for office and home use. It is an economic and sustainable project as it helps to prevent environmental pollution as well as generates new source of income especially to low income group of the rural community. Besides that, this project can give a high awareness among rural community.