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## Intelligent International Identification Card

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### ABSTRACT

This study will develop and implement the International Identification Card (IIC) to multi users (M-1). The IIC can be used in several methods such as an IC card, Passport, driver's license, Visa card, Security Information system, Business part, all information about individuals/persons. The Smart Identification Card Technology (SICT) system will be using several new technology categories/tools such as Information Technology, Management Information Technology, Database management, internet service, Bluetooth service, NFC and mobile calling service. The target of SICT is to increase the efficiency of IC card to know the details for all citizens and foreigners from any country regardless their nationalities. What this means is the citizen's national and/or international security check can be identifiable, accessible from anywhere and anytime without time and/or location considerations. Therefore, any criminal behavior records and any other required checks can be accessed by the governments and authorities. The advantages of implementing this technology are to reduce the cost and time of history checkup of the person and aggregate Multi-IDs to one SICT. This new technology system will result a magnificent change, this will include the person's (passenger's) passport information as well. Therefore, passengers can use their IIC for check in and out processes instead of using traditional passport. This new implementation of technology will assist the governments and citizens around the world without any delay in the service securely.

## 1. Introduction

Nowadays, computing technology exists without time and location restrictions. The 24/7 online business is today's worldwide technology that provides services for any

required particular/specific purposes. The technology tools and applications are to develop any existing and/or traditional system. Switching from an old to a new system/or upgrading an existing systems can create a high and accurate performance in a digital

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environment. What this means is running a digitalized platform will increase the functionality and reduce the mistakes that may happen by human. The importance of using these tools and applications are to link multi identifications in one digital platform. By creating a platform such an International Identification Card (IIC), the entire system can be controlled centrally [2], [3].

Computer Applications Technology (CAT) is an effective use of information and communication technologies in the user interface and the computer application environment in different sectors of society [9], [10], [11]. CAT equips learners with knowledge, skills, values and attitudes to create, design and communicate information in different formats. It also makes it possible for learners to collect analyses, edit data, manipulate, process, present and communicates information to different sectors of society. CAT will ensure that learners are equipped with information and security skills to cope in an information society [1].

In this study, the CAT approaches are to manage technical side that solves several problems. The system which be used is a representative of relation between the government and citizens. In another words, the study will develop the government services within the departments, ministries and any related offices that controlled by the national and international security authorities. On the other hand, the new system (Data Base System) will assist people to communicate with departments in relation to their requests and demands. As citizens, an online approval letter or contract can easily obtained if the process shows a clear or blank security check by using new SICT. Furthermore, the SICT will help the national and international security and criminal history when it's required by the government authorities regardless of which country is the citizen from. The new system and technical consists complement information for all citizen people.

In this study, SICT includes two aspects, the first aspect represents the Database Software (DBS), and the second aspect represents the hardware face which is an IC. The software aspect is a computer programming face to regulate information. By providing an official online systems/links, any related activities can be done immediately depending on relation between the governments and citizens. The hardware aspect emphasizes on creating a SICT called Smart IC Card. The SICT contains citizen's personal information, records, academic and education history, profile such as business, finance, medical history, security, CVs and even more. The Central Information Technology (CIT) and Management Information Technology (MIT) will control and protect their privacy. The sensitive personal information will not be visible and cannot be updatable, changeable and removable in any condition. However, people who hold the SICT can update basic information such as passwords, residency and postal addresses, contact numbers, CVs and so on.

In this research, the SICT will use a novel database system as part of software and next generation of hardware technology that has not implemented in any other researches before. The reliability and importance of the new system will enable the governments to centrally control the required functions. Thus, government authorities can communicate and contact or retrieve people's records with free of cost and time.

## 2. PROBLEM BACKGROUND [5]

This study will be covering several problems which are:

- i. Difficult to get complement information for citizens.
- ii. Difficult to reach the criminals when happens.

