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Privacy implications for information and communications technology (ICT): The case of the Jordanian e-government

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Abstract

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Privacy Implications for Information and Communications Technology (ICT): The Case of the Jordanian E-Government

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Abstract: Information and Communications Technology (ICT) is one of the fastest growing sectors in Jordan. The importance of ICT cannot be ignored as it affects all aspects of Jordanian society including telecommunications, education, banking, commerce and employment. However, the issue of individual privacy in this sector is a particular challenge as individuals are disclosing large amounts of personal information than ever at a time when there are no specific privacy laws or regulations. This paper identifies this privacy challenge by providing a case study on the electronic government (e-government initiative) in Jordan. The findings of this study are surprising. Despite that most government agencies have the ability to collect, use and disclose personal information; only three out of forty government agencies have some sort of guidelines with regard to privacy policies. The paper argues that the challenge of privacy could be resolved by granting individuals more control over their personal information. Jordanians could be given the right to access correct information about themselves, and decide when and how this information can be used and shared by others. Consequently, the most suitable approach to maintain this right to control is by suggesting a comprehensive legal framework to privacy protection in Jordan.

1. Introduction

Governments and non-governmental organizations worldwide have recognised the benefits of ICT in improving business and public service, reducing poverty, and encouraging governmental improvements. ICT will contribute to improvements in the provision of basic social services, help to disseminate valuable information on production and conservation, improve the efficiency of governments and enhance the provision of education and health. ICT facilitate, for example, distance learning and provision if an on-line library. Healthcare could be improved, for example, through electronic health records (EHR) providing a summary of health information which includes patient demographics, medical history, immunizations, laboratory data and radiology reports. EHRs could be incorporate data from any healthcare entity a patient uses and make data easily accessible to other healthcare professionals. Furthermore, a World Bank report suggested that ICT can play an important role in combating corruption and making government institutions more transparent by reducing the opportunities and incentives for, and increasing the costs of, corruption. It can also empower individual citizens and groups to hold government officials publicly accountable, by widely disseminating information about the government's actual performance. The increased ability to gather and send information has negative implications for privacy. Some countries have inadequate data protection laws while others have not adapted to changes in technology to maintain data protection and people's right to privacy.

The aim of this paper is to assess and evaluate the level to which the privacy of personal information is maintained and protected in Jordan. This aim can be achieved by choosing the initiative of e-government as a case study. This selection is due to the fact that e-government, which is administered by the government of Jordan, is the largest single entity to have the ability to collect, process, access and transfer personal information. Further the paper is aiming at examining whether current laws are sufficient for individuals to enforce their privacy rights or not.

2. Information and Communication Technology in Jordan

Jordan has transformed itself from a rural, poor country to a developing urban country with a highly educated population, with a literacy rate of 92.3 per cent as of year 2008. Jordan has a young population, 70 per cent of the total population (about 4.09 million) is under the age of 30.[1] Jordan's higher education institutions, comprising 8 public universities, 12 private universities, and 21 community colleges accommodate over 120,000 students. The number of IT students is currently 8,000 at the university level and 5,300 at the college level. Jordan has the highest proportion of university graduates in technological fields among the countries in the region.[2]

The ICT sector enjoys strong support from His Majesty King Abdullah II through his appointed government. Progressive regulatory and policy reform is underway while the sector is being transformed under an ambitious privatisation plan.3 A number of factors — including highly qualified human resources, the availability of world-class infrastructure, and the success of Jordanian IT companies — contribute to the growth of Jordan's ICT sector and help the transformation of Jordan into a major regional IT hub.[4] The growth of this sector, locally and regionally, provides attractive opportunities for foreign investors.

The ICT sector in Jordan is thriving and has become a major contributor to the growth of the Jordanian economy.[5] According to a report by the World Economic Forum, Jordan's Networked Readiness Index (NRI) has improved, and in 2010 it ranked 44th of the 103 countries surveyed. The NRI is the scale that assesses the extent to which different countries benefits from the latest ICT advances.[6] In 2003, the revenues from the IT sector in Jordan were USD 295.9 million to reach to USD 895 million in 2009, while the revenues from the telecommunications sector were USD 1.3 billion.[7] Based on conservative assumptions, the Ministry of Information and Communications Technology (MoICT) estimates that revenues from the Jordanian ICT sector will reach USD 3 billion by 2011. In addition, employment in the ICT sector will grow in tandem to revenue growth. The Ministry of Information and Communications Technology (MoICT) estimates that employment in the sector will rise to 35,000 in the period 2010–2011.[8]

The (MoICT) in cooperation with other Ministries, donor programs and non-governmental organisations in Jordan, has undertaken various ICT related initiatives.[9] One of the most important initiatives adopted by policy makers in Jordan and which will be examined shortly is the 'Electronic Government initiative' (e-government). However, it is worthwhile to briefly summarise the aims and goals of other initiatives and projects implemented by the Government of Jordan in order to shed light on ICT developments in Jordan. These initiatives and projects include:

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[1] Department of Statistics, *Jordan in Figures: Selected indicators* (2008) Department of Statistics-Government of Jordan <http://www.dos.gov.jo/dos_home_e/main/jorfig/2008/jor_f_e.htm> at 23 December 2010.

[2] Ministry of Information and Communications Technology (MoICT), *Invest in ICT in Jordan* (2005) Ministry of Information and Communications Technology <http://www.jordanecb.org/pdf/InvestinICTinJordan.pdf> at 16 April 2009, 8.

[3] Ibid.

[4] Ministry of Information and Communications Technology (MoICT), 'Research & Development Strategy for Information and Communication Technology 2007-2010' (2007) 1, Ministry of Information and Communications Technology <www.moict.gov.jo> at 16 April 2009.

