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Telkom University



Towards Quality Research Excelence



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## PROLOG



Research is usually considered as something very stiff. Becoming one of *Tri Dharma Perguruan Tinggi* (Three Pillars of Higher Education), research is not only about a commitment of university financial expenses. The readiness of human resources and facilities are also

# ACITYA Research Magazine for Various Societies

points of consideration in improving the quality and quantity of the research. Those points will be more important if becoming a research-based university (Research University) is the main objective.

There are many media that can be used to publish research result of its Society of Academician. In fact, publication of research result conducted by a researcher is obligatory to attain public attention.

For that reason, to facilitate the member of Society of Academician who has done some researches, there are many journals that can be used to publish research result. It is started from institutional, national, to international journal. The problem is, it is not an easy matter for a research result to be accepted in a reputable journal. Sometimes, a researcher should do a research repeatedly, but none of them is accepted.

However, a research that has been accepted in a journal, especially for credible international journal, will make the researcher also credible. The acknowledgment and trust from public will arise automatically, so the researcher will have a good market position and it will promote the name of the higher education institution.

So, how about for people in common? Of course, the result of the research is not only a reading material for researcher in the form of journal article. Researcher also needs to expose the works to people; hence, they know the real implementation of scientific knowledge.

However, it is not easy for people in common to read content of journal that is only understood by limited society of researcher. For that reason, ACITYA magazine present itself as a bridge to publish research result at Telkom University (Tel-U). It is aimed to be a reading material that can reach all community.

With some rubrics in it, ACYTA (taken from Sanskrit Language which means having knowledge) tries to inform research activity at Tel-U to public. They are, first *projection* covers main reports related to research. Second, *innovation* explains some research conducted at Tel-U in pop-language that will be understood easily by readers in common.

Third, *inspiration* contains notable researchers who have distinguished outcomes and they can inspire other researchers. Fourth, *Reference* discusses sources and literatures for research activity. Fifth, *laboratory* discusses facilities for research process.

Next, *conference* discusses the conferences attended by Tel-U researchers. And then, *actualization* reports research activities at Tel-U. The last one, *intellectual works* contains information of Tel-U's intellectual works.

This magazine is also equipped with some data related to research conducted at Tel-U. It is wished that by the presence of this magazine, it can provide information related to research area to public.  $\checkmark$ 

# Towards

What is something most wanted by higher education institution aside from performing education and instruction activity? Earning acknowledgement and respect from other. However, it is not easy. Even for Harvard University, they still need many years effort to achieve world-class predicate. A university should contribute to develop education in community, so, world-class predicate is not only a throne.

owadays, there are many higher education institutions that race to get acknowledgement from community, one of them is Telkom University (Tel-U). As de facto, this campus is just formed the past three years. However, its experience in academic area is already shaped in more than 20 years. To be acknowledged by community, a university should perform all Tri Dharma Perguruan Tinggi, equally. It cannot be developed only in one aspect. For that reason, the quality improvement of Tri Dharma always becomes one of the Tel-U Strategic Plans (Renstra).

This time, *Renstra* Tel-U has been activated for five years (2014 – 2018) and still operating. Yet, aside from *Renstra*, there is also a long-term plan, Development Major Plans (*Renip*) that will be managed in 25 years or 5 periods of rector. According to Tel-U Rector, Prof. Ir. Mochamad Ashari, M.Eng., Ph.D, there are some plans that are already executed and running in this *Renstra 1*.

"We start our merger on August 14<sup>th</sup>, 2013; the target is Tel-U becomes World Class University (WCU) in 2018. This campus is actively involved in developing creative art, business, and technology. After, WCU, it is planned that it will be Research University (RU) in 2023 (fit to *Re*-

*nip*). However, in 2018 we plan to have a quality research excellence university," he said.

For the first 5 years of Renstra. Tel-U manages some improvement every year after merger. First vear. we make consolidaа tion for four new merger institutions. Second vear. we restructure organizathe tion. Third year, we improve the management (manage-

ment excellence). The next year, we improve human resources and academic (academic excellence). During the last year, we improve research (research excellence). For long term target, positions that become our goals are Tel-U as WCU, and then RU, Entrepreneurial Uni-

> versity, World Class Entrepreneurial University and Global Entrepreneurial University in next 2038.

Even though the target of Tel-U to become RU is in year 2023. Tel-U wants to be a campus that achieves quality research excellence in 2018, and this is very interesting. It will be differentiated by the result of the research. "In 2018. it is wished that publications produced are worldwide.

especially in international level. Nowadays, the publication position of Tel-U is in 18<sup>th</sup> position in Indonesia or 2<sup>nd</sup> position if it is compared to other private universities. From the very beginning of merger, there are 56 papers that are already Scopus indexed, and now there are 369 papers," he said.

Meanwhile, to become Research University in 2023, Tel-U wants to have Doctoral program that has minimal 5 study programmers where the number of students in master and doctoral programs reach 20%. Now, the number is still lower than 1%. Lecturers, it is targeted to have min. 30% lecturers with doctoral degree or 60% lecturers in 2023. This time, there are about 79 lecturers who have Doctoral degree certificate, and there are 104 from total of 720 lecturers who are continuing the study. The main problem in Tel-U now is that there is no professor in this university.

#### **Tel-U Research Policy**

In the matter related to research at Tel-u, Ashari mentioned some policies that are applied to push the quantity and quality of research. First parameter of Tel-U in research is the number of papers that have been published in international scientific journal (Scopus-indexed), there are 56 papers in 2013. For that reason,

research, we make some research programs that are funded by Tel-U, namely Internal-Funded Research/ Penelitian Dana Internal (PDI) for them to learn how to manage a research. In 2014, we allocated Rp. 4 Billion for research funding,"

To improve lecturers'

participation in

#### PROJECTION

Ashari and his officials establish a program to improve research.

Firstly, reconditioning of prerequirement for lecturers to do research. It is understandable, because there are many lecturers who have not got Academic Functional Rank/Jabatan Fungsional Akademik (JFA) when they joined Tel-U, so, they cannot fulfill the requirement to conduct a research. Consequently, Lecturer's employment system should be mended, starting from National Lecturers Identification Number/Nomor Induk Dosen Nasional (NIDN), JFA, etc. It is aimed to make it easier for them to get research funding from Ditjen Dikti.

Secondly, improving lecturers' participation in research activity. According to Ashari, in 2013, there are more than 30% of 556 lecturers who conduct research each year. There are 185 research titles, and it was funded by both Tel-U and Dikti.

> "To improve lecturers' participation in research, we make some research programs that are funded by Tel-U, namely Internal-Funded Research/ Penelitian Dana Internal (PDI) for them to learn how to manage a research. In 2014, we allocated Rp. 4 Billion for research funding," said

Ashari. Also, there are trainings for lecturers to make research for competing at Dikti Grants.

Next, making a program to accommodate output of the research. The result of the research can be scientific publication, patent or product prototype. For scientific publication, Tel-U obliges every faculty to be a host of international conference. It is aimed to force lecturers to get accustomed to publish their research in international forum. Correspondingly, it is also aimed to make the faculty familiar to be a host of international seminar.

This time, every faculty at Tel-U has got an annual international conference related to their major. Especially for School of Creative Industry / Fakultas Industri Kreatif (FIK), the output of the research is usually art work or design. To protect those art works or patents, Tel-U has collaborated with Ministry of Law and Human Rights by preparing Intellectual Property Clinic / Klinik Hak Kekayaan Intelektual (HKI). The aim of this division is to make sure that every product is registered fast.

Lastly, organizational restoration to improve research at Tel-U. So far, any research activity is handled by *Dit. PPM*, now Tel-U has Research Centre (RC). The responsibility of Research Centre is to manage research in collaboration with researchers outside Tel-U, and improving Tel-U brand in Research Centre. Research Centre is an autonomous division by the command from Rector.

Now, it is already established Research Centre for ICT Business & Public Policy. This research centre is mostly cooperates with Ministry of Communication and Informatics / kementerian Komunikasi dan Informasi (Kemenkominfo) in making policies related to ICT business regulation. Product that is being studied is IoT (Internet of Thing), Big Data, and Smart Card that is widely used as ID and Parking Card. This activity is conducted by collaboration of School of Informatics Science (FIF), School of Electrical Engineering (FTE), and, School of Economics and Business (FEB).

Ashari added, "In the future, we are going to open RC for Advanced Wireless Technology. This RC will study 4G, 5G, and wireless technology in the future. Apart from the importance of conducting research with others, it will show the capability of Tel-U related to those areas. "

Not only RC, Tel-U also pushes

Prof. Ir. Mochamad Ashari, M.Eng., Ph.D



study programs at Tel-U are accredited by *Badan Akreditasi Nasional Perguruan Tinggi* (BAN PT). For International accreditation, Management Magister (MM) at Tel-U is accredited by The Alliance Business Education and Scholarship for Tomorrow (ABEST) 21 from Japan. As for Technical Engineering program, Tel-U is planned to register its international accreditation to JABEE/ IABEE that is also from Japan.

"This moment, we are in the middle of learning process in research area, so, some topics are still in academic scope. In the future, when Tel-U has became RU. topics analyzed by Tel-U should be related to national problems. For instance, there are many imported items from other countries, such as electronic equipments -mobile phone- to cooking ingredients, such as salt. When technical engineer is able to create a tool to make salt, they will need no more conventional salt pan that need a very wide area and it should be placed under sunshine. Thus, the quantity of the product will increase fast. Also, import of salt is no longer needed. So, research topics in the future are expected to focus on applicable matter and it can be implemented to solve country's problem," he added. 🛠

the function of Expertise Group / *Kelompok Keahlian* (KK). KK is a grouping of lecturers in corresponding field. The development of KK is done by conducting trainings and escorting program in performing academic and research improvement in their field.

Next, there is also Bandung Techno Park (BTP). The duty of this division is to follow up research result of Tel-U, especially for commercialized product. The structure of BTP is under Telkom Foundation/Yayasan Pendidikan Telkom (YPT); it is not part of Tel-U organizational structure.

#### Human Resources as the Skeleton Key

When research quality becomes the main topic, it is impossible for not talk about Human resources in it, because the main actor in a research is human who is supported by facilities. Related to this point, Tel-U condition is far from perfect. But, it does not mean that Tel-U is doing nothing.

According to Ashari, human resource maintenance is always there, starting from educational and instructional needs, research, to Community service activity. From instructional side, Tel-U works to adjust the ratio of lecturers and students; for science is maximum 1: 30 and non-science is maximum 1: 45. As a result, in 2014 Tel-U recruits 214 new lecturers. From educational sides, lecturers are supported to get Doctoral degree and JFA.

In addition, from facility avail-

ability, Tel-U always adds practical lab work as laboratory in line with the addition of students and renew any equipment in it. Furthermore, this time Tel-U is building Telkom University Creative Center (TUCC) and Gallery to show students' creation, especially from School of Creative Industry/ *Fakultas Industri Kreatif* (FIK).

However, Ashari admits that Human Resources aspects still need some improvement and it takes time.

Other aspect is institutional reconstruction to make Tel-U well-acknowledged by community. From management quality, Tel-U is certified with ISO 9001:2008 certificate. Meanwhile, for education quality, Tel-U is nationally and internationally accredited. This time, 10 to 27

# Fingerprint Extraction Interpolation in QR Code

These last few years, people are busy with e-KTP (Electronic Personal Identification Card) regulation that takes time.





I is because the process of issuing this card takes one year of time. Though, this e-KTP is very important in many administration processes. Seemingly, this government program is constrained by expensive facilities that should be provided. This is why not every area can be equipped with this facility. Besides, it is important to have an educated operator to run all of the equipments. It will affect the data recording process that usually takes time and it cannot be done in the same time. There is also problem in data gathering and saving the data. Data storing and extraction process to be readable by e-KTP is not easy and cheap.

Price for e-KTP maker at that time is reaching Rp 40 million per unit. And it is impossible for the government to provide this machine in every *Kelurahan* (sub district), since the number of *Ke*-

#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF COMPUTING

- Major
  - **Bachelor of Computational Science**
- Title
- Characterization Graf Operating Results Kromatiknya f- Based Index for Supporting Computational Time Optimization
- Researchers Team Dr. Adiwijaya
- Dr. Maman Abdurrohman, ST, MT
- Goverment Fund IDR 70.000.000
- Scheme Fundamental Research

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - **Bachelor of Electrical Engineering**
- Title
  - Guaranteed Cost Model In Uncertain Neutral Systems With Time Delay What Changed Against Time : System Control And Filtering (Filtering)
  - Researchers Team Erwin Susanto, Ph.D Junartho Halomoan, MT
  - Goverment Fund IDR 60.500.000
  - Scheme
  - Fundamental Research

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - **Bachelor of Electrical Engineering**
- Title
  - Design Modeling Space Time Block Code (STBC) and Differential - STBC ( DSTBC) In the case of WCDMA Wireless Communications Cooperative Environment With a Single Antenna On Fading Channels
- Researchers Team Ir. A. Aly Muayyadi, M.Sc., Ph.D Gelar Budiman, ST, MT Dr. Ir. Rina Pudji Astuti, MT
- Goverment Fund
- Scheme Fundamental Research

## INNOVATION



*lurahan* is plentiful, so, the officers should take turn in making e-KTP. The effect caused by this process is like domino effect for the next processes, such as inputting data to RFID (Radio Frequency Identification) and extracting data process from KTP. Both KTP that are done can only be read by a special reader that is not always available in all institution, and it should be connected to internet. From security point of view, it is easy for people to falsify this e-KTP. Finally, fingerprint and retina record are useless, since the data needed is printed in e-KTP. Therefore, e-KTP cannot guarantee the authentication of the person who owns it.

To see this case, it is important to put a security assurance inside this e-KTP, and it should be easy to make and verify, of course, it needs more fund to do so. For that reason, it is important to consider a method to perform the same function, but cheaper and easier.

To comprehend the demand mentioned above, a research is conducted related to biometric interpolation in QR code. QR code is a symbol in the form of matrix that consists of series of square module and it is equipped with a unique finder (unique pattern finder), that is located in three corners of QR. These squares module is how QR code directly authenticated without using complicated device.

In the research, biometric is hid in unused part of data for 1920 bit (for QR Code type 16). Characteristic extraction from fingerprint, iris or other biometrics can be hid in this part. The process of hiding this biometrics is using steganograph method. Steganograph is a process of hiding information in content, and the content here is a picture, sound or text (document).

To strengthen the security in hiding this information, they use Blum Blum Shub function. This function is used to randomize position of data hiding, so it is not easy for people to guess or locate it.

Authentication process of QR Code that is aimed to prove the owner of that QR code is by extracting characteristic that is already included in QR code and later, it will be compared with character-

If QR code is printed in KTP, so it can assure that the one who bring it is the real owner, not other person.

istic extraction from the one who bring that QR Code. If both have the same characteristics, it means that the one who brings that QR Code is really the owner.

If QR code is printed in KTP, so it can assure that the one who bring it is the real owner, not other person. To do the authentication process, it only needs to use cellular phone with 5-8 MP camera, and biometric scanner that can be connected to cellular phone.

