ELECTRONIC SUPPORT OF PUBLIC PARTICIPATION IN THE DEVELOPMENT OF LEGISLATION: THE LEX IS PROJECT

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Abstract

Information and Communication Technologies (ICT) can play an important role in facilitating the involvement of citizens and enterprises in the development of legislation and in managing the increasing complexity of the legislative processes. In this direction the main objective of the EU funded project LEX-IS is to improve the legislative process in National Parliaments through enhancing public participation in the preparatory stages (legislation proposal formation and public debate of draft legislation) with the use of state-of-the-art ICT-tools and methodologies. The main goals of the project are: a) development of tools for managing the complex legal frameworks and structures, b) development and use of ontologies and metadata schemas for the semantic annotation of legal elements (e.g. directives, laws, decrees, etc.), c) modelling of the draft formation and public consultation process using standard process management approaches such as BPMN to support direct integration in common workflow management systems and d) provision of tools for the active participation of citizens, businesses and non-governmental organizations in the above stages of the legislation process d) using argumentation support systems and web-based annotation facilities (ontology, semantic web services, Web 2.0, etc.) to the legal drafts. Using the above technologies the project aims to contribute to engaging citizens online, with special emphasis on the younger ones; bridging the growing gap between citizens and the state, represented by National Parliaments; improving the legislation process and its outcomes; and promoting e-Participation awareness.

1. Introduction

In many countries a lack of support by the public to the political system and a negative attitude towards politics can be observed, one of its symptoms being the low turnout of the voters in the elections [23], [24] [3], [4]. The political communication, instead of being a dialogue deliberation, tends to be monological, professionally produced and released for public consumption mainly based to a large extent on marketing criteria. At the same time the social problems have become more difficult and multi-dimensional, and the decision-making at all levels of government more complex, necessitating the involvement of more parties and interests than in the past. In this complicated and difficult context governments aim at designing effective and efficient public policies, which incorporate the knowledge and expertise of many stakeholders. These pubic policies should be widely supported by the stakeholders and by their societies in general. For the above reasons,

participation of citizens, businesses, non-government organizations, socio-economic and political groups, etc. in public policy-making is today of critical importance for the legitimacy and the effectiveness of governments and for the cohesion of the societies, even though it is a lengthy, complex and an expensive process.

A significant part of this public participation in policy-making falls into the mission of the National Parliaments, which have as one of their basic missions to approve (i.e. after detailed examination and discussion vote in favour of or against) various types of statutes (i.e. legislative acts, typical laws, etc.). A typical legislation procedure in Parliaments includes discussing, working out and passing typical laws and can be facilitated if the statutory authority collects (and acts upon) evidence, opinions and perspectives from all the interested or affected citizens and their associations. However, Parliaments of most countries represent citizens living in large and sparsely populated areas, so frequent face-to-face meetings with the Members of the Parliaments are impractical. In addition, the general lack of public awareness concerning the participative options available, and also the abovementioned alienation from the existing political system and its structures and the negative attitude towards them, create more barriers to a wide and substantial participation of all the stakeholders who are interested in or are affected by the statutes discussed in the Parliaments.

Information and communication technologies (ICT) can be very useful for addressing the above challenges. The EU 'i2010 eGovernment Action Plan' stresses that [4] 'ICT has great potential to involve large numbers of citizens in public debate and decision making, from municipal to European level', and sets as a basic priority the full exploitation of the capabilities offered by ICT for 'strengthening participation and democratic decision making'. In the same direction the Organization for Economic Co-operation and Development (OECD) states that 'Engaging citizens in policy-making is a sound investment and a core element of good governance' and that in this direction the ICT can be very useful, which 'are already transforming relations between governments and citizens'[23]; furthermore OECD concludes that 'all OECD member countries recognise new ICTs to be powerful tools for enhancing citizen engagement in public policy-making' since 'The unprecedented degree of interactivity offered by new ICTs has the potential to expand the scope, breadth and depth of government consultation with citizens and other key stakeholders during policy-making', but there is 'limited experience to date' in this area [24]. Especially in the legislation area it is expected that the use of ICT tools and applications has a great potential to support and improve the whole legislation process and its outcomes, so that it can result in better and more widely accepted legislation [5]. However, the experience in this area to date is quite limited.

