Conceptual Model of Iraqi's National Identification Card System

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Abstract
Over the last decade, as part of a national identity management program, Citizen Identification System is getting the attention of many countries of the world. As a technology platform for the administration of service delivery by government. Most of the developed countries are implementing robust NIC card system and some other countries, are in the process of establishing identification card system. However, in Iraq Presently there is only one database which is owned by the Ministry of Trade which was developed more than 22 years ago with help from the United Nation oil-for-food program during the 1990s. On the other hand, many government and private organizations are doing their day-to-day operations manuals that made the organizations to keep Exchange and Integration of citizen information among these organizations is very difficult. However, there is no much effort done in this respect. It is therefore important to anticipate and prepare a mean for integration before more automation is done and the data repository in many organizations grew. In this paper, the NIC developed prototype for the Citizen Identification System of Iraqi is proposed. NIC is proposing that keeps citizens' identification information and generates a unique national ID number, which can assist in the integration of citizen information. The Citizen Card is essentially prepared to identify citizens so that better security can be provided by identifying illegal immigrants and terrorists. The study assessed from based on the experience of other countries such as Malaysia by using citizen identification systems and the efforts in Iraq in that direction. Also analyzed the requirements for citizen identification system and proposed a working architecture for Iraqi condition. The implementation issues like the privacy of individuals and the functionality of NIC system is also evaluated. Moreover, the security requirement of the proposed system is specified and a scheme for generating unique national NIC number is presented.
Keywords: ID Card, e-government, strategic management

1. Introduction

It is known that Iraq is one of the countries with little Information and Communication Technology (ICT) utilization. The current barrier to the successful implementation of e-government in Iraq is due to the poor citizen identification system. This is owing to that Iraq does not have proper identification, documentation of its citizen [1]. In order to enable the sharing and integration of individual records at various offices, a means of individual record identification across the offices is required. For achieving this, the country needs to use National Identification Card System, which would be primarily accessible to government offices. In general, terms, a national identification (ID) system is a mechanism used by governments to assist public agencies in identifying and verifying the identities of citizens who are availing of government services or making public transactions [2]. Usually, the citizen is assigned an identification number at birth or when he or she reaches legal age. Depending on the purpose for which the ID system was built, some countries include not only their citizens, but also foreign nationals who have become permanent residents. Although some efforts are made to introduce e-governance in Iraq, but no significant effort is made on the Citizen Identification System, which can greatly assist e-governance by enabling the sharing of individual citizen information to facilitate the service rendering process of government offices. A Digital National Identification Card application has a system that helps govt. For making a strategic decision for an individual and for the nations. By using this system, Iraqi govt. Will know about the total no of citizens' database which is most important for a govt. To provide a proper service for an individual. Strategic decisions on job creation, subsidies in important sectors, prove the internal security, proper implementation of national income with a proper expenditure plan are the main objectives for the Iraqi government [3].The digital national identification system is the only solution that can solve most of the problems in Iraq. Benefit from Citizen Identification System, assess its consequences, particularly for individual privacy. This study presents how the system can be implemented with the current communication. Infrastructure and existing IT systems. Finally the design a feasible "Citizen Identification card System" that can be used in Iraq, assess its security requirements and develop a prototype to show how various applications can make use of the system.

