E-GOVERNMENT IN THE CZECH AGRICULTURE

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Summary

System Analysis of the contemporary state of e-Government in the Czech Republic with respect to specific problems of the Czech Agriculture is presented. Topics discussed: models for the Czech Government in the EU, e-Governance in the Czech Republic, legislation and regulation. Analysis results in projections of necessary changes to 2010 and relevant strategies and recommendations for application in the agrarian sector and regional development.

Souhrn

Systémová analýza stavu e-Governmentu v České republice se zřetelem k problémům českého zemědělství a venkovských regionů. Pojednává se o modelech pro české zemědělství odvozených z nejlepších aplikací v EU, problematice e-Governance, legislativě a opatřeních. Výsledkem analýzy je popis očekávaných změn do r. 2010 a návrh odpovídajících stratgií a doporučení pro české zemědělství a regionální rozvoj.

Key words

e-services, e-Government, e-Governance, e-Democracy, One-Stop-Government, Digital Divide, trends and tendencies in e-service provision development, strategic decision, re-engineering

Klíčová slova

e-services, e-Government, e-Governance, e-Democracy, One-Stop-Government, rozdíly v přístupu k ICT, trendy and tendence rozvoje poskytování digitálních služeb, strategické rozhodování, re-engeneering

e-Government in agriculture and regional development

The emerging 21st Century workplace is increasingly referred to as a "knowledge-based" economy, an environment in which the ability to access information quickly is a highly valued skill. Development of the future agriculture - much more then other branches of national economies - will depend on governmental control. A special role of agriculture in sustainable development, environment protection and healthful nourishment will do not without supports, quotations and strict rules. As government becomes a player in the knowledge-based marketplace, especially governmental organisations and government workers and employee operating in rural environment will need to be increasingly flexible, responsive, and customer oriented. The most valuable workers will be those who can fill a variety of roles and rapidly master new ones. For all these reasons, computer literacy is an increasingly valuable asset for employees both in the private and the public sector.

Being the users of these e-services, farmers, entrepreneurs and citizens in countryside regions have to have an easy access to the Internet and relevant education in information technologies.

e-Services based on ICT technologies offer the government some tremendous opportunities to move forward in the 21st century with higher quality, cost-effective, government services and a better relationship between farmers, citizens and their government.

A good functioning e-Government and congruous e-Administration are the base for the future rural development and competitive agriculture.

e-Services: e-Government, e-Governance, One-Stop-Government

e-Government is one of the most important (and also most interesting and exciting) components of the Information Society. Very general schema describes mutual roles of e-services:

e-services:	on-line, two-ways communication*, one single point*, everything and everywhere and anytime, ….	
e-service	main providers	level of government participation
e-Government e-Administration e-Environment e-Transportation e-Health … …	Government State administration	high high high low high
W-Rings W-Portals … …	Semi-private organisations Philanthropists	none
e-Business e-Commerce e-Touristic e-Health … …	Private organisations	none none low high
E-GOVERNANCE		

Table 1: Classification of e-Services from Government point of view

In this paper, ***Government*** means the management and institutions operating in the agrarian sector and the distribution of power between the different actors and the different levels and types of government. In case of agriculture, the main roles of government are: administration, regulation, service provision, democracy, environmental and social sustainability.

e-Government means a system approach in which all roles described above are applied to the Information Society, and the way in which ICT

- is used as a tool by government
- redefines the landscape of government, e.g. changing relationships, structures and processes, providing new opportunities and posing new threats

e-Governance is the system of measures by means of which government promotes and supports all activities leading to information literacy of population. e-Governance creates friendly and creative social environment and climate in the Society with an aim to improve

information literacy and decrease digital divide. Experts agree, that e-Governance becomes the *main driver of the future economic and social development* of nations (Frissen Paul, 1997).

One-Stop-Government (OSG) is type of providing and organisation of e-Government which stresses integration for achieving citizen- or customer-oriented Government.

Changing world and projections of changes to 2010

Models of e-Government for the Czech Republic – an inspiration from the EU

Despite the power of the new technologies in providing global reach and interactivity, models of e-Government are *cultural and political* rather than technical. This can be seen in Europe by comparing the very diverse levels of take up and of policy approaches, ranging from the Scandinavian participatory and the Anglo-Irish market-driven models of northern Europe, through the more statist, public sector driven responses of central Europe, to southern Europe's stronger reliance on family, community and city-region driven approaches.