This method only needs a common printer and common paper

# EXTERNAL FUND RESEARCH 2014

SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - Bachelor of Electrical Engineering Bachelor of Physics Engineering
- Title

Prototype Design Tool Monitor Telemetry -Based Anaerobic Digester Biogas

- Researchers Team Amaliyah Rohsari I U, ST, M.Si Indra Chandra, S.Si, M.Si Dra. Erni Dwi Sumaryatie, M.Eng.
- Goverment Fund IDR 56.500.000
- Scheme
   Competitive Grant

#### SCHOOL OF COMPUTING

- Major
- Bachelor of Informatics Engineering ■ Title Study and Application of Process Mining On Business Process Audit
- Researchers Team Angelina Prima Kurniati, ST, MT Imelda Atastina, S.Si, MT
- Goverment Fund IDR 50.975.000
- Scheme
- Competitive Grant

#### SCHOOL OF COMPUTING

- Major
   Bachelor of Informatics Engineering
- Title
  - Software for Design of System on Chip ( SoC ) Auto -Based Hardware / Software codesign
- Researchers Team
   Dr. Maman Abdurohman
   Ir. Endro Ariyanto, MT
   Novian Anggis Suwastika, ST, MT
- Goverment Fund IDR 55.000.000
- Scheme Competitive Grant

## INNOVATION

to print KTP. Authentication device needed is only cellular phone and biometric scanner that cost cheaper than the cost of device for printing e-KTP that is utilized now. Thus, it is not significant to place someone with a specific competency to print and authenticate e-KTP. It can is clear now, the process of producing and authenticating KTP can be more efficient and save by using the proposed method.

Based on the experiment, accuracy rate of authentication process is around 89.1%. The problem comes from biometric accuracy during extraction process. The concrete result of this research is software that is planted in cellular phone. ◆

It is cited from a research entitled "Fingerprint Extraction Interpolation in QR Code" by Ir. Ari Moesriami Barmawi, MSc., Ph.D and Fazmah Arif Yulianto, ST., MT.

THE research that has been conducted since 2013 is now in the process of publication and is waiting for the final process for patent that will be issued by Ministry of Law and Human Right. The assessment for substantial analysis is conducted in April 2016. This research is the result of Higher Education Feature Bequest Program for Security and Defense in Informatics Technology Area (Program Hibah Unggulan Perguruan Tinggi untuk Bidang Unggulan Pertahanan dan Keamanan pada Bidang keilmuan Teknik Informatika). This research has been published in International Conference on Information and Network Security in Beijing 2013 and International Conference on Information Science and Security (ICISS) in Seoul 2015.





# EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF ELECTRICAL ENGINEERING

- Maior
  - Bachelor of Electrical Engineering
- Title
- VOIP Development On Campus (VOC)
- Researchers Team Dr. Rendy Munadi Asep Mulyana, ST, MT Iman Hedi Santoso, MT
- Goverment Fund IDR 57.500.000
- Scheme
  - **Competitive Grant**

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major
   Bachelor of Industrial Engineering
- Title
   Bandung District Community Asset Mapping
   For ICT Empowerment
- Researchers Team
   Dr. Yati Rohayati
   Rino Andias Anugraha, ST, MM
   Sari Wulandari, ST
- Goverment Fund IDR 49.000.000
- Scheme Competitive Grant

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - **Bachelor of Telecomunication Engineering**
- Title
- SRP Development ( Universal Software Radio Peripheral ) Based Systems Asteristik To Quadruple Play Service
- Researchers Team Hafidudin, ST., MT Ir. Agus Ganda Permana, MT. Muhammad Iqbal, ST., MT.
- Goverment Fund IDR 58.500.000
- Scheme
   Competitive Grant

# INNOVATION

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# Modeling the **Technology** Consumer Behavior

23 3 35 <u>212</u>

53 1 12

Information and communication technology is growing very fast from time to time, starting from speed connectivity to various kinds of content in it. All of these technologies are then used to facilitate human life.

owever, the usefulness of this technology need to be examined to determine the factors that make these technologies are accepted and adopted thus, it can be used by the public repeatedly. It is important to see the continuity of information and communication technologies business for the future. It is also important for businessmen who run technology business areas such as content developers, operators and providers, this result of examination can be a reference for the development of their business.

In 2003. Venkatesh issued a theory of technology adoption, namely Unified Theory of Acceptance Use Technology (UTAUT), which became a model of technology adoption based on consumer behavior (behavioral consumer). According to Venkatesh, there are several variables that make technology can be adopted, accepted, and used constantly. They are performance expectancy, effort expectancy, social influence, facilitating condition, gender, age, experience and voluntaries of use. Venkatesh conducted his research in America on a business scale consumers (Business to Business-B2B) in the IBM Company. UTAUT model theory is the newest theory relating on consumer behavior, because it has the best predictive power and comparison that can reach up to 70% better than earlier theories.

Obviously, the UTAUT models may not have the same result when it is applied in one country to other countries. Based on that consideration, the researcher conducted the research again for this particular model development UTAUT in Indonesia and Malaysia to find out consumer behavior awareness at level Business to Consumer (B2C). It is because Indonesia has unique characteristics in the acceptance and technology usage.

Based on the data, Indonesia is the second highest country among the six countries in Southeast Asia that downloads many applications. The most downloaded application is instant messaging in 2013. However, from the application usage

# EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF COMPUTING

- Major
  - **Bachelor of Computational Science**
- Title
  - Interactive Multimedia for Academic English Presentation Skills (IMPAS)
- Researchers Team Ima Normalia Kusmayanti, S.S., M.Pd Warih Maharani, ST., MT. Florita Diana Sari, S.S., M.Pd.
- Goverment Fund IDR 50.000.000
- Scheme Competitive Grant

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Telecomunication Engineering
  Title

Design and Prototyping of National Health Center of Geographic Information Systems (Sigapnas) To Improve Public Health Services Indonesia

- Researchers Team
   Istikmal, ST., MT
   Tody Arifianto Wibowo ST., MT.
   Leanna Vidya Yovita ST., MT.
- Goverment Fund
   IDR 62.500.000
- Scheme Competitive Grant

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- **Bachelor of Electrical Engineering**
- Title
   Clever trolleys using RFID and Barcode technology based on ARM Processor
- technology based on ARM Processor Architecture Researchers Team
- Junartho Halomoan, ST, MT Surya Michrandi Nasution, ST., MT.
- Goverment Fund IDR 57.500.000
- Scheme Competitive Grant

## INNOVATION

side, Indonesia is the lowest country in Southeast Asia that uses it, so that data is very contradictive. For that reason, it needs to be revisited related consumer behavior using this UTAUT models, especially in Indonesia.

Actually, research related to technology adoption has been conducted by researchers when 3G appeared for the first time in 2006. The study was conducted in 2008 on the 3G to see how consumer behavior towards their 3G. At that time, 3G is the fastest connection of information and communication technology speed. This speed will not be useful if it is only used for telephone and SMS (Short Message Services).

For that activity, there should be a content that can be used by consumers repeatedly. Then, there is additional variable on the UTAUT theory which its evidence is necessary to be tested, whether it also influences consumers' behavior or not. Through qualitative research to a number of consumers and users of technology from operators, business players of information and communication technology, as well as individual consumers, there are three variables generated, namely affordability of devices (the ability to use the tool), affordability of services (service capacity), and the content (content).

As a fact, the first two variables are not proven that they have effects. It is only the content that has effects. The reason is, when the research was being conducted, the cost of information and communication technology in Indonesia was going down and even more, there was price war among operators.

Evidently, the development of UTAUT theory as a model in the study of consumer behavior has been developed by its creator, Venkatesh. In 2012, Venkatesh issued UTAUT II theory model with additional variables. There are: performance expectancy, effort expectancy, social influence, facilitating condition, hedonic motivation, price value, habit, age, experience Actually, research related to technology adoption has been conducted by researchers when 3G appeared for the first time in 2006. The study was conducted in 2008 on the 3G to see how consumer behavior towards their 3G.



# EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Telecomunication Engineering ■ Title
- Mini Wireless ECG for Athletes and Heart Disease Patients with High Mobility based on Android
- Researchers Team Koredianto Usman, ST, MSc Achmad Rizal, ST., MT Sugondo Hadiyoso, ST., MT
- Goverment Fund IDR 50.000.000
- Scheme
   Competitive Grant

#### SCHOOL OF COMPUTING

- Major
- Bachelor of Informatics Engineering ■ Title Easy Used And Customizable General
  - Reporting Application
- Researchers Team Kusuma Ayu Laksitowening, ST., MT Yanuar Firdaus Arie Wibowo S.T., M.T.
- Goverment Fund IDR 58.000.000
- Scheme
- **Competitive Grant**

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - **Bachelor of Physics Engineering**
- Title
  - Design Reactor Producing Hydrogen and Methane From Organic Waste As Energy Future
- Researchers Team
   Mukhammad Ramdlan Kirom
   Amaliyah Rohsari I. U., ST., M.Si.
   Salafudin, ST, MSc. (ITENAS)
- Goverment Fund
   IDR 67.500.000
- Scheme Competitive Grant

**INNOVATION** 

and gender.

Meanwhile, research into consumer behavior using the model UTAUT in Indonesia was directed to the content. In previous studies, the content has proven that it influenced the technology adoption in consumer. The UTAUT II theory issued by Venkatesh, was considered to be different if it was applied in Indonesia and Malaysia, in these cases, there is the possibility of adding a variable in it.

After investigating a Focus Group Discussion (FGD) and indepth interviews with a number of people who run the business of information and communication technology as well as individual consumers, there are two other variables that may have effect in the UTAUT II model,namely interoperability and mobile friendliness. Both of these variables will be tested in 2016 on 1,300 consumers and 200 consumer information and communications technology in Malaysia.

#### "Killer Application" the Cause of Applied Technology

The roadmap of study conducted also has become narrower since 2008, starting from 3G technology, mobile services, content, until the killer application as a derivative of the content. So, there is something that makes the technology used repeatedly, it is content. The content is not merely about news, stock information, but also applications in real time.

So, why is this application very interesting for technology users? It is because the application is successful "kill" technology consumers; it can make them not to turn away to other applications. Because of that it is called Killer Application.

Today, many applications in mobile technology can be categorized as a killer application. For example, WhattsAp (WA), Line, Instagram, and a variety of other applications are also used as instant messaging and social networking. But all of these applications mostly are not made locally, but it is made in abroad.

Through the development of UTAUT II models, the investigation of the killer application was conducted together by the researcher and postgraduate students; it gives evidence that a number of variables of the model UTAUT II causing an application are used

# EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF APPLIED SCIENCE

- Major
  - **Diploma of Informatics Engineering**
- Title

Computer Assisted Learning ( CAL ) for Children with Special Needs (Limitations Hearing)

- Researchers Team
   Retno Novi Dayawati, S.Si., MT
   Mahmud Dwi Sulistiyo ST., MT
   Litasari Widyastuti Suwarsono S.Psi
- Goverment Fund IDR 50.060.000
- Scheme Competitive Grant

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Physics Engineering Title
  - Design and Implementation of Prototype Power Plant -Based Polymer Electrolyte Membrane Fuel Cell ( PEMFC ) For Mobile
- Researchers Team Reza Fauzi Iskandar., S.Pd., M.T Mamat Rokhmat, S.Si., MT.
- Goverment Fund
   IDR 57.500.000
- Scheme Competitive Grant

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - **Bachelor of Physics Engineering**
- Title
  - Abnormalities Disease Detection System Implementation Based Voice Band Mobile Computing
- Researchers Team
   Suwandi Msi
   Rian Febrian Umbara S.Si.,M.Si
   Hertiana Bethaningtyas Dyah K., ST., MT.
- Goverment Fund IDR 56.500.000
- Scheme Competitive Grant

very frequently by technology consumers. The killer application research is extended to prove the number of variables of the model UTAUT II in Indonesia and Malaysia in 2016. consumer behavior in Indonesia and Malaysia. However, it must be still verified, due to the variable interoperability and new mobile friendliness will be tested quantitatively in 2016.

> If it can be proven, the results of this study can be recommended to a number of local application developers to create applications that confirm the criteria of the model variables UTAUT II. The results of this study can be a reference for operators in Indonesia, because the number of consumers who use the technology applications of instant messaging will increase their further communications traffic.

> At the point, this research is part of a market research that will have an impact on the development of information and communication technology business. Recommendations that are generated, can be a reference for the application development and business engineering development in the future.  $\bigstar$

> > Excerpted from the study: "Analysis of Instant Messaging Application Usage by Using Unified Theory of Acceptance and Use of Technology 2 (UTAUT 2)" wrote by Indrawati, Ph.D.

> > > 19

number of variables of the model UTAUT II in Indonesia and Malaysia in 2016. These variables are the same as the Venkatesh revealed in UTAUT II model in 2012, but there are a number of additions. The additions are performance expectancy, effort expectancy, social influence, facilitating condition,

hedonic motivation, price value, habits, age, gender, by additional interoperability and mobile friendliness with extra Interoperability and mobile friendliness. Interoperability is an application can be operated through a variety of media (gadgets, PC or laptop). While mobile friendliness is an application neither takes too many data in the data storage nor makes a gadget becomes slow.

Considering the research conducted in Indonesia and Malaysia, there is possibility for culture variable (cultural) will influence the research in the future. It can be seen from the differences in characteristics of consumers who have been interviewed in focus group discussions and in-depth related

nce the future. can be in charho have s group related

# INNOVATION

# Culturating to be More

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# Talking about jute, evervone must have ever contacted with this thing. A material in the form of a brown sack dull and shabby, indeed, often be used for a number of goods or used to turn off the kerosene stove that exploded by watering it.

ute does have a very low life cycle. After it becomes unused wet finished sack, it turns into waste. If it is not stacked, jute will be thrown away or burned. In fact, jute is the result of factory production comes from natural fibers from plants Kenaf and Jute are manufactured by PT Perkebunan Nusantara VIII. Moreover, the production process of Jute is fairly massive and it is not easy. In fact, used jute sacks became alternative clothing for the people living in the colonial times of deprivation. But this time, nobody noticed jute waste due to the rapid development of soft material.

The Emerging of sacks materials made of synthetic fibers is believed to be one of the causes of reduced use burlap sacks. Total production of jute sacks also declined, reached up 90,000 tons native fiber/year to only 60,000 tons of fibers/ year. In fact, one of the centers

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of production in the region Delanggu burlap sacks eventually liquidated.

Considering the number of used jute which only becomes waste, it is necessary to make the effort to extent its life cycles a bit longer. Fibers from the jute sack that is no longer in good condition, need to be reconditioned to restore the structure of the fiber and recycled, thus it can generate new quality and useful textile material. However. as the texture of threads on a sack, it is impossible to use it as raw fashion materials or clothing wear. Jute's fiber is rough and itchy if it contacts with skin. But it is very possible if it is developed into a textile material as fashion accessories craft materials.

