INFORMATION AND COMMUNICATION TECHNOLOGIES
AND POLITICAL PRACTICE IN POST-SOVIET ESTONIA

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ABSTRACT

This undergraduate thesis seeks to provide an overview of the successful adoption of information and communication technologies by the Post-Soviet government of Estonia—i.e. the successful promotion of an *information society* via *e-Government*. Furthermore, the paper argues that the consistent and proactive endorsement of these activities by enforceable legislative means is the most significant factor leading to the successful utilization of new technologies; a point which has led to Estonia boasting better than average and trendsetting regional and world rankings for e-Government performance. To these ends the terms of Information Society, e-Government, e-Democracy, e-Gov Databases, e-voting, and e-Gov web portals have been workably defined; and the correlating policies and information and communication technology end products (currently in use by the Estonian citizenry) have been detailed.

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INTRODUCTION

The Baltic state of Estonia has been undergoing a renaissance of information and communication technology (ICT) utilization since the fall of the Soviet Union in 1991. One specific aspect of this renaissance has been the adoption of e-Government practices, which have stimulated the economy as well as democratic participation in a rather distinctive way. This has led to Estonia consistently ranking near the top of international surveys of e-Government implementation in Central Europe and in the World in general [see APPENDIX].

Many factors have contributed to the success of the Estonian government in promoting ICT adoption and utilization for government services. However, it seems the most significant single aspect is the Estonian government's determined institutionalization of e-Government as a prerogative at the national level. Specific legislation has been passed (and adopted from the EU) since the early 1990s, which not only encourages, or even mandates, the use of ICTs but also actively funds and follows-up on government-sponsored projects. Now, Estonia enjoys national electronic IDs, which can be used for the mundane, private task of online banking or the revolutionary online voting (e-voting) in local and national elections.

The goal of this paper is to define key terms related to the exploration of ICT use by governments and their citizenries, then employ those definitions in a discussion of the current international and national policies adopted by Estonia, which are seeking to institutionalize e-Government as the leading component in the betterment of government. This paper will describe the novel interactions between the state and the citizenry via databases and web portals, asserting that

the strategy of e-Government implementation, as normal legislative policy, enables a kind of innovation seemingly unrivaled among Estonia's geographic and economic neighbors.

KEY DEFINITIONS

In order to better discuss specific instances of e-Government practice, a few key definitions need to be first established, namely: Information Society, e-Government, e-Democracy, an e-Gov Database, e-voting, and an e-Gov web portal. These terms will be employed later in this paper using the contexts outlined below.

Information Society

For the purpose of this paper, the most apt definition of an Information Society can be adopted from Tadaferua Ujorha's white paper for Global Knowledge Partnership, which reads: "The term 'Information Society' has been coined to refer to communities in which there is ready access to information and knowledge, leading to sustainable and equitable opportunities for growth and progress. In an Information Society, there is free flow of two-way communication between governments and their people, and among the people themselves" (3). There is a utopic quality to this definition of Information Society, which is why it has been adopted (as will be discussed later) by the European Union as the model to which Europe may aspire with the help of well-designed implementations of ICTs to inefficient systems such as government processes and services.

e-Government

The term e-Government is derived from electronic government, and is also known as e-gov, digital government, and online government. The OECD

defines e-government as "the use of information and communication technologies, and particularly the Internet, as a tool to achieve better government." Despite the generality of this definition it includes an important phrase "achieve better government." e-Government is not just about implementing electronic communication as the technology becomes available and globalization increases the demand for rapid correspondence; it is about achieving better government.

Digital Governance Initiative states that the goals of digital governance (electronic government) are to ensure "that citizens can participate in, and influence decision-making processes which affect them closely. Citizens no longer remain passive recipients of governance services provided to them, but can pro-actively decide the types and standards of governance services they want and the governance structures which can best deliver them" (Nath). Thus, e-Government should better facilitate the practice of governance, as well as democratic participation—i.e. furtherance via e-Democracy.

e-Democracy

e-Democracy, from electronic democracy, is the practice of democracy using information and communication technologies. The concept is more ethereal than e-Government because it refers to an action or set of interactions taking place. In trying to define e-Democracy, The Economist Intelligence Unit suggests that, "E-government is about more than delivering public services. The Internet offers the opportunity to expand citizen participation in governance, through electronic voting or other online channels to solicit public input on government policy" (*E-government in Central Europe* 15).

