UNIVERSITI TEKNOLOGI MALAYSIA

SCHOOL OF COMPUTING

Faculty of Engineering

SECP1513 – TECHNOLOGY & INFORMATION SYSTEM

INDUSTRIAL REPORT:

A VISIT TO CICT

SECTION : 08 – 1SECR

COURSE NAME : BACHELOR OF COMPUTER SCIENCE – COMPUTER NETWORKS & SECURITY

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Table of Contents

Introduction

This official visit was carried out regarding on our task that was given to us. We need to write an industrial report that should address the requirements and job specification needed for career in IT correspond to the industry that we visited which is Centre for Information and Communication Technology (CICT), Universiti Teknologi Malaysia. All of the guidelines and rubrics of the report had already being sent through WhatsApp group from our lecturer, Dr. Haswadi for us to follow exactly what are the writing requirements in order to achieve maximum score on this report.

The industrial visit was held on 20th October 2019 at Perpustakaan Sultanah Zanariah, UTM Johor Bahru during our lecture period of Technology and Information System. Supposedly this visit should be held at the CICT building itself, which is located at D07. However, there are some unexpected problem there, thus brought us to PSZ. Here, we were instructed to be at Level 2 of the library as there were located a lot of merchandise that was being used by the university previously on 90's to make a work done. Even though there were no CICT facilities inside the library, but there is a gallery about fields that resemble to CICT. To know more about the Centre for Information and Communication Technology, kindly visit their official website at https://cict.utm.my/.

Details of The Journey

As mentioned previously, we visited the Centre for Information and Communication Technology (CICT) in UTM Johor Bahru on 20th October 2019. The venue was supposedly be at the CICT building itself at D07 which are near from our faculty, School of Computing building (N28 and N28a) but due to reasons, we need to go to Perpustakaan Sultanah Zanariah, or PSZ in short to complete the visit. PSZ is one of three libraries in UTM that capable to commute a huge number of persons per session in the library. Since that the library is quite far from our faculty, plus it was a rainy day, some of us took bus and e-hailing services to reach there. Some who with umbrella just walked by following the path to the library. Once there, we were required to gather at Level 2 in front of the entrance of UTM Galleria. The visit that should start at 3.00 pm was not able to be so as some students arrived late due to heavy rains. However, the other things ran as scheduled.

CICT act as a support unit which provides and delivers ICT services for UTM (staff and students) mostly in ICT infrastructure, system development and administrative activities. CICT offers Internet and Wi-Fi, customer relationship management (CRM), web management, infrastructure and security, ID accounts and access, application development, multimedia, software and ICT facilities. Their vision was '*Digital University Driver*'. Their mission was '*Strengthening academia-centric service delivery through data driven digital ecosystem'*. They claimed that there are committed about their services that will lead to a high impact on ICT and will performed continues improvement for UTM.

Organisation Chart of CICT UTM Johor Bahru

Achievements

Throughout our trip at Galerium,Perpustakaan Sultanah Zanariah about CICT, Encik Mohd Zahari Abidin (Abang Zahari), Assistant Information Technology Officer as CICT's representative told us a lot about CICT. He told us every single thing of what CICT did. First, CICT UTM Johor Bahru protects that they called as *"Gerbang Selatan".* This meant that CICT UTM JB shields the server of our Ministry of Higher Education from cyber intruders on south corridor. For north corridor Regarding CICT's triumph or goods related to ICT, they established an application named *UTMSmart*. *UTMSmart* was an application that fulfil the student needs such as QR scan for attendance, result for each subject and course registration. CICT also offer their students with facilities and information that they develop originally by them. For instance, application and security.

For infrastructure and security, UTM CICT provides UTM Email for staffs and students, UTM Hosting, UTM ACID ID Account and Access, UTM-Ads, ICT Security, Video conferencing and Video streaming, High Performance Computing, Wi- Fi and Virtual Private Network in other word VPN. There was also application for development in such as Mobile Apps, System Development, Multimedia Development, Intranet Portal, Web Development, and crowd funding.