To that end, it has been conducted the survey of jute sack waste tested using the technique of single yarn and Non Weaving Machine Tools weaving. But before it was con-

#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF COMPUTING

- Major
  - Bachelor of Informatics Engineering
- Title
  - Palm Biometric study of Palm as a Feature Individual Identity
- Researchers Team Tjokorda Agung Budi Wirayuda, ST., MT Bambang Pudjoatmodjo, S.Si., MT Febryanti Sthevanie, ST., MT.
- Goverment Fund IDR 58.775.000
- Scheme Competitive Grant

#### SCHOOL OF COMPUTING

- Major
   Bachelor of Informatics Engineering
- Title
   Social Network Analysis for Social Media Marketing In Helping SMEs (Small and Medium)
- Researchers Team Warih Maharani, ST., MT Dr. Adiwijaya, S.Si., M.Si. Alfian Akbar Gozali, ST.,MT.
- Goverment Fund
   IDR 62.000.000
- Scheme
- **Competitive Grant**

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Computer System
- Title
  - Prototyping Hardware and Software Keylogger For Security Penetration Testing Computer Systems and the National Intelligence Purposes
- Researchers Team
   Yudha Purwanto, ST., MT
   Surya Michrandi Nasution, ST., MT.
   Ir. Agus Virgono, MT.
- Goverment Fund
   IDR 50.000.000
- Scheme Competitive Grant

#### INNOVATION

ducted, it is needed to know the strengths and weaknesses of jute. Excellence jute is having porous fibers with good strength.

Moreover, in terms of functions, jute sacks are better than plastic sacks. However there are some disadvantages of jute, jute production is still low, while the value of sales was higher than plastic bags. Furthermore, the production of jute is still carried out semi marginal and needs very much time as well as more human source to produce it while the plastic bag has been made marginal using heavy machinery. In addition, during this jute is produced just for taking of its primary function (sacks), but there is no consideration for aesthetic side.

Improving Aesthetical Value of Jute

It is not easy to recondition jute, because of its shape and unattractive appearance. A dull brownish color, texture rough and hard, and when it is exposed to water, its damp will not be lost. To that end, before the experiment done, jute goes into the preparation phase (preparation). After a Jute sack is separated into pieces of threads,

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jute soaked in water in order to remove dirt on the outer surface of jute yarn. After this, there are two processes at the stage of preparation, namely scouring and bleaching.

The process of scouring is the fiber treatment process to remove impurities and omit the content of gum or sap on the surface of the fiber that causes fiber handle so coarse and stiff. Through this process, the fiber will be softer and cleaner. In the process of scouring, jute is cooked by using water mixed with soda as liquid and Teepol in a certain period of time to get the most optimal fiber qual-

#### ity.

In this study, there are three recipes for jute scouring process. The first recipe uses 1.5 g / ltr as soda and 2.5 ml / ltr Teepol to cook 100 g kenaf fiber and 5 liters of water. The second recipe uses 5 g / ltr as soda and 5 ml / ltr Teepol to cook 100 g kenaf fiber and 5 liters of water. The Last recipe using 10 gr / ltr as soda and 10 ml / ltr Teepol to cook 100 g kenaf fiber and 5 liters of water. Each recipe is cooked for 30 minutes.

After scouring, jute fibers go into the bleaching process to change the dull color to white fibers. This process is actually op-

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tional in fiber processing. However, the bleaching process is done in order to maximize fiber quality that will be colored.

In this study, the bleaching process is conducted to determine the capability of the fiber to absorb color. In the bleaching process, there are two recipes that use. The first recipe using 2.5 ml / ltr H2O2 with 2.5 ml / ltr Na Silicate and 2.5 ml / ltr Teepol alongside 2.5 ltr of water and 100 grams of fiber. The second recipe using 5 ml / ltr H2O2 with 5 ml / ltr Na Silicate and 5 ml / ltr Teepol together 5 ltr water and 100 grams of fiber. Each recipe is cooked for 30 minutes.

After going through the process of scouring and bleaching, the resulted jute fibers are softer, clean, odorless, full white and tidier fiber structure.

The good quality Jute is then dried before going to the spinning stage using the technique of single yarn spinning and weaving on the handloom. In this study, experiments were conducted using a single yarn spinning which is manually using the jantra manual tool and handloom tool, because the scope of test used is only laboratory testing scope.

Not only that, the target of this study is Small and Medium Enterprises (SMEs), in which there are more people still use handloom. However, the use of spinning and weaving machines can only be done if the amount of production is very much and up tons and tons of fiber.

Based on the results of spinning, yarn produced has an inconsistent texture. Some threads are to be smaller, bumpy, and slightly larger because the yarn is spun manually only by the strength of the hand. However, this inconsistency makes jute yarn becomes

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#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Maior
  - **Bachelor of Information System**
- Title
- Making the Consumer Portal as a Source of Information on the Perceived Value of Consumer Products and Services
- Researchers Team Yuli Adam Prasetyo, ST., MT Andika Bayu Herbowo, ST., MT.
- Goverment Fund IDR 50.000.000
- Scheme Competitive Grant

SCHOOL OF COMMUNICATIONS & BUSINESS

Major

Bachelor of Management Business Technology and Informatics

Title

Simplifying Complexity Community Detection For Large Scale Social Network in the Field of Management Science

- Researchers Team
   Yahya Peranginangin
   Osa Omar Sharif, S.Si.,MSM
   Dr. Muchtadi Intan Detiene, M.Si. (TPM-ITB)
- Goverment Fund IDR 80.000.000
- Scheme Partnerships Research

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
  - Bachelor of Electrical Engineering
- Title
- Multisignal Development of Remote Patient Monitoring System for the treatment of heart patients using a wireless LAN protocol
- Researchers Team Achmad Rizal Vera Suryani, ST., MT Drs. Jondri, M.Si.
- Goverment Fund IDR 77.500.000
- Scheme National Strategic Excellent



more interesting in terms of aesthetics. There are three types of yarn obtained from the spinning: small, medium, and large yarn.

Then, the threads that have been woven enter handloom weaving process. In the weaving process, there are three types of motives usually created; those are plain weave (plain weave), woven keeper (twill weave), and woven satin (satin weave). Plain weave is the simplest and often used to manufacture fabrics like calico, cotton and canvas. In principle, the warp and weft yarns each interspersed one, resulting in a chessboard pattern structure. Woven keeper forms diagonal pattern characteristics on the surface of the fabric. To the left diagonal pattern is called "left keeper" and to the right is called "Right keeper". Fabrics woven keeper is usually thicker than the other. For satin woven, in principle, warp yarns leap some woof at a time (4-11 thread), then passes the lower surface of the weft (1 time) and repeated. The shortcoming of this woven is. fabrics with woven structure are more easily torn.

After it is woven, there will be

six samples of fabrics with small different texture and shape loom, although all of them use a plain weave structure. All the six results of woven become different; it is not only the woven process techniques that tighten and loosen the woven yarn.

But also, the different size of twist in yarn spinning process becomes one of the factors that make the characteristic woven vary. However, differences in texture and shape of each woven jute have an interesting aesthetic motif. Besides it is tested by using handloom, the threads of jute are experimented by crochet techniques. In this technique, jute yarn is knitted by a knitting tool, so that it can be a piece of cloth. This experiment proves the possibility of producing a new textile with different characteristics.

Based on research, jute waste still has an attractive point that can be innovated after it is processed. However, the fabrics structure produced cannot be used as fashion raw material, because it is still rough, even though it is not as rough as jute sacks.

However, the research is able

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to recommend jute waste development applied in to something useful. By conducting many experiments mentioned above, the waste jute sacks can be recycled into a piece aesthetic fabric.

Considering the jute fabrics characteristic produced, the future development that may be conducted is to implement jute fabrics as the textile craft raw material or fashion accessories. For instance, the jute fabrics can be used as the sheet of lamp cover, bag cover, shoes cover, belt cover, etc.

Although it has not reached the implementation stage, this research proved that jute sacks waste has good chance to be re-

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cycled into beneficial product in the future. It absolutely can enhance productivity, economical, and aesthetic value of jute. There should be further comprehensive research to identify the development of jute in the future. Whether it will be used as textile craft raw alternative material, as well as to find out the strength and jute quality level that has been through processed and it is added to the dyeing process in it. ❖



Excerpted from the research : "Utilization of Jute Bag Waste Through the Experiment of Single Yarn and Weaving Handloom as Alternative Raw Materials for the Textile Handicraft Products " by Dawn Ciptandi, S.Ds., M.Ds. and Citra Puspitasari, S.Ds., M.Ds.

#### EXTERNAL FUND RESEARCH 2014

SCHOOL OF INDUSTRIAL ENGINEERING

- Major
  - **Bachelor of Industrial Engineering**
- Title
  - Design -Based Quality Management System ISO 9001 : 2008 For Batik Culture and Industry in Indonesia
- Researchers Team Dr. Dida Diah Damayanti Dr. Ir. Luciana Andrawina, MT. Sri Widaningrum, Ir., MT
- Goverment Fund IDR 75.000.000
- Scheme National Strategic Excellent

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Telecomunication Engineering ■ Title Design and Implementation of Remote
  - Sensing Systems to Achieve Independence Nanosatelit Payload Satellite College
- Researchers Team
   Dr. Heroe Wijanto
   Budi Syihabuddin, ST., MT.
   Budi Prasetya, ST., MT.
   Agus Dwi Prasetyo, ST., MT.
   Inung Wijayanto, ST., MT.
   Dr. Ing. Arifin Nugroho, DEA, IPU
- Goverment Fund
   IDR 625.000.000
- Tel-U Fund IDR 100.000.000
- Summary IDR 725.000.000
- Scheme National Strategic Excellent

#### **RESEARCH 2014**

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
   Bachelor of Management Business
   Technology and Informatics
- Title

Analysis of Marketing Activities Political Decision-Making Voters

Researchers Team Achmad Manshur Ali Suyanto M. Yahya Arwiyah Runik Machfiroh Rona Afilia (Mhs) Zulham Husein (Mhs)

Fund IDR 12,500,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
   Bachelor of Management Business
   Technology and Informatics
- Title Social CRM Model using Complex Network
- Researchers Team Andry Alamsyah Yahya Paranginangin Gabriel Sas H. (Mhs) Farid Naufal Aslam (Mhs)
- Fund IDR 10,000,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
   Bachelor of Management Business
   Technology and Informatics
- Title
   Religy Commitment and Moslems
   Consumer Behaviour in Indonesia
   (Case Study in Bandung, West Java)
- Researchers Team
   Heppy Millanyani
   Bethani Suryawardani
   Novita Butarbutar (Mhs)
   Muh. Fakhri Rahmawan (Mhs)

#### Fund IDR 10,000,000

Scheme

Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

Major

Bachelor of Management Business Technology and Informatics

Title

Partial Adjustment Model as Alternative Financial Performance Measurement On Telecommunications Companies Listed in Indonesia Stock Exchange Period 2006 to 2012

- Researchers Team Muhammad Azhari Tieka Trikartika Gustyana Arti Rikaningsih (Mhs)
- Fund IDR 9.875.000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

Major

Bachelor of Management Business Technology and Informatics

-

Influence of extrinsic and intrinsic motivation through Knowledge Sharing Against PERFORMANCE IN PT Indonesia Power Center

- Researchers Team
   Ade Irma Susanty, PhD.
   Aditya Wardhana, SE., Msi.,MM
   Dita Hidayatunnisa (Mhs)
- Fund
- IDR 10,000,000

Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
   Dashalar of I
- Bachelor of Management Business Technology and Informatics

#### Title

Is the University as a Learning Organization (Learning Organization): A Case Study at the University of Telkom Bandung

- Researchers Team
   Herry Irawan, MM.,MT.
   Ratri Wahyuningtyas, S.Si.,MM.
- Fund IDR 5,000,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

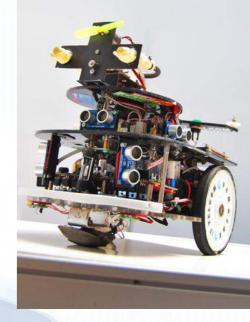
- Major
   Bachelor of Management Business
   Technology and Informatics
- Title
   Instant Messaging Application Usage
   Analysis by Using the Unified Theory of
   Acceptance and Use of Technology 2 (
   UTAUT 2 )
- Researchers Team
   Indrawati, Dra.,MM.,Ph.D
   Gadang Ramantoko
- Fund IDR 11,500,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF APPLIED SCIENCE

#### Major

- Diploma of Computerization Accounting

  Title
- Contributions Credit Banking on Growth of National Economy Year 2000-2013 **Researchers** Team Harrie Lutfie, Ir., MM. Agus Maolana Hidayat Rahmat Hidayat Diza Ekawati (Mhs)
- Fund IDR 10,000,000
- Scheme Internal Fund Research Batch I



#### SCHOOL OF APPLIED SCIENCE

Major

- Diploma of Marketing Management

  Title
- Experiental Influence Analysis of Marketing Strategy to Customer Satisfaction and Repeat Buyer
- Researchers Team Ati Mustikasari Rennyta Yusiana Puspita Wulansari
  - Senna Tedjapurnama (Mhs)
- Fund IDR 10.000.000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF APPLIED SCIENCE

- Major
- Diploma of Marketing Management

  Title
- Buzz Marketing Influence Analyse to Brand Image, Brand Awareness, and Purchasing Decision on Twitter

#### Researchers Team Fanni Husnul Hanifa

Widya Sastika Andrieta Shintia Dewi Baiq Khaulah (Mhs)

- Fund IDR 10,100,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF APPLIED SCIENCE

#### Major

Diploma of Telecomunications Engineering

Title

Control of High Power Amplifier And Driver Standard Dvb - T2 transmitter Tv To Community In Uhf Frequency

 Researchers Team Yuyun Siti Rohmah Suci Aulia Rahmat Sopian (Mhs) Uning Juningsih (Mhs)

Fund IDR 12,000,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF CREATIVE INDUSTRIES

Major

Bachelor of Visual Communication Design

Title

Sign Design System PT Kereta Api Indonesia To Increase Public Service Company ( Case study Kiaracondong Bandung Train Station)

Researchers Team
 I Dewa Alit Dwija
 Mohamad Tohir
 Ruth Dina (Mhs)

Fund IDR 6,200,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF CREATIVE INDUSTRIES

- Major Bachelor of Visual Communication Design
- Title

Shifting Nuance On Billboard Advertising Marlboro Advertising Edition Be > Marlboro

- Researchers Team
   Syarip Hidayat
   Riky Azharyandi Siswanto
   Sri Nurbani
   Nurdiani Maulida (Mhs)
   Nur Ikhsan Azizudin (Mhs)
- Fund IDR 9.600.000
- Scheme

Internal Fund Research Batch I

#### SCHOOL OF COMPUTING

Major
 Bachelor of Computational Science

- Title
  - Design of Test and Measurement Test of Proficiency in Indonesia (UKBIn) as Primary Treatment Study
- Researchers Team
   Diyas Puspandari
   Dede Tarwidi
   Rafik Khairul (Mhs)

## Fund

IDR 10,000,000 Scheme Internal Fund Research Batch I

#### SCHOOL OF COMPUTING

- Major
   Bachelor of Informatics Engineering
- Title

Attacks on Transposition Cipher Algorithm Differential Evolution **Researchers** Team

- Gia Septiana Wulandari Siti Saadah Wahyu Rismawan (Mhs)
- Fund IDR 6,550,000

Scheme

Internal Fund Research Batch I

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
  - Bachelor of Business Administration
- Title Effect of Affiliates . Confidence