Access2Democracy, an NGO promoting the awareness and spread of e-Democracy practices, tries to define e-Democracy by stating that it is not: "about

technology, an e-government service, just about e-voting, 'push-button' democracy, an 'alternative' democracy, a panacea." Instead, they suggest that it is "about consultation & deliberation, about right of 'access' and accountability, about people's voices being heard and respected" (Goulandris). Essentially, proponents of e-Democracy want you to believe is that it is more about democracy than electronicalization, which is true. e-Democracy is about participation; the United Nations on occasion employs an even more direct term—e-Participation.

e-Gov Database

An e-Gov Database is a collection of information created and maintained by a governmental body, whether available through the Internet to the citizenry or only accessible to selected officials. However, in the context of this paper, an e-Gov Database will only refer to databases openly accessible via the Internet as a service to the citizenry. Databases like this might include census data, passed legislation and legislation under review, or taxation records.

e-voting

e-voting, from electronic voting, can be any use of an electronic device to receive and count votes in an election. However, in the context of this paper, all references to e-voting refer specifically to the casting of ballots over the internet through a government-sanctioned system of hardware and software and for a government-sponsored election.

e-Gov Portal

An e-Gov Portal is a website employed as a centralized directory of resources for a specific governmental body (or all governmental bodies of a country) accessible to the relevant citizens. The most prominent example is FirstGov (now USA.gov), which allows U.S. citizens to search and browse all of the online resources of the U.S. Federal Government. It may link to resources such as an e-Gov Database or an e-voting online application.

"INFORMATION SOCIETY" AS POLICY IN ESTONIA

As a sovereign state, following the fall of the Soviet Union in 1991, the Estonian government has had the corollary authority to set its own agenda and policy since then. And then in 2004, Estonia successfully completed the process of admission to the European Union or EU ("Timeline: Estonia"). Along with admission to the EU, Estonia became a formal party to policies agreed upon by that body. And while some EU resolutions are non-binding, Estonia has seemingly chosen to adopt each initiative related to the concept of an Information Society as domestic law.

eEurope 2005

The subtitle of the eEurope 2005 action plan is "An information society for all." This action plan was adopted by the EU to forward the ideal of the Information Society in Europe via, among other thing, access to broadband Internet service, a full suite of e-Government services, and the creation of a "dynamic e-business environment" (Commission of the European Communities 3). In general, eEurope 2005 is a set of goals and suggestions for working with other countries to better achieve those goals. Estonia did not enter the EU until 2004, after eEurope was proposed. Yet, in response, Estonia tailored their 2004 *Principles of the Estonian Information Policy 2004 – 2006* to better align with the goals outlined by the Commission of the European Communities (iDABC 4). However, this new policy, coincident with eEurope 2005, is only one piece of legislation in a long history of such governmental action in Estonia.

Domestic Initiatives

On July 19, 1996, Estonia's "Personal Data Protection Act" went into law. It was quickly followed by a "Databases Act" to regulate the creation and maintenance of databases in 1997. But it was in 1998, that Estonia approved its first comprehensive Information Policy—"Principles of the Estonian Information Policy" and "Information Policy Action Plan"—prioritizing specific projects with detailed schedules and provisions for revising the "Principles" policy every 4-5 years and the "Action Plan" every year! (iDBAC 5—6)

In the late 1990s and early 2000s, Estonia's information policy called for the creation of a government-wide backbone network as well as the launch of a system platform called "X-Road," which standardized the interchange of data between government operated databases—allowing citizens to have their personal data integrated and accessible via one method (iDBAC 5).

By 2000, Estonians could file their taxes online via "e-TaxBoard" (iDBAC 5). And then in 2001, Estonia made access to the Internet a basic freedom by an act of parliament "to guarantee Net access, just like any other right, to its citizens" (Meier).

In January 2002, Estonia introduced national electronic ID cards, which combined with the "Digital Signature Act" signed in 2000 made it mandatory for all Estonian citizens over age 15 to be enrolled in the system. And that summer, the Estonian Government (along with the United Nationals Development Programme and the Open Society Institute) launched an E-Governance Academy to train public servants and policy makers across Central and Eastern Europe. (iDABC 4)

As was already mentioned, a new Information Policy was enacted in 2004; and as will be discussed later, e-voting was piloted in 2005. Since then, a new policy has been passed the "Estonian Information Society Development Plan

2007-2014," which will focus on greater economic development via ICT

implementation and a re-focusing on efforts for ubiquitous access to the Internet

for all citizens ("Estonia: i2010 Annual Report 207" 1).

What differentiates Estonia from other, specifically Central and Eastern European, countries is its successful follow-through on releasing a number of innovative e-Government applications in pursuit of the ethereal Information Society. The follwoing selection of common types of e-Government technologies represents the *flagship* websites and services currently available to the Estonian citizenry, including an e-Gov web portal, an e-Gov Database, and two vehicles for e-Democracy.