Detailed Descriptions on The Visit

This planned visit was held by Technology Information and System (TIS) coordinator, as followed by the other respective lecturers on TIS as well as our own lecturer, Dr. Haswadi bin Hasan. In this galleria, the assistant gave us a brief talk on the technologies devices that were used a few decades ago before the existence of great modern gadgets. A number of devices stored here and still stand in decent state. In this report, we are going to explain in details of everything in the galleria that we managed to capture. Before all, here is a list of things that were located in the galleria.

1. Magnetic tape unit
2. Impact printer
3. Apple Macintosh Classic Computer
4. IBM P70 Model 6554-673
5. Mainframe Tape Subsystem
6. Typewriter
7. Multi TV-VCR Combination
8. Microfilm Reader 'Allen Micro Model'
9. Block Hot Stamping
10. Projectors (6 images)
11. Hokushin Film Projector
12. Movie Camera - Panasonic M9000
13. Slide Film & Slide Mounting
14. Slide projector
15. Film Copy Machine 'Extek 2101'
16. Kodak Prostar Replenisher Machine
17. Microfilm
18. Microfilm processor 'Kodak Prostar Model'
19. Microfilm Reader 'Micron 750 Model'
20. Microfilm 'Rekordak Model'
21. Microfilm camera 'Zeutschel OK 102 Model'
22. Image magnifying machine 'Dunco 67C Model'
23. Time control device 'Gralab Model'
24. PYE-model Camridge, England Radio
25. Radial Line Plotter
26. Process Camera

MAGNETIC TAPE UNIT

The Magnetic Tape Unit was used as a 'back up' for the mainframe system an information database of staff and students as well as other University's information system during the year 1976 until 2010. Initially, this model used a round shape tape before converting to square shape tape.

IMPACT PRINTER

The Impact Printer of Dot Matrix Printer is a printing machine used in UTM during the 1990s until 2011. It was used to print the data information of students and staff to meet the University's requirements. This printer was also capable of printing in high volumes and non-stop for 48 hours.

APPLE MACINTOSH CLASSIC COMPUTER

The Macintosh Classic was first introduced in early January 1984 and has since been used in UTM Library in early 1990. It was equipped with a software memory of 1 MB of RAM and 2 MB to 40 MB of hard disk. With its large capacity at the time, the computer was used in the Library along with the Lotus 123 and Word Star applications for work and simple calculation.

IBM P70 MODEL 6554-673

The IBM P70 Model 6554-673 was used in UTM Library in early 1998 to contribute to work performance. As such, Library was liable of all modules, databases, software operations and data accessibility. With its ability to support up to 16MB on disk storage, the computer system provided a performance improvement on desktop operation.

MAINFRAME TAPE SUBSYSTEM

The Mainframe Tape Subsystem was used as a ‘back up’ for mainframe system and information database of staff and students as well as other University’s information system during the year 1985 until 1995. This model used a square shape tape after the round shape tape was no longer in use.

TYPEWRITER

Typewriters were used in the Library during the 1970s until early 1980s. Before the application of computers in 1985, these apparatus were once used for administrative tasks such as printing letters and memos.