And Knowledge Sharing Innovation Against Lecturer in Environmental Faculty of Business Management the University of Telkom

- Researchers Team Anita Silvianita Tri Indra Wijaksana Yuli Setiawan (Mhs)
- Fund IDR 10.000.000
- Scheme

Internal Fund Research Batch I

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
  - Bachelor of Business Administration
- Title Work Family Conflict At Motorists Traveling Inter-City Pt . Xyz , Bandung
- Researchers Team Astadi Pangarso Arif Partono Prasetio Anisa Narima (Mhs) Putri Meuthia (Mhs)
- Fund
- IDR 8,500,000
- Scheme Internal Fund Research Batch I

#### EXTERNAL FUND RESEARCH 2014

- SCHOOL OF COMPUTING
- Major
  - **Bachelor of Informatics Engineering**
- Title

Insertion Extraction Feature Fingerprint On QR Code

- Researchers Team Ir. Ari Moesriami Barmawi, MSc., Ph.D Fazmah Arif Yulianto S.T., M.T.
- Goverment Fund IDR 55,000,000
- Scheme
   Higher Education Excellent

#### SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
  - **Bachelor of Communication Studies**
- Title
  - Adolescent Behavior In Using New Media : New Media Habit Mapping Sub Regional Urban Youth Bandung (Bandung Regency)
- Researchers Team Alila Pramiyanti Idola Perdini Putri
- Goverment Fund IDR 12.000.000
- Scheme
   Beginner Lecturer Research

#### SCHOOL OF CREATIVE INDUSTRIES

- Major
- Bachelor of Craft Textiles and Fashion
- Title
  - Trend Analysis of Contemporary Jewelry as a result of the Dynamics of Change and Development Society Lifestyle Fashion Industry
- Researchers Team Arini Arumsari
   Fajar Ciptandi
- Goverment Fund IDR 10.000.000
- Scheme Beginner Lecturer Research

#### **RESEARCH 2014**

#### **SCHOOL OF COMMUNICATIONS &** BUSINESS

- Major Bachelor of Business Administration
- Title

Factor Analysis Decision Making Process Sign in Private Higher Education Institutions (Case Study at the University of Telkom, Indonesia)

Researchers Team Nadya Novandriani Karina M. Kristina Sisilia Annisa N Garmaisa (Mhs)

Fund IDR 7,300,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF COMMUNICATIONS & BUSINESS

Maior

Bachelor of Business Administration

- Title Against Student Satisfaction Level Analysis Secretariat in School of **Economics & Business Telkom** University Approach Using Dimensional Service Quality
- Researchers Team R. Nurafni Rubiyanti Mahendra Fakhri Prabubento Cakti (Mhs)
- Fund IDR 8.000.000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF COMMUNICATIONS & BUSINESS

- Major **Bachelor of Communication Studies**
- Title Effect of Communication Skills in English and Utilization Capability ICT (Information and Communications Technology ) Against the Safety Level Workforce Indonesia

#### Researchers Team lis Kurnia Nurhayati

Alila Pramiyanti Wa Ode Ferawati (Mhs)

- Fund
- IDR 9,750,000 Scheme

Internal Fund Research Batch I

#### SCHOOL OF COMMUNICATIONS & BUSINESS

Maior

**Bachelor of Communication Studies** Title

- Role of Regional Indonesian Broadcasting Commission (KPID) of West Java For Inspection Agency **Program Impressions**
- Researchers Team Ira Dwi Mayangsari Reni Nuraeni Genggam Arsuma (Mhs)
- Fund IDR 11.300.000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF COMMUNICATIONS & BUSINESS

- Major Bachelor of Communication Studies
- Title Reflections on Political Journalism Framing Robert N. Entman Assessing News in Media Indonesia And Koran Sindo
- Researchers Team M. Yahya Arwiyah
  - Dedi Kurnia Syah Putra Wahyuni Sahara (Mhs)
- Muhamad Ganda Rahmalis (Mhs)
- Fund IDR 10,000,000
- Scheme Internal Fund Research Batch I

#### Title Prototype Design Emi Filter And

USN For Hybrid System Solar Power And Wind Power To Scale Laboratorum

Bachelor of Electrical Engineering

Researchers Team Ig. Prasetya Dwi Wibawa Ekki Kurniawan Nur Sabbaha (Mhs) Muhamad Irpan (Mhs)

SCHOOL OF ELECTRICAL

ENGINEERING

Major

- Fund IDR 9,475,350
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Maior Bachelor of Electrical Engineering Title
- Warning System and Railroad Crossing Safety Monitoring Using Arduino and Android
- Researchers Team Ramdhan Nugraha Estananto Rudy Gunawan (Mhs) Muhammad Fayyadh (Mhs)
- Fund IDR 10.000.000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major Bachelor of Physics Engineering
- Title Study, Design And Analysis System Thermoelectric

- Researchers Team Abrar Imsudiari Puri H Nuzul Hesty Pranita (Mhs) Kiki Azura (Mhs)
- Fund IDR 10.500.000

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Physics Engineering
- Title
  - Design of Control Proportional Integral - Derivative ( PID ) and the concept for the Leader - Follower Tracker Agent Tracks and Formation in Multiple Mobile Robots
- Researchers Team Ahmad Qurthobi Reza Fauzi Iskandar Abdul Haffif (Mhs)
- Fund IDR 10,000,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Physics Engineering Title
- Development of Solar Cells Made TiO2
- Researchers Team Edy Wibowo Mamat Rokhmat Girindra Wardhana (Mhs) Aldy Satria Hidayat (Mhs)
- Fund IDR 10,500,000
- Scheme Internal Fund Research Batch I

- - Scheme
  - Internal Fund Research Batch I



#### SCHOOL OF ELECTRICAL ENGINEERING

- Major Bachelor of Physics Engineering
- Title

Design and Performance Evaluation of Acoustic Parameters In Classroom Building P - Telkom University

 Researchers Team Muhammad Saladin Prawirasasra Suwandi Hertiana Bethaningtyas Dyah K.

Mochammad Reddy Tri Cahaya (Mhs)

- Fund IDR 10,500,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
- Bachelor of Physics Engineering
- Title Design of Sea-Level Gauge System
- Based Ultrasonic Sensor
- Researchers Team
   Rahmat Awaludin Salam
   Indra Chandra
   Theresia R Silalahi (Mhs)
- Fund IDR 10,500,000
   Scheme
- Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

#### Major

- Bachelor of Telecomunication Engineering
- Title
- Design and Implementation of Mini Plant Sorting Wood type using LAB -View
- Researchers Team Afief Dias Pambudi Junartho Halomoan, MT. Achmad Syawaluddin (Mhs)
- Fund IDR 11,500,000
- Scheme
- Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Maior
- Bachelor of Telecomunication Engineering
- Title
- Design, Simulation And Realization Microwave Filter Support For Synthetic Aperture Radar Research in Environmental Engineering Faculty of the University of Telkom
- Researchers Team Budi Syihabuddin Agus Dwi Prasetyo Dwi Andi Nurmantris Ernaldo Lumbantobing (Mhs) Agie Vadhillah Putri (Mhs)
- Fund
- IDR 10,819,000
- Internal Fund Research Batch I

# EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF CREATIVE INDUSTRIES

- Major
  - **Bachelor of Intermedia Fine Art**
  - Title Study Fine Coat Tigers Ali Sultanate of
  - Cirebon

     Researchers Team
     Dadan Sudiana
  - Amrizal Salayan ST Parpatih
  - Goverment Fund IDR 12.000.000
- Scheme
   Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major
   Diploma of Infomatics Management
- Title
   Prototype Comparative Advertising inter Supermarket
- Researchers Team Dahliar Ananda Sari Dewi Budiwati Siska Komala Sari
- Goverment Fund IDR 10.000.000
- Tel-U Fund IDR 3.540.000
- Summary IDR 13.540.000
- Scheme Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major
- Diploma of Computer Engineer
- Title
- Design and Development Middleware on Radio Frequency Identification ( RFID ) 13.56MHz for the utilization of e-ID
- Researchers Team
   Dedy Rahman Wijaya
   Ibnu Asror
- Goverment Fund IDR 14.000.000
- Tel-U Fund IDR 10.000.000
- Summary IDR 24.000.000
- Scheme Beginner Lecturer Research

#### **RESEARCH 2014**

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major Bachelor of Telecomunication Engineering
- Title Application Performance Analysis of Trellis Code Modulation in OFDM
- Researchers Team
   Linda Meylani
   Iswahyudi Hidayat
   Nur Andini (Mhs)
   Bani Aulia Rahman (Mhs)

Fund IDR 8,945,000

Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

- Major
   Bachelor of Telecomunication
   Engineering
- Title Monitoring Electrocardiograph Using the Zigbee As Data Sender With Mesh Topology
- Researchers Team
   Ratna Mayasari
   Sugondo Hadiyoso S.T., M.T.
   Zulfikar Kurniawan (Mhs)
   Antommy Fachrizal (Mhs)
- Fund IDR 8,839,
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ELECTRICAL ENGINEERING

Major
 Bachelor of Telecomunication
 Engineering
 Title

Classification of Wood Fiber Straight And Leaning Based Digital Image Processing

#### Researchers Team Ratri Dwi

Erwin Susanto Gurnita Koncara (Mhs)

- Fund
- IDR 9,210,000
- Scheme Internal Fund Research Batch I

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
  - Bachelor of Management Business Technology and Informatics
- Title Preparation of Information Security
- Management Framework In Higher Education

Researchers Team Candiwan Pupita Kencana Sari Ayu Ardhillah (Mhs) Atika Prihastuti (Mhs)

- Fund IDR 10.200.000
- Skema

Internal Fund Research Batch II

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
  - Bachelor of Management Business Technology and Informatics
- Title
- Analysis of Value Co -Creation Kub Zocha Using the Business Model Canvas
- Researchers Team Dini Turipanam Alamanda Osa Omar Sharif, S.Si., MSM. Maghfirah (Mhs)
- Fund IDR 10.750.000
- Scheme
- Internal Fund Research Batch II

#### SCHOOL OF ECONOMICS & BUSINESS

- Major Bachelor of Management Business Technology and Informatics
- Title
   How to Start a Business Students
   Bandung Based on Social Media usage
- Researchers Team Jurry Hatammimi Osa Omar Sharif Reza Noor R (Mhs)
- Fund IDR 12,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF ECONOMICS & BUSINESS

- Major
- Bachelor of Management Business Technology and Informatics
- Title
  - Database Development On Preservation of Digital Information Using Model Open Archives Information System ( OAIS ) In Telkom University Library
- Researchers Team Yudi Priyadi Herry Irawan
- Dion Nurfadhilah Benardi (Mhs) Fund
- IDR 10,000,000
- Internal Fund Research Batch II

#### SCHOOL OF ECONOMICS & BUSINESS

- Major Master Management
- Title

Identify the Factors That Contribute To Year 2009-2012 Capital Structure (Case Study On Foreign Exchange Banks in Indonesia)

Researchers Team
 Dr. Norita, S.E., M.Si, Ak.
 Dr. Ir. Ratna L. Nugroho, M.M.
 Anissa Agustina Rahmadini (Mhs)

- Fund
  - IDR 10,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF ECONOMICS & BUSINESS

- Major Master Management
- Title
  Easter And
- Factor Analysis Online Purchase On Instagram Users In Bandung In 2014 Using Techniques of Exploratory Factor Analysis
- Researchers Team Indira Rachmawati
   Farah Alfanur
   Riana Satriana (Mhs)
- Fund IDR 10,000,000
- Scheme Internal Fund Research Batch II



Technolo Title How to S

#### SCHOOL OF COMPUTING

- Major Bachelor of Informatics Engineering
- Title

Application of Graph DB Database Schema Library Indexing In Tel - U

- Researchers Team Kemas Rahmat Saleh Wiharja, S.T., M.Eng. Dana Sulistyo Kusumo, Ph.D. Isjhar Kautsar (Mhs)
- Fund IDR 11.000.000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF COMPUTING

Major

Bachelor of Informatics Engineering

- Title
   Model User Experience In Early
   Childhood Learning Applications
- Researchers Team
   Mira Kania Sabariah
   Veronikha Effendy
   Muhammad Noor Sholihin (Mhs)
- Fund IDR 12,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF CREATIVE INDUSTRIES

- Major
   Bachelor of Interior Design
- Title

Creative Village phenomenon as a compact and sustainable village case studies : creative village Pasundan in Bandung

- Researchers Team
   Ully Irma Maulina H, M.T.
   Doddy Friestya A.
   Muhammad Taufiq (Mhs)
   Muhammad Ihsan (Mhs)
- Fund IDR 12,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF CREATIVE INDUSTRIES

- Major
  - Bachelor of Visual Communication Design
- Title

Media Analysis Online Games In Actualization National Character

- Researchers Team
   Dicky Hidayat, S.Sn.,M.Ds
   Runik Machfiroh
   Listyo Dwi Harsono
   Rizka Azizan Nurrahim (Mhs)
   Raden Annisa Nur Fauziah (Mhs)
- Fund IDR 12.500.000
- Scheme
- Internal Fund Research Batch II

# SCHOOL OF CREATIVE INDUSTRIES Major

Bachelor of Visual Communication Design

Title

Books and Media Development Promotion Project To Bandung Through Activity -Based Writing (Case Study ; School of Creative Industries )

- Researchers Team Ira Wirasari Ilhamsyah Yelly Andriani Barlian M Rifky Adilan (Mhs)
- Fund IDR 10.000.000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF CREATIVE INDUSTRIES

- Major Bachelor of Product Design
- Title
   Product personalization Jewelry
   Trapart Nunun Tjondro Creation (as
   an Imaging Stuff to the Object of his
   Owner)

Researchers Team Asep Sufyan M.A

Muchlis Fajar Sadika Eki Juni Hantono (Mhs) Prafca Daniel Sadiva (Mhs)

- Fund IDR 12,000,000
- Scheme

Internal Fund Research Batch II

#### SCHOOL OF CREATIVE INDUSTRIES

Major

Bachelor of Product Design

Title
Design Tools Enrich

Design Tools Enrichment (Enrichment) for Owa Jawa As a Means to Play When In Java Primate Rehabilitation Center

- Researchers Team Muchlis Dandi Yunidar Asep Sufyan M.A Nur Megawati (Mhs)
- Maulia Shofiyah Hanum (Mhs) **Fund** 
  - IDR 12,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF CREATIVE INDUSTRIES

- Major Bachelor of Craft Textiles and Fashion
- Title

Implementation of Textile Engineering Reka Background In Style Casual Bags Products with Inspiration Decorations Nusantara

- Researchers Team Citra Puspitasari, M.Ds Aldi Hendrawan Nurjunida (Mhs)
- Fund IDR 9.500.000
- Scheme Internal Fund Research Batch II

#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF CREATIVE INDUSTRIES

- Maior
  - **Bachelor of Intermedia Fine Art**
- Title
  - Digging Values Spirituality in Works of Art Indonesia (Case study : works Amrizal Salayan)
- Researchers Team Didit Endriawan Kiki Rizky Soetisna Putri
- Goverment Fund
   IDR 12.000.000
- Scheme Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major
   Diploma of Computer Engineer
- Title