There is no simple and general model of e-Government in the contemporary EU. Types of e-Government models differs in EU and the Czech Republic. Traditions and habits influence strongly the approaches to methodology and organisation:

- **Northern Europe (**Denmark, Sweden, Finland, Netherlands): Influence of history of Freedom of Information. Stress on e-Governance as part of e-Democracy. Notion of active government not necessarily viewed with suspicion. Stress to strong role for local democracy.
- **Anglo-Irish environment** (UK, Ireland): e-Governance is seen as a response to "new economy" and hence driven by business needs. Emphasis on transactional services to increase efficiency. For citizens, concerns about privacy may retard developments.
- **Central Europe** (France, Belgium, Luxemburg, Germany, Austria): Tradition of strong civic pride and strong public sector and centralised state, though many recent changes. Thus, great e-Government diversity with, e.g. Germany with federal structure and relatively weak centre, and France still relatively centralised.
- **Southern Europe** (Italy, Spain, Portugal, Greece): Strong role for non-governmental civic institutions. Importance of city-regions leading e-Government development - e.g. Barcelona, Bologna. Central government role in standardisation and funding but not necessarily development.
- **Czech Republic** (and also Hungary and Slovak Republic): An excellent heritage of the Austro-Hungarian Monarchy is a very good statistics, organisation of national databases and high number of well educated specialists in electronic service provision. A consequence of socialistic era is a centralised state. Citizens and small producers expect a leading role of government in promoting and assistance. Relatively good education of people and functioning education system of high and higher education make it possible for government not too intensively develop principles of e-Governance.

Benefit for both citizens and Government

People involved in agricultural sector need direct access to government information and services to participate in common democracy, using the Internet, telephones, mobiles and other information technologies as they emerge.

e-*Government is a way for governments to use the new technologies to provide people with more convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in democratic institutions and processes.*

The task for the Government is to build on these individual initiatives and develop them into a comprehensive plan for achieving the benefits of e-Government more widely on behalf of all users in agrarian sector.

e-Government will improve government and thus influence the quality of life in four important ways:

1. It will be easier for people to have their say in government.
2. People will get better services from government organisations.
3. People will receive more integrated services because different government organisations will be able to communicate more effectively with each other.
4. People will be better informed because they can get up-to-date and comprehensive information about government laws, regulations, policies and services.

Digital divide

Applications of principles of e-Government will improve the ability of all people to participate in e-services providing by both governmental and private institutions. But, it also has the potential to create new divisions in society between (1) those who have the skills and tools to use the new technologies to participate in common democracy and (2) those who do not.

Today, the Czech Government is not prepared to allow this to happen and solve the problem effectively.

New communications are assigned to all population and will influence not only farmers, entrepreneurs and other producers involved in agrarian sector and services providers but also other citizens living in countryside regions. To decrease digital divide the Government must plan e-Government in such a way that:

1. Conventional means of access to government are maintained for those people who need them.
2. Community access to the Internet is available for those people who, for any reason, can not access it from their homes.
3. Educational and public information programmes are used to help people, young and old, in using the new technologies.

At the same time strengthen where necessary, all legislation designed to protect peoples' privacy; and provide safeguards around the sharing of people's personal information among Government agencies.

Wide adoption of e-Government will improve peoples' ability to participate in government, and will improve the state sector's ability to provide affective and efficient services. The end is improving the lives of citizens through good government supported by effective and efficient organisations staffed by people devoted to serving the public.

In the Czech Republic, there should be no overnight and dramatic developments, but rather a more staged approach with developments of traditionally good base. Within the next decade, people should be able to do the following:

1. Electronically register information with the Government - for example, births, deaths and marriages - at a time and place that suits them.
2. Conduct their financial dealings with government organisations electronically.
3. Complete and send all government forms from one place on the Government's Internet site.
4. Have their say on a wide range of government proposals and policies through the Internet.
5. Benefit from high quality health care from a public health service that provides integrated and personalised services.
6. Have confidence that effective controls backed up by good legislation will safeguard privacy.

7. Benefit from the reduced costs and time involved in property transactions because land survey and title information is available electronically and transactions can be registered the same way.

Drivers of future development

General changes will influence behaviour of private and non-private subjects to exploit maximum of benefits from ICT. New economy will be an e-economy, knowledge or network economy. Products, services, supply, demand driven will be organised according to principle: the "customer is king". Network will better differentiate hierarchy in government and society. New actors like intermediaries, individuals, pressure groups, bottom-up community/voluntary groups, informal networks, etc. will influence the society. Globalisation will generate new alliances, new types of partnerships, co-operation as well competition. The society will be both individualised and social, new cultures and mindsets occur. Network will enable so far unprecedented transparency and openness.