[5] Ministry of Information and Communications Technology (MoICT), *Invest in ICT in Jordan* (2005) Ministry of Information and Communications Technology <http://www.jordanecb.org/pdf/InvestinICTinJordan.pdf> at 16 April 2009.

[6] World Economic Forum, 'The Global Information Technology Report 2009-1010: ICT for Sustainability' (The World Economic Forum, 2009) <http://www3.weforum.org/docs/WEF_GITR_Report_2010.pdf> at 23 December 2010.

[7] Information Technology Association-Jordan (int@j), 'ICT & ITES Industry Statistics & Yearbook' (Information Technology Association-Jordan (int@j), 2009) 10.

[8] Ministry of Information and Communications Technology (MoICT), 'National ICT Strategy of Jordan 2007-2011' (Ministry of Information and Communications Technology, 2007) 3, avail <www.moict.gov.jo> at 26 April 2009.

[9] Ministry of Information and Communications Technology (MoICT), *E-Initiative Database* (2003) Ministry of Information and Communications Technology (MoICT) <http://www.moict.gov.jo/MoICT/MoICT_Initiative.aspx> at 28 April 2009.

i. The 'e-Village Project': This project began in July 2006 and 'seeks to address the need to increase the capacity, awareness and economic opportunities of rural women in the field of ICT'.[10] Its main objectives are:

- to raise villagers' awareness and to enhance internal communications among villagers through establishing an "Information and Awareness Centre",
- to build the capacity and professional skills of the village citizens to allow them to benefit from different IT services and opportunities created by the project through establishment of an "Empowerment Centre", and
- to enhance the economic opportunities within the village through creating new job opportunities ... within the "E-Service Centre".[11]

ii. The 'Connecting Jordanians Initiative': This initiative 'aims to coordinate and accelerate critical developments and reforms intended to make ICT an important facet in the lives of all Jordanians and to improve their economic, social and cultural prospects in meaningful ways'.[12] A concrete example of this is the plan to provide computers and broadband Internet access to all of the 3000 Jordanian primary and secondary schools by 2010. As a result, teachers in these schools are required to take the International Computer Driving Licence, a project financed by the United Nations to promote the creation of basic IT skills.[13]

iii. Laptop 'Note Book' for every University Student: This aims 'to bridge the country's digital gap and support the usage of ICT tools in the educational process by providing a laptop for each university student in the Jordanian public and private universities at an affordable cost'.[14] Internet access and wireless technologies are also to be supplied. This initiative also aims to help transform the Jordanian economy into an e-economy by increasing technology use and by providing training for the work force in the country.

iv. Jordan's Broadband Learning Network: This initiative launched in January 2003 aims to achieve the following goals:

- promoting collaborative learning program
- enabling access to learning content for all Jordanians and contributing to lifelong learning opportunities
- supporting a wider range of broadband services, including multimedia rich content
- promoting the development of a cluster of e-Learning content, applications, and services of regional and global export meeting the network requirements of speciality users, and
- stimulating the development of the "Knowledge Economy".[15]

The most interesting initiative regarding privacy discussion in the context of ICT is the Jordanian e-government initiative. The focus on this initiative is significant for a number of reasons. First, in Jordan, the public sector is the largest employer, being the most important economic entity.[16] Second, launching an e-government portal involves fundamental changes in the culture and operating practices of government and the

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[10] Ibid.
[11] Ibid.
[12] Ibid.
[13] Claudio Ciborra and Diego D. Navarra, 'Good Governance, Development Theory, and Aid Policy: Risks and Challenges of E-Government in Jordan' (2005) 11(2) *Information Technology for Development* 141, 150
[14] Ministry of Information and Communications Technology (MoICT), *E-Initiative Database* (2003) Ministry of Information and Communications Technology (MoICT) <http://www.moict.gov.jo/MoICT/MoICT_Initiative.aspx> at 28 April 2009.
[15] Ibid.
[16] Claudio Ciborra, 'Interpreting e-government and development: Efficiency, transparency or governance at a distance?' (2005) 18(3) *Information Technology & People* 260, 262.

perception of government by both citizens and businesses, as e-government is based on the view of government as a supplier of services and citizens or businesses as its clients. Third, as the e-government portal becomes a major link between public sector and citizens and/or businesses, the portal will become the largest single entity in terms of an information database. It has the ability to collect, access, store, and transfer vast amounts of personal information. The issue of privacy in the context of e-government in Jordan will be examined in details below.

3. Electronic Government in Jordan

The Organisation for Economic and Co-operation Development (OECD) has defined 'e-government' as the 'use of information and communication technologies and particularly the Internet, as a tool to achieve better government'.[17] E-government aims to make the interaction between government and citizens (G2C), government and business enterprises (G2B), and inter-agency relationships (G2G) more friendly, convenient, transparent and inexpensive.[18]

The development of this interaction, however, can be divided into five stages.[19] The first stage is called 'emerging'. At this stage, the government creates a web page or an official website, links to ministries and departments (for example, education, health, labour and finance). Much of the information provided in this stage is static (for example, the contact details of ministries or departments) and there is little interaction with citizens.[20] The second stage is called 'enhanced'. The government provides more information on public policy and governance. Links are created to archived information that then becomes easily accessible to citizens. This information includes, but is not limited to, documents, forms, reports, laws and regulations and newsletters. The third stage is called 'interactive'. The government at this stage delivers online services such as downloadable forms for tax payments and applications for passport renewals. The fourth stage is called 'transactional'. At this stage the government begins to transform itself by introducing two-way interactions between 'citizens and government'. This stage involves options for paying taxes, applying for ID cards, birth certificates, passports and licence renewals, as well as other similar G2C and C2G interactions, and allows the citizens to access these services online 24/7. All transactions are conducted online. 'Connection' stage is the fifth stage, where the government transforms itself into a connected entity that responds to the needs of its citizens by developing an integrated back office infrastructure.[21]

The United Nations e-Government Survey in 2008[22] placed Jordan 50th on the e-Government Readiness Index,[23] recording an improvement from its 68th ranking in 2005.[24] In regards to the E-Participation Index,

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[17] Organisation for Economic Co-operation and Development (OECD), *The e-Government Imperative* (2003) 11.

