

# **Cyber Democracy 2001: A Global Scan**

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## Preface

This report explores global developments in the use of information technology to support democratic governance, a phenomenon known as Cyber Democracy. It is the first of a two-step process and will be followed by the development of forecasts and scenarios that will explore the possible impact of Cyber Democracy into the future.

This report was prepared by Alternative Futures Associates (AFA) for Vivendi Universal Prospective. AFA is the subsidiary of the Institute for Alternative Futures. It is based on AFA's /IAF's extensive knowledge of trends in government and in information and communication technologies, interviews with key experts involved in these developments, books, surveys, and Internet-based research of documents available in English, French, and German. The AFA project team included Clement Bezold, Mark Justman, Jennifer Kang, Robert Olson, and Clare Parsons.

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This is a scan, not a survey, which would sample a universe to depict a pattern of prevalent activities. An environmental scan generally identifies new and emerging activities that are not as well developed or widely spread. However, the section on Cyber Administration includes results of two significant global surveys comparing electronic-government services in various countries. For this report we have added AFA's additional findings in that section. All other sections report on trends that are largely developmental or experimental, that have not yet been studied as systematically. These sections include prominent, visible activities that are cited as important examples, but are not meant to be exhaustive.

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# Executive Summary

## Overview

Cyber Democracy involves the use of information and communications technologies to support governance. Cyber Democracy is a collection of new processes and old habits, of aspirations and fears, of specific detailed improvements in government services and enhancements in human evolution, of tremendous promise and terrible risk.

This wide scope of what Cyber Democracy is can be attributed to the fact that Cyber Democracy touches every aspect of what governments do. Furthermore, it comes at a time when the challenges facing governments and societies are significant and are likely to become even more challenging.

In democracies, we, as voters, get back what we invest in the process. Yet most democracies do little to train us on how to be citizens, particularly on how to develop shared aspirations and visions that could steer our polity or help us anticipate events. Cyber Democracy will play a part in enhancing our role as citizens.

The status of Cyber Democracy is two-fold:

*Initial experiments:* Around the globe, but particularly in the most “connected” regions of the world, there are truly significant experiments in government administration. The experiments involve voting, political participation, providing the infrastructure for participation, and developing new forms of agenda setting. This report reviews leading examples of these critical developments.

*Emergent possibilities:* Current experiments only hint at the potential. There is a promising opportunity to invent and put in place new approaches that enhance the key values of democracy, particularly: freedom, equality, stability, majority rule with protection of minority viewpoints, participation, shared vision, and anticipation. In addition, the interactive nature of technology could enhance collective intelligence for shaping policy and implementing change.

This report explores the growth of Cyber Democracy, along with our insights into what it all could mean.

## 1. Growing Democracy: Global Trends Toward More Democracy

In 1974, there were 39 democracies. Since then, 81 nations have adopted democratic governments. Today 120 of the world’s 192 countries are electoral democracies. This number of democratic governments represents 63 percent of the world’s states. An estimated 67 countries are engaged in activities classified as Cyber Democracy.

Yet, in mature democracies, democratic systems show signs of wear. Worldwide, voter turnout varies. In the US, the average voter turnout is at 48 percent, although more than 70 percent of citizens express interest in political issues or activities. Europe historically has a higher turnout with a 77 percent postwar average. Yet elections for the European Parliaments are reflecting a decline – to 49 percent voting participation; likewise the 2001 reelection of Tony Blair in the UK had just 60 percent vote turnout, the lowest level of turnout since 1918.

## **2. Cyber Democracy is growing up alongside the proliferation of information technology that is being employed around the world to support governance**

Cyber Democracy includes at least five activities:

- **Cyber Administration** – Or E-government. The use of the Internet and other information and communications technology (ICT) to enhance government services. The Internet is helping to expedite a wide range of such services.
- **Cyber Voting** – Internet voting for candidates as well as for policies via initiatives and referenda.
- **Cyber Participation** – ICT-enhanced citizen interaction and input on policy issues or policy development apart from voting. This would include petitioning legislatures, electronic town meetings, polling and electronically mediated policy dialogues.
- **Cyber Infrastructure** – In addition to connectivity, more specific cyber tools used to enhance participation, deliberation, and community building. These tools include groupware and online community development tools, games and simulations, as well as polling and surveys.
- **Cyber Agenda-Setting** – The use of the Internet and other ICTs to enhance or redirect the political or policy agenda by established groups such as political parties and non-governmental organizations (NGOs) and through emergent phenomena, particularly “swarm activism.”

