e-Democracy: A Solution for Disadvantaged Territories"

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Abstract: The paper after having examined the concept and possibilities of e-democracy, examines the situation in Italy and in Europe. The impact on daily social life has been given particular study through the introduction of a taxonomy of e-democracy in relation to the category of services and the targeted citizen segment.

Finally, a technological solution has been proposed which allows for greater participation by the citizenry in areas where for reasons of census, culture and poverty such participation has not been possible.

Keywords: e-democracy, digital divide, ICT, e-participation, e-consultation, e-voting.

1. Introduction

In our society the instances and need for a constant and more direct relationship, for confrontation and cooperation among public and private institutions (single and collective) are increasing. Thus attempts are being made to solve the problems that may make it difficult for citizens in the computer society (Weber et al. 2003) to cross the digital divide by using, for example, measures that facilitate electronic access to services and to clear, pertinent and timely information about institutions. By creating permanent network connections between public administration decision making centers and the social entities in which needs are formed and proposals made, a fundamental step ahead towards the realization of a truly participatory and inclusive democracy is accomplished.

In Europe, strengthening and introducing new forms of citizen participation have been recognized as important elements in the modernization of democratic institutions and in social inclusion. The local level is particularly promising for the support of this renewal process, given the characteristic proximity of local institutions to the citizenry and the possibility of closer control of decisional processes and their effects.

In this study we propose a taxonomy of services for the digital citizenry for management of procedures and administrative complexity. Finally, we propose a "shared solution" for the activation of fundamental participatory processes in areas at risk of digital division.

2. e-Democracy: How and Why

The second phase of the Italian National Plan for e-Government (MIT 2003) proposes as one of the five principle courses of action to be taken in the coming years the start of projects to develop digital citizenship, defined as "e-democracy". The stated intention is to address the growing complexity involved in arriving at public decisions through greater involvement with the capabilities and experiences existing within a society by using 'long-distance' dynamics to create personal contact, dialogue and consultation. E-democracy distinguishes amongst the processes that require information and communication strategies for all participants in a democracy (administrators, citizens, associations, public and private entities) within the environment of political processes and governmental processes in local, national and international communities.

ICT (Information Communication Technologies) can be utilized in various ways to remove or reduce obstacles and hindrances to citizen participation in political life (Anttiroiko 2003). Like the concept of democracy itself, the concept of e-democracy, in its wider acceptance, works in several different dimensions (Gronlud 2003):

- Social inclusion: an essential pre-condition which, specifically in the case of e-democracy, means inclusion in the information society (that is, the need to brook the digital divide, especially regarding access to infrastructures, services and adequate cultural tools;

- Access to information: with particular reference to information generated by public officials (reference is made to transparency in the political decision making process in democracies and, thus, to the possibility of expressing informed consent and exercising democratic control over operations of public institutions);

- Access to the public sphere: the real possibility of producing information and participating in the formation of opinions; of dialogue between private citizens and institutions; of open discussion amongst social, political and institutional participants;

- The electoral dimension: the active and passive electorate, the electoral processes of selection within the political class and the formation of governments and/or representative bodies, with particular attention to the voting process, the basic mechanism of choice within the model of representative democracy. In this environment innovations are feasible in the choosing of candidates, the shaping of ballots, the actual technical form that voting assumes (Smith, Macintosh 2003) (absentee voting, known as the e-vote or the electronic vote) and the ways of voting itself (ballots created by graduated/ordered lists and candidates, ballots on policy issues, etc.) ;

- Direct citizen participation where specifically permitted by law (for example, referendums, petitions, appeals, formation of informal groups and associations);

- Citizen involvement and associated forms in specific decision making processes (for example, roundtables on local development issues, territorial agreements, participatory city planning, participatory budget-making, schedules, traffic and transport planning, sanitation and health planning.

Citizen participation in the life of democratic institutions can thus be considered as a positive intervention on many fronts, starting from the pre-conditions for participation (access to information, social inclusion, passive and active electorate, direct initiative), and employing many forms of citizen consultation in the course of decision making processes through to involvement in the final phase of the decision making process (voting) (Tonn et al. 2001).

3. The situation in Italy and in Europe

In the past several years in Italy, local entities have been increasingly active in promoting citizen participation in decision making processes. Most of these initiatives have found it difficult to take full advantage of ICT in terms of integrating their participatory practices throughout a given territory.