E-services in 2010 will change the daily work and life of citizens in many aspects:

1. *Expected technologies*
   - Moore's law: *things that think* - computing
   - Metcalf's law: *things that link* - communication
   - standardisation and individualised systems
   - towards standard systems and protocols but away from *one-design fits all* access
   - ambient intelligence: ubiquitous computing, ubiquitous communication and intelligent user-friendly interfaces
   - multimedia everywhere
   - smart cards, Internet, digital TV, kiosks, mobile comms, WAP, *Bluetooth*, hand-held, etc.
2. *Changing services*
   - complement or upgrade existing services
   - creation of completely new services
   - new ways of delivering services
   - new forms of interaction between service "provider" and "user"
3. *Changing suppliers*
   - complete re-think necessary on everything: roles, strategies, structures, organisation, skills and competence, blurring of "public", "private" and "third" sectors, balance of electronic and human-mediated services
4. *Changing role and priorities*

What will happen to the four roles of traditional government: administration, regulation, service provision and democracy? We can expect:

- "reinventing government"
- "tailored"as well as "joined-up" government
- regulation tending to facilitation
- administrative changing to service
- "closed doors/windows" transforming to "open doors/windows"
- remote objects will be nearer
- bureaucratic behaviour changing to accountable behaviour (*Lord knows?)*

5. *Changing how e-Government works*

Similar to e-Business it can achieve greater efficiency, greater productivity, cost reduction and will treating citizens like customers. But, it will have to maintain and improve public service ethic, need for accountability and democracy. e-Government services will require deep re-engineering of the Public Administration if full benefit is to be achieved.

6. *Changing democracy*

New types of democracy: from politics to participation, from rights & limitations to rights & responsibilities, from rule of majority to secession of minorities, from classical citizenship to citizenship reinvented where citizens' groups are organising themselves on the Internet and communicate on-line.

7. *Changing users, people and places*
   - governments must identify who is the user and what types of users could be served [1]
   - government must solve problem of digital divides:
     - technology "haves" and "have-nots"
     - the unskilled and the highly skilled
     - disabled, elderly, gender, ethnic and cultural differences
     - self-employed, free agents, SMEs, corporates
     - NGOs, community and civic groups
     - inner cities, old industrial, rural and remote areas
   - government must re-define new roles, opportunities and threats for regions

8. *Changing partnerships*
   - in relations among public, private and non-profit organisation the role of the last, e.g. third/voluntary/non-profit sector is rapidly increasing
   - industry must be intimately involved in e-Government at all stages [2]
   - learn from others (as well as compete with them)
   - umbrella organisations combining all interests
   - combine bottom-up with top-down

9. *Changing finance and cost-benefit*
   - public sector budgets are expecting to be squeezed in all directions
   - enforce principle "more for less": trade-off between electronic and traditional services often cost more initially but much less in the longer term
   - consider not just technology but also organisational change and skills/competence development costs
   - governments have to look for new sources of investment and revenue

Strategies for the Czech e-Government

Strategies for e-Government should take all of the above issues into account. They need to be based, firstly, on a clear set of e-Government principles for Europe, and, secondly, upon a strategic approach which applies these principles to the actual entities in question and their requirements.

It is also possible from the work of PRISMA, to suggest a series of steps and strategies towards successful e-Government, as summarised in the rules below.

Recommendations for future projects

1. Tie e-Government initiatives more firmly into all areas of government policy, and ensure 'joined-up' government, integrating both horizontally and vertically, as necessary.
2. Make sure e-Government enhances all the roles of government (i.e. administration, regulation, service provision, institutional support for the localities' social, cultural, environmental and economic well-being, and democracy).

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[1] (Danish and German studies): enthusiasts - 30%, pragmatists - 26%, traditionalists - 25%, sceptics -19%

2 Huge potential as public sector is 40% of European GDP and there is much "catching up" to do.

3. Use e-Government to change what government does, not just do it better.
4. Develop a balance so that both efficiency and the public service ethic can be strengthened.
5. Measure benefits as well as costs.
6. Develop a notion of "universal service" for all citizens: access, affordability, skills, incentives, i.e. develop strategies which reduce the digital divide or at least do not exacerbate it.
7. Develop strategic alliances with a variety of private companies and civic and community organisations.
8. Create synergies between on-line services and ICT-supported ("warm") human services
9. Roll out e-services (e.g. using pilots, incubators, best practice and benchmarking), and learn from your own mistakes as well as from others.
10. Develop a new and re-vitalised notion of the European public service ethic in the Information Society.