2 Km Range for UAV Ground Control in Disaster Recovery

- Researchers Team
   Dudi Soegiarto
   Nina Hendrarini
   Simon Siregar
- Goverment Fund IDR 11.000.000
- Skema
- Beginner Lecturer Research SCHOOL OF CREATIVE INDUSTRIES
- Major
  - Bachelor of Craft Textiles and Fashion
- Title Jute bags Waste Utilization Through Experiment Single Yarn and Weaving handloom as Alternative Raw Materials for the Textile Handicraft Products
- Researchers Team Fajar Ciptandi Arini Arumsari
- Goverment Fund IDR 12.000.000
- Scheme
   Beginner Lecturer Research

#### **RESEARCH 2014**

#### SCHOOL OF APPLIED SCIENCE

Major
 Diploma of Infomatics
 Management

Title

Final Project Monitoring System At Diploma of Management Informatics Telkom University

- Researchers Team Wardani Muhamad Dahliar Ananda ST.,MT Aas Suhendar (Mhs) Muhhamad Khusnan (Mhs)
- **Fund** Rp12,500,000

Scheme Internal Fund Research Batch II

#### SCHOOL OF APPLIED SCIENCE

- Major Diploma of Informatics Engineering
- Title
   E -Learning Readiness Assessment in Telkom University
- Researchers Team Hetti Hidayati Yanuar Firdaus Kusuma Ayu Laksitowening Yunita Yesi (Mhs)
- Fund IDR 7,500,000

Scheme Internal Fund Research Batch II

#### SCHOOL OF APPLIED SCIENCE

Major
 Diploma of Computer Engineer
 Title

- Making Infrastructure As A Service Using OpenStack And Configuring High Availability
- Researchers Team Fitri Susanti Isa puncuna ST Aswandi (Mhs)
- Fund IDR 12,000,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF APPLIED SCIENCE

- Major
  - Diploma of Computer Engineer
- Title
  - File Management Application In LAN On Computer Laboratory of the School of Applied Sciences
  - Researchers Team
     Tedi Gunawan
     Reza Budiawan
     Pristian Luthfy Romadloni (Mhs)
     Rakhmi Jauhari (Mhs)
  - Fund
  - IDR 12,000,000
  - Scheme

Internal Fund Research Batch II

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
   Bachelor of Business Administration
- Title Marketing Strategy And Its Effect on Performance Marketing Agency Ship Classification Indonesia
- Researchers Team
   Budi Rustandi Kartawinata
   Aditya Wardhana
   Dini Arti (Mhs)
- Fund
- IDR 10,000,000
  Scheme

Internal Fund Research Batch II

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
- Bachelor of Business Administration

  Title
- Effect of Characteristics Against Online Store Impulse Buying Through Browsing (Studies in Lakupon.Com)
- Researchers Team Citra Kusuma Dewi Farah Oktafani
- Rosa Saraswati (Mhs) Fund
  - IDR 10,000,000

Scheme

Internal Fund Research Batch II

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
- Bachelor of Business Administration
- Student Satisfaction Study Course In Entrepreneurship By Using the Kano Model for Bachelor of Business Administration -Telkom University, the Period of 2013-2014
- Researcher Darman Darwis
- Researcher Fellow Kristina Sisilia Dias Putra P (Mhs)
- Fund IDR 7,500,000
- Scheme Internal Fund Research Batch II

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
- Bachelor of Business Administration
- Title
   Development of a Framework to Build
   Documentary Style Video Script for

   Engaging e-Learning
- Researchers Team Kristina Sisilia Yahya Peranginangin Irfan Prarendra Darmawan Erlangga (Mhs)
- Fund
- IDR 9,500,000
  - Internal Fund Research Batch II

#### SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
- Bachelor of Business Administration
- Title

Influence of Marketing Mix Strategy Against Students Decision of Choosing Telkom University

- Researchers Team Trisha Gilang Saraswati Peggy Hariwan Hermansyah Wahid (Mhs) Mely Hartati (Mhs)
- Fund IDR 8,500,000
- Scheme Internal Fund Research Batch II

# SCHOOL OF COMMUNICATIONS & BUSINESS

- Major Bachelor of Communication Studies
- Title
   Utilization of Social Media On Private
   Radio Youth In Bandung
- Researchers Team
   Martha Tri Lestari
   Drs. Hadi Purnama.,M.si
   Elsa Viera Taraniar (Mhs)
- Fund IDR 11.500.000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF COMMUNICATIONS & BUSINESS

- Major
- Bachelor of Communication Studies

  Title
- Puppet Performance Management in the Era of Creative Industries : A Comparative Study of Transformation Value In Performance And Traditional Puppet Opera Van Java On Television Trans7
- Researchers Team
   Rah Utami Nugrahani
   Reni Nuraeni
   Hagia Anisa Mufti (Mhs)
- Fund IDR 10.000.000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

#### Maior

Bachelor of Information System

Title

Modeling Business Processes with Process Mining Technique Using Heuristic Algorithm Miner and Usability Evaluation of Academic Information Systems (Case Study : Telkom University)

- Researchers Team Rachmadita Andreswari Atya Nur Aisha Aulia Fashanah H. I Gede Wisuda Pura (Mhs) Kholifatul Ummah (Mhs)

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major Bachelor of Information System
- Title Grouping Development Team Based Human Behavior Criteria In Collaboration Software Development

#### Researchers Team

Tien Fabrianti Kusumasari Nurdinintya Athari Supratman Albi Fakultas Ilmu Terapanransyah Ibnu Caesar (Mhs) Josua Clement Sembiring (Mhs)

- Fund IDR 12,500,000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

Major

Bachelor of Electrical Engineering Title

- Position settings and Automatic Charging System for Automated Guided Vehicle
- Researchers Team Angga Rusdinar Estananto Rifqi Lutfi (Mhs) Ibnu Waldy (Mhs)
- Fund IDR 12.500.000
- Scheme
  - Internal Fund Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Maior
- Bachelor of Physics Engineering Title
- Carbon -based supercapacitor Nanopori For Water Desalination Applications
- Researchers Team Memoria Rosi M. Ramdlan Kirom Yogama Y S (Mhs) Dwi Puspitasari (Mhs)
- Fund IDR 7.500.000
- Scheme Internal Fund Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major Bachelor of Telecomunication Engineering
- Title
  - Simulation Virtual Local Access Network (VLAN) Based Software Defined Network (SDN) For Telkom University Network
- Researchers Team Ridha Muldina Negara Rohmat Tulloh Indrarini Dyah Irawati Arif Nur Hidayat (Mhs) Vina Listiani (Mhs)
- Eund
- **IDR** 10.000.000
- Scheme Internal Fund Research Batch II

#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF APPLIED SCIENCE

- Maior
  - **Diploma of Computer Engineer**
  - Title
  - Plagiarism Detector Web -Based Applications
  - Researchers Team Ismail
    - Eka Widhi Yunarso
  - Goverment Fund IDR 13.000.000
- Scheme **Beginner Lecturer Research**

#### SCHOOL OF CREATIVE INDUSTRIES

- Major Bachelor of Intermedia Fine Art
- Title
  - Mapping Artists Bandung Based on the **Creative Process Paradigm Contemporary Arts as Creative Preparation Methods** Subjects Subjects Art Creation
- Researchers Team Kiki Rizky Soetisna Putri Didit Endriawan
- Goverment Fundi IDR 12,500,000
- Scheme **Beginner Lecturer Research**

#### SCHOOL OF APPLIED SCIENCE

- Major
  - **Diploma of Computer Engineer**
- Title
  - Early Detection of Diseases Through the Eye Iris Using Algorhytm Watershed -Based Smartphone
- Researchers Team Mia Rosmiati Simon Siregar
- Goverment Fund IDR 13.000.000
- Scheme **Beginner Lecturer Research**

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Fund IDR 9,100,000 Scheme

Internal Fund Research Batch II

#### **RESEARCH 2014**

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Maior Master of Electronics Communication
- Title White Space Steganography Text With LZW compression Using Multiple Huffman On Android
- Researchers Team Ledya Novamizanti Gelar Budiman Ayu Puspitasari (Mhs) Made Sumarsana (Mhs)
- Fund IDR 11,400,000
- Scheme Internal Funding Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

 Major Master of Electronics Communication

- Title Implementation of Convolutional Code Encoder Channel FPGA -Based Digital TV For Applications
- Researchers Team Raditiana Patmasari Rita Purnamasari Desti Madya Saputri Ahmad Eko Ardianto (Mhs) Muhammad Abdillah (Mhs)
- Fund IDR 9,000,000
- Scheme Internal Funding Research Batch II

#### SCHOOL OF INDUSTRIAL ENGINEERING

Maior

- **Bachelor of Industrial Engineering**
- Title
  - Proposed Design The Ergonomic Material Handling Operator Beans Vegetables Loading Article Search Google using Rational Method PT. ABO FARM

#### Researchers Team

Ir. Budi Praptono, MM. Yusuf Nuaroho Dovo Yekti Mira Rahayu Fransiskus Tatas Dwi Atmaii Mohammad Fadli (Mhs) Ni Made Yunita (Mhs) Ayren Tantri (Mhs)

- Fund
  - IDR 72,000,000

Scheme Partnerships Research

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major
- Bachelor of Industrial Engineering
- Title
  - Value Chain Analysis and Strategic **Business Development Association** of Agricultural Products Processing Bandung regency
- Researchers Team Dr. Ir. Endang Chumaidiyah, MT. Farda Hasun Atva Nur Aisha Nanang Suryana Farina Chendia (Mhs) Angga Prasetiyo (Mhs) Viki Suriadinata (Mhs)
- Fund

IDR 40.000.000

Scheme Partnerships Research

#### SCHOOL OF INDUSTRIAL

- ENGINEERING
- Major
  - **Bachelor of Industrial Engineering**
- Title
- Integration of Quality Management System (QMS) ISO 9001 : 2008 Environmental Management System (EMS) ISO 14001 : 2005 on CV Gradient Method With **Business Process Improvement** Approach

- Researchers Team Ir. Sri Widaningrum, MT. Marina Yustiana Lubis Muhammad Igbal Pratya Poeri Suryadhini Hasna Fatharani (Mhs) Hana Khalidah (Mhs) Raidya Dwiky Adyaesta (Mhs) Fund
- IDR 64,700,000
- Scheme
- Partnerships Research

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major Bachelor of Industrial Engineering
- Title Kanban System Design Using Electronic Kanban In Project Single Aisle in PT Dirgantara Indonesia
- Researchers Team Dr. Ir. Dida Dyah Damayanti, M.EngSC. Pratya Poeri Survadhini Widia Juliani Denny Sukma Eka Atmaja Hadi Mugti (Mhs) Wita Anggraita (Mhs) Bagus Dhaka (Mhs)
- Fund IDR 62.000.000
- Scheme Partnerships Research

#### SCHOOL OF INDUSTRIAL

- ENGINEERING
- Major
  - **Bachelor of Industrial Engineering**
- Title

Analysis of Effect Against Draft Work Desk Ergonomic Comfort and Productivity In Batik Cap Operator (A Case Study in Bandung Batik Komar)

- Researchers Team Ir. Wivono, MT. Rino Andrias Anugraha Murni Dwi Astuti Yusuf Nugroho Doyo Yekti Achmad Fadhilah (Mhs) Muhammad Rausyanfikrian (Mhs) Yaser Yulio (Mhs)
- Fund IDR 60.000.000
- Scheme
- Partnerships Research

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major Bachelor of Industrial Engineering
- Title
- Waste Distribution System Design at the Department PERTASIH of Bandung District
- Researchers Team RD, Rohmat Saedudin, ST., MT. Muhammad Nashir Ardiansyah Budi Santosa
- Fund IDR 70,000,000
- Scheme Partnerships Research

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major
- Bachelor of Industrial Engineering
- Title

Design Prototype Machine Automatic Feeder for Rod Bending Process Spion Motorcycles

- Researchers Team Budi Sulistyo, Ir., MT. Haris Rachmat **Rino Andias** Murni Dwi Astuti
- Fund
- IDR 70,000,000
- Scheme
- Partnerships Research



#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major
   Bachelor of Industrial Engineering
- Title

Optimization System Maintenance and Total Site Crew Base Transceiver Station (BTS) Method Using Reliability Centered Maintenance (RCM) and the Life Cycle Cost (LCC)

- Researchers Team Drs. Judi Alhilman, MSIE. Rd. Rohmat Saedudin F. Tatas D.A. Andri G.S. Reza Satya (Mhs) Michael Panjaitan (Mhs) Alfrianiko A (Mhs) Ilham Nur (Mhs) Yan Habib (Mhs) Veronika Sari (Mhs)
- Fund IDR 70,000,000

#### Scheme

Partnerships Research

#### SCHOOL OF COMPUTING

- Major
- Bachelor of Computational Science **Title**
- Development of Employee Performance Appraisal System In PT Dirgantara Indonesia (Persero)
- Researchers Team
   Erwin Budi Setiawan, S.Si., M.T.
   Fitriyani
   Izzatul Ummah
   Nurul Ikhsan
   Daniar Dwi P (Mhs)
   Fathurahman Alhikmah (Mhs)
- Asry Faidhul (Mhs)
- IDR 50,000,000
- Partnerships Research

#### SCHOOL OF APPLIED SCIENCE

- Major Diploma of Telecomunication
- Engineering

  Title

Design and Implementation of Hydroelectric Power On- Grid

Researchers Team Ir. Agus Ganda Permana, M.T.

Muhammad Iqbal Dadan Nur Ramadan Ahmad Syaifudin (Mhs) Zulfikar Fajar (Mhs) Wanda Khansa (Mhs)

- Fund
- IDR 70,000,000
- Partnerships Research

#### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF APPLIED SCIENCE

- Major
  - Diploma of Computerization Accounting
- Title
  - Effect of Information Technology and Organizational Culture on the Quality of Accounting Information Systems and its Impact on the Quality of Accounting Information (Survey on Higher Education in Bandung)
- Researchers Team Nelsi Wisna Raswyshnoe Boing K.
- Goverment Fund
- IDR 13.500.000
- Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major
  - **Diploma of Infomatics Management**
- Title
   Utilization of Computer Assisted Language
   Learning ( Call ) to Improve Writing
   Skills ( Writing Skill ) Telkom Polytechnic
   Student
- Researchers Team
   Pikir Wisnu Wijayanto
   Ismail
- Goverment Fund IDR 12.000.000
- Tel-U Fund IDR 3.000.000
- Summary
   IDR 15.000.000
- Scheme Beginner Lecturer Research

#### **RESEARCH 2014**

#### SCHOOL OF COMPUTING

 Major Bachelor of Informatics Engineering
 Title

Detection of PCOS on Medical Image Ultra Sonography ( USG ) to Identify Female Fertility

 Researchers Team Bedy Purnama, S.Si., M.T. Adiwijaya Untari Novia Wisesty Fhira Nhita Ali Hasyim (Mhs) Widi Astuti (Mhs) Eni Setiawati (Mhs)

Fund IDR 70,000,000



#### Scheme

Partnerships Research

#### SCHOOL OF APPLIED SCIENCE

Major
 Diploma of Telecomunication

Engineering

Title

Needs Analysis Development Program Upgrades SME Marketing Products for SME Business Development in Agricultural Products Processing Association of Horticultural of Bandung District

#### Researchers Team Dr. Ir. Yati Rohayati, MT. Sari Wulandari, S.T., M.T.

Aulia Fashanah Hadining, S.T., M.T. Taufik Nur Adi, S.T., M.T.