2. Literature Review

Over the past decade the digital technologies have discerned advancements rapidly and the information becomes even more arduous, due to the hostilities of environment over the information and communication technologies (ICT) have resulted in a paradigm shift in the way government across the globe conduct business. ICT systems have become central to government operations and providing of services (Al- Khour, 2012). NIC is a general identification document which has issued by the national ascendancy. It could be developed by National institutions or incorporated with a private organization (Sobel, 2002). However, National identifies and associated identity cards are widely used by several governments across the globe, they are pursuing policies that depend on information technology (IT). By enforcing electronic identification systems as a technology platform for The administration of service delivery by government. National systems offer users with a national recording number which will be used as a typical identifier by government agencies. The electronic identification systems has been the issuance of astute national cards as an expedient of personal identification and have often been the most contentious aspect in many countries. Some countries have made it indispensable for their citizens to have an ID card (e.g. Belgium, Italy and Spain), while others remain optional (e.g. Austria, Japan and Sweden). Several countries includes, Argentina, Brazil, China, India, Malaysia, Singapore, South Africa, South Korea, and most countries in the European Union have introduced national ID card systems. While, the UK argued its national ID cards and national identity register in 2011 after a change in government (Johnston et al., 2013). Other countries such as Australia, New Zealand and the US have decided not to introduce national ID cards in the near term due to popular backlash. Resistance to the introduction of ID cards has reduced from concerns over, interalia, costs, privacy rights and data security, infringements of civil liberties, and doubts over their effectiveness as a tool to tackle crime and terrorism (Mukhija and Goyal 2005; Ouziel 2009; Travis 2010; Wadwa, 2013). Charles Pearson (2010) and others have stated hat the most beneficial ways to help citizens and nations' by application of NIC system that helps to solve the internal conflict between governments and citizens and bring the trust for safety for the family and society. Some of the author agrees that the national security is very important and control the personal attitude, the NIC has some remarkable support.

Complicated, technically unsafe, too prescriptive and lacking publically trust (LSE, 2005). Donny Quinn, (2011) pointed out that In America, organizations such as the American Civil Liberties Union (ACLU) believe that a national ID card system would remove certain civil liberties, while other organizations believe that the cost to the federal government would be much higher than the budget. Others argue that the technology proposed for this theme is, to a large extent, untested and unreliable, which no scheme on this scale has been undertaken anywhere within the world (Ballard, 2006; EFF, 2002; Kent and amp; Millett, 2002; Lamb, 2005; McCue, 2004).

Cragg Ross Dawson (2003) Stated that the government is considering introducing identity cards to help combat illegal immigration and working, reduce identity fraud and other crime, improve access to services as well. Their argument is based on the fact that a modern national ID system is essential in an era where identity theft is growing with horrific impact on governments, businesses, and citizens. Although technically these private industries do not have a legal entitlement to such information it will become commonplace and people already will assume their identity card is required in order to access those services. (Kenday; 2012).

1.1 Design and Features of Iraqi National Identity Card

This study is completely focusing on issuing NIC, which is smart multi-purpose card having a link with database and will maintain by the proper networking communication system. In this section, two issues are discussed; at first needed to describe about the future of the ID and then how the system works. National Identity Card is made as a plastic card and it is the exact size of a credit card. It has embedded with a microchip which has a way to link with the main databank where the bearer's information stored during the registration. In many countries using the cards containing with some information; those are average as: an identification number [3]. Photo, name, date of birth, present and permanent address, parents' details, siblings details, issuing agency, date of issue, place of birth, educational record, signature, citizenship, residency, marital status, professions, physical characteristics (blood group height, weight, hair color or eye color), financial details (income, loan and investment), occupations, travel history, crime record, health record and welfare. There is a basic info ID structure given in the following figure 1.
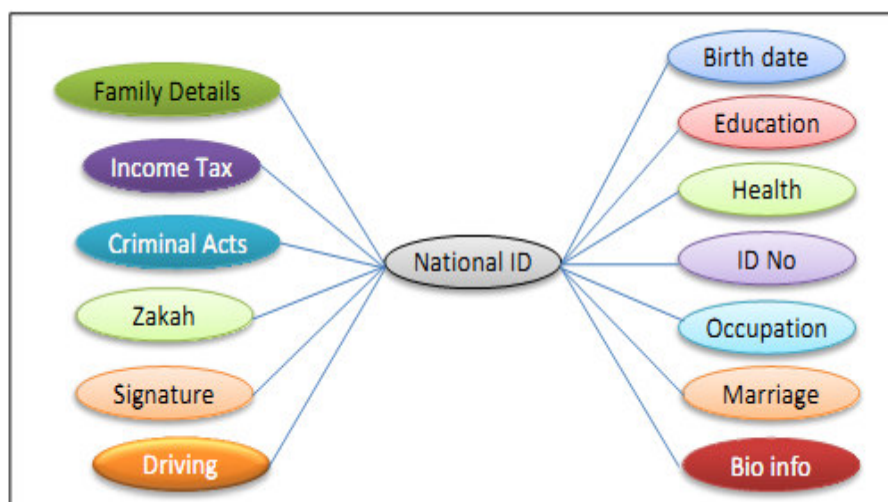
Fig. 6 Information storage structure in NIC