What to do in the Czech agriculture to reach EU level of current e-Government

1. *Tie e-Government initiatives more firmly into all areas of government policy.*
2. *Use e-Government to change what government does, not just do it better.*
3. *Measure benefits as well as costs.*
4. *Develop a notion of "universal service" for all citizens: access, affordability, skills, incentives.*
5. *Develop strategic alliances with a variety of private companies and civic and community organisations.*
6. *Build a portal that integrates complete range of government roles and provides paths to them based on citizen need and life situations rather than department or agency.*
7. *Digital democracy -- transparent, open and accountable government.*
8. *Roll out services (e.g. using pilots, incubators, best practice and benchmarking), and learn from mistakes.*

Selected recommendations for the Czech Agriculture and rural development

Information kiosks

Studies show that low-income individuals, single-parent households and especially rural populations may be less likely to have access to computers and the Internet. In addition to the cost factor, some individuals may be unable or disinclined to acquire computer skills – but should be regular users of information networks. In this context, state agricultural administrative have to focused on the development of information "kiosks." These kiosks should be placed in public areas (shopping malls, banks, rural community centers, etc.), and use simple interactive processes. Specific conditions and users needs in agriculture require the governmental service providers to expand the number and variety of information kiosks available. The kiosks could be used for information on subsidies, new ordinances, health issues, employment opportunities, consumer product safety, and other topics, all in simplified formats to maximise agrarian public access.

On-line Government Phone Book

The functional logic of the yellow pages is usually somewhat less clear. A farmer knows what he is looking for, but he does not know where to start looking. These problems can improve functionally arranged "blue" [3] pages which could be available both on-line and in the local yellow pages. These could be easily located and electronically searched.

[3] Similar "blue pages" uses Federal Government for American farmers.

Free Digital Certificate Availability (ECDL) for all citizens

Digital certification is an important element of creating an on-line environment that ensures the trustworthiness of transactions. While various technologies can accomplish this objective, they each involve some form of digitally certifying the authenticity and integrity of data (e.g., letters and transactions) transmitted electronically across a network. A principal role in mutual e-services provision will have the electronic signature. Government should bear a differentiate amount of the cost of providing a free digital certificate to each farmer who will use the net service system and will take advantage of mutual on-line communication. This digital certificate could then be used whether the individual was acting on his/her own behalf, as a farmer or a company employee, or in any other capacity in which a signature is required.

Handle disparities in access to the Internet

A number of reports have been issued that analyse the disparities in access to the Internet according to population demographics, and discuss how those gaps are changing. According to some of these studies, some groups are less likely to have access to the very technology that is fuelling economic growth for other parts of the population. However, other studies show that this gap is changing because of the efforts of private companies and philanthropists in donating computers and sponsoring remote Internet services. This problems should be seriously treated and relevant research should be organised. The results of this studies would be made publicly available.

Learning from the private sector

The private sector clearly has led the way in using the Internet and other IT advances to break down communication barriers, slash procurement costs, streamline processes, boost productivity, and re-shape expectations for business-to-business transactions. The government can benefit substantially by adapting the lessons and harnessing the expertise of the private, non-profit, and academic sectors to advance the cause of e-Government. Reciprocally, substantial incentives exist for organisations in each of these sectors to bring these e-Government concepts to reality, given the associated economic opportunities, research needs, reduced cost of government interactions, and prospects for enhancing government services.

Private companies have been highly successful in using the Internet to re-design how they do business. As a result, they have slashed costs, improved production, and created new markets and better services. The federal government can learn from the private sector, to apply the lessons of private businesses to improving government on-line services:

Improve citizen access

Government officials can use web sites to hold on-line meetings, press conferences, case studies and on-line advisory services.

Enhanced search capability

With the ever-increasing demand for information to be posted on the Internet, users can see that private institutions web sites are better arranged then the government web sides. Even when the desired information is present, people searching the government web site may not find it easily because of how the information is arranged. The government should take measures to improve the "searchability" of its on-line data. [4]

[4] E.g. such as creating a government-wide resources index that helps users determine where information is located.

Improved organisation of Government information

All ministries and state agencies already have some degree of presence on the Internet, in the form web sites. In their current state, these sites serve as individual and specific "portals" to provide citizens with access to a vast array of public information. Some experts believe that the public would be better served if these efforts *were better co-ordinated*.

Private co-operating companies

The Ministry owns a vast amount of information (in the form of reports, databases, and other records) that could be much more useful to farmers, enterpreneurs and citizens producing and living in rural areas if it were packaged differently or organised more efficiently. Much of this information has never been placed in electronic form, or may be arranged in a format that is difficult to access and/or understand. Significant opportunities may exist to provide this information to interested users in user friendly formats. As envisioned here, public-private partnering could be used to identify information categories that would be the highest in citizen demand. 5 The benefit lies in repackage of the information and attracting new potential users on the market. Private organisation may be able to find other markets for the information, such as clients willing to pay for additional analysis and research based on the government data.