MULTI TV-VCR COMBINATION

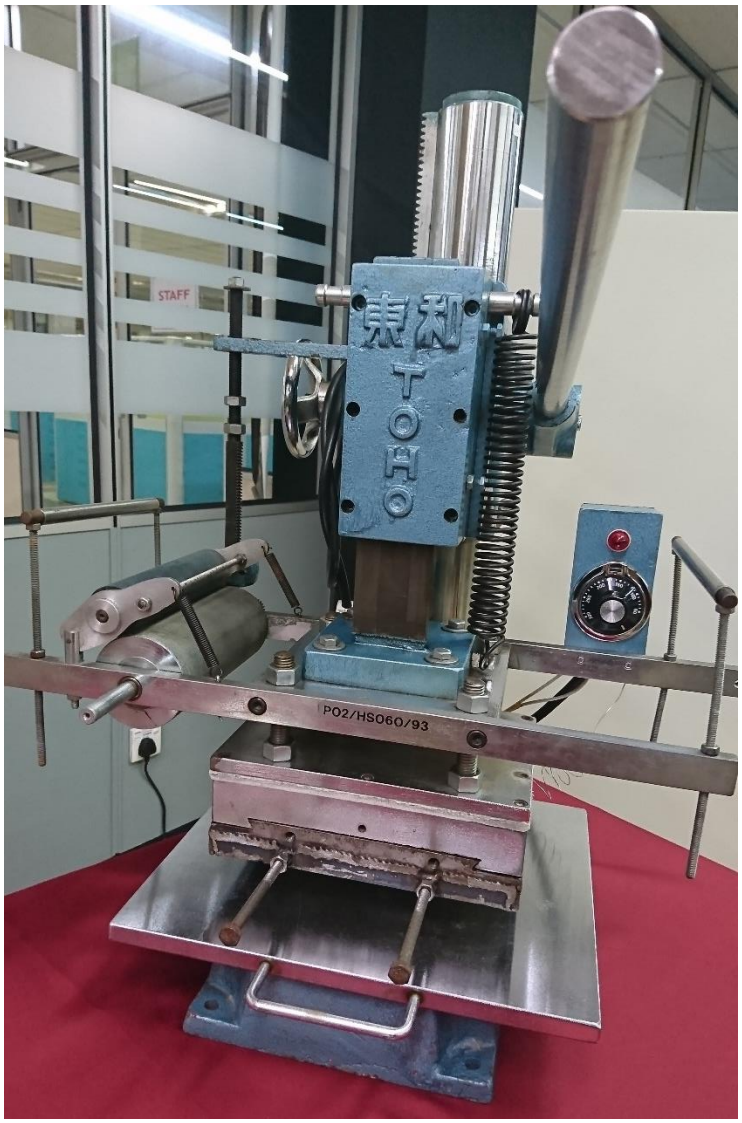
Multi TV-VCR Combination was used for Library media service during the 1990s until early 2000s.

MICROFILM READER 'ALLEN MICRO MODEL'

The microfilm reader was first used in UTM Library around early 1980s and early 2000's. It was used for reading thesis content (text and images) which was stored in microfilms and displayed on the machine's screen. At the time, the online information development was very limited and it gave and impact to users reference approach. As such, microfilm became one of the main sources of information in UTM Library. The microfilm was considered essential in the Library's collection as a mean of storing a large amount of data with a small medium.

BLOCK HOT STAMPING

Hot stamping block used in 1978 featuring UTM logo and previous motto ‘Untuk Tuhan Dan Manusia’. The golden hot stamping logo is used on official documents/publications and can be seen clearly against buckram – a type of cloth commonly used as book covers. The motto on the logo has since been changed to ‘Kerana Tuhan Untuk Manusia’.



PROJECTORS

Projectors help that communication by expanding the image of your computer screen to be large enough for a room full of people to see. The equipment was used by library staff during 1980s until 1990s with the purpose of supporting the learning and teaching activities.

SLIDE PROJECTOR

This slide projector was used in the Library to display slide shows during the 1970s until early 1990s.

HOKUSHIN FILM PROJECTOR

The 16mm portable SC series made a very good reputation in Japan and some other countries. The portable use the cycloadding auto threading method along with the guide numbers (1-2-3) for completing the steps required, which is a unique system using a threading arm loads the film circularly.

SLIDE FILM AND SLIDE MOUNTING 'MODEL SEARY'

The 'Slide Mounting' is a tool used to produce frames for slide films. An edited film was placed into a special adhesive frame. The frame was then inserted into an electric brace and compressed at as specific heat for ten seconds until the frame was attached. A total of 600 titles of slide films are available for reference at UTM Library using a special projector machine tool.

FILM COPY MACHINE 'EXTEK 2101 MODEL'

The 'Silver Film Duplicator' was used to produce negative to positive microfilm copies. The microfilm negative copies served as references to users while the positive copies were stored in UTM in Library special collection. The reasons for this was to ensure that the master copy of each UTM thesis is preserved and traceable in UTM Library collection.

MOVIE CAMERA – PANASONIC M 9000

Movie camera is a type of photographic camera which can takes a rapid sequence of photographs on an image sensor or on a film. It is a still camera, which captures a single snapshot at a time. This movie camera was used for library media service to record Library programmes/activities during the 190s until early 2000s.

