innovation for
sustainable growth

riid

riid 2012
RESEARCH INVENTION & INNOVATION DESIGN
Innovation For Sustainable Growth

CONTENTS

WELCOME MESSAGE

Assalamualaikum wbkt and Salam One Malaysia

First of all, I would like to congratulate the Research, Industrial Linkages and Alumni Melaka for yet another successful organization of the Research, Invention, Innovation and Design (RIID) exhibition 2012.

This competition and exhibition is the fourth effort by the Research, Industrial Linkages and Alumni in exhibiting the outcomes of research, invention and innovation by our own versatile lecturers and students and also participation from other IPTAs, IPTS and Schools. I believe that 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 Research, Industrial Linkages and Alumni in the Melaka campus will continue to address the various challenges that we are constantly facing with a view towards multidisciplinary solutions. Hence, the present exhibition with the theme 'Innovation for Sustainable Growth' is appropriate, 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 organizing committee of Research, Invention, Innovation and Design (RIID) 2012 and each and everyone who has made this exhibition a reality. 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 for a job well done.

Yours sincerely,
Y.Bhg.Prof Madya Dr Mohd Adnan Hashim
Rector
Universiti Teknologi MARA Melaka
November 2012

BACKGROUND OF PENYELIDIKAN, JARINGAN INDUSTRI & ALUMNI (PJI&A)

PJI&A established in April 1980, started as the Research Management Unit (RMU) or IRDC and was formerly known as the Planning, Research and Development Centre. 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 Research and Consultancy Bureau in 1994 and on 15 July 2003 it became Institute of Research, Development and Commercialisation (IRDC).

With the mooting of the 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 became the Research Management Institute (RMI) to synchronise with UiTM's aspiration to become a Research University that will develop innovation activities and new research. In branch campuses RMI is known as RMU. The department of PJI was officially established in 2009 headed by its Deputy Director, Associate Professor Dr. Roaimah Omar. Under her guidance, Invention, Innovation and Design (IID) started with the RIID showcase in August 2009 and this was followed by the first IID exhibition and competition in October 2009.

PJI&A is mainly responsible to manage, monitor and facilitate researchers in conducting their research in the area of science and technology, management and social sciences. It also provides consultation services to researchers and assisting them in their research claims. PJI&A also conducts seminars and workshops to encourage, motivate and train the academic and non-academic staff in research and consultation, securing research grants and projects, to manage good financing and also manages entrepreneurial and alumni activities.

Objectives

- To promote word-class research.

- To administer, coordinate and provide service for research development, consultation and research publications.

- 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 disseminate information and provide ample training in research, consultation and publication of research.

- To provide related service through the latest technology.

- To assist in research publications for high impact journals.

Vision

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

Mission

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

Innovation activities can be considered as an important mechanism for the nation's progress. RIID2012 Melaka anchors on the objective to produce individuals who are capable of formulating creative ideas and be highly competitive. UiTM is an institution which primarily puts emphasis on an innovative culture among its staff and students to form a critical thinking society, possessing creativity skills and elevated knowledge. Aligned with the government's aspiration to cultivate innovation, UiTM Melaka has taken the initiative to organise RIID2012 Melaka Innovation Festival.
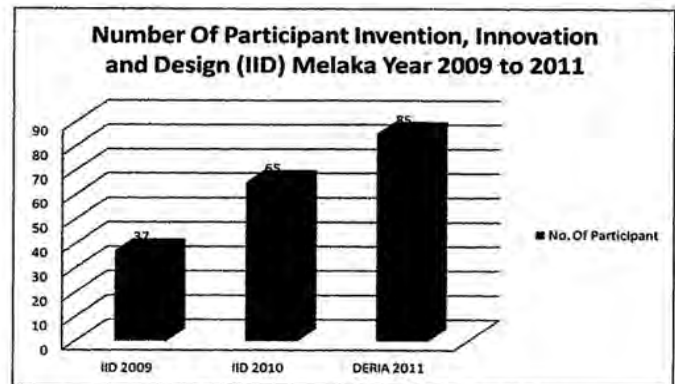
To raise the status of local universities globally or among the KPI which has been determined by the Ministry of Higher Education (MoHE) and to achieve the status of Research University, the total number of innovation being produced by a university is of utmost importance. Innovation is a vital catalyst to attain the status of a developed nation in the year 2020. Parallel to this, UiTM Melaka is carrying the nation's aspiration through innovation programmes wherein the staff and students' creativity and innovative abilities could be brought to greater heights through competitions and innovation exhibitions held every year.