- iii. Physical/traditional or face to face meeting between departments and people regarding a contract such a tender offer may costs and waste time.
- iv. Difficult to process any report or work of people from government offices.
- v. Difficult to control the foreigner visitors when an incident happens.
- vi. Difficult to access people's information. The approval letter/documents may take long time to be obtained.
- vii. Insufficiency of computer applications technology use to complete the process of demanded data/records regarding information about a person/citizen visiting a country.
- viii. The existing system at some airports (check in and out) process results delay because of the long customs and security check lines.
- vii. To retrieve security information, records and criminal history without delay.
- viii. To aggregate Many-To-One (M-1) identifications such as Passport, Driving license, National ID, Bank cards and etcetera.
- ix. To control the check-in and out process lines at the airports. All other manual process can be done by Robot System.

#### 4. SCOPE OF STUDY

The main purpose of this study is on the SICT system to provide services and solve problems between departments and its people. This technology project can be developed and applied to the countries who are interested in this technology. In this research, the University campus selected real life scenario.

#### 5. SIGNIFICANCE OF STUDY

In priority to this study, the main purpose is to enhance, develop and upgrade government department services with high performance and quality. As it's an (M-1) system, most of the linked in services and processes can be done in one single click. What this means is to provide an efficiency of information and data for both sides (departments and customers).

#### 6. REQUIREMENT OF THE SYSTEM

The scopes of SICT hardware and software implementation system require two central which are:

##### 6.1. Centers of Information Technology [7]

The Center of Information Technology (CIT) represents management part of the system. It includes the staff (users) and computers to achieve the system requirements.

#### 3. RESEARCH OBJECTIVES

- i. To develop a platform serves governments.
- ii. To enhance and implement the requirement citizen service.
- iii. To provide the departments/ministries a better accessible services (One – To - Many).
- iv. To convert an analog system to digitalized (SICT). The digitalized system will provide faster process, communication and information exchange.
- v. To exchange (send and receive) information among departments.
- vi. To assist citizens to achieve the requirement that can be done by online rather than physical visits.

SICT includes capability of an input and manipulation of data, end-user computer application programs and solution of any problem appears during system updates.

## **6.2. Information Management Center [4], [10]**

The system requires much information (data) from several centers or ministries. To collect information from database, there must be an accessible relation among the departments in accordance to types of information. Therefore, the Information Management Center (IMC) will be considered to manage and control data before approaching to the SICT system processes. The reason of this is all data information should be analyzed and confirmed before transferring them to the SICT system input level.

## **7. METHODS AND ANALYSIS**

### **a. Hybrid Methodology**

There are several methods will be integrated into the procedure. The technology tools should obtain information to solve all problems. The hybrid methods will be used to apply the new system and technical phases of SICT that includes some software such as XLM, visual FoxPro, visual Basis, Oracle and other database software. The methodology of implementation is to enable and increase the capacity and efficiency of the government serves system. On the other hand, the SICT will provide better services to citizens [6].

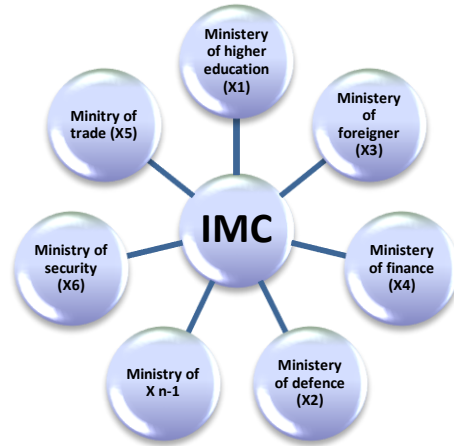
### **b. Decision Support System (DSS)**

The computer programming software will be used to build a decision support system for solving the problems of both sides (departments and citizens). The DSS will provide a solution to the system if problems exist. Thus, the DSS used to assist staff at the entire system management.

## **8. SUGGESTION TECHNOLOGY, GOVERNMENT SYSTEM DESCRIPTION**

The system on this study surveys and classifies Technologies Management (TM) uses seven categories as: TM framework, knowledge-based systems, data mining, information and communication technology, artificial intelligence/expert systems, database technology, and modeling [4]. The TM applications as the followings: (1) TM technologies tend to develop towards expert orientation, and application development is a problem-oriented domain. (2) Different scopes studies in the TM, such as statistical methods are suggested to implement in TM as another kind of technology. (3) In this study, the integration of quality and quantity of information is to extend our horizon of next generation of the future

Different TM working definitions, paradigms, frameworks, concepts, objects, prepositions, perspectives, measurements, impacts, have been described for investigation [5;6]. For example, the concept of 'the knowledge-creating company' is a management paradigm for the emerging 'knowledge society', and information technology can help to implement this concept [8]. Some articles have investigated issues concerning the definition and measurement of knowledge assets and intellectual capital [7; 12]. Figure 1 shows the structure of SICT.