*The Promise of Cyber Democracy.* More than half the US population and three-quarters of European citizens surveyed believe information technology will spark a renewal of democracy and civil society.

*The Dark Side of Cyber Democracy.* With the enhanced connectivity made possible by ICTs, come potential privacy violations by “big brother” governments, corporations, or terrorists; employment discrimination; loss of civic rituals and community; isolation into one’s own political community.

## **3. Major Emerging Trends**

As more global citizens connect to the Internet (52 percent of US homes; 55 percent of European), governments are accelerating their efforts to use ICT to make services more citizen-friendly. As a result, experiments in greater political and policy interaction are exploding around the world. By 2005 it is forecast that 1 billion people will be connected to the Internet, with the fastest growth occurring in developing countries.

Around the world, there are four stages of complexity and interactivity for E-government services available online:

- Making information available. (Greatest current use.)
- Interacting electronically with citizens through mechanisms such as E-mail.

- Enabling transactional activities such as fees payment.
- Integrating the services of diverse government agencies into a single entry point through a public portal.

### **Europe**

In 2001, EU countries will spend almost €55 billion on the computerization of public services. Germany is the biggest spender. However, Portugal, Greece and Finland are increasing their investments at the fastest rates.

- EU countries are engaged in a major initiative to expand the range of Cyber Democracy activities, from improving systems software to making the most popular government transactions available online by 2003. These would include disseminating income tax information, tax collection, job search services, and car registration.
- British Prime Minister Tony Blair has committed his country to having government services be 100 percent Internet based by 2005. In addition, the low turnout in his reelection has accelerated the UK's consideration of Internet voting.
- Estonia is a significant leader in creating an "E-Cabinet": holding Cabinet meetings online with Cabinet members participating from multiple sites. This has allowed them to save both time and money when conducting Cabinet meetings. Estonia is also committing to Internet voting by 2003, and using ICTs to enable foreign investment in local businesses.

### **United States**

About 70 percent of federal government websites provide online data and service. The comparable number for states is 19 percent. However, states have greater direct communication with the public through their websites. Some 70 percent of state government entities use E-mail to communicate with citizens, compared to only 27 percent of federal government sites. Specifically, 73 percent of state sites reportedly answer E-mails within one day. Other cyber developments in the US include:

- Experiments in connecting legislatures and local governments with citizens.
- Using a wide range of cyber tools and media involvement, "Electronic Town Meetings" have had significant roles in bringing the public into discussions of policies and legislation.
- Insurgent political parties have successfully used ICTs. For example, despite the fact that he was a third party candidate, ex-professional wrestler Jesse Ventura was elected in 1998 election as governor of Minnesota. His campaign relied heavily on the Internet. Likewise, other challenging candidates in major races have made successful use of the Internet. John McCain did so in the 2000 Republican presidential primary.
- The shortcomings of the 2000 presidential election (voting irregularities, faulty voting equipment, denial of access to the polls) have led to calls for greater consistency in voting practices, much of it built around ICTs, though there remains great caution about full Internet voting.

**Among Developing Nations**

Korea, Brazil, Chile, Estonia and Taiwan have set high priorities in promoting E-society nationally, especially in providing services. Korea is a leader in facilitating easy network access and use. South Africa is a leader in Africa, with E-government initiatives in the planning stage.

**4. Cyber Administration**

Cyber Administration focuses on government services and their efficiency and is the most common and most easily implemented component of Cyber Democracy. In doing public business, use of ICTs saves governments money. At its most efficient, for example, online purchasing could reduce buying costs by up to 20 percent, which, based on total expenditures, would save an estimated \$110 billion in the US and \$156 billion in the EU. Given the demographic trends of lower birth rates in developed countries and the surge of older citizens requiring services, this efficiency and reduced cost will be needed.

- ICT use supports the growing movement towards privatization of public services, a continuum that ranges from enhancing transactions (for example, IBM improved software for car registration in the US state of Arizona, and receives 2 percent of each fee in turn) to the full outsourcing of services, such as purchasing.
- Continued investment is being made in new technology, including building more consumer-friendly portals and computer languages.

**5. Cyber Voting**

Electronic voting occurs in three forms, each more complex than the last. They are: wired polling sites; authenticated E-mail; and web voting.