KODAK PROSTAR REPLENISHER MACHINE

The ‘Kodak Prostar Replenisher’ was used to mix two types of chemical compound namely ‘Kodak Developer’ and ‘Kodak Fixer’. The mixture was then transferred into the ‘Kodak Prostar II Processor’ machine to be used during the microfilm washing process.

MICROFILM PROCESSOR 'KODAK PROSTAR MODEL'

The ‘Kodak Prostar II Processor’ was used to cleanse the 16mm an 35mm sized microfilm of ‘Recordak Micro-File’ machine and the ‘Zeutschel’ microfilm camera machine. It also produced negative microfilms for UTM these. It was capable of processing microfilms with a speed of up to 10 feet per minute.

MICROFILM

A microfilm is a media item which was heavily used as a learning and reference medium in UTM back in the 1980's until early 2000. It used a special 35mm size film and was stored in boxes for easy storage. There are almost 15,000 titles of microfilms in UTM Library collection ranging from these, international journals, acts, newspaper etc. The Library's effort in carrying out microfilming process began as early as the 1980s until 2007 an it focused on duplication of theses and research project. The initiative was carried out to preserve the security of the intellectual property of the University. Also, to ensure that this primary source of information can still referred from time to time. The microfilm collection is stored in an environmentally controlled storage at the Media Materials Room, UTM Library.

MICROFILM READER ‘MICRON 750 MODEL’

The Microfiche Reader was used to read the content of a microfiche. It was a source of information in the form of a flat film sheet and contained text and images. The content of the microfiche film was read according to the order of the letters on the machine and the display could be expanded when needed. A total of 500 titles of microfiche are available in UTM Library collection covering various sources such as journals, technical reports, proceedings, and other general references.

MICROFILM MACHINE ‘REKORDAK MODEL’

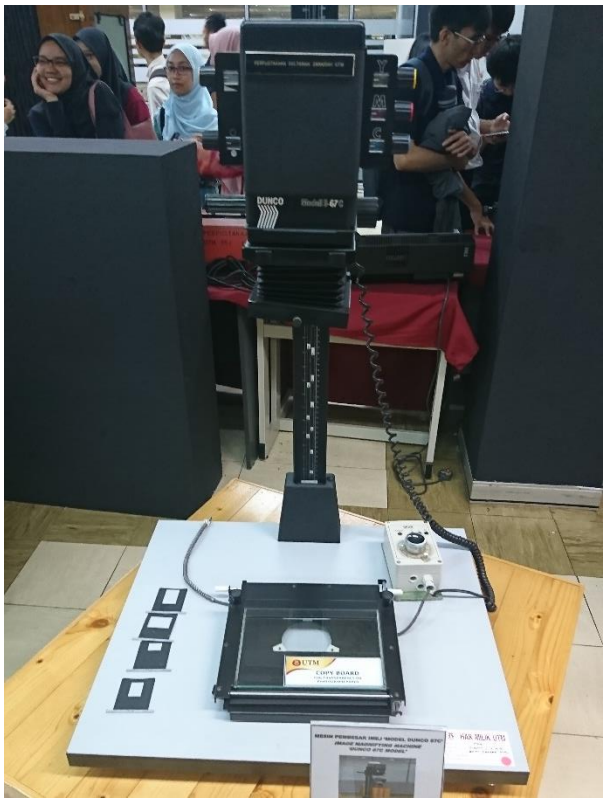
The 'Recordak Micro-File’ machine was used to capture small images of UTM theses. The images were recorded into microfilms or microfiche It utilised a special film; the 'Kodak Ektacrhrome' which was 35mm in size, and with a capacity of 100 feet per film roll. This machine was first used in UTM Library around nearly 1980's until 2007.

MICROFILM CAMERA 'ZEUTSCHEL OK 102 MODEL'

The ‘Microfilm Camera Zeutschel OK 102’ model is a high accuracy camera used to photograph small images of UTM theses. The images were recorded into microfilms or microfiche. It utilised a special film; the ‘Kodak Ektacrhrome’ which was 35mm in size, and with a capacity of 100 feet per film roll. This machine was first used in UTM Library in 1986 until around 2007.

IMAGE MAGNIFYING MACHINE 'DUNCO 67C MODEL'

The 'Film Enlarger' is a tool used to enlarge images to produce photo prints from negative films. It could be modified according to a preferred image size. The film magnifier was only used in the darkroom to prevent light from entering. It was first used in UTM Library around 1985 until 2007.