To consistently produce innovation, IID competitions can act as one of the ideal channels or medium to ensure students, lecturers, administrative officers and the public to exhibit or display their products or prototype as well as new ideas that contain commercial values. The first IID held at UiTM Melaka level took place in 2009. It successfully exhibited more than 37 products. To continue the innovation culture within the campus community, IID competitions should be maintained.

The number of participation showed an encouraging response with 45 products being exhibited in the following year. The third IID known as DERIA 2011 was given a new facelift with an estimation of nearly 100 products that competed. Therefore, the Research, Industrial Linkages and Alumni Division (PJI&A) suggested organising the 4th IID in 2012. The IID competition this year is known as RIID2012 with the theme 'Innovation for Sustainable Growth'. The theme is chosen as innovation is believed to be the main impetus for growth that would spearhead the nation towards becoming a high income developed nation.

Therefore, the Research, Industrial Linkages and Alumni Division (PJI&A) has suggested to organise the 4th IID in 2012. The IID competition this year is known as RiiD2012 with the theme *Innovation for sustainable growth*.

R= research, I = invention, I= innovation, D= design = RIID

Number Of Participant Invention, Innovation and Design (IID) Melaka Year 2009 to 2011

1st IID: LET'S IID 2009

Gold Medal

1. Asmaradana (Video clip) by FSKM
2. Pinggan Rasmi Istana Melaka by FSSR
3. Rekabentuk Maskot dan Logo SUKMA 2010 Melaka by FSSR
4. eXtention-C by FPN
5. CD Interactive Cartoons on Sexual Education for Young Children by FSSR
6. Grammar Mania – A Game For The Language Classroom by FPEND
7. Dara Pujaan (Short Film) by FKPM
8. Kalkulator Zakat Mudah Alih @zakatfon by IKAZ
9. Smart Easel by FSSR
10. Dhobi Wallah – The Last Laundrette Mohican (Documentary) by FKPM
11. e-Inventori ICT System by FSKM

Silver Medal

1. Teguh 11 by FSSR
2. Songket Rasmi Negeri Melaka by FSSR
3. Workout with English by FSKM
4. Smart Drawing Board by FSSR
5. i-Masjid by IKAZ
6. Photo Gallery 2009, The Good, The Bad and The Ugly:Journey of Emotions (Sweats of Heart;s Desire) by FKPM
7. Dulang Bekas Kuih Raya 1 by FSSR
8. MyPJI-Portal by FSKM
9. Academic Predication Model Neural Network for Computer Sciences Students in UiTM by FSKM
10. Mobile Archery Scoring System by FSKM
11. e-Aduan ICT System by FSKM

Bronze Medal

1. Sistem e- GL Staf by FSKM
2. Postcards as Affective Image Makers for Melaka Tourism by FSSR
3. Impact of Economic Growth on Air and Water Pollution in Malaysia by FPP
4. Snakes and Ladders (Literature) by FPEND
5. Reka Bentuk Komunikasi dalam Penjenamaan Semula Identiti dan Imej Lokasi Pelancongan di Negeri Melaka (Melaka River Cruise) by FSSR
6. Photo Gallery 2008, The Good, The Bad, The Ugly: Journey of Emotions (Life) by FKPM
7. Malaysian MotoGP 2009 Booklet by FFPM
8. Penghasilan Functional Sculpture/Decorative Objects/Design Object (Terendak Lampu Hiasan) daripada Logam Terpakai/Terbuang dengan Teknik Kimpalan Beracuan by FSSR
9. The Sale and Purchase Agreement: Creating and Innovative Glossary to Make It More Comprehensive
10. KOMIK: Catatan SI MAHASITUA by FSSR

Faculty with the Highest Number of Participation Category: FSSR

Best Booth Category: Asmaradana (Video Clip) by FSKM

Best Poster Category: Kalkulator Zakat Mudah Alih @zakatfon by IKAZ

DERIA 2011

Best Interactive Category:
2nd Group, Noor Suhaida binti Aziz / Nornadia binti Jonari, UiTM Melaka

Best Young Inventor Category:
QI FIND (Qiblat Finder for the Blind)
Mohd Alif bin Mansor (L), Sek.Men.Keb. Teknik Kuala Lumpur

Best Invention Category (Open):
Welca Troly OK2011
Mohd Firhan bin Morni (L), UiTM Shah Alam

Best Invention Category (Student):
Automatic Observer Vehicle
Zulkarnain bin Jamak (L), Politeknik Ungku Omar

Best Innovation Category (Open):
Smart Ampoule Breaker
Amiruddin bin Mohd Yusuf (L), Hospital Segamat