Privacy issues

In the future, it seems almost inevitable that farmers and citizens as well as and businesses will conduct more and more government interactions on-line. Despite the opportunities this future holds, however, the potential of the Internet for government services will not have fully explored until individuals feel confident about how the government protects their privacy in on-line interactions. Ministry agencies have diverse missions, and the information collected from a visitor to a given agency web site may legitimately be used very differently than it would be used at a different agency web site. A fundamental premise of e-Government privacy must be that the individual visitor knows (1) what type of personal information is collected, if any, (2) when that information is collected, (3) how that information may legitimately be used. This allows the citizen to make an informed decision about whether or not to reveal personal information as part of a given government transaction.

Subsidy of virtual education

Increasing the computer literacy both of the citizens and of the officials can help to ensure that, as citizen-to-government interactions become more automated, government employees are ready to actively participate in the transition. This increase in computer literacy can be achieved, in part, by ensuring that federal employees have easy access to computers, the Internet, and a broad range of computer training. The Internet has remarkable potential as a distance learning tool, and efforts have been underway for years, in the academic sector, to tap that potential.[6] Virtual education based on on-line communication can help in providing of education for adult employees by means of on-line certified computer courses at various skill levels, and to make that curriculum available at no charge to all government employees.

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[5] "Value-Added Network"–is a company in USA that repackages information or performs similar services for commercial construction companies – it presets converting data in an electronic format and places it on-line, with little or no charge to the government agency.

6 A significant is the "Learning Anytime Anywhere" (programmes LAAP), administered by the universities, which increase the quality and improve the focus of on-line university programs.

e-Governance in the Czech Republic

The role of major co-ordinator for public administrative information systems building and development in The Czech Republic (The CR), covering also regions and communities, is in accordance with The Code 365/2000 Digest[7] dedicated to *Office for Public Information Systems*. The Office is a body of The CR state administration. Publishing standards for the information systems area and testing of ability to meet those standards are major instruments for availability their competency. The evaluations are lent to independent institutions. The mission of these institutions is to ensure the evaluation of public administration information systems. The Office acts as a major contact institution for European Commission in the area of various questions regarding information society development.

State Information Policy in the agrarian sector

The Ministry of Agriculture of the Czech Republic has adopted a strategy based on *State Information Policy* to be governmental basic instrument, which affects a new era of information society entrance for producers and other population operating in the agrarian sector. The document includes following goals and areas of state information policy:

- information literacy
- e- democracy
- public administration information systems development
- communication infrastructure
- information systems credibility and security and personal data protection
- electronic commerce
- transparent economical environment
- stable and secure information society.

Government has adopted *Public Administration Information Systems Building Conception*[8]. *Action Plan of State Information Policy Implementation* (its purpose is to present preparedness of central public administration bodies to take information society vision by direct and indirect activities to real benefits felt by citizens and to present ability to put principles of co-operation with other subjects in practice, in particularly self-government and business community when trying to reach state information policy goals) was adopted by The Czech Government in May, 2000. It is the most interesting instrument for filling the *State information policy goals*.

The CR joined program goals "*e*Europe + Initiative"[9] together with other candidate countries for the EU entry. The primary goal is to use opportunities, offered by the new, digital and knowledge-based economy to acceleration and economy development. The *Action Plan*, which is actualised by Government, in sense of reflection both State information policy priority areas and *e*Europe+ is prepared [10].

Targets for on-line service delivery for e-enabled public services

Basic starting points for on-line service delivery for e-enabled public services are defined by *State information policy*. One framework Action Plan for State Information Policy Realisation programs is e-Government. The program is based on *Building Public Administrative Information Systems Conception* and activities of *Government Council for State Information Policy expert groups*. Items were covered by a common framework program – *Electronic Public Administration*, according to the fact, most of items mentioned in

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[7] The Code On public administrative information systems.

[8] On 11th of October, 1999, following Government Resolution No 525/99, Article III (see Government Resolution No 1059/99).

[9] On June 2001 at The EU summit in Swedish Göteborg (15. – 17. 6. 2001).

[10] For further information see www.uvis.cz.

the documents are cross-sectoral and relate to more areas of priorities to be ensured. Common output of these projects leads to both total changes in processes, which provide public administration functions and results felt by citizens and businessmen as public administration services.