The details of physical or bodily information with fingerprint are usually known as biometric information. In recent days, it is very useful information, which is, commonly, vary with one another. The government can find the difference by extracting data and later using different code from the software. The biometric system will perform according to the code that set up to determine in which category individual are placed related to the bodily and behavioral characteristics [4]. Therefore, everyone must be aware of their activities because that are under surveillance. It is very common in issuing NIC with biometric information where information's are: data extracted from the body, an Iris Scan, Retinal Scan, Digital Image, or Fingerprints. This means that even though if a card has stolen and a new fingerprint data inserted, but anyone with a government scanning system can   read that it as fake. Even though there are 100 countries using the NIC or national identity cards or equivalent system to identify their citizens, but this study is concerning same factors but will be beyond the capacity of usual ID, due to the different application to solve Iraq's current situation.

1.2 Structure for Iraq"s National Identification Card (INIC):
The study is given a name of Iraqi National Identification Card is INIC. To avoid narrow views the study will use some steps. At the first step, the basic structure has taken from the Malaysian Identification Card (MyKad) structure and then the second step will discuss the INIC, which is proposed for Iraq. The structure, which is, consists with five basic information databases, that are linked by microchip embedded with a plastic identity card. And there are some biometric information included such as; fingerprints and signature. However, using biometric information, it will help to identify of a person accurately. Biometric info carries basic different that always vary person to person. The identification number can be same with others, but biometric info is always compact with bodily and physical details will never be the same with second human being [5] . The complete views of the INIC database system with both sections (individual security and national security) are disclosed in the following structure.
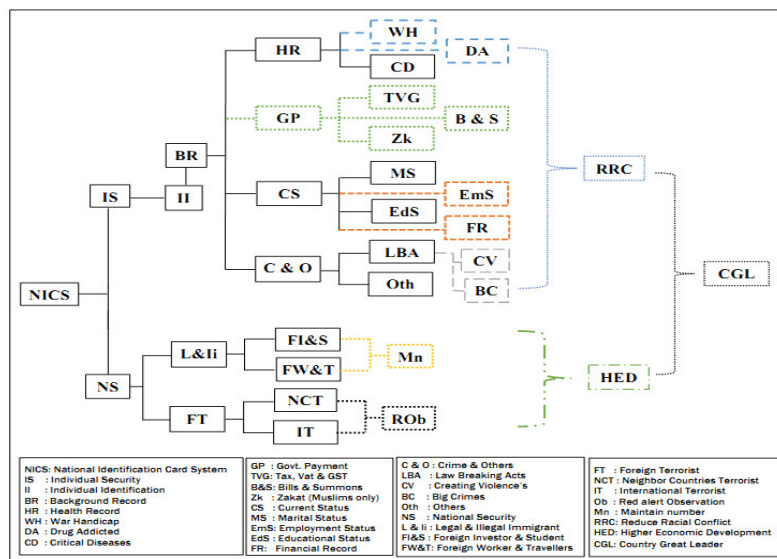
Fig. 7 Conceptual Proposed INIC structure outlook of overall database

2. Privacy Issues

Privacy is a key concern as all of an individual's personal (biometric) information will be stored in one database where the possibility of corruption and exploitation of data is far greater than when having the information disbursed. Risks that arise from this centralization include possible errors in the collection of information, recording of inaccurate data, corruption of data from anonymous sources, and unauthorized access to or disclosure of personal information[6]. The Citizen Card System authority has to strike a balance between "privacy and purpose" on the biometric data collected from the citizens. The biometric database of people should not be misused in any way by the personnel of Citizen Card System authority or others. Suppose the biometric data (digital fingerprint) of a person is compromised, then the consequences of such incidents are fatal because the digital fingerprint is basically used for the authentication process. Hence, if the critical biometric data of a citizen are compromised, all future authentication process for such person could prove wrong. So, Citizen Card System must be secure from malicious elements - both internal and external sources[7].