Quite often, participatory experiences, which for the most part are enacted through associations representing diverse interests and which only rarely and recently involve the third sector and individual citizens, have been employed within a local environment. The level of local and regional communities assumes strategic importance in the issue of citizen participation. In the Italian case, recent institutional innovations focus special attention on this issue. For institutions, greater involvement constitutes a decisive resource: it increases visibility in the public sphere; it allows citizens immediate comparison between emerging positions; it becomes an important factor in the efficiency itself of local politics, in the structure of conflicts and in the issue of mutual responsibility. This type of collaborative/participatory decision making is becoming widespread in many countries, often assuming highly differentiated forms based upon the problems in question.

The emergent Italian formulas to be noted (Crc, Formez 2004) are: juries made up of citizens selected for duty according to variable criteria (competence, lottery drawing, statistical representation, etc.) who, for a predetermined length of time, debate an issue and through consultation produce a final advisory report; numerically consistent and representative panels of citizens who periodically participate in opinion polls over an long period of time; and written consultations which urge citizens to express their points of view on public projects initiatives; citizen/administrator forums to encourage dialogue; focus groups of citizens potentially interested in or possibly directly influenced by a specific public action (Schneider 2002); opinion polling regarding public initiatives; deliberative polls which, before a choices are made about public issues

based upon opinions which emerge from the polls, require group discussions structured according to various criteria, both amongst those polled and with experts in the subject as well; citizen-generated petitions; indications of citizen interest in the institutions that operate within a given sector (or vice-versa).

The common thread in these methods is the attempt to solicit proposals and decisions through a "deliberative" process of collective elaborations of issues. It is thus important to point out that beyond the one single aim of promoting citizen participation, multiple and complex experiences emerge, and by combining various tools, can be used to design participatory methodologies and strategies.

In Europe, experiments have been conducted to encourage greater citizen participation for the promotion of European democratic governance, including use of the ICT (Biasiotti, Nannucci 2004). The Council of Europe has promoted various initiatives for local democracy, including the theme of e-democracy. The Committee of the European Council of Ministers approved, in 2001, specific recommendations for strengthening citizen participation in public life at the local level.

The European model of governance as outlined in the White Book recognizes the re-enforcement of citizen participation through forms of consultation during the course of the process of definition of policies as one of the basic pillars of European government. This is an important statement of guiding principles, stimulating not only at the level of relationships between the Union and each national state but also, of necessity, at the level of internal relationships between the political institutions of each national system at diverse territorial levels.

At the Union level, many web sites have been and are being created for consultation by citizens and their associations such as (Oxford Internet Institute et al. 2003):

- Your Voice, a European portal providing citizens with information on European Union norms (http://europa.eu.int/yourvoice/consultations/index_it.htm);

- CONECCS data base – the European Consulting Commission and Civil Society (CONECCS) (europa.eu.int/comm/civil_society/coneccs/index.htm);

- e-Vote (http://evote.eu2003.gr);

- Futurum is a site which furthers the debate on the Future of Europe (http://europa.eu.int/futurum);

- e-Voting. This is a most important application of e-consultation and has already been used in Geneva for voting in the federal referendum of September 26 2004 on the reform of citizens' rights. 72.5% of the electorate voted by e-mail, 22% voted electronically, and only 5% chose traditional voting at local polling sites. The voting method used by the Swiss public sector required no added installations to voters' computers. The main element in the application is a plastic card which citizens receive at home and which can be renewed for each election. The University of Geneva, a partner in the project, conducted a poll which revealed that two-thirds of those citizens polled were in favor of electronic voting, which could mean the permanent inclusion of e-voting at the federal level and the end of its test phase as soon as the Swiss government modifies the existing law on political rights which presently permits voting at the federal government level only on a written paper.

- Europe's Information Society Thematic Portal is new and provides access to the policies and activities of Europe's Information Society which is comprised of several of the European Union's Directorates (http://www.europa.eu.int/information_society). The portal is organized into three main categories: 1) thematic areas (culture and society, economics and work, education and training, quality of life, industry, regions/the world and research); 2) policy (where the European Directives on Themes of the Information Society are set forth and summarized); 3) activities (which sets forth the various initiatives promoted by the Directorate Generals, such as research programs, grants, and outside entities and organisms).

4. Taxonomies and classifications

Various technologies used to involve citizens in local administrative processes. These are summarized in Table 1 below.