Goal of framework program *Electronic Public Administration* is modified to fit needs of farmers and to start operation of selected public administration e-services by 2002. The goal state for agrarian sector is characterised as follows:

- At least 10% of public administration contacts should be realised electronically by the end of 2002.
- Contact of farmers and countryside citizen with public administration will be enabled consecutively 24 hours a day and 7 days a week (i.e. direct access of citizen into public administration bodies' electronic databases).
- Access will be enabled all over the area of The CR.
- Public administration functions will be rationalised and accessible through public administration contact places.

General principles of projects tending to fill the goals are, in particular:

- Common usage of information kiosks and presentation sites at Internet and other forms, which could be used for full scope public administration contact (beside personal contacts "at e-desk", mailing, telephone).
- Public administration services (like information provision and in particularly citizens and businessman affaires execution) are electronically available 24 hour a day and 7 days a week.
- Realisation of changes in the way offices work, thanks to usage of information and telecommunication technologies, building public administration contact places up.

Electronic signature gains ground step by step. It is anchored in The CR Law[11] as an instrument for facilitation of citizens and companies access to on-line public administration services.

Role of private, voluntary or community sector in e-Governance

The Czech Government endorses its role in process of information society creation in area of *State Information Policy*. Simultaneously it reflects the significant role of the public, which is influenced by *State Information Policy* and it shares in the policy realisation.

Czech Forum for Information Society

Czech Forum for Information Society (CFIS) was established to promote dialogue of the public with information society. CFIS was established by the Government [12] as an advisory body reflecting both expert and social aspects of state information policy realisation and information society development in connection with experts and others. CFIS concentrates experts and public representatives, who are delegated for period up to three years to solve particular questions cohering with information society development. When executing expert activities, The CFIS creates working groups, composed by CFIS members and other participant in accordance with groups focus. Contemporary CFIS has six working groups: Literacy for 21st Century, Electronic Commerce, Companies and Enterprises Transformation into 21st century, Health Care in Information Society, State as a Service for Citizen and Harmony Development of Information Society.

CFIS mission is to support dialogue on information society development and on its technical, technological, educational, social, cultural, religious, sociable, economical, ethic,

[11] Code No 227/2000 Digest.
[12] In June 1999.

security, environmental and defensive aspects, on risks and opportunities and on government and public role in this development.
The public is enabled, through the medium of CFIS activities, to actively participate on state information policy realisation, on solving problems relating to information society establishment and simultaneously to address government and its institutions and to influence decision making at all levels.

Center for Electronic Commerce and Association for Information Society

Center for Electronic Commerce and Association for Information Society belongs among most significant independent associations, which are often partners when preparing strategic governmental documents in area of e-Government. See http://www.info-forum.cz/.

Center for Electronic Commerce

Center for Electronic Commerce (CEC) is an expert non-profit organization, which associates organizations and individuals with professional interest in electronic commerce, Internet and wider aspects of information society development. CEC mission is to enable community of its partners (on membership basis) to interchange information and knowledge and to provide platform for common projects of commercial sphere, public administration and universities.
CEC mission is:

- to support and systematically monitor The CR electronic commerce and information economy development
- to be a link between commercial sphere, public administration and universities when co-ordinating activities in area of information economy development,
- to function like a information and communication junction in relationship with similar type of centers and structures abroad
- to popularise Internet and electronic commerce principles in area of expert and secular public through informational-educational activities.

See http://www.e-commerce.cz/default.asp.

Association for Information Society

Association for Information Society is profession association of approximately 50 companies from area of information and communication technologies. Its goal is to evaluate information society development. See http://www.spis.cz/.

Cities and Communities Union

Cities and Communities Union of The CR (SCU) is voluntary, non-political and non-governmental organisation. Communities are its regular members in sense of Code On Communities. Commission "*Cities and Communities Information Systems*" operates within SCU. See http://www.smocr.cz/.

Nemoforum

Nemoforum is special-purpose association. Its members are significant public administration organizations, professional associations, chambers, associations and universities, having relationship with information on realties and geographic information systems.

The purpose of Nemoforum is to support the solution of problems, make plans, co-ordinate activities relating to administrative needs and territory development and its data an also co-ordinate development in the area of information concerning realties and territories and to realize these suggestions (if they are in sphere of participants´ competencies) or to initiate solutions using other subjects. See http://www.vugtk.cz/~nemoforum/.

Legislation and regulation

Personal data protection. The Czech Parliament adopted in the 2000 Code No 101/2000 Digest On Personal Data Protection. The Code defines number of notions connected with personal data and their protection13 and further it states conditions for work with personal data both in letter and electronic form. A separate part of The Code is created by establishment and building up the *Office for Personal Data Protection* and its organization, authority determination and Office obligations. The Code conception rose from The EU Directive No 96/45 On Personal Data Protection.