- Fund IDR 45.000.000
- Scheme Partnerships Research

#### SCHOOL OF COMPUTING

Major

Bachelor of Computational Science

- Title Geological 3D modeling Nickel Resources Using Kriging Method
- Researchers Team
   Sri Suryani Prasetiyowati, S.Si., M.Si
   Dede Tarwidi
   Yuliant Sibaroni
   Irma Palupi
   Hari Yudha Fanani (Mhs)
   Cyndy Nurul Pharadiba (Mhs)
   Feby Ali Dzuhri (Mhs)

Abdurrahman Muttaqiin (Mhs)

- Fund IDR 70,000,000
- Scheme Partnerships Research

#### SCHOOL OF APPLIED SCIENCE

- Major
- Diploma of Informatics Engineering

  Title
- Development Database Integration System for Three Domain (Case Study : Agriculture Department of Bandung District)
- Researchers Team Rahmadi Wijaya, S.Si., MT Bambang Pudjoatmodjo Erda Guslinar Perdana Cahyana, ST., M.KOM Mahendra Dwifebri Purbolaksono (Mhs) Ahmad Miqdad Alhaddar (Mhs)
- Fund IDR 60.000.000
- Scheme Partnerships Research

#### SCHOOL OF INDUSTRIAL ENGINEERING

- Major Industrial Engineering Undergraduate
- Title
  - Planning Implementation of Knowledge Management System at the Center for Documentation and Scientific Information Indonesian Institute of Sciences (PDII - LIPI)
- Researchers Team
   Dr. Ir. Luciana Andrawina, MT.
   Amelia Kurniawati
   Nia Ambarsari
   Mochamad Teguh Kurniawan
   Umar Yunan Kurnia Septo Hediya
   Yusril Maulidan Raji (Mhs)
   Yusuf Rahmadi (Mhs)
   Dwi Pratama (Mhs)
- Fund IDR 60,000,000
- Scheme Partnership Research

#### SCHOOL OF COMPUTING

- Major
- Bachelor of Informatics Engineering

  Title
- OpenMTC Platform Developing for Smart City Prototype which applied to Smart Building Solution
- Researchers Team Dr. Maman Abdurohman, ST., MT. Anton Herutomo, S.T., M.Eng. Catur Wirawan Wijiutomo, S.T., M.T. Sidik Prabowo, S.T.
- Fund IDR 168,000,000
- Scheme International Grant Research

#### SCHOOL OF COMPUTING

- Major
   Master of Info
- Master of Informatics Engineering

  Title
- Securing Multimedia Content
- Researchers Team Ir. Ari Moesriami Barmawi, M.Sc., Ph.D Fazmah Arif Yulianto, S.T., M.T. Gia Septiana Wulandari, S.Si., M.Si.,
- M.Sc.
- Fund
- IDR 100,000,000
- International Grant Research



### **EXTERNAL FUND RESEARCH** 2014

#### SCHOOL OF APPLIED SCIENCE

- Major
  - **Diploma of Computer Engineer**
- Title
  - Optimization Hosting Services to Support SMEs in Environmental Activities TASS Telkom University
- Researchers Team
   Prajna Deshanta Ibnugraha
   Marlindia Ike Sari
- Goverment Fund IDR 12.000.000
- Tel-U Fund IDR 6.430.000
- Summary
- IDR 18.430.000
- Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major Diploma of Computer Engineer
- Title
   Utilization of Single Board Computer
   For Network Server Monitor Using the Raspberry Pi
- Researchers Team Rini Handayani Marlindia Ike Sari
- Dikti Fund IDR 13.500.000
- Tel-U Fund IDR 8.430.000
- Summary IDR 21.930.000
- Scheme Beginner Lecturer Research

### CONFERENCE

# 2nd ISCLO Prepare to Face MEA

The tense of free trade competition is increasing quickly after the opening of the Asian Free Trade Area (AFTA) as the impact of the ASEAN Economic Community (AEC). Each country needs to prepare themselves in order not to fall behind other countries.



ot only at the state level, a number of companies started to improve their service quality and strength of the organization. It is because the MEA does not only open up trade in goods and services more freely, but also international labor market is more competitive.

Recognizing this, PT Telkom which has become an international company was wary. MEA influence will have an impact on the performance of the company if the company does not have any preparation in terms of quality. One of them is establishing Corporate University (Corpu) which will be the improvement place of the quality of its employees. In addition, besides holding a number of training, Corpu has already held an international conference devoted to the field of organizational learning (learning organization).

Having success in the first implementation in 2013, the International Seminar and Conference on Learning Organization (ISCLO) held back the event for the second time in 2014. The event was organized by Telkom Corporate University (Telkom Corpu) with Telkom University (Tel-U). This time, 2nd IS-CLO was held at The Ritz Carlton Hotel Mega Kuningan Jakarta, Wednesday - Thursday (5-6 / 11). The theme taken was still about learning organization, namely the "Learning Organization in Increasing the Organization Performance".

"The Change in current business runs rapidly with a very tight competition, forcing the company has the ability to learn faster in order to excel in order to face environmental competence and a more dynamic market demands," said Director of Human Capital Management (HCM) PT Telkom Group, Ir. Priyantono Rudito, M.Bus., Ph.D.

Business change cannot be avoided in global business competition. According to the International Labour Organization (ILO), the opening of labor markets brings great benefits. Besides being able to create millions of new jobs, MEA can improve the welfare of 600 million people living in the region. It is estimated, the demand for professional labor will go up 41% or about 14 million. Meanwhile, the demand for middle-class workers will rise 22% or 38%, and a low level of labor increased by 24% or 12 million.

ISCLO, this time, presented a number of research results and the views of practitioners and academics around the world



### EXTERNAL FUND RESEARCH 2014

#### FAKULTAS EKONOMI DAN BISNIS

- Major
  - Bachelor of Management Business Technology and Informatics
- Title
  - Analysis of Writing Ability in English Employee PT Telkom Indonesia Tbk by Level Critical Thinking and Linguistic
- Researchers Team Siska Noviaristanti lis Kurnia Nurhayati
- Dikti Fund IDR 12.000.000
- Scheme Beginner Lecturer Research

#### SCHOOL OF APPLIED SCIENCE

- Major
- Diploma of Computer Engineer
  Title
- Portable Wireless Computer Network Infrastructure to Support Teaching and Learning at the Faculty of Applied Sciences University of Telkom
- Researchers Team
   Tafta Zani
   Anang Sularsa
- Dikti Fund IDR 10.000.000
- Tel-U Fund IDR 4.581.800
- Summary
   IDR 14.581.800
- Scheme
   Beginner Lecturer Research

### CONFERENCE



related to the field of learning organization. This was revealed by the Chairman of the Committee ISCLO 2nd 2014, from Tel-U, Herry Irawan, MM, MT. In fact, a number of research publications related to the field of learning organization will be presented in the call for papers is carried out in parallel.

"For ISCLO 2nd, 2014, we support from the academic aspect of concept of a learning organization in the organization," said Herrera who is also the Vice Dean of the Faculty of Economics and Business Tel-U.

2nd ISCLO 2014 was attended by 211 participants and presentations from 9 countries, there are the United Kingdom, Australia, Vietnam, United Arab Emirates, Malaysia, Singapore, Indonesia, China, and Bangladesh. "There were 62 papers presented in parallel sessions are divided into six different tracks. The sixth track is a Learning Organization, Leadership, Global Competitiveness, Instructional System Design, Knowledge Management, and Learning Technology and Methodology, "he said.

A number of seminars with competent resource persons 2nd event held in 2014. Among other ISCLO seminar entitled "The Role of Knowledge Management in Developing Learning Organization for Improving Company Performance" delivered "Mr. Knowledge Management" Philippines, Dr. Serafin Talisayon. Speakers from the Philippines are a Director for R & D Knowledge Expert and Cofounding of CCLF (Center for Conscious Living Foundation inc).

There is also a seminar session panel entitled "Implementation of the Gen Y Learning Organization on Supporting Company's Performance" delivered Ir. Priyantono Rudito, M.Bus, Ph.D; Head of General Electric E Indonesia, Dr. Handry Satriago; and CEO of PT Net Mediatama Indonesia, Whisnutama Kusubandio.

While at the end of the 2nd title ISCLO 2014, there was a presentation from the Director Najafi Global Mindset Institute and Gervin distinguished, Thunderbird University, USA, Prof. Mansour Javidan entitled "Global Mindset in a Supporting Role Company's Performance Toward Globalization".

The keynote speaker was the former Indonesia minister of Energy and Mineral Resources (ESDM), Prof. Dr, Kuntoro Mangkusubroto who serves as Head of the Presidential Work Unit for monitoring and Control of Development 2009-2014 (UKP4) as well as leader of Telkom Sigma, Judi Achmadi. The book "Levereging Global Talent" written by Ir. Priyantono Rudito, M. Bus. Ph.D was launched at this event. ❖



### EXTERNAL FUND RESEARCH 2014

#### SCHOOL OF APPLIED SCIENCE

- Maior
  - Diploma of Computer Engineer
- Title
- Designing Tables Excel OLAP Reporting Tools For Environment Faculty of Applied Sciences at the University of Telkom
- Researchers Team
   Tora Fahrudin
   Suryatiningsih
   Anak Agung Gde Agung
- Dikti Fund IDR 13.000.000
- Tel-U Fund IDR 5.159.000
- Summary IDR 18.159.000
- Scheme Beginner Lecturer Research



**Collaborative Innovation Room** 

# **From Laboratory** to Long Distance Internship

What comes across our mind when the word of laboratory is heard? It must be described that it is a place full of glass bottles for chemistry experiment or white officer who looks like a doctor or a pharmacist. In fact, the laboratory is not only connected to either chemistry or biology.

There are many laboratories adjusted to their basic concern. Namely, in technology field, its laboratory has full of mechanical equipment or there are only computer rows containing specific software. Even more, a broadcast laboratory usually has a number of broadcasting equipment such as, camera, lamp, etc.

So, how about economic and business field? Of course these fields also have many laboratories relating to their concern, for example, statistics that needs SPSS laboratory and any else.

Something interesting is that Economic and Business Faculty (FEB) Telkom University (Tel-U) has one laboratory which is not only used to conduct research project, this laboratory is also become a hang out place both of lectures and college students who are pursuing fresh ideas on research, even for internship.

The place is Collaborative Innovation Room (CIR) located on the ground floor of FEB building. At first glance there is no difference in this room with other rooms. The width is not much different from a classroom width, but it has a number of Personal Computer (PC) that is partitioned into three. The room is also equipped with a conference table and a sofa to relax. Every day Monday- Thursday, you can see that this room will always be filled with students and lecturers.

According to the Head of Asset and Scheduling FEB, Muhammad Azhari, SE, MBA, CIR is used by three vocation Groups (KK) in FEB, namely, ICT-Based Management (IBM), Finance and Accounting Studies (FAS), as well as Strategic, Economy and Entrepreneurship (SEE). "So, this laboratory collaborates three Vocation Groups, namely IBM, FAS, and SEES. In fact, one of the activities in this laboratory is a long distance internship program for students, "said Azhari.

Before it is used for long distance internship program, CIR was a meeting place for the three vocation groups to discuss

### LABORATORY



several research ideas that will be conducted. It is not only the lecturers, but also the students like to gather in the laboratory based on their intention or conducted project. Because of the partition, then the three vocation groups agree not to always gather at the same time. They are worried if their concern will be distracted, unless if it is only small group.

CIR is not a new thing in FEB. This laboratory was originally named Business Incubator. The goal is to accommodate students





who are interested in or own a business venture. Especially when Telkom Education Foundation (YPT) rolled the MOVE Program 1000 in 2012-2013, the Business Incubator is prepared to assist the students who receive financial aid MOVE. The reason is that their business continues to grow forward.

"Besides being used for a gathering place to discuss research ideas and internship, the laboratory is also used for meetings that discuss the curriculum of the three vocation groups or related academic matters and project consultation," said Azhari.

Related to long distance internship, this is a breakthrough in FEB to run CIR. Recently, Epsilon company located in Jakarta has completed the long distance internship program for one semester at CIR. Azhari admitted, this is a win-win solution cooperation among FEB

44



and related companies.

"Why long distance internship?" It is because not all companies needing internship partner have sources to direct or place their internships in their companies. Many internship companies do not accept internships because of the activity will be their homework; it is not because they do not want to accept them. Besides that, middle companies do not have sufficient places if they want to accept internships. Finally, we try to do the internship activity here. So, everything that should be done by the internship is brought here", Azhari explained.

The long distance apprenticeship process is performed in accordance with CIR working hours as in the related company. The goal is that the students look chores assigned to her internship. In addition, the long distance internship at CIR will be guided and monitored by the lecturers, so if there are difficulties. students can directly ask. Typically, the project has given the company to internships students such as the construction budget plan; calculate the visibility of eligibility, and others. However, for a number of jobs that require the presence of interns, they still have to come to the internship company in Jakarta. Of course, it is not conducted every day.

For the long distance internship activities, FEB is looking for another company to cooperate and provide long distance internship programs. The reason is, one of the difficulties in the apprenticeship program FEB is the difficulty in obtaining student internship locations. In fact, with internships, students can find out the problems that exist in the company. After studying on campus, they can immediately implement it in the real world.

"These internships have a goal to let students know the weaknesses or problems that exist in the mid-sized companies. Our concept for the internship is a doctor. Students on campus have studied medicine to develop a good business, managing budgets, managing people, and others. Well, now there is a real company, live practiced, "Azhari continued.

Existing facilities at the CIR for the working of a number of projects is not the same as themed laboratories in FEB. However, the existing facilities are sufficient. Each computer in the laboratory is already connected to the Internet network. However, Azhari admitted, classic obstacles still haunt campus facilities. Call it, the Internet is suddenly down when internships are working on projects.

"The classic barriers occur particularly in the development

of the facility. For example, the Internet suddenly down. Then, look for the provider of the internship program is also somewhat difficult, because there must be cooperation agreements first. We also need to weigh up, lest too many companies for internships. Therefore, the scheduling will be confusing for students. Moreover, the laboratory is not large and wide. If there are many internships here, it will be critical," he said.

Another breakthrough of CIR is making it as a center of research information from the existing three vocation groups. For the short term, at least CIR can help students who are looking for topics of research for their assignment or thesis.

"If the library acts as a reference and resources then, the CIR can be a place for ideas. In addition, hopefully this lab can increase the competence of students academically and practically. Currently, the new CIR is used in FEB. If the concept has matured, we could open the CIR to other faculties, "said the professor of Finance and Economics at the end of the conversation. ❖

# With literatures, the Research Must Go On



In research realm, literature is a compulsory thing to be discussed not to mention in a university like Telkom University.



iterature is needed to support scientific paper or research. The more literature used to support the scientific paper or research, the better the research result.