Table 1: e-Democracy's online tools according to level of interactivity and potential for direct input on the local governance level

Information, contact and dialogue for consultation within the decisionmaking process				
Publication of data and monitoring quality of service or user satisfaction	Submission form for proposals to be evaluated by the PA	Deliberative survey on a specific theme that impacts upon decisionmaking	Citizens and administrators forum placed within a decisionmaking process	Chat line placed within the decisionmaking process
Information, contact and dialogue intended for but not inserted within the decisionmaking process				
Publication of deliberations	Submission form for help and	Questionnaire on satisfaction of	Forum or blog with	Chat line with administrators
Direct video coverage of council meetings	FAQ gathered from citizen contributors	On line survey on specific issues (pre- or post-decision)	Citizen forum for comment on document drafts or definitive documents	-
Information and general interactive tools				
Mailing of institutional newsletter	Submission form for notifications and suggestions (response not guaranteed)	Questionnaire or online survey on general issues)	Inter-citizen only forum or blog on themes relating to city life	Chat line on a specific issue of civic interest
Information on election dates and results	Listing of e-mail addresses of administrators	-	-	-
Information on the institutional activities	Regular mailing addresses for high-level policy makers	-	generic Citizens' forum or blog on general issues	Chat line (all issues)

Vertical axis: **Impact degree on the governance**

Horizontal axis: **Interaction level** — Information   Dialogue   Consultation   Decision

To achieve efficient function, e-democracy must include at least three basic elements: information as a guarantee of transparency and equality amongst the different democratic participants; dialogue that is user-friendly and wide-ranging thanks to new channels of communication; consultation with different long-distance contact variables designed for use by all participants in drafting documents so that the decisional process fully involves all citizens. The level of development of these elements classifies e-democracy's online tools according to degree of interactivity and potential for direct input on the local governance level (Rur, Censis 2004). E-democracy, however, means more than simply "giving voice" to citizens. E-democracy must also encourage citizens to participate, to perceive other means of direct involvement other than those directly concerned with the actual moment of voting. One necessary prerequisite is background information that is widely available and accessible as regards both content and language (Shi et al. 2000). It is important that the administration demonstrate its willingness to establish contact and that suitable space is allotted, both on line and off, for proper expression according to pre-set rules. Decision makers or public functionaries must learn to participate, to respond, to indicate response time and to use the information that emerges from discussion.

On a purely informational level (level zero in interactivity), some basic information is useful as background for future e-democracy initiatives. First, information on the institution's activities, which may appear either on the home page or as a press release or in newsletter form for citizens who subscribe to the service. Second, data on the most recent election results (and possibly data on past elections). Such information should be present on Internet sites regardless of any intent to broaden dialogue between the institution and the public. A more targeted action might consist of the publication of minutes of meetings or councils or of direct web cam transmissions of council meetings. Thus public administration can involve citizens in political decision making and debate rather than simply inform the public about general outcomes. One of the most high-impact tools for optimal management of the relationship between PA and citizens is the publication of data and

results regarding monitoring of services and user satisfaction, providing transparency and allowing for both criticism and discussion.

A second, basic requisite for a minimum degree of interactivity regards contact with the institution by providing users with e-mail addresses or electronic submission forms for notifications that do not require response from the institution. If the institution desires even greater contact, it can publish a FAQ page with questions culled from citizens themselves, thus providing answers, and can clearly outline its procedures for responding to questions if indeed it intends to guarantee a direct response. The contact form itself becomes an actual tool of electronic democracy; from the moment the institution invites proposals and contact, it commits to considering these elements for a specific purpose in the decision making process.

Other tools employed in interactivity (a single voice in surveys and questionnaires, many voices if forums or chat lines are used) can appear on line to deal with general issues and require no direct intervention on the part of the administrators. Another tool might provide a form of interaction with administrators; or – and here we are in the realm of true e-democracy in the fullest sense – the interactive site and the results of interaction may form an integral part of the decision making process. In this case, structured dialogue is established; citizens are part and parcel of the site and its options for use (information, consultation and decision making); they participate, listen to opinions, and can indicate their receptivity to proposals. Citizens in this scenario are also made aware of the actors (participants in local decision making, public functionaries, other citizens and associations) and the objectives (collaborative planning and drafting of documents, proposals for alternative solutions for ongoing projects, amendments and alterations of drafts, expression of opinions on decisions already taken or ongoing, and so forth).