Electronic signature. The Code No 227/2000 Digest On Electronic Signature was prepared following appropriate EU legislation and consequently it was adopted in 2000. The Code determines rules and legal framework for electronic signature usage when sending messages and documents in electronic form. It further determines conditions for issuing qualified certification on guaranteed electronic signature and conditions for accreditation lending to certification services provider. Government regulation No 304/2001 Digest follows both legal regulations. It deals with the method of electronic signature usage in area of public administration.

Free Access to Information . The CR Parliament adopted Code No 106/1999 Digest On *Free Access to Information* in 1999. The Code orders public administration bodies (state administration and self-government) to present information at public desks and to ensure access to the information through distance access (for e.g. using Internet). The Code determines, in another part, rules on citizen's possibility to ask for information provision from public administration bodies. The Code respects in this Article legal regulation On Personal Data Protection and legal standards on classified realities protection. Besides here above mentioned, there was issued Code No 123/1998 Digest On Information Right On Environment.

Unique personal identifiers. For more than then 50 years, a common identifier has been used by The Czech Citizens – *birth number*. Date of birth and gender is coded in the birth number. The identifier is used for all evidence ordered by Code and like personal data it is principally liable to personal data protection in accordance with Code No 101/2000 Digest. At present, the possibility of new identifier creation and establishment is discussed. It should represent only a sequential number and would exclude any other than identification information in identifier.

Identity Cards. Each citizen of The CR has, so called *citizen certificate*. This document is only in a paper form and contains the most important personal data, i.e. name, surname, surname when married, data of birth, place of birth, birth number, permanent residence address, marital status. Works on electronic (chip) identification cards started to run in the last period. Meanwhile, they are running pilot projects in the framework of health insurance and there was also prepared a pilot project of public administration employees profession chip cards. Both pilot projects are in a state of implementation. Results should be evaluated this yea and the next procedure should be determined14.

National databases. However, in The CR, they are available in public and electronic form (i) *business register of corporate bodies*, (ii) *statistic register of economic subjects* which covers all economic subjects types. Further it could be mentioned *meta-information*

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[13] For e.g. it defines personal data, sensitive personal data, processes of personal data operations etc.

[14] Notice: Unique identifiers of economic subjects – practically from beginning of ´80 they were in Czechoslovakia and now in The CR they are used a unique identifiers for enterprising and non-enterprising subjects, which exercise some economic activity on special Code basis. Statistic service is responsible for identifiers system and their assignment is provided by particular registration places.

system MIDAS on geo-informational resources, which contains information on geo-data files, which are recorded by The CR public administration bodies.

Digital divide at local, regional and national level

The *Czech government did not accept any conceptual document engaged in "digital divide"*. It is necessary to mention, that one of the State Information Policy principles is an active reduction of the bad impact of information technologies development on less educated citizens, on economically or socially handicapped, and physically disabled persons. The Czech government knows this problem and so supports all actions minimising negative consequences of "digital divide", especially in the field of education. Among the most important ones belongs the *State Information Educational Policy*, processed by the Ministry of Education, Youth and Sports, public library services, preferential Internet access for the disabled, and some projects of the Ministry of Labor and Social Affairs.

a) Ministry of Education, Youth and Sports

In March 2001, the government passed the "*Plan of the First Period of the State Information Educational Policy*" (AIPVZ) and in this way a very ambitious project began. The government will assign the amount of 7.5 billions of CZK to this project in years 2001 - 2005.

The aim of the first period (the second period will be devoted to common public education) was to establish conditions for effective and meaningful implementation of information and communication technologies (ICT) to curricula of elementary schools, grammar schools, high schools and apprentice centers. By 2005, all school leavers should have "information literacy" and 75% of teachers should use ICT in their everyday life and work. All these kinds of schools should be able to participate effectively in a program of lifetime learning in the field of ICT.

The realization of AIPVZ is divided into 3 projects:

- *Project I – Information Literacy*

The aim of this project is to *obtain basic knowledge and skills by 75% of all teachers*. 25% of teachers should be on the advanced user level and school activation in the field of ICT use. The qualification growth of ICT co-ordinators and a variety of special ICT courses will be guaranteed at all schools.

- *Project II – Educational Software and Information Sources*

The aim of the second project is to *obtain effective integration of ICT to the teaching process*, education and school operation and to establish conditions for new teaching methods implemented in information background. This program is based on the Educational Portal.