TIME CONTROL DEVICE ‘GRALAB MODEL’

The ‘Darkroom Timer’ is a time control tool used in the darkroom. The time control process was carried out during the process of soaking the microfilms manually in the chemical mixture. This tool was needed to control the period of soaking in accordance with the procedure so as not to affect the quality of microfilm.

‘PYE MODEL-CAMRIDGE, ENGLAND’ RADIO

This radio which was produced in the 1950s was used during the 1960s until 1970s in Technical College, Kuala Lumpur. It was used as one of the medium of information dissemination and with the purpose of supporting the learning and teaching activities.

RADIAL LINE PLOTTER

This Rodial Plotter was used at the Department of Photogrammetry, Faculty of Surveying during the 1960s to 1990s to produce topographic maps using a photogrammetry method. The students were exposed to mapping concepts and topographic mapping procedures using photographs as the main data source. This tool was used as the basis for photogrammetry principles and procedures in laboratories and for Bachelor's Degree Project (formerly known as Special Technical Project) of students specialising in photogrammetry. Photographs with overlapped images were attached to this device and the creation of 3D images were displayed through a telescope. With the aid of floating point, the shape and height of the surface could be seen and this allowed the contours of the terrain which were consistent with the scale map be produced fast and accurately. The photogrammetry equipment changes as technology progresses. As a result, at the end of the 1990s, this tool was no longer in use after the Faculty relied heavily on stereoplotter and digital plotter which were controlled by a computer.

PROCESS CAMERA

The Camera Process was manufactured by Hunter Penrose Ltd., a company which was based in the United Kingdom where thousands of these devices were sold worldwide in 1890 until 1962. This camera which was a gift from the Department of Survey and Mapping Malaysia (JUPEM) was used since the British colonial. This initial model is fully mechanical and it has been used to facilitate students in understanding the principles and procedures of photography production. It is a KLIMCH 'horizontal process camera' and was used in the Cartography Department, Faculty of Surveying during the early 1980s until the late 1990s. The students who undertook land surveying course drew map sketches on paper or tracing papers using technical pens to produce maps and graphics in a conventional method. The final drawing or manuscript is considered as a science document when he used for various application specifically in the planning and development of land or landfill. The result of the sketch is displayed on a specific location which is the focal point of the camera lens. Plates and films containing terracotta contour images were processed to produce black and white maps of coloured maps. Printed topographic maps were treated as 'CONFIDENTIAL and LIMITED' and used only for teaching and learning purposes in the faculty. The application of this camera was seized in early 2004 due to the advent of digital technology.

Reflection

As we know, over the year's technology has been growing past. No matter past or present, we always use technology as an alternative way to make our things easier and better. As a reminder, we must use technology wisely because sometimes technology can ruin our life.

(Nur Nabilah binti Yusman, 2019)

I am hoping that this Technology and Information System course will be able to guide me a lot in exploring the current world on Internet and modernisation. In a few years' time, I want to achieve my goal in being on of individual who can contribute to country development regarding technology. As looking forward to the goal, this visit was actually giving major impact on myself. It made me think of every possibilities of what humans could do, from a big machine which only could store small bytes of data to a micro machine but might accumulate enormous data. This mean that we would create more powerful devices soon. Thus, to achieve the dreams we need to enhance our self in many aspects to ensure that we could book a place for us in an industry to deliver good performance with brainy ideas, as well as contributing to nation's modernisation and pride.

(Muhammad Iskandar Zulqarnain bin Mohd Ishak, 2019)

My dream with regard to my course is that I will be able to fully utilize the knowledge that I have gathered and apply for a job that is related to my course in order for me to give back to the society that has given me so much in return.

This visit made me realize how adaptability skill is important in order to succeed as it shows the evolution and changes that technology has made only in a couple of decades. My goals and dreams with regard to this course have only been strengthened by this realization.

The action that is necessary to be done is being aware about the industry which is computer security industry where almost every aspect of life in this current age is revolving around this industry and an awareness is necessary to improve my potential in the industry.

(Az Mukhlis Iskandar bin Azli, 2019)