[18] Subhajit Basu, 'E-Government and Developing Countries: An Overview' (2004) 18(1) *International Review of Law Computers & Technology* 109, 113.

[19] The description here of the five stages relies heavily upon a UN publication: Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008) 16 <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>.

[20] See, the Official Site of the Jordanian e-Government, avail <http://www.jordan.gov.jo> at 23 December 2010.

[21] Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008) 16 <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>.

[22] The United Nations e-Government Survey 2008 presents a comparative assessment of the 192 United Nations Member States. 'The Survey evaluates the application of information and communication technologies by governments. The aims to which these technologies are put to use vary, but include: better access and delivery of services to citizens, improved interaction with citizens and business, and the empowerment of citizens through access to information … This evaluation of e-government readiness places citizens at the forefront, by focusing on the governmental services and products that primarily affect them': Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008) 12 <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>

[23] The e-government readiness index measures the capacity of governments to develop and implement e-government services. The index ranges from 1 (low level of readiness) to 1 (high l level). The indicator has three sub-indices: web measure, telecommunication

surprisingly, Jordan recorded the greatest move upwards, from being ranked 90th in 2005 to 15th in 2008. E-participation can have a number of ramifications for governance.

E-participation is a tool that enables governments to dialogue with their citizens. By enhancing government's ability to request, receive and incorporate feedback from citizens, policy measures can be better implemented to meet the needs of citizens and provide them with suitable services.[25]

The above result indicates that Jordan is confidently committed to interact with its citizens with most advanced technology channels including the technology of e-government.

The national e-government initiative, launched in the year 2000 by the Government of King Abdullah II, aims to transform the nation into a knowledge-based society based on a competitive and dynamic economy.[26] The e-government initiative is administered by a committee comprising eight members selected from both the public and private sectors. The committee has been chaired from the outset by a representative of the then newly formed MoICT. The Ministry is responsible for formulating telecommunication policy and coordinating e-government initiatives, as well as attracting investment in the ICT sectors, and setting the ICT policy and strategic plan for the telecommunication and postal sector.[27]

Despite all government agencies in Jordan (for example, ministries and departments) being virtually located in one portal (the Jordan's e-government website), each government agency is still in charge of its own ICT policies. [28] This means that each agency has its own method of collecting, accessing, using and disclosing personal information obtained from individuals. In regard to individual privacy protection, each agency is able to lay down its own policies and guidelines. This may result in a conflict between policies and guidelines when there is a breach of individual privacy. For instance, government agencies in Jordan are not bound by the legal terms and conditions included within the privacy policy located in the e-government portal. Supplying personal information to an agency through the e-government portal does not guarantee that this information is protected by the agency in accordance with the terms and conditions stated in the e-government privacy policy. The following sections highlight the issue of privacy in the Jordan's e-government context.

4. E-Government Initiative and Individual Privacy Concerns

The lack of privacy protection might inhibit the achievements of the e-government project. If individuals are not confident that their privacy is adequately protected, they will be reluctant to use the available e-government services.[29] A study conducted by Hart-Teeter Research found that 60 per cent of Americans who use the internet are interested in using e-government for various activities such as filing a change of address, obtaining birth certificate or renewing driver's licence. However, nearly 45 per cent of Americans believe that submitting their personal information to government web sites may risk the security and privacy of that information.[30] Due to a lack of similar studies in Jordan, the author uses a different method to assess the level to which individual

infrastructure and human capital. Jordan's e-government readiness index is 0.5480 for the year 2008: Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008) 14, 21 <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>.

[24] Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008) 35 <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>.

[25] Ibid 58.

[26] Government of Jordan, *e-Government Program* (2006) Government of Jordan <www.jordan.gov.jo> at 30 April 2009.

[27] Above n 16, 263.

[28] Yousef Elsheikh, Andrea Cullen and Dave Hobbs, 'e-Government in Jordan: Challenges and Opportunities' (2008) 2(2) *Transforming Government: People, Process and Policy* 83, 89.

[29] Priscilla M Regan, 'Privacy in an Electronic Government Context' in Hsinchun Chen et al (eds), *Digital Government: E-Government Research, Case Studies, and Implementation* (2008) 128.

[30] PA Times, 'E-Government Study Finds Ease, Engagement, Privacy, Protection are Top Priorities', *PA Times 26(5)* (Washington, D.C.), May 2003, 2, avail <www.aspanet.org> at 21 May 2009.

privacy is protected and maintained in the context of e-government. The so-called 'Fair Information Practices' (FIPs) principles are adopted as a bench mark for privacy assessment in Jordan. The use of FIPs as a bench mark is justified on the basis of a number of factors. First, FIPs were proposed in 1973 by a US government advisory committee aiming to address the inadequacy of protection for privacy under contemporary law. Since then, FIPs have been widely used as a standard benchmark for privacy protection evaluation.[31] For example, the 'privacy policy' located on the US e-Government portal[32] uses FIPs as a benchmark for privacy protection. The US e-Government portal is ranked by the UN as the undisputed world leader in e-government readiness.[33]

Second, the OECD has built its privacy guidelines based on FIPs as they are embodied in the OECD Guidelines. While the OECD Guidelines are viewed as set of recommendations rather than legal binding requirements for its members, Jordan (a non-member state) could use the OECD privacy guidelines for privacy protection.[34]

Finally, the US Federal Trade Commission (FTC) has developed FIPs into five main principles which have become the most popular benchmark for evaluating the adequacy of privacy protection for the online environment.