- *Project III – Infrastructure*

The aim is *to provide, in 5 years, to all teachers and 8 % of pupils, a parallel access to the Internet* and other selected services of the information and communication infrastructure available at provided computers.

To be able to implement the main objective, it is necessary to provide schools with a LAN, (local computer network), quick enough, and in the each phase of the project implementation sufficiently sized. All the basic and secondary schools should be equipped with such a LAN in 3 years.

b) Ministry of Culture

In the frame of the program "*Public Information Services for Libraries*", by the end of 2001, all the professional libraries (approximately 1000) were connected to the Internet. By the end of 2004, there will be 5000 more public libraries connected to the Internet end equipped with computer technology (Internet accessibility at public places will reach 90% of the population).

c) Ministry of Labour and Social Affairs

The Ministry suggested a pilot *project focused on the creation of approximately 6 centers for transfer of knowledge and skills in informatics in the regions of higher unemployment*. All that is in the framework of the Action Plan of information literacy improvement and improved re-qualification possibilities.

The popularisation of information technologies through mass media is also going on, especially the popularisation of Internet possibilities.

What to do - future trends and themes

Paper reported on some of the recently completed work of the EU-supported PRISMA project examining the best of e-Government experience across Europe in relation to technology, organisational change and meeting the needs of the user (citizens and business). These should be used to build future-oriented best practice models and providing comprehensible and useful tools for practitioners and researchers to guide their decision making and research priorities respectively.

The importance of government is clear. Not only are we all dependent upon its services and the framework of law, peace and stability it provides, but in Europe it also contributes 40% of GDP. Over the past few years, however, the concepts of government and governance have been dramatically transformed. Not only is this due to increasing pressures and expectations that the way we are governed should reflect modern methods of efficiency and effectiveness (like the best of business) but also that governments should be more open to democratic accountability.)

e-Government is not just *about a government portal* with services offered electronically. It is also very much about the need to use ICT to support better *quality "warm" human services*, so that government 'on-line' complements rather than substitutes for government 'in-person'. These goals can be simultaneously driven by and are the result of:

1. Intra-and inter-governmental reengineering.
2. The needs to strengthen efficiency, the public service ethic and democratic and open In this sense, it is appropriate to talk of "government process re-engineering, including not only services and relations with customers but also transparent, open and accountable government processes and relations with citizens in the digital democracy. This deep modernisation of government implies a transformation away from legacy systems inherited from the past and traditional ways of doing things (whether these be in relation to technology, structures, work processes or attitudes) and the development of a new culture of governance in public services.

Among the particular e-Government trends and themes identified by PRISMA which are likely to be increasingly important in the future are:

- the shift from "cold" administration to "warm" ICT-supported human services (e.g. smaller, ICT-automated back office, larger front office with more frontline ICT-supported human services), including improved cost-effectiveness and quality of administration procedures.
- new innovative services and practices based on state-of-art ICT, including built-in benchmarking (e.g. citizen satisfaction), scalability, interoperable multilingual access platforms, change management, etc.
- cross-border administration enabling access to mobile services from anywhere, anytime, including multi-modal self-service terminals (Internet, voice, video)
- common entry points to public services, including consistency of information and quality of service (completeness, coherence, relevance, timely delivery). This includes systems to

manage complex procedures involving authorisation by different administrations on local, regional and national levels

- personalisation and customisation of e-Government services, in terms of content, functionality, delivery, access, interface, and technologies for identification, protection of individual rights, confidentiality and privacy.
- build e-services which can learn (e.g. through neural processing) how the user uses the service and personalise it on a on-going basis (the user learns together with the system and gets personalised support)4
- mobile and electronic ('me') government, including mobile and multi-channel access to services for all and increased trust and confidence by citizens and councillors
- tools to ease integration of services and workflow, including integration with legacy systems, knowledge management and learning systems based on natural language processing. This should also include semantic web systems and intelligent agents for fast information search, as well as knowledge management systems for European networks and focused groups
- distributed artificial intelligence for e-Government to achieve better transparency (e.g. regulations and entitlements)
- "business" models for scalable packaged sets of services (public-public and private-public) involving citizens, councils and communities (C2C services) and balancing customised large scale turnkey solutions against outsourced and standardised solutions
- trust, security and confidence systems, including data protection and privacy systems, to support citizens' requirements for anonymity, authentication and reliability of information, also in relation to fighting crime and terrorism against electronic, physical and personal property, as well as coping with emergency/risk situations in local and regional territories
- radical strategies and models of organisation and service delivery for inclusiveness (i.e. access for all and counteracting the digital divide), including systems to improve basic services to the community (basic health, elderly care, e-learning and social services).

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