The LEX-IS project (its full title being 'Enabling Participation of the Youth in the Public Debate of Legislation' among Parliaments, Citizens and Businesses in the European Union) attempts to contribute in this direction. It is part of the 'eParticipation' Preparatory Action of the European Commission [5] (http://www.eu-participation.eu). Its main objective is *to improve the legislative process and output in the National Parliaments by enhancing public participation in the preparatory stages* (legislation proposal formation stage and public debate of draft legislation), *with special emphasis on the youth, using advanced ICT-based tools and methodologies, such as ontologies, metadata, argumentation support, facilitation and visualization methods, process management approaches*. The main research questions addressed in this project are:

- Which are the best ways of using these advanced ICT-based tools and methodologies for supporting and enhancing public participation in the preparatory stages of the legislation process?
- How useful are these advanced ICT-based tools and methodologies, and what is the value they generate?
- Which are the main factors that determine this value (quantitatively and qualitatively)?

- Which are the main barriers to the wide use of such ICT-based tools and methodologies by the public (e.g. the main stakeholders of the legislation developed by the Parliaments)?

This paper is structured as follows: Initially in section 2 the background of this project is described briefly. Section 3, outlines the objectives of the project, while section 4, demonstrates the technological architecture the participation platform will be based on. In section 5 is presented the project methodology (consisting if analysis of requirements, adaptation of the technological platform, execution and evaluation of pilots, dissemination of results and study of sustainability-viability) and finally, section 6 summarizes the conclusions.

2. Background

As mentioned in the introduction ICT has a great potential to support and improve the engagement of citizens in public policy-making. The underlying assumption thereby is that ICT is exploited properly and in combination with other 'traditional' methods that have been used in the past for citizen engagement. According to the OECD the basic precondition for an effective engagement of citizens in public policy-making is the provision of relevant 'information' to citizens. The most important tool in this direction is the organization of effective 'consultations' with appropriate participation means; *the vision thereby being to achieve 'active participation'* [23]. ICT can support all key levels of citizens' engagement in public policy-making by enabling [9]:

- eInforming, which refers to a one-way channel that provides information from either government such as official websites, or citizens such as ePetitions.
- eConsulting, which is a limited two-way channel where official initiatives by public or private agencies allow stakeholders to contribute their opinion, either privately or publicly, on specific issues.
- eCollaborating, which is a more enhanced two-way channel. It acknowledges an active role of all stakeholders in proposing and shaping policy - although the responsibility for the final decision rests with officials.
- eEmpowering refers to the placement of the final decision in the hands of the public, e.g. legally binding referenda.

Various types of ICT tools and applications are reported in literature (e.g. [21], [24], [13], [16], [17], [19], [2], [9], [10], [22]), which have potential to support and improve citizens' engagement in each of the stages of the public policy-making cycle; the most important of them are shown in Figure 1.

Stage in policy-making cycle	Information	Consultation	Active Participation
Agenda-setting	- site-specific search engines - e-mail alerts for new policy issues - translation support for different languages - - style checkers to remove jargon	- online surveys and opinion polls - discussion forums - monitoring emails - bulletin boards - frequently asked questions (FAQs)	- e-communities - e-petitions - e-referenda
Analysis	- translation support for different languages - style checkers to remove jargon	- evidence managed facilities - expert profiling	- electronic citizen juries - e-communities
Formulation	- advanced style	- discussion forums	- e-petitions

Stage in policy-making cycle	Information	Consultation	Active Participation
	checking to help interpret technical and legal terms	- online citizen juries - e-community tools	- e-referenda amending legislation
Implementation	- natural style language checkers	- discussion forums - online citizen juries - e-community tools	- email distribution groups fro target groups
Monitoring	- online feedback - online publication of annual reports	- online surveys & opinion polls - discussion forums - monitoring emails - bulletin boards - frequently asked questions (FAQs)	- e-petitions - e-referenda