Telkom University strives to open access for its academia to national and international literature. Its literature provision is conducted by Library Unit.

Generally there are three kinds of literature provided by Telkom University. Firstly, subscribed international journals such as IEEE, Springer, ACM, Science Direct and Emerald Insight. Secondly, e-journal from Dikti grant such as Engage learning, ProQuest and EBSCO HOST. Lastly, e-resources from National Library (Perpusnas).

"All of the international ejournals are charged. Each journal is different in terms of its subscription. For example, we subscribed all IEEE journals and its magazine. However, for other journals we only subscribe its proceeding and journal. There are also special journal for management, social science and



engineering," Nurul Fitria, the library manager said.

The different subject study in e-journal in Telkom University is only a way to equally distribute the science literature for the researcher. For example, IEEE journal has the biggest number of subject study (more than 40) yet it is only for engineering. Next is Springer. It has only 12 subject study but it quite varies from engineering, social science and law.

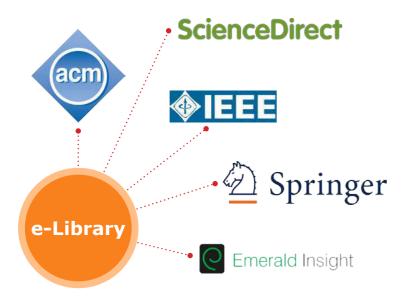
The other journal, Emerald Insight, has 12 subject stud-

### REFERENCE

ies but it is only for management and social science. The other is Science Direct. It has limited subject study (only 5) and is limited to only social science. Lastly, ACM (subscribed in 2014), it is only for computer science.

"Those five journals can be accessed not only in Telkom Campus but also anywhere in the world. We just need to set the VPN that can be gained from Library Unit. We can see the way through http://www.youtube.com/ watch?v=\_dv4qxdYtt8. In addition to it, we can also see the way to use it through http://www.youtube.com/watch?v=CN3Y14ttms8. If we are in the campus we can use auto login," she added.

For the journals granted by Dikti, the academia can access all the journals by clicking all the provide links in condition that they need to ask for the user name and password to Library Unit of Telkom University. However, according to Wuwul, the Dikti journals



can only be access in campus since Dikti does not allow to share the journals to the public.

For the journals of National Library, students and lecturers wanting the access should register personally (online) to Perpusnas through the link http://e-resources.perpusnas.go.id. The journals are so many and free of charge. Perpusnas has many subscription of international journal that is as credible as the journals subscribed by Telkom University.

The Difficulty in Finding Journals for Creative Art Field

The field of study in Telkom University is recently divided into three : engineering, management & business communication and art & design. Wuwul admitted that Telkom University still has difficulty in finding the international journals related to creative art. Recently, we are trying to subscribe Oxford Online to provide the related literature.

"Art and Design is indeed unique. Many of its fields are difficult to be made scientific. The journals that we are trying to subscribe –Oxford Online- are not purely Art and Design but mixed



with engineering such as the one for architecture. Meanwhile, the Art & Design magazines' quantity is available more. It can also be used as a reference because this field is unique. Thus, Library Unit



has discussed this matter with Art and Design Faculty members related to the needs of the reference. We are looking for the ones that mostly matched. The faculty members are also helping to find,"

#### Wuwul said.

According to Wuwul, related to the number of literature usage provided by Telkom University, it can be seen through the download that is done every month. "The number of the users in each month is different depends on the subject study numbers and academic calendar. If there are many people who do the final task or if there is a conference, usually the download of the journals are more", she added.

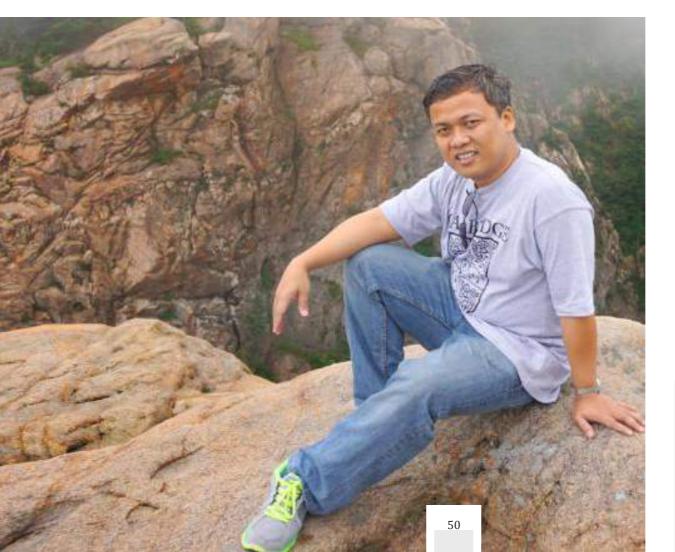
Wuwul hoped that digital international journals can be optimized to be used by the academia. She said that the yearly subscription is pricy so if the users are less the journals are useless. In addition, the more scientific literature in Telkom University means the more research activity in campus.

"We are from Library Unit is really open if there are academia who have difficulty in the access. We always conduct user education to socialize the usage and the access of the subscribed journals. The needy can come to library or we come to the faculties. So far, if there are some complaints from the users we tried to find where the problems came from. For example, why they cannot access IEEE then we checked. If the file to be downloaded is proceeding we surely can't help because we only subscribe for the journals and magazines. We told the users about it. Yet, if there is a problem with the subscribed thing we forward the complaints to the representative of the publishers," Wuwul pointed out. 🛠

**INSPIRATION** 

Dr. Adiwijaya

# **Acknowledged** by Conducting Research



The acknowledgment and trust are two things that are difficult to gain. Sometimes people need to do higher effort to gain them. Similarly, in the academic realm. It requires high integrity and professionalism. ne of the efforts is the research activity, one of *Tri Dharma Perguruan Tinggi* (Three Pillars of Higher Education). Doing research requires not only having qualified knowledge, commitment and high credibility but it also needs the researcher to make the research to be useful for people. This principle is always kept by Telkom University researcher, Dr. Adiwijaya.

Due to his hard work and commitment in research realm, the man called Kang Ady, was able to produce the most paper indexed by Scopus in Telkom University." Recently, there are 28 papers indexed by Scopus," the modeling and computational experiment lecturer, Kang Ady, added.

"People would ask why we need to appreciate this. A researcher must publish his or her research in a journal especially in Scopus. Not all of journals can be indexed internationally. Furthermore, Scopus is one of international index for research journal that has been decided by Kemristek Dikti (The Ministry of Research, Technology and Higher Education) to show a quality research.

Scientific paper in internation-

al journal proposed in position promotion of a lecturer will be checked by Thomson, ISI Knowledge, Scopus SJR Journal Ranking or in Microsoft Academic Search. If a journal is found in one of those pages, it meets the criteria to be international journal. Indirectly, the researcher whose paper is in international journal and indexed there has also international quality. The researcher then is acknowledged and trusted. Indexing is like a license to make the research whose quality is acknowledged.

Adiwijaya also feels the same way. Even though he admitted that to be indexed by Scopus is not the main purpose. "The effect that I feel that there is some sort of trust from others. For example, nowadays I have been asked to review several papers that are indexed by ISI and Scopus. Besides, in this open era, we are always being careful in doing research, writing the paper and publishing it," he added.

The man born in Majalengka on September 21, 1974 said that researching has been his passion since he was trusted to do research through the grant he got. For that reason, he never stops despite

The effect that I feel that there is some sort of trust from others For example, nowadays I have been asked to review several papers that are indexed by ISI and Scopus. Besides, in this open era. we are always being careful in doing research, writing the paper and publishing it."

many challenges and difficulties. He spends almost 20-30 percent of his day for the sake of research. The main thing in researching is commitment.

"When we are trusted, we must have passion in the research. When we have the passion, no matter what challenge we face we will always enjoy the journey and be given easiness to face it. The research is actually originated from curiosity. Research means search again the knowledge. Therefore, before doing research, we must make research mapping so that we do not do what other people have done. When the research plan and question are clear, the proposal we make will be easier to be accepted by the grant givers," he said.

To manage the time between other jobs and the research, Kang Ady said, "I always come to the office earlier and go home later than the working hour so that there is time to do and think about the research."

Becoming a professional researcher since 2008, Kang Ady, a graduate of ITB, makes his habit of research applied to his daily life. The culture of having argument for everything has even influenced his children who always ask about the decisions made in the family.

His mindset about mathemat-

### INSPIRATION

ics is also similar to research. He said that many people are allergic to mathematics. It does not apply to me, he said. He thinks that mathematics is a field to sharpen our logics and it can be represented more easily in the forms numbers. Researching in the field of mathematics has made Kang Ady have logical and argumentative attitude. This is the thing that he always pointed out while teaching his students.

After learning mathematics, there are four mindsets that are supposed to be the outcomes for its learner: problem solving, communication, connections and reasoning.

"To make it more interesting, mathematics should be viewed in applicative way. Thus, a lecturer must do research to make them upgrade their useful insight continually while teaching. A good lecturer can inspire and improve students insight based on the subject competence that he holds. If a lecturer only teaches the same materials as the book, it only says. Therefore, students just need to read by themselves even watching a youtube video is enough," he added.

"For example when delivering materials related to matrix, I started by giving an example if a student has 1 megapixel. 1 megapixel means 1.000 pixels to the right and 1.000 pixel below of the picture. The value of each matrix component is the pixel intensity itself. This is to make easy the understanding process inside. Thus, we started by introducing the matrix and its operation which is small," he explained.

A number of researches have been done by Adiwijaya both in Telkom University and in other external parties. Besides the fundamental research funded by The Ministry of Research Technology and Higher Education related to graph coloring application, Kang Ady is also active in doing some applicative research in cooperation with government and private institutions. One of them is BMKG. The research conducted is related to rain fall prediction. Furthermore, there is also cooperation with The Ministry of Agriculture in deciding the planting calendar for several commodities such as rice. corn and potato.

According to Kang Ady, all the researches are originated from the related parties that need the technology optimization. For example, for the planting calendar, the purpose is optimizing the planting period from two times to three times. The other research is detecting the



fertility period of woman based on the USG in cooperation with maternity clinics. Recently he is doing the competitive research of Telkom University related to correct the hijaiyyah letters and searching chunks of Al Quran verse based on pronunciation.

"A lecturer must do research to make them upgrade their useful insight continually while teaching. A good lecturer can inspire and improve students insight based on the subject competence that he holds. If a lecturer only teaches the same materials as the book, it only says." and time, Kang Ady remained happy when he finally found something. "It is more like finding a treasure, we must feel tired but when we finally find it, we are unavoidably happy. Sometimes when I feel stuck, I do something else such as doing sport," Kang Ady said, admitting that he loves futsal, swimming and biking.

Even though the research that

he conducted required his mind

Wanting his track to be followed by his colleagues and students in Tel-U. Dr. Adiwijava. The Vice Dean of Academic and Studentship of School of Computing, has made the research integrated with the final task. In line with his plan, in each final task there must be a lecturer who has academic functional position, at least in the level of lector or doctor divided in several teams. Each team consists of young lecturer, so that they are used to doing research and making progress quickly in their position. Therefore, the process of lecturer's data sharing can be monitored well.

Kang Ady highlighted, "there is a benefit from doing research but not many and not really reliable. However when we already have good positioning in research world, we will not have to think about funds anymore. For example when we need labs equipment, conduct a colloquium or be invited to a scientific meeting, the funds can be taken from the research funding."

Now, School of Computing has got ICoICT that has been indexed by Scopus. Additionally, SoC has handled two, international and national, journals i.e International Journal on Information and Communication Technology (IJoICT) and Indonesian Journal on Computing (Indo-JC). Kang Ady hopes that the journal supervised by SoC under coordination with PPM Directorate of Telkom University can be indexed by scopus so that more people can publish their work through those journals.

Furthermore, he wishes that Telkom University can be seen beautifully not only from one angle but also from every angle it has.

"I hope that all of us in Telkom University has shared understanding to achieve our goal. Each element need to be reliable not dependent. It is like a picture, we need to be the best pixels so that the picture looks beautiful in any angle. The last picture is the vision of Telkom University," Kang Ady added. � ACTUAL

# Protecting Intellectual Property in Klinik HKI



Having a piece of intellectual property but easily taken by someone is not amusing thing. This case often occurs in Indonesia due to the regulation about the piracy and the lack of people's awareness to appreciate other's intellectual property.

The real example of this is the music piracy that has gone over the sensible way leaving the music industry legal player in loss. To make matter worse, more illegal music is available than the legal one.

In the more crucial level, not only music that is pirated but also things in education environment. Piracy or plagiarism of work is also popular in education institution (a place where ethics and moral value are supposed to be highly appreciated).

Ideally, a higher education institution must be a positive role model in controlling its people's behavior since any plagiarism is authentically the same as stealing the act and can be taken to the court.

Therefore, there must be a guarantee for every intellectual property in education environment in order to protect them. One of them is supposed to be done in higher education by registering all the scientific property to the Intellectual Property Right (HKI) that has been accommodated by The Ministry of Law and Human Rights (Kemenkumham).

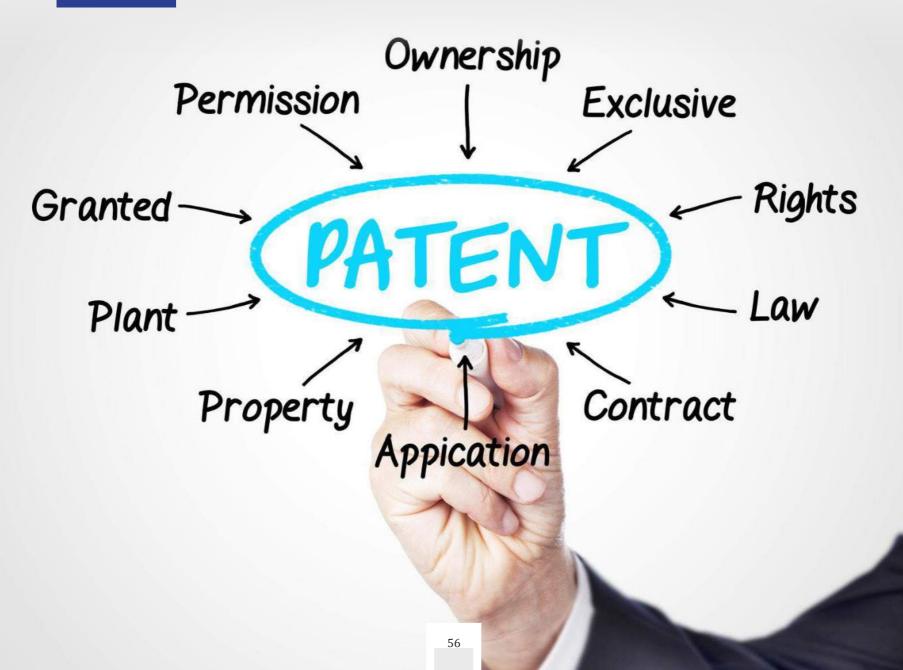
Realizing the importance of intellectual property rights, Telkom University is surely do-



ing something. The registering process and handling have been done gradually even though personally in nature. Many lecturers and researchers of Telkom University come to Jakarta to register their works. Some of them succeeded. Their property are considered an intellectual property rights that cannot be disturbed and claimed by other parties not to mentioned copied and taken without permission.