5. A technological and organization solution

After this brief overview of the concept of e-democracy, and having analyzed the state of the art in Italy and in Europe, we propose a technological solution that allows for broader citizen participation even in cases where, for reasons of census, culture or economic status, such citizen participation might not be possible. We have named the proposal "E-DemS", an acronym for e-democracy Server; it is based upon the premise that all citizens must see themselves as members of a virtual community (Horrigan 2002) that unites them and affords them a voice and, on the other hand, the administration with which citizens are communicating is considering their opinions. The goals of the proposal are quite high and can be summarized as follows:

- Involvement of the citizenry in political life on a township and provincial level through the establishment of a direct line connecting citizens and institutions;

- Lowering of the space-time barriers; citizens can be involved without having to travel to the actual administrative offices by using kiosk set up in areas accessible to the public, thus reducing time wasted waiting in line and providing answers to questions or requests within a short time period (Forum) or immediately (Chat);

- Gathering citizens' opinions to enact policies that satisfy them and reflect their real needs;

- Provide a voice for those who, from the point of view of social policy, have been defined "disadvantaged" for various reasons – for example, women, young people, the elderly, the unemployed, immigrants, the handicapped and children, people living far away from the administrative offices. From the point of view of participatory politics, these segments of a population constitute a priceless resource of opinions, ideas and actual experience which can be evaluated for the benefit of the general public; similarly, contributions can be channeled to professional communities, both emergent and established, and to businesses, social workers and insurance company actuaries.

In essence, the main objective of E-DemS is to enable a series of relationships, services and technological tools that provide incentives for broader and more active participation in the life of disadvantages communities (disadvantages in the sense given above). This form of participation, revitalized by the use of new technological methods, can be applied even to small communities, based on the premise that all communities contribute to the larger provincial informative system. Before defining the tools required to reach the above-indicated objectives, the participatory

processes that govern the life cycle of local politics of the citizen involvement have to be described. It is important to detect areas for intervention where decision makers are favourably inclined toward innovative processes. The main goal is to broaden and promote the involvement of as many citizens as possible in the choices of both the town and the province to identify the problems to be solved, prioritize these by order of urgency and investment, examine their compatibility with available resources and, by so doing, revitalize the electorate assemblies. As a result of this participatory process, the electorate assemblies will have greater evaluation criteria in hand to define their choices. Equally, greater stimulus will accrue to these administrative assemblies, which will be increasingly called upon to provide technical and economic justification for their choices.

The experimental areas in which citizens will offer opinions and suggestions regard for the most part local development: urban planning, territorial and environmental matters, social and health issues, work and training, social integration, cultural policies and consultative bodies (on social matters, observers, young people and children, immigrants, etc.).

Naturally, no participatory process can precede a definition of a shared frame of reference for the population, and requires enactment of a parallel process of definition of indicators which can qualify and evaluate the economic, social, cultural, environmental, urban, leisure time and sports and health policies over time to verify the true capacity of the participatory approach in determining qualitatative improvement and social and environmental sustainability – and provide new impetus to the Town. It is also clear that such a participatory process will not result solely through use of an ICT tool. It must be integrated into the life cycle of local policies and evaluated within and by the appropriate offices.

The complexity and uniqueness that go into defining decision making processes mean rigorous, ongoing and incremental definitions of life cycles within local politics. The primary element to be taken into consideration is the one-year life cycle of the proposal, which involves many individuals in an ongoing and incremental way and begins with the essential goals and tools but is capable of growth and evolution with minimal risk.

The technical infrastructure of E-DemS is based upon a central server for the province to collect and manage e-democracy initiatives that have developed and will continue to develop within the provincial network. Citizens can intervene in decisions that concern them through dedicated sites (stalls or booths) located throughout the area in easily accessed locations.
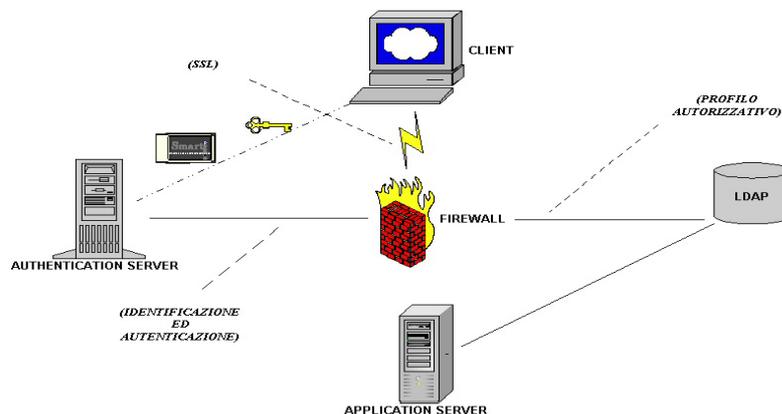
Figure 1: E-DemS' System architecture