Figure 1*: Tools for e-engagement in each stage of the public policy-making cycle [24]*

Very promising for supporting and facilitating a substantial, deep and effective e-participation can be the existing methods and systems for representation and facilitation of argumentative discourses, which have been developed from the extensive research that has been conducted in this area ([6], [15], [12], [18], [16], [17], [19], [9], [10], [22]). Many interesting systems have been developed for this purpose, based on alternative models of argumentation structuring, such as the IBIS (Issue Based Information System) [6], [7]; the HERMES [15], the ZENO [12], etc. These systems can provide a computerized facilitation and graphical representation of online debates, mapping the issues and the diversity of opinions formulated in order to enable a wider audience to deliberate better the emerging issues. As argued in Kirschner et al. [18], the visualization of argumentation can facilitate problem solving in many ways, such as in maintaining focus on the overall process, in maintaining consistency and in increasing plausibility and accuracy. A generalization of these systems is the 'Structured Consultation System' [19], [20], [22], which offers to each participant in an e-consultation the capability to enter semantically annotated positions (e.g. problems, complaints, agreements, disagreements, etc.), based on a pre-defined 'Consultation Ontology'. This term denotes a set of allowed kinds of elements the participants can enter in the e-consultation and of the allowed relations among them. Consultations structured in the above sense, using appropriate ontologies, either from the public policy domain (e.g. [20]) or from the legal domain ([29],[1]) can be very useful for facilitating and supporting advanced forms of e-participation.

Especially in the area of legislation development it is expected that the use of ICT tools and applications has a great potential to support and improve the five stages of a legislation process (adopted from Howlett and Ramesh, [14]):

1. *Agenda setting:* establishing the need for a legislation or a change in legislation, and defining what the problem to be addressed is (e.g. by Ministries and relevant institutions).
2. *Policy formulation (drafting legislation):* Defining the challenges and opportunities associated with an agenda item (e.g. debating draft legislation) more clearly in order to produce a draft policy / legislation document. This can include: gathering evidence and knowledge from a range of sources including citizens and civil society organizations; understanding the context, including the political context for the agenda item (legislation); developing a range of options (e.g. in Parliaments with participation of citizens, businesses, non-government organizations, socio-economic and political groups, etc.).
3. *Decision making:* Coming to a final decision on the policy.
4. *Implementing the policy / legislation:* This process refers to the act, where governments put policies / legislation into effect.

5. *Monitoring the policy / legislation:* Follow-up/monitoring of the legislation life-cycle (e.g. amendments, impact, etc.), which can involve evaluation and review of the policy in action, research evidence and views of users. Here there is also the possibility to loop back to stage one.

By supporting the different policy lifecycle stages with ICT to engage also citizens, better and more widely accepted legislation shall be achieved [4], [5]. For this purpose the following kinds of ICT can be very useful:

- Visualisation of arguments, dialogues and impacts of legislation
- Tools for assessing cost and benefits of proposed or adopted legislation
- Tools for reducing the complexity of legislation in order to improve access to its content by non-specialists
- Techniques of organizing and structuring legislative information, thus improving use and content access, through e.g. standardisation and harmonisation
- Tools and services to allow access to relevant legislation content according to specific needs of citizens, socio-economic groups, etc.
- Tools and services to enable interaction between Members of Parliaments and citizens or socio-economic groups on cross-border EU level issues.

3. Project Objectives

The main objective of the LEX-IS Project (http://www.eu-participation.eu/lex-is/) is to improve the legislative process in National Parliaments through enhancing public participation in the preparatory stages (legislation proposal formation and debate on draft legislation) with the use of state-of-the-art ICT-based tools and methodologies, specifically focusing in enhancing the participation of younger citizens. This will be achieved through:

- Applying existing advanced ICT-based tools and methods for managing the complex legislative frameworks and legal structures.
- Developing ontologies and metadata schemas for the semantic annotation of legal elements, so that all involved parties can easily locate and interpret the necessary information with the use of internet-based retrieval tools.
- Modelling and representation of legal elements (directives, laws, decrees) in order to assist argument visualization and legal impact for the public.
- Providing means for the actual and substantial participation of citizens, businesses and non-governmental organizations in the preparation and debate phases.
- Modelling of the exact process followed during the above two preparatory stages of the legislative process using workflow management technologies.