- *Wired polling sites* conduct voting is at computer-equipped voting centers, supported by the Internet, and linked to a voter registration database. A terminal displays the voter's ballot on a kiosk or computer terminal screen. The citizen uses a touch screen or keystroke to record his vote.
- *Authenticated E-mail* is Internet voting that functions as "virtual" absentee voting. Ballots are requested and distributed via secure E-mail. The ballot is completed on a computer where it is encrypted, transmitted, validated, and returned to the election office through an E-mail transfer.
- *Web voting* establishes a central election website where voters log on through secure means, verify their identities, and cast an electronic ballot. This can take place wherever appropriate Internet access is available.

Many countries are experimenting with Internet Voting:

- The US, Britain, France, and Brazil have already conducted experiments and are evaluating the results.
- Australia and Estonia have announced plans for Internet voting experiments in upcoming elections.
- Technical fixes for authenticating votes and voters are emerging. Smart cards and biometrics are under study to identify voters, but will probably first be used publicly for authenticating e-commerce, particularly e-banking. Kiosks or ATMs

that use biometrics (e.g. on-site, immediate iris scan, finger print, or voice print) for e-commerce or e-banking are also possible technologies for creating secure voting sites in the future.

## **6. Cyber Participation**

The ability to contact an elected representative is being enhanced by ICTs. U.S. House of Representatives E-mail messages grew from 20 million in 1998 to 48 million in 2000 and are still growing at the rate of 1 million per month. With such high volume, many of these E-mails are ignored. However, effective E-mail management software is being developed to help public servants sort and route messages more effectively.

Legislators and legislatures are developing novel experiments. One Vancouver legislator set up a confidential electronic voting system for constituents to weigh-in on three pending laws. The Scottish Parliament accepts public petitions over the Internet. In the spring of 2001, the state of Nevada allowed citizens to register their opinion by "voting" for or against any bill pending before the legislature.

Electronic Town Meetings (ETMs) are interactive policy discussions using ICTs to connect governments and citizens. They are in the forefront of experimentation in the field of Cyber Democracy. In the US, an initiative named Americans Discuss Social Security (ADSS) involved thousands of citizens in dozens of cities, along with Representatives and Senators, to determine public thinking on "fixing" Social Security. They used the most sophisticated "groupware" and processes to stimulate learning and dialogue. Participating citizens reportedly supported higher taxes to provide long-term solutions for Social Security.

## **7. Cyber Infrastructure**

Each of the components of Cyber Democracy is supported by enhanced connectivity and new tools. These tools include software or groupware for stimulating online communities, games and simulations for citizen input, and Internet polling. In the state of Minnesota, "MN Politics" – an online mailing list – became a political force as an online community, in part by allowing citizens to interact directly with politicians via the Internet. Leading experts and consultants on democracy are focusing on how to develop cyber tools that promote democratic values. For example, Benjamin Barber, a leading expert on democracy, has created PnyxUnchat, software that allows e-discussion participants to decide on ground rules and elect their moderator.

Games and simulations have been used as planning aids in high-level policy circles and as a form of entertainment for kids. But now, a simulation similar to the popular SimCity game, is being used to gather public input for local planning in Myrtle Beach (South Carolina). The EU has developed Euromod, an integrated benefit-tax model for its 15 member states. In the U.S., online simulations allow users to balance the federal budget or "build-their-own" defense budget."

Polling and political focus group testing are taking advantage of the Internet. Political campaigns in the US spend an average 5 to 10 percent of the total campaign budget in on polling. Yet in the US only 15 percent of people will answer a telephone survey, down from a 40 percent response rate 15 years ago. Knowledge Networks, an Internet competitor of established polling organizations, has involved 250,000 US households in Internet polling. In the 2000 Presidential election, Knowledge Networks used this approach to have a panel of 700 instantaneously determine for CBS News whether Gore or Bush had won the debate.

## **8. Cyber Agenda-Setting**

Agenda-setting includes getting public officials, and the press, to take up issues of citizen concern; steering or setting policy directions; and setting priorities. All three activities are being enhanced by ICTs and used by conventional and emerging parties, and organizations.

ICT use can build support for issues or political candidates. Political organizations use cyber tools to fundraise and to recruit supporters and volunteers. The Swedish Moderates Party has created a website and generated interaction in periods during and between elections to hold the loyalty of their members. Facing a decline in attendance at their traditional political rallies, Korean political parties have created Web pages for their campaigns, particularly to attract younger and first-time voters.