3. Cost

One concern that any government would have about identity authentication and national ID cards is cost: how much and who will pay? Many observers believe that identity management programs will always increase costs as new technologies and functions are added, but this is not always the case in fact. In the case of Iraqi's national ID card program, cost has not been a major obstacle [8] .The new card replaced several existing identification document, which has actually reduced production and management costs in the long run. The cost of procurement of the cards and management of the whole process has been taken up by the separate ministries. In the United States alone, the cost estimate of their ID system is about $17.4 billion within its ten-year phased implementation [9].

And 8.2 British , pounds or 16.6 US dollars) for the cards, which covers the costs of the program.

In Philippine It is estimated that implementing an ID system in would cost P1.6 billl ion, according to Ultimately, the cost of an ID system depends on the level of technology, the coverage and system specifications [10].

4. Methodology

The research strategies have been chosen by researchers are a structured interviews, and questionnaires. These research strategies are common and popular strategy in business and management research. Surveys allow the collection of a large amount of data from sizeable population in a high economic way and mainly based on questionnaires, because it is easily understood and can easily come to a conclusion. However, Data collection in the research study is a very important part. The primary data is collected using Quantitative research by carried out questionnaires through interview, on relatively large samples and therefore results are statistically robust. Interviewing major personnel or institutes is involved with this NIC system and development of Network Communication System in Malaysia. To find out proper and authentic information the survey will interview major personnel in Iraqi government, and numerous of private institutions those can help to find a proper justification for this new strategic leadership plan.

4.1 Data Collection Procedure

Data sampling is a very important part of any research study. The research needs to estimate the exact population sample for the study. The researcher's area of study is about the proposed the identification card system in Iraq using the sampling technique in the area of the Ministries and organizations that involved with NIC Only. However, the interviewers sample as below:

A: Malaysia

. Interview with Ministry Home Affairs personnel in Kuala Lumpur.

. Interview with the organizations involved in development of National Identification Card.

. Interview with Finance ministry personnel

. Interview with some Economist

. Interview with key industrialist

.Interview with Professor of UTM, UKM, UM & USM

. Interview with key columnist of daily star and business world magazines in KL.

B: Iraq

. Interview with Ministry Home Affairs personnel in Iraq.

. Interview with Private organization those involved in development of Iraq.

. Interview with Finance ministry personnel

. Interview with some Economist

. Interview with key industrialist

. Interview with Professor of UOB, AMU, ANU, IU&UTI

. Interview with key columnist of daily star and business world magazines in Iraq.

4.2 Population and Sample:

Table 1. Population and Sample:

No	Key Personnel	Country	No. of persons
1	Economist	Iraq	2
2	Home Minister	Iraq	1
3	Political Leader	Iraq	3
4	Business man	Iraq	10
5	Professors	Iraq	10
6	Journalists	Iraq	5

No	Key Personnel	Country	No. of persons
1	Economist	Malaysia	2
2	Home Ministry representative	Malaysia	1
3	Political Leader	Malaysia	3
4	Business man	Malaysia	10
5	Professors	Malaysia	10

4.3 Data Analysis Procedure

Data collection and analysis will complete based on interview. Reappointment with the interview personnel will carry on and keep contacting them until the authentication of the data has proven. Once these have been presented, the findings from a set of key informant interviews are summarized, in order to present the perceptions of the NIC system by those who have been involved in its development and implementation.

5. Conclusion

The Citizen Card System will be beneficiary to the citizens as it is a unique number which contains basic information of every person. There are numerous benefits will come up after the successful installation of INIC there is no need to carry driving license, voter cards, credit application etc.. Moreover,. National identification cards became a key theme at this modern century lifestyle and have long been advocated as a means to enhance national security; unmask potential criminals, and guard against illegal immigration. Several believe that implementing a NIC may deter acts of terrorism together with frustrating, illegal immigrants and chase capabilities of its citizen. The introduction of Iraqi's identification card has provided a platform to support additional applications in the future such as driver's licenses , visas, , health services, benefit payments, and a variety of mobile payment system applications.

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