The online privacy principles developed by the FTC to assess the adequacy of privacy protection include the following:[35]

1) Notice / Awareness: Individuals should be given notice of an entity's policies regarding individual privacy protection prior to the collection of personal information from them. This principle is significant as individuals are then more able to make an informed decision as to whether and to what extent they may disclose personal information.

   The FTC, for example, has noted that among the 'essential' material to be disclosed to the individual prior to collection of data are the 'identity of the entity collecting the data,[36] the uses to which the data will be put,[37] the identity of any potential recipients of data,[38] and 'the nature of the data collected and the means by which it is collected.[39]' Such material is to be included in the notice to ensure that individuals are properly aware of the information being collected about them.[40] The FTC also notes that

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[31] United States Government Accountability Office, 'Privacy: Key Challenges Facing Federal Agencies' (United States Government Accountability Office, 2006) 4, available <www.gao.gov> at 15 June 2009.

[32] Initially <www.firstgov.gov>, now www.usa.gov. For policy, see US Government, *Privacy and Security* (2010) US Government <http://www.usa.gov/About/Privacy_Security.shtml> at 24 December 2010.

[33] Department of Economic and Social Affairs, 'Global E-Government Readiness Report 2005: From E-Government to E-Inclusion' (United Nations, 2005) 31.

[34] Organisation for Economic Co-Operation and Development, *OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data* (1980) OECD <http://www.oecd.org/document/18/0,3343,en_2649_34255_1815186_1_1_1_1,00.html> at 10 April 2010.

[35] Federal Trade Commission, *Privacy Online: A Report to Congress* (1998) Federal Trade Commission <http://www.ftc.gov/reports/privacy3/priv-23a.pdf> at 04 March 2010, 7–8.

[36] Ibid 7, The FTC cites a number of documents for this principle including: *OECD Guidelines* – Openness Principle, *EU Directive* art 10 and FTC, *Public Workshop on Consumer Privacy on the Global Information Infrastructure*, Staff Report (December 1996) , 9-10,.

[37] Ibid. The FTC cites a number of documents for this principle including: *OECD Guidelines* –Purpose Specification Principle, *EU Directive* art 10 and FTC, *Public Workshop on Consumer Privacy on the Global Information Infrastructure*, Staff Report (December 1996) , 9-10. The FTC notes that data collected should not be used for other purposes without the data provider's consent: *Privacy Online: A Report to Congress* (1998) 49.

[38] Ibid, The FTC here cites *EU Directive* art 10.

[39] Ibid 8, The FTC here cites the US Department of Commerce, *Privacy and the NII: Safeguarding Telecommunications-Related Personal Information* (1995) 21.

[40] Ibid 7.

individuals are to be informed as to whether the supply of the information requested is compulsory or voluntary and the consequences of failure to supply the requested information.[41]

2) Choice / Consent: Individuals are to be given the option to determine how personal information collected from them may be used.[42] For example, individuals who provide their personal information to governmental agency (for example, health department) may wish that this information not to be used by another governmental agency (for example, the social security department), or to be used externally by a third party (for example, an insurance company).

3) Access / Participation: Individuals should be able to access information collected about them to ensure that this information is accurate and complete. For example, individuals should been given the right to view (access) their information kept in a governmental agency. If this information or some part of it is inaccurate and/or incomplete, individuals should have the right to contest the data to ensure correction and/or amendment of their information.[43]

4) Integrity / Security: Information collected about individuals is to be accurate and secure. Therefore, data collecting entities must take reasonable steps to ensuring the integrity and safety of personal information. For example, in relation to data integrity, agencies should use only reputable sources of information, cross-reference information against multiple sources, provide access to information for concerned individuals, and delete unnecessary information.[44] In regard to security, measures should be taken for example to limit access to data to authorised persons for authorised purposes only, as well as heightening security through the use of data encryption for storage and transfer.[45]

5) Enforcement / Redress: The above principles cannot be effective in ensuring privacy protection unless there is an enforcement mechanism to enforce and implement these principles. Lack of a mechanism for enforcement and redress would result in seeing the above principles as set of suggestive principles rather than legal requirements.[46]

With respect to Jordan's position towards the above principles and in order to evaluate individual privacy protection against these principles, a case study was conducted involving a number of government agencies in Jordan with an online presence (websites). Forty governmental websites were visited through the official Jordanian e-government portal (<www.jordan.gov.jo>) between 4th of June 2009 and 10th June 2009. The intention here is to assess the level to which the privacy of personal information is protected by government agencies. The selection of the e-government portal in Jordan for this case study is due to the fact that this portal is the largest single entity to have the ability to collect, process, access and transfer personal information. This case study also aims to examine the following issues:

a. The number of government agencies that have privacy policy/statement on their websites, and

b. The content of these privacy policy/statements, if they are available, and their standards as compared to the FIPs model.

From Table 1 'Government Agencies with online Presence in Jordan' (see appendix)), two major issues have been identified that present a real challenge to individual privacy protection in Jordan, namely the collection of personal information and the use and disclosure of such information. These issues are discussed below.

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[41] Ibid 8, The FTC cites among a number of materials EU *Directive 10.*
[42] Ibid.
[43] Ibid 9.
[44] Ibid 10.
[45] Ibid.
[46] Ibid.