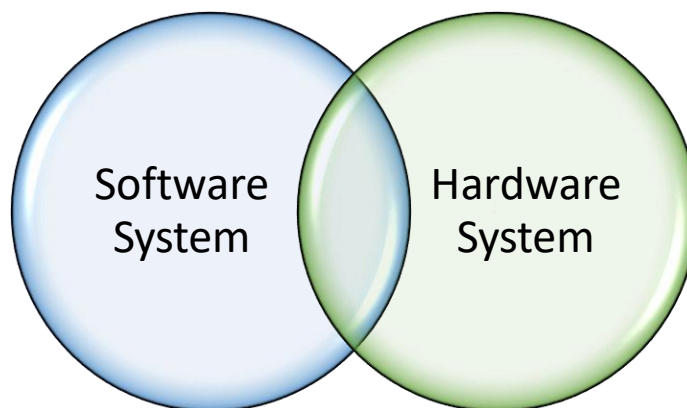
**Figure 1:** Structure of Technology Government System

In the figure there are relation among the government ministries and center of information technology, which control of the CIT of the government. Form these relations the ministries can contract easy and fast to achieve and implement among them or with the citizen people. The Technology, Government System includes three branches which are:

- i. Management (central of information technology) which controls the other two branches.
- ii. A software system which represents the computer programming and computer science.
- iii. Hardware system which controls the “Smart Cart”. Figure 2 shows the framework of technology, government system.

### Technology Government System

Management: Information Management Canters



**Figure 2:** Formwork of Technology Government System

The information management centre's are controlled to distribute the SICT to the people and will be input all information and update it when there is any changing in

profile of people. Also, it is control to update the software and hardware parts. Figure 3 shows the relation between IMC, citizen and foreigners.

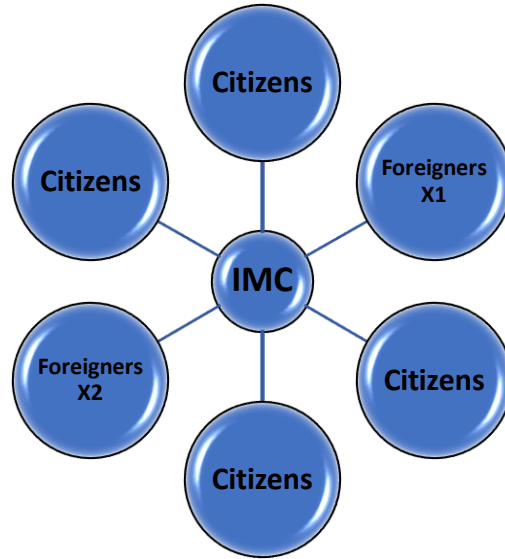


Figure 3: Relation between IMC and people

**9. SMART CARD**

**a. What is Smart card?**

A Smart Card is a microchip that contains more information than the magnetic strip

cards. The SC is a hardware that accepts variety of coding and programming applications depending on required platforms and functions. In this scenario, the best example is as shown in table 1 below:

Table 1: SICT

Profiles Personal information	Passport pages	Security pages	Business pages	C.V	Others
xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxx	xxxxx
xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxx	xxxxx
xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxx	xxxxx
xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxxxxx	xxxxx	xxxxx