The entire system can be summarized schematically and highly abstractly using the following UML "business use-case" diagram.
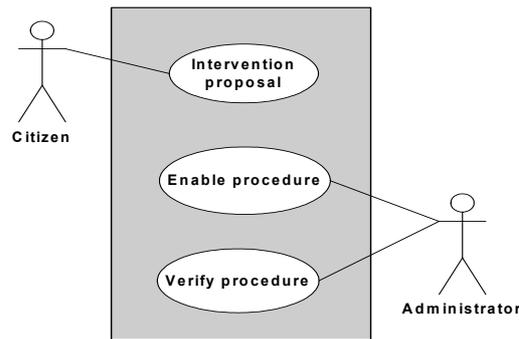
Figure 2: E-DemS' use-case diagram

The principal actors within the system are the citizens and the administrators. Both must use a password and a smart card to gain access to the system, these to be furnished by an employee at the E-DemS location after due verification of the user's residence in the township in which the service will be used.

Authentication for E-DemS means obtaining certain permissions; we have defined three of these: A, with sub authentication A1 and A2; B; and C, with sub authentications C1 and C2. A-type authentication includes Administrators and is divided into A1, or authentication of the administrator with restricted access (for example, for town employees) and A2, or authentication of the administrator with broader privileges (for example, provincial employee). Authentication B applies to administrators who analyze the statistical data generated within the E-DemS system and forward the data to the town or provincial offices responsible for considering the needs of the citizenry (for example, the statistical analyst assigned to the province). Authentication C, provided to citizens, is subdivided into C1 authentication for citizens with broader privileges (for example, associations representing citizen groups) and C2 authentication for citizens with fewer privileges (for example, the average citizen residing in the town in which the E-DemS system is used).

The technologies to be used in the proposal are different and employ different technologies (De Cindio 2004). Information technologies will be both "top-down" and "bottom-up". Forum technology will be used for discussions between citizens and PAL, with controlled and authenticated access in full adherence with rules and regulations for the respect of privacy. During certain hours and for certain "hot" issues, controlled access public chat areas can be provided where administrators can interact in real time with citizens on line. To provide support for consultation, monitoring and evaluation of single initiatives and projects, an on-line vote in the form of opinion surveys will be provided along with traditional techniques. Techniques to promote and evaluate our proposal include a targeted Newsletter, with citizens providing information and content, and Newsletter web publication. An online advertising campaign will promote the group's activities on the province's and its towns' websites; a thematic mailing list will diffuse news about new forms, surveys or other initiatives and will bolster the more traditional hard-copy communications to be distributed to all families door-to-door within the area with further distribution to sites to be determined, such as bars, association offices, cultural clubs, schools, etc., and poster campaigns.

Auto-evaluation of the system will be provided through customer satisfaction surveys covering topics such as usability and accessibility of ICT tools (Andersson, Gronlud 2003), efficiency of these tools, and finally the consistency and appropriateness of tools available for discussion of issues (Macintosh, et al. 2003), (Welch, Hinnant 2003).

6. Conclusions and future developments

Fundamental goals of E-DemS for citizen participation aim at accessibility and integration as well as minimization of attendant risks (Weber et al. 2003) such as:
- Emarginization through technology: individuals who have neither the ability nor the possibility to use the ICT tool should not be excluded;
- Cultural emargination, leading to manipulation of opinion.

It follows that the scope and size of the proposal decidedly exceeds that of a mere technological area; it involves single citizens, associations, organizational structures and local administration processes.

Thus ICT should not be viewed simply as an instrument kit to be used by those involved in the participatory process to create a public political context in order to promote sustainable initiative, but also as an engine and accelerator for social and economic development.

Such technologies, in fact, offer the opportunity for global sharing and for adapting experience to varying needs and local conditions, particularly regarding the allocation of public and private goods and services directed towards specific development objectives like health, education and the environment.