4.1 Collection of Personal Information

The collection of personal information concerning individuals has always invoked issues of privacy. Online technologies increase privacy concerns because they allow for faster and, easier storage of more data, as well as aggregation of the data, possibly without the individual's consent.[47] In relation this privacy issue, the current case study reveals that websites run by all Jordanian government agencies have the ability to collect personal information. The collection can be made in different methods, but appears to be direct. The icons 'contact us', 'suggestions and complaints', and 'apply for service' located on the front page of the government websites allow individuals to submit their personal information when contacting the relevant department.

As far as privacy protection is concerned, only three government agencies of the forty surveyed provide 'privacy policy/statement' on their websites. Table 2 (see appendix) shows the three websites: the Official site of the Jordanian e-Government,[48] the Telecommunications Regulatory Commission (TRC)[49] and the Royal Jordanian Airlines.[50] By examining the privacy policies of these websites, the following observations have been made.

First, it is believed that these three websites have voluntarily chosen to place their privacy notification and not because they were required to do so by Jordanian law or regulation. If they were required by a law or regulation, the remaining websites would have similarly exhibited privacy policies.

Second, the terms and conditions included in the privacy policies of these websites differ. Individuals who visit one website may become confused with regard to privacy policy when visiting another website; and may have a different understanding of policy when that knowledge is compared to that of another person who has visited a different website. Below are two examples regarding differences in the contents of privacy policy.

Example one: Unlike the e-Government of Jordan and the Royal Jordanian Airlines websites, the TRC provides a definition to the terms of 'personal information'. On the 'privacy policy' hyperlink located on the 'home page of the TRC website, 'personal information' is defined as:

> Any information that may be used to identify an individual, including, but not limited to, a first and last name, email address, a home, postal or other physical address, other contact information, title, industry, and other such information.**[51]**

The author believes that the above definition has no legal basis in the Jordanian law; the legal source of this definition is unknown. The only source detected that may be linked to this definition is found in US law. In section 1303(8) of the US Children's Online Privacy Protection Act (COPPA), 'personal information' is defined as: 'individually identifiable information about an individual collected online, including: first and last name, home and other physical address, e-mail address, telephone number, and any other information…'.[52]

It seems that the TRC has copied the US definition onto its own website. However, the difference between these two definitions is that the TRC's definition is nothing more than terms included within a legally non-binding policy. By contrast, the US law will determine whether the information is 'personal information' or 'non-personal information'.

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[47] France Belanger and Janine S Hiller, 'A framework for e-government: privacy implications' (2006) 12(1) *Business Process Management Journal* 48, 54.

[48] Government of Jordan, *Privacy Policy* (2009) The Government of Jordan <www.jordan.gov.jo> at 04 June 2009.

[49] Telecommunications Regulatory Commission, *Privacy Policy* (2009) Telecommunications Regulatory Commission <www.trc.gov.jo> at 04 June 2009.

[50] Royal Jordanian, *Privacy Policy* (2009) Royal Jordanian Airlines <www.rj.com> at 04 June 2009.

[51] Telecommunications Regulatory Commission, *Privacy Policy* (2009) Telecommunications Regulatory Commission <www.trc.gov.jo> at 04 June 2009.

[52] Children's Online Privacy Protection Act of 1998, 15 USC §§ 6501-6506.

Example two: Point 5 of the privacy policy which is posted on the Jordanian e-government website provides a clear statement that the site will not use 'cookies' technology to track individuals who visit the site.[53] If this type of technology is to be used, the website will notify individual so they can accept or refuse it. In contrast, the website of the Royal Jordanian Airlines says 'cookies' technology will be used, but it will not sending an individual notification[54] to those utilising the site. It thus provides a 'blanket' notice in its policy. (It should perhaps be noted that in the US posting such a notice on a website appears to be the minimum required to satisfy the FTA privacy protection requirements.[55]) In the TRC privacy policy statement, however, there is no statement on the use of 'cookies' technology.

The use of 'cookies' by a website is often seen as an invasion of privacy (particularly when their use is not indicated to the site user) as they have the capacity to build a profile on the needs, preferences and patterns of expenditure of any individual visiting particular websites. 'Cookies' work by placing an identifying code on the hard drives of those who visit the site. This code allows the visitor to be tracked as they travel through the website and to be recognised on subsequent visits.[56] The use of 'cookies' may cause harm to individuals. Potential problems include identity fraud, physical injury, financial hardship or harm to or his/her reputation.

In this context, it is important to distinguish two separate types of information that can be stored in 'cookies': personally identifiable information (PII) and non-personally identifiable information (non-PII). PII consists of information that is used to identify an individual such as: name, address, phone number, e-mail address, credit card number, social security number or personal identification number or national identification number or card (where applicable).57 By contrast, non-PII is not directly linked to a particular person, with information collected anonymously (for example, statistical information, gender, race, purchases, or salary).

4.2 Use and Disclosure of Personal Information

The main issue regarding the use and disclosure of personal information in the online environment is that of consent. Personal information which has been collected by a government agency via its website may be transferred to another agency or even to a third party (non-governmental entity).[58] Table 1 (see appendix) lists the government agencies with online presence and indicates that all government agencies in Jordan have the ability to collect personal information.

In respect to the three websites that have privacy policies/statements (as shown in Table 2), a number of observations can be made regarding privacy principles of consent, access, security and enforcement.

In relation to the matter of consent, the findings reveal that all three websites do not use similar terms regarding how collected personal information about individuals may be used nor do they contain similar provisions. This may be due to each type of industry requiring a different privacy policy.

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[53] Telecommunications Regulatory Commission, *Privacy Policy* (2009) Telecommunications Regulatory Commission <www.trc.gov.jo> at 04 June 2009.

[54] Royal Jordanian, *Privacy Policy* (2009) Royal Jordanian Airlines <www.rj.com> at 04 June 2009.