Riik.ee: Official State Web Center

Similar in character to the United States' FirstGov e-Gov web portal, Riik.ee is the clearinghouse for the Estonian government's online services and resources. It offers links to nearly 100 databases, including the motor vehicle and population registers. In 2003, Riik.ee won an honorable mention in the eEurope Awards for eGovernment. (European Institute of Public Administration 29)

To make usage easier, a common interface has been implemented throughout the portal. But the major functional component involved with the portal and the affiliated branch websites is really the national electronic ID system. The ID system is also the centerpiece of the e-Government infrastructure of Estonia; each citizen can apply for an electronic ID just like applying for a passport. The ID, accompanied by digital signature security, has enabled online tax filing; and, in recent years, it has seen its most ambitious application with the onset of e-voting.

Eesti Statistika and Eesti Õiguskeele Keskus

The *Eesti Statistika* (Estonia Statistics) website—http://pub.stat.ee/—is a repository for general data collected by the federal government of Estonia, which is browsable/searchable to anyone on the Internet, most importantly the citizens of Estonia. Users enjoy access to well-formatted statistics regarding the population, the environment, economics, and agriculture at customizable levels of specificity. This is an excellent example of an e-Gov database, where government records are made publicly accessible through a free Internet-based service. The value of such a contribution stems from the ability of researchers to cull relevant data about the country and perform their own analysis, hopefully sharing actionable results with the government via a new research publication.

Similarly, the *Eesti Õiguskeele Keskus* (Estonian Legal Language Centre) is an online database that keeps records of all EU and Estonian legislation— http://www.legaltext.ee/. Part of the site's administration is responsible for an ongoing translation effort to ensure that the documents can be read in Estonian, Russian (the second most common language in Estonia), or English. This plays an integral role in furthering the cause toward a well-informed Information Society. The Economist Working Group reflected on e-Government in Central Europe [see APPENDIX for rankings], observing that "the Estonian, and secondarily Turkish governments stand out in the region as practitioners of e-democracy. They exhibit not only clear efforts to open communication channels to citizens, but also processes to ensure that online feedback is incorporated into the legislative process" (*E-government in Central Europe* 16). The feedback loop alluded to at the end of the quote is completed by Estonia's *Today I Decide* website.

Täna Otsustan Mina (Today I Decide)

The theoretical link between e-Government and the realization of the idyllic Information Society comes by e-Democracy; and in Estonia, that link is *Täna Otsustan Mina* (or Today I Decide)—http://www.eesti.ee/tom/. Launched in 2001, in 2005 the website averaged over 150,000 hits per month, "as citizens comment on draft laws and even submit their own ideas for new ones" (Eggers 150). If proposals receive over 51 percent approval in online votes, after a two-week discussion period, then they are actually considered by the relevant policy bodies and could be enacted into law. By virtue of this innovation, Estonia shows itself to put policy to practice in its embrace of the Information Society model. As confirmation, the rest of quote from The Economist Intelligence Unit, used in the previous section, reads: "Estonia's celebrated I Decide Today [sic] portal effectively allows connected citizens near-instant communication with ministers on policy and legislation issues. Such efforts at developing e-forums are also often the start of more significant electronic transactions in the e-government process—Estonia is acknowledged to be the first country to have passed national e- voting laws" (*E-government in Central Europe* 16).

Local and National e-voting

Estonia first experimented with e-voting on a local election level; using the lower stakes to test-run the new hardware and software in 2005. During that election about 9, 500 (less than 1% of registered voters) accessed the e-voting website during the three days of open advanced voting (Sheeter). Then in 2007, about 30,000 (about 1 in 30) registered votes signed into the online voting system to cast their ballot in the first-ever e-voting-capable parliamentary election ("Estonia claims new e-voting first"). The system works by using the aforementioned personal electronic ID. A propriety card scanner must be hooked

up to the computer and series of personal information must be entered to affirm the voter's identity. And with the ever-more-ubiquitous wireless Internet access in Estonia, a citizen could have easily sat at a coffee shop and vote for a desired MP. By removing some of the usual hassle of physically attending one of many prescribed polling sites, Estonia could overtime raise the level of democratic participation via such ease of use.

CONCLUSION

"Mr Ott of the Estonian Ministry of Economics and Communications notes that a cohesion of interests and agendas between business and policymakers, as in Estonia since its independence in 1991, can help produce depth and breadth of government approach as well as the resulting services… The government initially worked with partners that would ensure wide reach and technology support… It then developed programmes to win over 'early adopters' (entrepreneurial self-employed taxpayers) and then engaged in education programmes to build appeal in the mass market. As a result, 36,000 tax returns were submitted electronically in 2001, and nearly 138,000 returns were submitted last year" (The Economist Intelligence Unit, *E-government in Central Europe* 14).

Looking at the history documented herein and the flattering quotes from industry experts, it appears that Estonia is the Cinderella story of Eastern and Central Europe—at least when it comes to e-Government promotion. However as impressive as e-Government initiatives can be, it is still important to critically evaluate each new development.