Using the above technologies the LEX-IS Project aims to contribute towards:

i) engaging online citizens, with special emphasis on the younger ones, businesses and non-government organizations (NGOs), in public policy-making,
ii) enhancing and improving the communication and interaction between the civil society, the formal politics and the administration,
iii) gathering informed evidence from the society concerning public policy issues, which is structured in a clear and unambiguous manner, in order to provide useful input to the Parliaments and make them view policy issues from the perspective of the public; the Parliamentarians can use this evidence for judging the level of public support for each public policy or legislation they create, and perhaps revise or change it in order to increase its acceptance and support by the public.

iv) promoting public awareness concerning eParticipation.

The consortium of the project includes ICT companies and academic institutions with proven experience in eGovernment and eParticipation, as well as National Parliaments from EU Member States.

4. Technological Architecture

In Figure 2 we can see the technological architecture of the platform the project will be based on, which consists of three basic blocks:

- the Universal Storage Subsystem,
- the Core Functionality Subsystems,
- the Participative Services Subsystem (web front end).

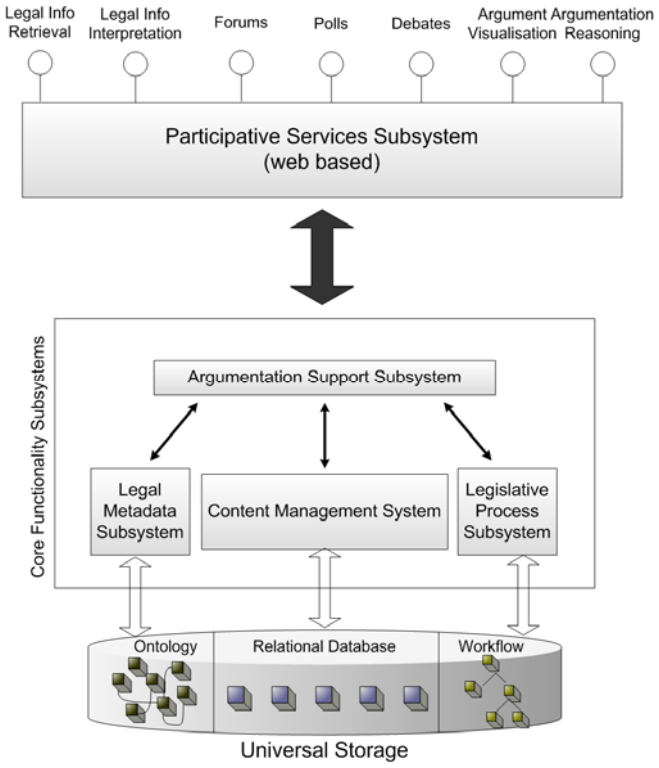

Figure 2: Platform Technological Architecture

The *Universal Storage Subsystem* is the main storage facility of the system and it comprises three distinct repositories:

a) The *Ontological Repository* for Legislation/Legislative Information, which constitutes the main area for storing legislation and legislative information. This repository is based upon a legal framework ontology, which is developed by the project consortium, and proposes a novel way to organise and structure legal information, using ontological features that enhance content access and content interpretation.

b) The *Relational Database*, which is a standard database for the storing all conventional data and information that will be handled by the system, such as user profiles, information about polls, discussions, debates, mailing lists, etc

c) The *Workflow Model Repository*, which stores the necessary models of the legislation process, related user roles and accompanying actions for all the sub-stages of the above two stages of the legislative process that will be supported by this platform (legislation proposal

formation and debate). This workflow approach enables the system in each of these stages and sub-stages to be fully aware of the user groups that are allowed to participate and provide them with the support they require at this particular time through a series of specially customized services (e.g. information retrieval, argumentation, argument visualisation, etc.) according to their profile.