[55] Federal Trade Commission, *Privacy Online: A Report to Congress* (1998) Federal Trade Commission <http://www.ftc.gov/reports/privacy3/priv-23a.pdf> at 04 March 2010, 8.

[56] Above n 18, 124.

[57] Frederic Debusseré, 'The EU-E-Privacy Directive: A Monstrous Attempt to Starve the Cookies Monster?' (2005) 13(1) *International Journal of Law and Information Technology* 70, 77.

[58] Maeve McDonagh, 'E-Government in Australia: the Challenge to Privacy of Personal Information' (2002) 10(3) *International Journal of Law and Information Technology* 327, 331.

There are two types of consent: 'opt-in' or 'opt-out'. The 'opt-in' method requires affirmative steps by the individual to allow the use, and disclosure of his/her personal information.59 Opt-in grants individuals (before they supply requested information) the opportunity to say 'yes', 'I approve' or 'I accept' to indicate whether their information is to be used or shared.[60] In contrast, the 'opt-out' method requires affirmative steps to prevent the collection, use and disclosure of such information.[61] This method allows unlimited information practices unless and until an individual says 'stop'.[62]

In respect to the principle of access, only the TRC website grants individuals the right to access to their personal information to ensure its accuracy. Individuals can contact the TRC through an e-mail address or via a telephone number with regards to any changes or amendments of their personal information stored by the TRC.

In regards to the principle of security, all three websites claim to take all reasonable steps to ensure that the information collected is accurate and up-to-date. For example, the Jordanian e-Government privacy policy states that information that is out of date will be destroyed, deleted, or converted to an anonymous form of information.

Finally, with respect to the principle of enforcement, only the TRC privacy policy states that matters and disputes that may arise concerning the use of TRC site shall be governed by the Jordanian law, and the courts of Jordan should have jurisdiction to deal with these matters and disputes.

Based on the above findings, the author's analysis can be summarised as follow:

1) The government agencies in Jordan that do not have privacy policies/statement on their websites (37 of the 40) have the ability to use and disclose personal information that has been collected about individuals. These agencies are under no legal obligation to provide statements explaining their information privacy practices. As a result, the author believes that the use and disclosure of personal information by these agencies can be undertaken without an individual's consent.

2) The government agencies listed in Table 2 that do have privacy policies for their websites and do not provide clear information regarding the following:

- *Individual consent*: government agencies are not required - based on their privacy policies - to obtain individual's consent when collecting personal information. The author suggests that government agencies should not offer individuals with an 'opt-out' option as it cannot be effective to adequately protect individual personal information. To be effective, the 'opt-out' option relies upon individuals being able to understand how government agencies are using, disclosing and sharing their personal information. This is an almost-impossible demand, as individuals generally lack knowledge of the possible uses an entity can make of the information collected nor can all such possibilities be foreseen, even by the entities themselves at the time of the information being collected. It also relies upon individuals being informed that they have a right to opt-out of this information practices (using, disclosing and sharing).[63] The 'default setting, however, is of total freedom for the entity collecting the information in regard to its use, further disclosure (sharing internally or with external entity for related or unrelated matters) and so forth. The individuals' lack of control over their personal information leads the author to conclude that the 'opt-out' method cannot be effective. The three privacy policies listed in Table 2 do not provide individuals with options to consent regarding whether and how personal

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[59] Federal Trade Commission, *Privacy Online: A Report to Congress* (1998) Federal Trade Commission
<http://www.ftc.gov/reports/privacy3/priv-23a.pdf> at 04 March 2010, 9.
[60] Mike Hatch, 'The Privatization of Big Brother: Protecting Sensitive Personal Information from Commercial Interests in the 21st Century' (2001) 27 *William Mitchell Law Review* 1457, 1494.
[61] Federal Trade Commission, *Privacy Online: A Report to Congress* (1998) Federal Trade Commission
<http://www.ftc.gov/reports/privacy3/priv-23a.pdf> at 04 March 2010, 9.
[62] Above n 59, 1494.
[63] Ibid 1495, Those contributing information also need to know that they can do so at any given point or at various points where they may not wish to disclose information or allow information disclosed to be shared.

information may be used for purposes beyond those for which the information was provided.[64] And in regard to access by individuals to material they have supplied and the right to amendment of inaccuracies, none of the government agencies surveyed offered individuals the ability to access, view or delete their information. Individuals may thus be misrepresented in the data collected from or about them (for example in out of date or erroneous material that remains in an entity's records).[65]

- *Individual complaint*: privacy policies for government agencies listed in Table 2 do not provide clear information about complaint procedures and remedies for injured individuals. The lack of information on this issue makes privacy policies useless as individuals will question who is responsible for protecting their privacy and be suspicious regarding the entire issue.

- *Enforcement*: privacy policies on these government websites do not state which government agency is in charge of enforcing their privacy rights. The simple reason is that in Jordan has no specialised agency to enforce privacy rights. The enforcement provisions included in the TRC privacy policy are concerned with matters arising from the use of TRC website rather than its privacy policy.

5. Conclusion

The rapid developments in information and communications technology in Jordan have created many possible ways for government agencies to collect, store, access and process large amounts of personal information about their citizens. The success of e-government depends on the extent to which individual Jordanians trust government with the information that the citizens provide and which governments receive in their online transactions. Failures of e-government will not be as a result of the technological developments, but because of the lack of a privacy legal framework that regulate online environment. If e-government is to succeed in Jordan, it requires a legal framework to protect the privacy of its citizens.

It is strongly recommended that Jordan enact comprehensive privacy legislation applicable to both public and private sectors. The proposed legislation should, firstly, define some important concepts, such as privacy and personal information. Then the proposed legislation should lay down privacy guidelines similar to those of fair information practices (FIPs). The main role of the guidelines is to provide a workable mechanism for terms such as: consent, use, disclosure and access. Above all, the main goal of the proposed legislation is to educate and spread awareness of the importance of protecting personal information in the e-government environment.