Best Innovation Category (Student):
PSC: A Public Sector Comparator (PSC)
Khairizam Ismail (L), UiTM Shah Alam

Bronze Medal
Best Design Category (Open):
Portable Stool for "Home n Garden"
Zulkarnain bin Hassan (L), UiTM Perak

Best Design Category (Student):
Jelajah Melaka-Muar
Nasya-Nani bt Mat Isa (L), UiTM Melaka

Best Booth:
Pesanan Khidmat Masyarakat 'Kawan'
Muhammad Azril Izuan bin Ramlan (L), UiTM Melaka

Best Poster:
QI FIND (Qiblat Finder for the Blind)
Mohd Alif Mansor (L), Sek.Men.Keb. Teknik Kuala Lumpur

Diamond Award:
Smart Ampoule Breaker
Amiruddin bin Mohd Yusuf (L),Hospital Segam

PROGRAMME TENTATIVE

Date : 7 November 2012 (Wednesday)

TIME	TENTATIVE
8.15am	Registration
9.00am	Exhibition and Judging (Session
11.30am	Cultural Presentation
12.00pm	Lucky Draw I
1.00pm	Rehat / Makan Tengahari
2.30pm	Pameran & Perjurian (Sesi II)
3.00pm	Mind Challenging Game
4.00pm	Lucky Draw II
5.00pm	Adjournment
5.10pm	Registration for Tour of Melaka City
5.30pm - 11.00pm	Optional : River Cruise Melaka/ Jonker Street/Taming Sari

Date : 8 November 2012 (Thursday)

TIME	TENTATIVE
8.15am	Registration
8.30am	Arrival of Guest Speaker
8.35am	Breakfast
9.00am	Genovasi Briefing
10.00am	RIID 2012 Exhibition
11.00am	Lucky Draw 3
12.30pm	Break/ Lunch
2.00pm	Innovation Talk by Animosta Studios S/B
3.00pm	Arrival of PM Zulkifli Abdul Majid (Director of RIBU)
3.20pm	Welcome Prosession for VVIP, Rector and Deputy Rector UiTM Melaka
3.25pm	National Anthem and Wawasan Setia UiTM
3.30pm	Doa Recital
3.40pm	Opening Presentation
3.45pm	Speech by Chairperson of RIID 2012, UiTM Melaka
3.50pm	Speech by Rector
4.00pm	Official Opening and Closing bby PM Zulkifli Abdul Majid (Repsenting Assistant Vice Chancellor (Research) , RMI UiTM Shah Alam)
4.20pm	Launching Gimmics – Multimedia Presentation
4.25pm	Visit to Exhibition Booths
4.40pm	Press Conference
5.00pm	Award Presentation
5.35pm	Closing Ceremony
5.40pm	Photograph Session
5.45pm	Tea Break

COMMITTEE RIID 2012

■ **Certificate**
Ustz Husnul Rita bt Aris
Pn Siti Hajar Abd Aziz
Noofazreen Binti Mohd Aris
Mariam Farhana
Adibah Binti Bahori
Pn Zaiton Hasan
Cik Rabiah Ibrahim

■ **Audio Visual and ICT Equipment**
Puan Rohayu Hj. Ramli

■ **Refreshment**
Ustazah Noraini Ismail
Vani a/p Tanggamani
Siti Anis Nadia binti Abu Bakar
Puan Siti Rohana binti Daud

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Muna Kameelah Sauid
En. Mohd Hatta Mohd Yatim

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Akmal Adanan
Tania Maria Tangit
Noor ibtisam Abdul Karim
Abu Zaireen Abu Hassan
Norfaezah Khalet

■ **Montage**
YM Tengku Shahril Norzaimi Tg. Hariffazillah

■ **Video and Photographer**
Shahril Anuar Abdul Ghalim

■ **Innovation Talk**
Pn Ilya Yasnorizar Ilyas
Nadia bte Abdullah

■ **Food Stall**
Prof Madya Zaihan Abd. Latif
Puan Nor Hamiza Mohd Noor

■ **Judges**
Prof Madya Dr Maheran Katan
Dr. Shafinar Ismail
Pn Alisa Ibrahim
Pn Suhailah Kassim
Ainaa Idayu binti Iskandar
Azlin Zanariah binti Bahtar
Nur Hidayah binti Zaini
Nurhaslinda Hashim
Ahmad Syaifullizan Zulkeefly
Sulaiman Mahzan

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En. Faizul Ab. Razak
En. Ahmad Nasrin Mansor
En. Yahya Abdul
Pn. Murni Abu
En. Amran Abdul Razak
En. Nor Azizan Abdullah
Pn. Nor Hidaya Baba
Cik Siti Husnima Md Husin