The *Core Functionality Subsystems* comprise:

i) The Legal Metadata Subsystem, which utilizes the abovementioned legal framework ontology in order to store and retrieve legislation and legislative information in the Universal Storage Subsystem.

ii) The Content Management Subsystem, which will be based on the content management system DOC ASSET of the Athens Technology Center S.A., will allow the stakeholders/policy makers to capture, store and manage digital content in any format (e.g. documents, images, excel files, PDFs, audio files, video files, etc.).

iii) The Legislative Process Subsystem, which enables the whole platform to be legislation process stage and sub-stage aware, and provide to the various user groups the appropriate participative services to match their needs at each stage and sub-stage.

iv) The Argumentation Support Subsystem, which provides the necessary argumentation support to every category of users, using methods and tools from the domains of Computer Supported Collaborative Argumentation (CSCA) and Computer Supported Argument Visualization (CSVA) (see [18]), which provide computerized facilitation and graphical representation of online debates, that maps the issues and the diversity of opinions expressed by the participants, in order to enable a wider audience to deliberate substantially on a public policy topic.

The *Participative Services Subsystem* constitutes the web front end of the entire platform; apart from externalising the final endpoints of the provided services to the users and performing the required user authentication during their log on, it provides the necessary interfaces in order to register user requests (which in turn are dispatched to the proper core functionality subsystem in order to be carried through) and to present to the users the results after the end of the processing of their requests.

5. Methodology

The project will me implemented through the following Workpackages (WPs):

I) *Baseline Definition* (WP1) includes the definition of the various users groups and the specification of the requirements of each user group from the LEX-IS eParticipation platform. Additionally, in this WP a detailed model will be constructed of all the sub-stages of the two first stages (legislation proposal formation and debate on draft legislation) of the legislation process (including roles and responsibilities of involved parties). Extending the work made in the GENESIS IST project on legal frameworks representation (Gionis 2006), an ontology of legal frameworks at National and EU level will be formulated, which will include the structure, type and content of EU legislation, treaties, regulations, directives, decisions, etc. as well as National legislation, constitutions, laws, presidential degrees, etc. This ontology will be used for organizing and structuring the legislative information in order to improve access and use of it by non-specialist, and for improving the level of communication and interaction between institutions of legislative nature and the society. Finally, the argumentation support, facilitation and visualization functionalities of the platform will be designed in detail, taking into account existing methods and systems for representation and facilitation of argumentative discourses, which have been developed from the extensive research conducted in this area and have been summarized in section 2.

II) *Platform Adaptation* (WP2) includes initially the adaptation, final configuration and integration of the main subsystems of the LEX-IS platform and their testing in laboratory conditions; then a first version of the LEX-IS platform will be made available to the consortium online, and based on their remarks the necessary modifications will be made in the LEX-IS platform so as to produce its final version.
III) *Pilots Planning, Execution and Evaluation* (WP3) aims at planning, preparing and executing the pilot trials for the system in realistic conditions that will comprise more than 300 end users (namely 50 Members of Parliaments, 50 Businesses, 100 Citizens and 100 Young People). These pilot trials will be executed both at a European Level (at the Model European Parliament) and at a National level (Austrian and Lithuanian Parliaments). A detailed plan will be developed for the entire pilot operation, prescribing all the participating parties, their roles and obligations during the execution of the pilots. Furthermore, the plan will elaborate all the accompanying actions that need to be carried out, such as promotion, training of the pilot users, drafting of specific scenarios to be followed by them, provision and installation of the necessary infrastructure for the effective system operation and setting up of the needed methodological framework in order to capture the full set of results of the pilots. Additionally, this workpackage includes a complete evaluation of the whole LEX-IS system, both from the Parliaments perspective, based on the evaluation framework proposed by the OECD (OECD, 2003), and from the participants perspective, based on models and conclusions from the extensive previous research that has been conducted in the area of technology and innovations acceptance, such as the 'Theory of Reasoned Action' (TRA) (Sheppard et al, 1988), the 'Technology Acceptance Model' (TAM) (Davis, 1989; Venkatesh and Davis, 2000) and the "Innovation Diffusion Theory" of Rogers (2003). The basic user acceptance determinants proposed by the above theories and models will be analysed into a number of items suitable for the special characteristics of e-participation.
IV) *Results Viability and Dissemination* (WP4) will be conducted throughout the lifecycle of the project; a wide range of tools will be used in order to effectively disseminate the basic concepts and results of the project, such as electronic and printed newsletters, project web-site, press releases, publications, workshops, etc. Also the viability and sustainability of the project after the end of this contract and without the EU financial support will be examined.
Also the *Project Management* (WP5) will include a series of activities aiming at monitoring and coordinating all project activities and ensuring conformance with the project plan and the quality plan, and also at mobilising project resources among the participating three Parliaments – pilot sites and five EU member states.