Further, policy-makers in Jordan are required to take an urgent action to address privacy challenges posed by the newly adopted technologies such as the smart cards and by surveillance technologies. The privacy challenges in these technologies shall be treated in separate research paper.

References

1. Basu, Subhajit, 'E-Government and Developing Countries: An Overview' (2004) 18(1) *International Review of Law Computers & Technology* 109
2. Baumer, David L, Earp, Julia B and Poindexter, J.C., 'Internet Privacy Law: a comparison between the United States and the European Union' (2004) 23 *Computers & Security* 400
3. Belanger, France and Hiller, Janine S, 'A framework for e-government: privacy implications' (2006) 12(1) *Business Process Management Journal* 48

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[64] David L Baumer, Julia B Earp and J.C. Poindexter, 'Internet Privacy Law: a comparison between the United States and the European Union' (2004) 23 *Computers & Security* 400, 405.
[65] For example, where material for one individual is entered into the file of another with a similar or identical name, notwithstanding a dissimilar address, such information then characterising the first with the second's record of bad debts or criminal record and so forth.

4. Ciborra, Claudio, 'Interpreting e-government and development: Efficiency, transparency or governance at a distance?' (2005) 18(3) *Information Technology & People* 260

5. Ciborra, Claudio and Navarra, Diego D., 'Good Governance, Development Theory, and Aid Policy: Risks and Challenges of E-Government in Jordan' (2005) 11(2) *Information Technology for Development* 141

6. Debusseré, Frederic, 'The EU-E-Privacy Directive: A Monstrous Attempt to Starve the Cookies Monster?' (2005) 13(1) *International Journal of Law and Information Technology* 70

7. Department of Economic and Social Affairs, 'Global E-Government Readiness Report 2005: From E-Government to E-Inclusion' (United Nations, 2005)

8. Department of Economic and Social Affairs, 'United Nations e-Government Survey 2008: from E-Government to Connected Governance' (United Nations, 2008)

9. Department of Statistics, *Jordan in Figures: Selected indicators* (2008) Department of Statistics-Government of Jordan <**http://www.dos.gov.jo/dos_home_e/main/jorfig/2008/jor_f_e.htm**> at 23 December 2010

10. Elsheikh, Yousef, Cullen, Andrea and Hobbs, Dave, 'e-Government in Jordan: Challenges and Opportunities' (2008) 2(2) *Transforming Government: People, Process and Policy* 83

11. Federal Trade Commission, *Privacy Online: A Report to Congress* (1998) Federal Trade Commission <**http://www.ftc.gov/reports/privacy3/priv-23a.pdf**> at 04 March 2010

12. Forum, World Economic, 'The Global Information Technology Report 2009-1010: ICT for Sustainability' (The World Economic Forum, 2009)

13. Government of Jordan, *e-Government Program* (2006) Government of Jordan <**www.jordan.gov.jo**> at 30 April 2009

14. Government of Jordan, *Privacy Policy* (2009) The Government of Jordan <**www.jordan.gov.jo**> at 04 June 2009

15. Hamelink, Cees J, 'New Information and Communications Technologies, Social Development and Cultural Changes' (United Nations Institute for Social Development, 1997)

16. Hatch, Mike, 'The Privatization of Big Brother: Protecting Sensitive Personal Information from Commercial Interests in the 21st Century' (2001) 27 *William Mitchell Law Review* 1457

17. Information Technology Association-Jordan (INT@J), 'ICT & ITES Industry Statistics & Yearbook' (Information Technology Association-Jordan (int@j), 2009)

18. McDonagh, Maeve, 'E-Government in Australia: the Challenge to Privacy of Personal Information' (2002) 10(3) *International Journal of Law and Information Technology* 327

19. McNamara, Kerry S, 'Information and Communication Technologies, Poverty and Development: Learning from Experience' (The World Bank, 2003)

20. Ministry of Information and Communications Technology (MoICT), 'National ICT Strategy of Jordan 2007-2011' (Ministry of Information and Communications Technology, 2007)

21. Ministry of Information and Communications Technology (MoICT), 'Research & Development Strategy for Information and Communication Technology 2007-2010' (2007)

22. Ministry of Information and Communications Technology (MoICT), *E-Initiative Database* (2003) Ministry of Information and Communications Technology (MoICT) <**http://www.moict.gov.jo/MoICT/MoICT_Initiative.aspx**> at 28 April 2009

23. Ministry of Information and Communications Technology (MoICT), *Invest in ICT in Jordan* (2005) Ministry of Information and Communications Technology <**http://www.jordanecb.org/pdf/InvestinICTinJordan.pdf**> at 16 April 2009

24. Morales-Gomez and Martha, Melesse, 'Utilising Information and Communication Technologies for Development: The social dimensions' (1998) 8(1) *Information Technology for Development* 3

25. Organisation for Economic Co-operation and Development (OECD), *The e-Government Imperative* (2003)

26. Organisation for Economic co-Operation and Development (OECD), OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data (1980) OECD <http://www.oecd.org/document/18/0 3343, en_2649_34255_1815186_1_1_1_1, 00.html> at 10 April 2010

27. PA Times, 'E-Government Study Finds Ease, Engagement, Privacy, Protection are Top Priorities', *PA Times 26(5)* (Washington, D.C.), May 2003, 2

28. Regan, Priscilla M, 'Privacy in an Electronic Government Context' in Hsinchun Chen et al (eds), *Digital Government: E-Government Research, Case Studies, and Implementation* (2008)