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Pn. Mahdalela Rahim
Pn. Afidah Bidin
Isma Izza Mohamad Esa
Pn. Rafidah Abdul Karim
Nurul Huda Mohamad Saad

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Division Of Academic Affairs (HEA), UiTM Melaka

Division Of Student Affairs (HEP), UiTM Melaka

Division Of Facility and Infrastructure Developement (BPF) UiTM Melaka

Treasury Department, UiTM Melaka

Corporate Office, UiTM Melaka

Residence & College Management UiTM Melaka

Security Unit, UiTM Melaka

IPTA, IPTS, College & School

All UiTM Branch Campus

Innovation For Sustainable Growth
An Innovative Exhibition Of Higher Learning Research

61. IPv6 Deployment: An Architecture in Accessing and Securing ICMPv6 Risk for Network Community

Faculty of Computer and Mathematical Sciences, UiTM Perlis

Wan Nor Ashiqin Wan Ali, Athirah Rosli, 'Abidah Hj Mat Taib

Abstract

The security challenges in IPv6 deployment require an optimum security mechanism that can handle IPv6 threats. Under these circumstances, the project focuses on assisting network community against potential IPv6 risk by assessing, detecting and securing IPv6 threats and vulnerabilities. This architecture demonstrates the importance in correlating a threat model, i-SeRP and DDSP systems to mitigate from IPv6 threats. A threat model is used to assess the IPv6 threats and providing a platform in detecting risk value using i-SeRP system. Afterwards, policies have been applied to secure the network using DDSP system. Seeing that IPv6 becomes crucial for network community, thus they need to be aware of IPv6 threats and vulnerabilities. In the long run, this project contributes to the efficiency in managing security policy for IPv6 deployment. Therefore, the architecture is highly recommended in securing the IPv6 deployment particularly for network communities in Malaysia.

62. Kaedah Alternatif Verifikasi Halal Haram Dalam Perundangan Islam

Laboratori Polisi dan Pengurusan Halal Universiti Putra Malaysia

Mohammad Aizat Jamaludin, Dr. Mohd Anuar Ramli, Dr. Suhaimi Ab Rahman

Abstract

Kajian ini menfokuskan kaedah alternatif verifikasi halal haram menurut perspektif Islam dalam penentuan status hukum produk gunaan, sama ada makanan atau bukan makanan. Kebiasaannya, dalam perundangan Islam, kaedah verifikasi halal haram yang digunapakai adalah berdasarkan sumber utama seperti al-Quran, al-Sunnah, al-Ijma' dan al-Qiyas, di samping sumber sekunder yang terdiri daripada al-'Urf, al-Maslahah, al-Istihsan, al-Istishab dan Sadd al-Zara'i`. Selain daripada kaedah yang berlandaskan sumber primer & sekunder tersebut, terdapat juga kaedah verifikasi alternatif lain. Ia telah dibangunkan oleh sarjana hukum Islam seperti al-Istihalah, al-Istihlak, al-Istibra', al-Intiqal, al-Taba'iyyat, al-Intiqal, al-Inqilab, al-Ihraq, al-Takhammur dan al-Takhallul. Kaedah-kaedah ini bersifat sporadik di dalam kitab fiqh klasik dan ia tidak disusun secara sistematik serta belum dibincangkan secara terperinci sebagai penyelesaian dalam menangani isu-isu kepenggunaan masa kini. Dalam kajian ini, kaedah alternatif tersebut akan dibangunkan sebagai sumber verifikasi halal haram barang gunaan semasa dengan beberapa contoh aplikasi yang relevan. Untuk mencapai objektif berkenaan, pengkaji mengaplikasikan kaedah kepustakaan dengan menggunakan metode dokumentasi sepenuhnya. Kitab-kitab fiqh klasik akan dirujuk untuk membangunkan kaedah-kaedah berkaitan agar ia dapat dijadikan sandaran dalam penentuan hukum halal haram. Data-data kualitatif ini akan dikumpulkan dan dianalisis untuk menghasilkan beberapa model analisis verifikasi halal haram menurut perundangan Islam. Hasilnya, beberapa model untuk kaedah alternatif verifikasi halal haram dapat dibangunkan sebagai garis panduan untuk para penyelidik hukum dan pihak industri yang terlibat dalam barangan gunaan sama ada produk makanan atau bukan makanan. Oleh itu, penyelidikan ini akan menyumbang satu penyelesaian alternatif kepada isu-isu kepenggunaan berkaitan dengan produk halal haram semasa.