6. Conclusions

In this contribution the background, the objectives, the technological architecture and the methodology of the LEX-IS project has been described. Its basic objective is to use and evaluate advanced state-of-the-art ICT-based tools and methods, such as ontologies, metadata, argumentation support, facilitation and visualization methods, advanced process and workflow management, etc., for improving the legislative process in National Parliaments through enhancing public participation in its first two preparatory stages (legislation proposal formation and public debate of draft legislation). This project aims at addressing interesting (both from the scientific and the practical application viewpoint) research questions: which are the best ways of using these advanced ICT-based tools and methodologies for supporting - enhancing public participation in the preparatory stages of the legislation process, how useful they are and what value they generate, which are the main factors that determine this value (quantitatively and qualitatively) and which are the main barriers to their wide use by the public. We expect that the LEX-IS project will produce

interesting results and conclusions concerning the above questions, which will be useful to both researchers and practitioners in this area, and will facilitate and support the use of these technologies by the Parliaments.

7. References

[1] BREUKER, J., VALENTE, A., WINKELS, R., Use and Reuse of Legal Ontologies in Knowledge Engineering and Information Management, in: V. R. Benjamins et al (eds.), Law and Sementic Web, LNAI 3369, Springer-Verlag, 2005, pp. 36-64.

[2] BRITISH COUNCIL, Facilitating Active Citizenship: E-Participation in the United Kingdom and Germany, accessible from http://www.egov-goodpractice.org/

[3] COLEMAN, ST., Connecting Parliament to the public via the Internet - Two case studies of online consultations, Information, Communication & Society, Vol. 7, No. 1, March 2004, pp. 1–22.

[4] COMMISSION OF THE EUROPEAN COMMUNITIES, i2010 eGovernment Action Plan: Accelerating eGovernment in Europe for the Benefit of All, COM (2006) 173, Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions, Brussels 2.04.2006.

[5] COMMISSION OF THE EUROPEAN COMMUNITIES, eParticipation in the context of legislative processes – Work Programme 2006, DG Information Society and Media.

[6] CONKLIN, E. J., BEGEMAN, M. L., gIBIS: A Hypertext Tool for Team Design Deliberation, Proceedings of the Hypertext'89 Conference, ACM Press, New York, 1987, pp. 247-252.

[7] CONKLIN, J., Dialog Mapping: Reflections on an Industrial Strength Case Study, in: Kirschner, P., Buckingham Shum, S. and Carr, C. (eds), Visualizing Argumentation: Software Tools for Collaborative and Educational Sense-Making, Springer, London, 2003, pp. 117-136.

[8] DAVIS, F. D., Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology, MIS Quarterly, Vol. 13(3), 1989, pp. 319-339.

[9] DEMOCRACY – NETWORK (DEMO-NET), Deliverable 5.1 - Report on current ICTs to enable Participation, accessible from http://www.demo-net.org/

[10] DEMOCRACY – NETWORK (DEMO-NET), eParticipation: The potential of new and emerging technologies, accessible from http://www.demo-net.org/

[11] GIONIS G., CHARALABIDIS Y., ASKOUNIS D., Capturing Legal Issues: A Methodological Framework to Serve All Needs, Workshop on Enterprise Software Application Interoperability for Businesses and Governments (ISBG 2006), in Conjunction with PAKM 2006, 29-30 November, 2006, Vienna, Austria.