29. Reynolds, George W, *Ethics in Information Technology* (Second ed, 2007)
30. Royal Jordanian, *Privacy Policy* (2009) Royal Jordanian Airlines <**www.rj.com**> at 04 June 2009
31. Telecommunications Regulatory Commission, *Privacy Policy* (2009) Telecommunications Regulatory Commission <**www.trc.gov.jo**> at 04 June 2009
32. United States Government Accountability Office, 'Privacy: Key Challenges Facing Federal Agencies' (United States Government Accountability Office, 2006)
33. US Government, *Privacy and Security* (2010) US Government <**http://www.usa.gov/About/Privacy_Security.shtml**> at 24 December 2010

Table: 1 Government Agencies with Online presence in Jordan

No. Government Agency	Stage I Emerging	Stage II Enhanced	Stage III Interactive	Stage IV Transactional	Stage V Connected	Availability of Privacy Policy/Statement	Website 'Home Page' Address
1. The Official Site of e-government	Yes	Yes	Yes	No	No	Yes	www.jordan.gov.jo
2. Ministry of Finance	Yes	Yes	Yes	No	No	No	www.mof.gov.jo
3. Ministry of Foreign Affairs	Yes	No	No	No	No	No	www.mfa.gov.jo
4. Ministry of Health	Yes	Yes	No	No	No	No	www.moh.gov.jo
5. Ministry of Higher Education and Scientific Research	Yes	Yes	Yes	No	No	No	www.mohe.gov.jo
6. Ministry of Industry and Trade	Yes	Yes	Yes	No	No	No	www.mit.gov.jo
7. Ministry of Information and Communications Technology	Yes	Yes	Yes	No	No	No	www.moict.gov.jo
8. Ministry of Interior	Yes	Yes	No	No	No	No	www.moi.gov.jo
9. Ministry of Labor	Yes	Yes	Yes	No	No	No	www.mol.gov.jo
10. Ministry of Municipal Affairs	No	No	No	No	No	No	www.mma.gov.jo
11. Ministry of Planning and International Cooperation	Yes	Yes	Yes	No	No	No	www.mop.gov.jo
12. Ministry of Political Development	Yes	Yes	No	No	No	No	www.mopd.gov.jo
13. Ministry of Public Sector Development	Yes	Yes	Yes	No	No	No	www.mopsd.gov.jo
14. Ministry of Public Works and Housing	Yes	Yes	Yes	No	No	No	www.mpwh.gov.jo
15. Ministry of Social Development	Yes	Yes	No	No	No	No	www.mosd.gov.jo
16. Ministry of Transport	Yes	Yes	Yes	No	No	No	www.mot.gov.jo
17. Amman Stock Exchange	Yes	Yes	Yes	No	No	No	www.exchange.jo
18. Central Electricity Generating Co.	Yes	Yes	Yes	No	No	No	www.cegco.com.jo
19. Central Bank of Jordan	Yes	Yes	Yes	No	No	No	www.cbj.gov.jo
20. Civil Service Bureau	Yes	Yes	Yes	No	No	No	www.csb.gov.jo
21. Department of Press and Publications	Yes	Yes	Yes	No	No	No	www.dpp.gov.jo
22. Jordan Deposit Insurance Corporation	Yes	Yes	No	No	No	No	www.dic.gov.jo
23. Development and Employment Fund	Yes	Yes	Yes	Yes	No	No	www.def.gov.jo
24. Electricity Regulatory Commission	Yes	Yes	Yes	No	No	No	www.erc.gov.jo
25. Executive Privatisation Commission	Yes	Yes	Yes	No	No	No	www.epc.gov.jo
26. Jordan Chamber of Commerce	Yes	Yes	Yes	No	No	No	www.jocc.org.jo
26. Jordan Food and Drug Administration	Yes	Yes	Yes	No	No	No	www.jfda.jo
27. Orphans Fund Development Foundation	Yes	Yes	Yes	No	No	No	www.ofdc.gov.jo
28. Jordan Security Commission	Yes	Yes	Yes	No	No	No	www.jsc.gov.jo
29. National Information Technology Centre	Yes	Yes	Yes	No	No	No	www.nitc.gov.jo
30. Royal Jordanian	Yes	Yes	Yes	Yes	Yes	Yes	www.rj.com
31. Security Depository Centre	Yes	Yes	Yes	No	No	No	www.sdc.com.jo
32. Telecommunications Regulatory Commission	Yes	Yes	Yes	No	No	Yes	www.trc.gov.jo
33. Income and Sales Tax Department	Yes	Yes	Yes	No	No	No	www.incometax.gov.jo
34. Insurance Regulatory Commission	Yes	Yes	Yes	No	No	No	www.irc.gov.jo
35. Department of Lands and Survey	Yes	Yes	No	No	No	No	www.dls.gov.jo
36. Social Security Corporation	Yes	Yes	Yes	Yes	No	No	www.ssc.gov.jo
37. Department of Statistics	Yes	Yes	Yes	No	No	No	www.dos.gov.jo
38. Jordan Customs	Yes	Yes	Yes	Yes	No	No	www.customs.gov.jo
39. Civil Status and Passports Department	Yes	Yes	No	No	No	No	www.cspd.gov.jo
40. General Intelligence Department	Yes	Yes	Yes	No	No	No	www.gid.gov.jo

Table: 2 Government Agencies Websites with Privacy Policies in Jordan

No. Government Agency	Availability of FIPs Core Dimensions					Website 'Home Page' Address
	Notice	Choice	Access	Security	Enforcement	
1. The Official Site of e-government	Yes	Yes	Yes	No	No	www.jordan.gov.jo
2. Telecommunications Regulatory Commission	Yes	Yes	Yes	No	No	www.trc.gov.jo
3. Royal Jordanian	Yes	Yes	Yes	Yes	No	www.rj.com