At this point, however, it is still unclear how exportable Estonia's e-Government policies are. The E-Governance Academy appears to be doing a positive work. What is key, though, is the ability to tailor a policy for specific needs. Note "ability" to tailor a policy. As stated in the quote above, there was an alignment of thought between the business communities and policymakers in Estonia, as well as the presence of a well-supported nationalist government

during a majority of the Post-Soviet period. These factors contribute to the ability of policymakers to agree on and enact policy.

Certainly, policy was the key in Estonia's prominence in e-Government. Arguably it was born out of an innate desire for the ideals of democracy, e-Democracy, and an Information Society; but economic necessity (especially in a small country with little natural resources) should be considered as well (The Economist Intelligence Unit, *E-government in Central Europe* 16).

The true test will be if Estonia can continue the progressive policies and their efficacy. The Economist Intelligence Unit offers one last, troubling possibility: "it is the political and business elite which constitute the majority of online and Internet-savvy citizens; certainly this is the case in Estonia, whose young, technologically sophisticated business elite has worked closely with the political class to bring about a remarkable digital transformation. But still only ten percent of the population has effective access to the Internet, which means that unless the base is broadened, Estonia's online forums will remain a communication medium for the enfranchised elite—exactly the opposite of the stated e-democracy objectives. Expanding citizens' access to the Internet is crucial if e-government initiatives are not to widen, rather than narrow, society's digital divide" (*E-government in Central Europe* 16).

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APPENDIX: RELEVANT ESTONIAN E-GOVERNMENT RANKINGS

TITLE OF RANKING REPORT	RANK	% OF POP.	HIGHEST FROM FORMER USSR?	SOURCE
Highest Internet Penetration Rate (2007) [1]	30 in the world	51.8%	Yes	"Top 35 Countries with the Highest Internet Penetration Rate"
The Networked Readiness Index (2007)	20 of 122	N/A	Yes	World Economic Forum
E-Government Ranking (2006) [2]	26 of 198	N/A	Yes	West
E-Government Readiness overall Rankings (2005)	19 of 191	N/A	Yes; and 3rd among all developing countries.	United Nations
E-participation [E-democracy] Index (2005)	11 of 191	N/A	Yes	United Nations
E-Readiness Rankings (2005) [3]	26 of 65	N/A	Yes [4]	The Economist Intelligence Unit, *The 2005 e-readiness rankings*
Central Europe e-Government overall rankings (2004) [5]	1 of 10	N/A	Yes [4]	The Economist Intelligence Unit, *E-government in Central Europe*
Level of Government Online Usage by Population (2003)	12 of 32 [6]	36%	Yes [4]	Taylor Nelson Sofres, *Government Online: an international perspective*
Level of Government Online Usage by Internet Users (2003)	5 of 28 [6]	76%	Yes [4]	Taylor Nelson Sofres, *Government Online: an international perspective*
Citizens Who Believe the Internet is Safe (2003)	13 of 29 [6]	29%	Yes [4]	Taylor Nelson Sofres, *Government Online: an international perspective*

[1] In a study of Internet Penetration in Europe conducted by Taylor Nelson Sofres between 7 December 2005 and 11 January 2006, most countries said the main reason for there being no home internet connection was because "no one in the household is interested in the internet;" however, the main reason in Estonia was "the fact there was no means of connection available in the household" (Taylor Nelson Sofres. "Two out of ten European households have a broadband Internet connection").

[2] Estonia was given the highest scores in this survey for their E-Government access to Publications and Databases.

[3] "Estonia's lead e-readiness spot in the region [Eastern Europe] (26th) is not only attributable to its good connectivity performance, but also to extremely proactive e-government development. Initiatives such as its e-cabinet programme, implemented in 2001 to streamline government decision-making at the highest level, have helped to improve administrative efficiency with a web-based documentation system" (The Economist Intelligence Unit, *The 2005 e-readiness rankings* 10).

[4] Not all countries from the Former Soviet Union were examined in this specific survey.

[5] "E-democracy initiatives tend to take second priority in the region to improving public services, but a few governments—notably that of Estonia—have scored significant gains in soliciting digital feedback from citizens" (The Economist Intelligence Unit, *E-government in Central Europe* 4).

[6] Countries in this specific survey included: Australia, Bulgaria, Canada, Czech Republic, Denmark, Estonia, Faroe Islands, Finland, France, Germany, Great Britain, Hong Kong, Hungary, India, Ireland, Israel, Italy, Japan, Latvia, Lithuania, Malaysia, Netherlands, New Zealand, Norway, Poland, Singapore, Slovak Republic, South Korea, Spain, Taiwan, Turkey, United States of America. Some countries did not report specific information, which leads to the variance in total numbers.