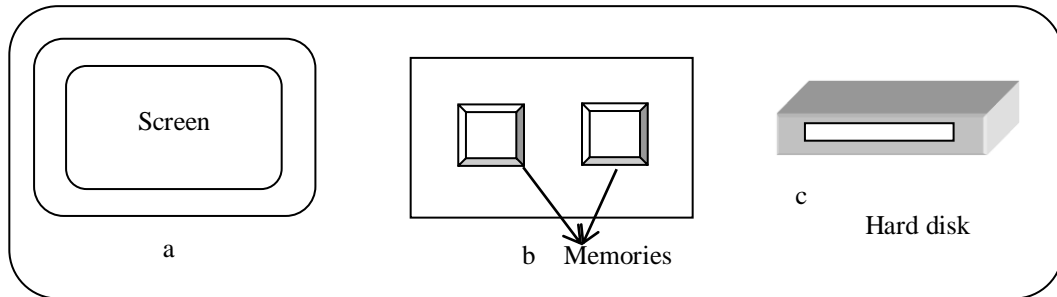
Several features and functions are available in the SICT. One those features is information stored are editable and updatable. After accessing the system securely, information such as person's security and behavior records, bank statements/transactions

and locations can be visible to permitted government authorities. The second feature is Bluetooth. By enabling this feature, the signal of CIT can be sent to their smartphones. The purpose of linking this type of communication is to involve in emergency and security

situations. The other feature of SICT is having an extra space of memory. Thus, more information can be saved when extra space is required by CIT to monitor the person's movement.

There are three different features/shapes of smart card. These three features shown in figure 4 below are Screen, Memories and Hard Disk:

**b. Suggestion a shape of smart card**



**Figure 4:** Shapes of Smart Card

There are several technical parts in SICT. These parts are:

- i. ID unique number: By clicking on the unique number, some fundamental information comes up on screen. This includes identification numbers, address, date of birth, place of birth and occupation. Services such as wireless and Bluetooth, call and Near Field Communication (NFC) connection systems will be available to use.
- ii. The SICT contains a memory to save all personal information.
- iii. The SICT can be used to send information to the CIT in an emergence case.
- iv. The SICT includes the Global Positioning System (GPS) service to identify the location of the person.
- v. As CIT is responsible of controlling security and criminal records and history, the hard desk of SICT displays related information.
- vi. As SICT uses double SIMs instead of single, the spare SIM provides an extra space/memory card which can be manipulated in some special situations such

backup and/or saving additional personal information.

- vii. For security purposes, SICT holders cannot access, edit, update or delete all information in storage card. However, some limited information can be changed through the official websites of CIT.

**c. Some important scopes of this card**

- i. The SICT will be combine individual process 1-1 to M-1 processes such as IC, Passport, driving license, bank account management, Visa card, etc.
- ii. The SICT contains all person information such as (C.V, Business, background, security information, etc.)
- iii. Knowledge the owner of SICT location. The authorized persons are only the members who can knowledge such an address of the Card holder. Furthermore, the person can be identified and located by this technology. Thus, only the authorized people by governments can locate the SICT holder. This may help those authorized people to arrest the person in demand.

- iv. The card can be linked in with person’s smart phone. As there are some privacies of accessing people’s devices. This option can be accessible in some particular situations.
- v. Depending on solar cells the SICT will be activate the work and to connect with CIT or with person contact “mobile” or by “Bluetooth”.
- vi. The card support the lower and the inspector realization with the criminals depend on the calling recorders when they happen any crime.
- vii. From first step of visa application to the departure and arrival level, the processes can be done electronically/online through SICT website. For some manual activities, robots will be available to complete the process.
- viii. As SICT includes the passport details and functions, passengers can freely use and travel by using their paperless system rather than carrying actual passport.

### 10. Gantt Chart

	2022				2023				2024				2025			
Project Activity																
Literature view																
Data collection Analysis																
Fabrication of Design																
Design of Multi-place																
Model verification validation																
Model experimentation																
Scenario planning																
Conclusion																

### 11. Conclusion

The Intelligent International Identification Card represents a significant advancement in global identification systems. By integrating cutting-edge technologies such as biometrics and AI, the IIIC aims to provide a secure, efficient, and universally accessible identity solution. Unlike traditional ID systems, the IIIC addresses key challenges related to identity theft, fraud, and cross-border verification, ensuring that individuals' identities are accurately and safely recognized across different nations and platforms. This unified approach facilitates

seamless interactions in travel, commerce, and digital environments, enabling a new standard for international identity management. In conclusion, the Intelligent International Identification Card stands as a forward-looking solution to modern identity needs, promising to transform global identity verification and foster a more interconnected world. With proper safeguards and cooperative development, the IIIC has the potential to become a cornerstone of a more secure, inclusive, and digitally empowered future.

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