However, Telkom University

wants to make the process of intellectual property rights easier for the academia. The representatives of Telkom University presented in General Directorate of Intellectual Property Rights of The Ministry of Law and Human Rights. As a result, Telkom University gained a trust to establish an intellectual property rights clinics in campus (Klinik HKI). Finally, the Klinik HKI was officially established on Saturday (13/12/2014) in K building. The inauguration



ceremony was attended by the Directorate General of The Ministry of Law and Human Rights, Prof. Dr. Ahmad M. Ramli, SH.

In that event, Tel-U conducted a seminar about intellectual property right. This event was also attended by a Sundanese figure, Sam Bimbo. "In fact, Tel-U's ability in creating intellectual property rights was in line with

### We do hope that the Klinik HKI can be a new profit center for Telkom University because other parties can also register here. Additionally, Tel-u clinics can sell the registered Tel-U property rights if there is someone interested in it.

the campus target in research and community service oriented towards intellectual property rights," said the Director of Tel-U Research and Community Service, Dr. Palti M. Sitorus. Since Tel-U set the target to be a Research University in international level, the awareness of intellectual property right became greater. Therefore, in every activity of *Tri Dharma Perguruan Tinggi* (Three Pillars of Higher Education), Tel-U is always oriented towards intellectual property rights. Consequently, guidance, regulation, guarantee and protection are needed to protect proportionally the created intellectual property rights.

Telkom University has targeted in 2014 about 42 rights, in 2015 about 132 rights and in 2016 about 120 rights. The forms are various such as copyrights, trademark, idea, logo even books. However, for the patent, Tel-U has not registered since the process can take six years.

Patent is the highest rights in which the form registered is a kind of prototype or a product. Usually a patent can result in much amount of money if there is someone who wants to buy it. In Indonesia, there are only 200 patents so far registered in the world so far.

"The time for patent process is long, because it must be proven anywhere. There must not be any similarity with others. The patent's measurement is world level. If there is similarity it can be investigated," Mr. Palti said.

According to Palti, not all higher

institutions, not to mention private higher education's have intellectual property rights clinics in Bandung. Currently, only ITB and UNPAD that have the clinics for intellectual Property. It is commonly known that the two campuses have already possessed many scientific property. By the establishment of the Klinik HKI, Tel-U academia do not have to go to Jakarta anymore to handle their rights since they have it here. To make matter better, people from external parties can also come to register in Klinik HKI.

"We do hope that the Klinik HKI can be a new profit center for Telkom University because other parties can also register here. Additionally, Klinik HKI can sell the registered Tel-U property rights if there is someone interested in it," he added.

Nowadays, Klinik HKI is located in Creative Industry Faculty on the first floor. Klinik HKI will be an individual unit under the directorate of research and community service of Telkom University.

"In the future, Klinik HKI will be closer to the directorate so that it will make people easier to register their rights. It is also hoped that the Klinik HKI can be more empowered and developed", he said.  $\clubsuit$  INTELLECTUAL PROPERTY

# Services of Klinik HKI





After the issuance of Rector Decree regarding the Intellectual Property Right in Telkom University, the clinic officially inaugurated on December 13, 2014 started running. Intellectual Property Rights is an exclusive thing that is given to a person or a group of people in terms of protection of invention, invention in science, technology, art and literature as well as symbol and trademark usage including patent, copyright, mark, trade secret, industrial design, and varieties of plants as mentioned in the Indonesian laws.

The management of Intellectual Property Rights in Telkom University is resulted from teaching, researching and community service done by academia or in cooperation with other external parties. This management includes the achievement, possession, protection and the usage of the rights. Tel-U can acquire intellectual property rights from the inventors both originated from Tel-U or other partners of Tel-U.

Additionally, every Tri Dharma activity result funded by Tel-U either fully or partially and supported by campus facility should be registered under the name of Tel-U as the holder of the rights.

The holder of the rights must

meet several requirements. First, maintaining and managing intellectual rights. Second, paying tax, properness test fee, registration fee, and commercialization and maintenance fee.

Third, the monitoring system. Fourth, responsibility for the law consequences resulted from rights possession. Fifth, giving information periodically about the development of rights management to the parties involved in the rights. Sixth, distributing the result of the rights' commercialization according to the applied terms.

The rights management in Telkom University has been done through the Klinik HKI under the coordination of PPM directorate. Klinik HKI has several tasks in serving the process of the rights registration in Tel-U. First, exploring the activity that has potential to be registered and meet the requirements based on the laws applied. Second, doing evaluation with panels of judges deciding about the technology properness, scientific properness and the newness of the potentials.





yo, kita lawan pembajakan & nalsuan!!! Third, doing the process of moving the intellectual property right from the academia to Tel-U. Forth, doing the process of registering the rights to General Directorate of The Ministry of Laws and Human Rights. Fifth, managing the portfolio of Tel-U rights. Sixth, endeavoring the invention discovery of the

research done by the researcher of Tel-u that has the patent potentials. Seventh, facilitating the advocate and law support of the rights by Tel-U. Eighth,

doing the socialization and development of Tel-U academia's and society's care of the intellectual property rights. Lastly, submitting the regular report (once every three months) to the Vice Rector dealing with the research and the rights.

Klinik HKI has a group of judges originated from Tel-U academia suggested by Tel-U clinic. This team is adhoc team consisting of some lecturers and other academia members who have expertise in related

The management of Intellectual Property Rights in Telkom University is resulted from teaching, researching and community service done by academia or in cooperation with other external parties. This management includes the achievement, possession, protection and the usage of the rights.

> subject concerning the intellectual property rights to be evaluated. The group of the judges can also be recommended by the dean of faculty or the head of research interests group. When needed, Tel-U can appoint the expert or expert team from external party to be the judges.

> Klinik HKI also cooperates with Bandung Techno Park (BTP) which is the center of tenant development in technology to be product prototype.

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CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Lia Yuldinawati, ST., MM LISENCE HANDLER/ BRAND OWNER SCHOOL OF COMMUNICATOONS & BUSINESS INTELLECTUAL PROPERTY KIND : COPY RIGHT TITLE : Company Profile IM Telkom CERTIFICATE NO : 070798

2014

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CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Nyoman Bogi Aditya

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> TITLE "3D Fashion Ilustration"

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Moch. Nurdiansyah, S.Ds

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> TITLE "Fast Chicken"

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CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Muhammad Fauzan Syara Zhuhriyami Abdurrahman Jundullah

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Aplikasi Berbasis Android "E-Braille"

> CERTIFICATE NO. 072378

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Herlangga Wicaksono Mutia Noor Hafid

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Program Komputer Aplikasi Berbasis Android dengan nama "Petualangan Andy (Edisi Kebun Nenek)"

> CERTIFICATE NO. 072182

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Irna Yuniar Magdalena Karismayanti

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> TITLE Buku Ajar Perancangan Basis Data

> > CERTIFICATE NO. 070659

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CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Laura Sinar Utami Ditra Alfilia Mardhanti Nur Aisha Fitriyani

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TITLE Program Komputer Aplikasi Berbasis Android dengan nama "DYXE"

> CERTIFICATE NO. 072181

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Hajar Hanifah Steva Nina Resti Maruti Sekar Arum

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> TITLE Aplikasi Berbasis Android "Toolips"

> > CERTIFICATE NO. 072379

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Ibrahim R., Akbar F., Thomi F., Faisal N., Yongki, Jonah J., Febrinando, Arga, Richson, M. Aditya

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> TITLE Film "Dunia Twitter"

CERTIFICATE NO 071622

CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Gery A., Zulendy N., M. Taris, Rahmat A., Tri Restu

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TITLE Film Dokumenter "Mamat on The Street"

CERTIFICATE NO 071623

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CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Ibrahim R., Wildan Faisal N., Gama, Siti

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TITLE Program Televisi "Cari Tahu" Episode "Magic Mushroom"

CERTIFICATE NO 071624 CREATOR / DESIGNER / INVENTOR / BRAND CREATOR Mustafa R, Dico Willian, Desy Fiftina, Fatimah R., Reza M. A., Arif Rahman, Setia A. P.

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TITLE
Film Dokumenter "Ride The Life"

CERTIFICATE NO 071577

# Enterprise Solution & Assurance (ESA) Total Solution of Information System

Do you often feel annoyed dealing with government bureaucracy? The organization system is one of the local governments when it comes to the service. However, in this digital era, the management in profit and non-profit organization can be made easy through integrated management information system as long as the government is ready t change from manual way to digital way.

RESEARCH

GROUP

**Enterprise Solution** 

and Assurance Telkom University

o solve this problem, Telkom University has research interests group focusing on management information system of company i.e Enterprise Solution & Assurance (ESA). This research interests group under the faculty of industrial engineering comes to support the needs of big scale profit and non-profit corporate. According to the member of ESA, Y. Adam Prasetyo, ST, MT, this research group focuses on the research and development of science in terms of implementation of total solution and information system management.

"The solution given can be in the form of implementation solution of ERP system and IT infrastructure. ERP stands for Enterprise Resources Planning. Meanwhile, the information management system can be in the form of Enterprise Architecture Design and Information System Management," Adam, the lecturer of Introduction to Information System and Technology and Science Development Concept (KPST), said.

Adam added that the research interest group of ESA has just been established in July 2015 while there was splitting of the former group from 3 to 4 under industrial engineering faculty. The ESA interest group has 15 lecturer members of the faculty active every Monday and Friday discussing some ideas for research topic.

There are four divisions in ESA interest group focusing on management information system. First, Enterprise Packaged Solution (EPS) that uses application of System Application in Data Processing (SAP), Oracle Business Suite, Microsoft Dynamic AX etc. Usually, this division uses Enterprise Resources Planning (ERP) laboratory.

Second, Enterprise Architecture Design (EAD) that uses the application of Business Process Management, EA Design, etc. The laboratory is also used by BPAD. Next is the Enterprise Infrastructure Management (EIM) that uses the application of DC DRC, network, etc. This division uses Network System Laboratory.

Last, IT GRC (Governance, Risk, Compliance) that deals with auditing problems, IT Governance ITSM, Project Management etc.

### **Research Focus**

Even though it is new, ESA interest group has done several research related to the total solution for corporate management information system. Recently, ESA focuses one-governance research. According to Adam, this research is oriented towards the architecture of the governance for example enterprise application in some local government.



"We make a product like a website but it is SSO in nature. This application is to support other applications that are distributed. Initially, there were many offices in local government that use their own applications so they have to process by themselves. The login should be made from every application. Making enterprise application is actually difficult because it needs good governance system. We are trying to develop application supporting the distributed governance application," Adam explained.

There are some potentials of research in ESA interest group that can be developed. First, the design of Enterprise Architecture e-governance based on the characteristics of government budgeting mechanism. Second, ERP open resource implementation for e-governance. Third, standard design of information system management of government oriented to ISO 27000. Lastly, the design of network architecture and egovernance hardware to support smart city implementation of local government. One of the products produced by ESA is serbatau. com. This is a socialization media of knowledge dissemination that is web based and can be used as online learning. Additionally, there are some community services conducted by ESA interest group.

### Information System as Company's Enabler

The basic study of ESA is the major of Information System. Uniquely, there are two Information System majors under the School of Industrial Engineering and under the School of Computing. But, Adam said that the two majors have a few differences especially in their functions.

"Information system under Industrial Engineering is focused on enterprise. Therefore; the students are equipped with the knowledge generally as well as business functions (human resource, finance etc) and they are given understanding of ERP and SAP. So it becomes one function

### RESEARCH GROUP

- both the development and its implementation. In addition to understanding information and technology, the students also know the company's business functions such as organizational structure, governance, needs, etc," he said.

The students majoring in Information System under the School of Industrial Engineering are obliged to configure all the needs of business functions in a company so that they can be enabler for the company. Meanwhile, Information System major under the School of Computing is more oriented to the development of and making of the application. In other words, Information System major under the School of Computing is more oriented to the soft method whereas Information System major under the School of Industrial Engineering is more oriented towards the method development, i.e. IT implementation to support the business and company. Today, many companies need IT consultant analyst that also understands the business process.

"The ESA interest group imple-

ments the solution of the existed application. So we see the type of the company, what their needs are. Then, we try to customize the application based on their demand and finally we implement it. After that, we socialize and conduct training while they are using it," Adam added.

Adam admitted that the classical problem in some companies is the change management. The companies consist of people but this variable, despite its importance, only gains little consideration. When companies adapt a technology, the people must be involved because they are the actors and the determining factor of the company's performance. If the technology change is not made in a company, the information system management will be bad because it is not effective and efficient. The competitiveness of the company will also decrease. It might lose before the company adapting the technology.

Related to the development of ESA research interest group, Adam admitted that he still has difficulty because of the teaching task or structural task that leads to the lack of focus to handle the research interest group. Additionally, the highest academic functional position of the lecturers is lector so that it still needs to be improved.  $\clubsuit$ 

### THE RESEARCH OF ESA RESEARCH INTEREST GRUOP

- Design and Development of Integrated Single Window E-Government-Based Service-Oriented Architecture (Single Sign On, User Management, Managerial Dashboard).
   Partnerships Research Yuli Adam Prasetyo, ST, MT
- Application of Business Intelligence to Analyze Effect Against GPA Student Profile Studies Program Information System Telkom University by Using Pentaho. Independently Research
   Teguh Kurniawan, ST, MT
- Design Technology Development Planning Network Infrastructure to Support Business Process LIPI Cibodas. Independently Research
- Crowdsourcing Model Development of Public Infrastructure and Environmental Monitoring for Improving the Effectiveness of Government Oversight. Independently Research
   Yuli Adam Prasetyo, ST, MT
- Architectural Design Enterprise for Higher Education Case Study: Institute of Public Administration (IPDN).
   Penelitian Mandiri
   Ridha Hanafi, ST, MT
- Design Prompt and Actionable Feedback to Improve the Validity and Response Speed in the framework of a Quality Improvement Service.
   Partnerships Research
   Wiyono, Ir, MT

### COMMUNITY SERVICES OF ESA RESEARCH INTEREST GROUP

- Strengthening Activity Development Through Lampung Quran Wakaf Foundation and Web Development.
- Softskill development and Hardskill Students SMKN 1 Lemahsugih and SMK 1 Malausma to Increase Competency and Job Readiness Facing Graduates in the World of Work.
- e-Raport SDN Sukadana II (continuation of previous devotion, namely Digital Library)
- The role of HR as key to success in the implementation of e-Government for the Bandung District Governance Toward Better.

# LIST OF PAPER ON OURNALS

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   Porman Pangaribuan
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Methodology

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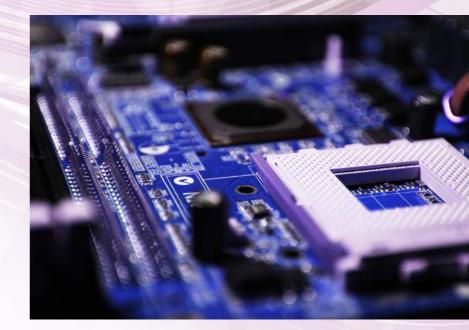
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