The technical potential that new ICT tools offer will not in and of themselves become immediately and efficiently usable. PAs must determine how and which tools to use in adapting these new technologies. For this reason, our proposal does not present a general, overall improvement in communication with citizens, but an overall reconsideration of all administrative procedures in order to examine their communicative content so that a new quality of services can emerge. Such an outcome implies careful analysis of users' many needs and characteristics. The analysis can be accomplished only if PAs carry out an efficient and thorough reorganization of their communications, relationships and exchanges amongst the branches of the administration. In other words, the innovations that the new technologies can produce must be guided by definite objectives consistent with service policies and closely linked to organizational innovation. Otherwise, PA rationalization runs a high risk of inefficiency or may be counterproductive, generating more diversity, uncertainty and problems than it eliminates. Tools for success must therefore find their justification in accessibility paradigms at 360°, meeting head-on potential fiscal, cultural and social problems (Andersson, Gronlud 2003). This is why we have analyzed problems that hinder access by comparing them using empirical data (that is, socio-demographic data) that apply to potential users of the service. Thus the user's typology type and the type of distributed system can be defined in terms of those social categories that are not represented and/or are at risk of future marginalization.

One qualifying element of the project, which allows access to services to those who do not possess the hardware or the computer know-how, includes the presence throughout the territory of a high number of public access points carefully planned and usable by all, and plans for the content and means of presentation of these.

Lastly, as applied within this context, the information tool leads not to divided but to increased participation, spontaneously uniting all citizens who, for whatever reason, have difficulty with mobility or with expression.

References

Andersson A., Gronlud A., (2003), *E-society accessibility: Identifyng research gaps*, Electronic Government, proceedings lecture notes in computer science, Vol. 2739, pp 15-20.

Anttiroiko A.V., (2003), *Building strong E-democracy – The role of technology in developing democracy for the information age*, Communications of the ACM, Vol. 9 No. 46, pp 121-128.

Biasiotti M.A., Nannucci R., (2004), *Learning to become an e-citizen: The European and Italian policies,* Knowledge Management in Electronic government, proceedings lecture notes in computer science, Vol. 3025, pp 253-264.

De Cindio F., (2004), *Tecnologie per la partecipazione,* [online], http://www.crcitalia.it/riservato/document.aspx?Categoria=773&documento=3223

Gronlund A., (2003), *Emerging electronic infrastructures – Exploring democractic components*, Social science computer review, Vol. 1, No. 21, pp 55-75.

Horrigan J., (2002), *Online Communities: Networks that nurture longdistance relationship and local ties*, Pew Internet and American Life, [online], http://www.pewinternet.org/reports/pdfs/PIPCommunities_report.pdf

CRC e FORMEZ, (2004), *Linee guida per la promozione della cittadinanza digitale: e-democracy"*, [online],
http://www.crcitalia.it/riservato/AttivitaDocument.aspx?Categoria=58?Documento=2915

Macintosh A., Robson E., Smith E., Whyte A., (2003), *Electronic Democracy and Young People,* Social science computer review, Vol. 1 No. 21, pp 43-54.

Ministro per l'innovazione e le tecnologie, (2003), *L'E-government nelle regioni e negli enti locali: II fase di attuazione,* Note di riferimento per lo sviluppo della II fase dell'e-Government nelle Regioni e negli Enti Locali, [online],
http://www.forumpa.it/archivio/1000/1300/1320/1324/egov_Fase2.pdf

Oxford Internet Institute, University of Oxford, university of Maryland, Cisco and BT, (2004)*, A New Agenda for e-Democracy*, Position Papers for an OII Syposium.

RUR, CENSIS, (2004), *E-democracy: un'opportunità per tutti?*, [online],
http://www.crcitalia.it/riservato/document.aspx?Categoria=RisNews_Sezione&Documento=3084

Schneider S.J., Kerwin J., Frechtling J., Vivari B.A., (2002), *Characteristics of the discussion In Online and Face-to-Face focus Group,* Social science computer review, Vol. 1, No. 20, pp 31-42.

Smith E., Macintosh A., (2003), *E-voting: Powerful symbol of Edemocracy*, Electronic government, proceedings lecture notes in computer science, Vol. 2739, pp 240-245.

Shi, Yuhang and Scavo C., *(2000), Citizen Participation and Direct Democracy Through Computer Networking*, Handbook of public Information Systems, Ed. G. D. Garson, Marcel Dekker, Inc., New York, pp 247-263.

Tonn B.E., Zambrano P., Moore S., (2001), *Community Networks or Networked Communities?,* Social science computer review, Vol. 2 No. 19, pp 201-212.

Welch Eric W., Hinnant Charles C., (2003), *Internet Use, Transparency and Interactivity effects on Trust in Government*, Proceedings of the 36th Hawaii International Conference on System Sciences.

Weber L.M., Loumakis A., Bergman J., (2003), *Who Participates and Why?*, An Analysis of Citizens on the Internet and the Mass Public, Social science computer review, Vol. 1, No. 21, pp 26-42.