[12] GORDON, T. F., RICHTER, G, Discourse support systems for deliberative democracy, Proceedings of EGOV 2002 International Conference, September 2-6, 2002, Aix-en-Provence, France.

[13] GRONLUND, A., e-Democracy: in Search of Tools and Methods for Effective Participation, Journal of Multi-Criteria Decision Analysis, Vol. 12, 2003, pp. 93-100.

[14] HOWLETT, M. & RAMESH, M., Studying Public Policy: Policy cycles and Policy subsystems, Oxford University Press, 1995.

[15] KARACAPILIDIS, N., PAPADIAS, D., Computer Supported Argumentation and Collaborative Decision Making: The HERMES system, Information Systems, Vol. 26, No 4, 2001, pp. 259-277.

[16] KARACAPILIDIS, N., LOUKIS, E., DIMOPOULOS, ST., A Web-based System for Supporting Structured Collaboration in the Public Sector, Proceedings of EGOV 2004 International Conference, August 30 – September 3, 2004, Zaragoza, Spain.

[17] KARACAPILIDIS, N., LOUKIS, E., DIMOPOULOS, ST., Computer-supported G2G collaboration for public policy and decision-making, Journal of Enterprise Information Management, Vol. 18, No. 5, 2005, pp. 602-624.

[18] KIRSCHNER, P., BUCKINGHAM SHUM, S. & CARR, C., Visualizing Argumentation: Software Tools for Collaborative and Educational Sense-Making, Springer, London 2003.

[19] LOUKIS, E., Electronic Government-to-Government (G2G) Collaboration, chapter of Anttiroiko, A., Malkia, M. (editors), Encyclopedia of Digital Government', Idea Group Publishing, July 2006.

[20] LOUKIS, E., An Ontology for G2G Collaboration in Public Policy Making, Implementation and Evaluation, Artificial Intelligence and Law, Special Issue on e-Government, e-Democracy & e-Governance (accepted for publication).

[21] MACINTOSH, A., DAVENPORT, E., MALINA, A., WHYTE, A., Technology to Support Participatory Democracy, in: Electronic Government – Design, Applications and Management, Idea Group Publishing, 2002, pp. 226-248.

[22] MAKEDON, F., LOUKIS, E., FORD, J., Electronic Support of Government-to-Government Negotiation and Collaboration for the Design and Implementation of New Policies, International Journal of Applied Systemic Studies (accepted for publication), 2007.

[23] ORGANIZATION FOR ECONOMIC CO-OPERATION & DEVELOPMENT (OECD), Citizens as Partners: Information, Consultation and Public Participation in Policy Making, Paris, France, accessible from www.oecd.org (2001).

[24] ORGANIZATION FOR ECONOMIC CO-OPERATION & DEVELOPMENT (OECD), Promises and Problems of e-Democracy: Challenges of Online Citizen Engagement, Paris, France, accessible from www.oecd.org (2003).

[25] ROBERTS, N., Public Deliberation in an age of Direct Citizen Participation, American Review of Public Administration, Vol. 34, No. 4, December 2004, pp. 315-353.

[26] ROGERS, E., Diffusion of Innovations, Fifth Edition, The Free Press, New York, USA 2003.

[27] SHEPPARD, B. H., HARTWICK, J., WARSCHAW, P. R., The Theory of Reasoned Action: A Meta-Analysis of Past Research with Recommendations for Modifications and Future Research, Journal of Consumer Research, Vol. 15(3), 1988, pp. 325-343.

[28] VENKATESH, V., DAVIS, F. D., A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies, Management Studies, Vol. 45(2), 2000, pp. 186-204.

[29] VISSER, P., BENCH-CAPON, T., A Comparison of Four Ontologies for the Design of Legal Knowledge Systems, Artificial Intelligence and Law, Vol. 8, 1998, pp. 27-57.