Non-Government Organizations (NGOs) are using cyber tools to enhance their reach, lower their costs, and give themselves a greater ability to affect issues. For example, Amnesty International's Internet campaign against torture can generate thousands of E-mails to targeted recipients within hours, including alleged perpetrators. NGOs such as Doctors without Borders/Médecins Sans Frontières (MSF) actively pursued the issue of access to AIDS drugs for South Africa, via an Internet campaign. Ultimately, 39 pharmaceutical companies dropped a 3-year suit against South Africa, leading to the production and import of generics, as well as a drop in prices to one tenth of what had been originally charged.

Among the most innovative and unexpected efforts to influence policy agendas is the so-called "Swarm Activism," a term used to describe loose networks of activists who coordinate efforts without any formal leadership. For example, the power of this new phenomenon was evident when an e-mail exchange between the Nike Corporation and an MIT graduate student was distributed online globally within weeks. It brought attention to factory conditions for workers making Nike products outside the US. On a more visible scale, protestors at the World Trade Organization's (WTO) Seattle 1999 meeting used the Internet to enhance organizing and rally demonstrators. Since then, this method has been carried on to other WTO meetings and other meetings of global leaders in Washington, Barcelona, and Genoa.

Far less visible than cyber facilitated demonstrations is cyber enhanced ecological restoration. The 71 million bird-watchers in the US are forming online communities and reshaping local ecologies. What's new, says John Fitzpatrick, an ornithologist, is that humans connected to the Internet are "acting like a flock without leaders, changing the physical planet a fraction of an acre at a time, for the benefit of other species and thus the entire world. The Internet is the first point in human history in the creation of consciousness at a massive and biologically meaningful scale." And the bird-watching application is likely to only be a beginning.

## **9. Observations and Implications**

Most Western democracies have evolved from agrarian to industrial and now information societies. Democracies have expanded the definition of who is a "citizen" with rights. Democratic evolution will continue. Cyber Democracy will accelerate this evolution because it increases the speed of deliberation and has the potential to enhance the foresight and wisdom of those deliberations.

Considering the examples we described in the report and in the table in Appendix A several patterns and observations, become clear:

- Some countries are obvious leaders in experimentation at various stages of Cyber Democracy development. Brazil and Estonia, for example, are in the forefront of programs and services, as are the US and the UK.
- Leaders in E-government are likely to experiment in multiple Cyber Democracy activities and appear more ready to embrace the technology in all its possibilities.

We have discovered many important experiments that use cyber tools in various aspects of governance. However, current experiments only hint at the emergent possibilities. The big question is whether or not new tools allow democracies to put in place new approaches that enhance the values of democracy and use new forms of connectivity, technology, and increased collective intelligence in order to address profound challenges.

Swarm activism raises questions about the Internet's enhancing of collective intelligence. The French scientist and futurist Joel de Rosnay agrees. He argues that the challenges this emergence will pose for Cyber Democracy will require:

...elevating the intelligent conduct of these societies to a superior degree of thought and action through a creative compromise among natural laws, political action, and spiritual aspirations. The transition from the social individual to the symbiotic human, consciously and naturally integrated within one or many supra-societal macro-organism, stands as one of the greatest challenges ever faced by humanity throughout its entire evolution. It is as crucial a stage as the transition from single-cell life to multi-cell integrated organisms...The challenge is so complex that it stands beyond the management abilities of current government structures and operations.<sup>1</sup>

## **10. Anticipating Critical Junctures for Cyber Democracy**

In considering the findings from this Global Scan, it is clear that Cyber Democracy will be a major force, hopefully, but not necessarily, for the good of citizens and governments. To ensure that Cyber Democracy makes its best contribution, it will be necessary to anticipate choices. This will require foresight on many topics particularly ICT itself, privacy and security protections, our mechanisms for creating shared vision, the role of elected representatives, and our own experiences of learning as citizens in the public sphere and in the marketplace.

These exercises in foresight will require developing forecasts and engaging stakeholders in interpreting the results. It is critical that major players in civic discourse, particularly in the media, support and participate in these efforts.

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<sup>1</sup> Joel de Rosnay, *The Symbiotic Man* (New York, McGraw Hill Publishing 2001),152-154.

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# Introduction

## The Challenges of 21<sup>st</sup> Century Democracy

*No one pretends that **democracy** is perfect or all-wise. Indeed, it has been said that **democracy** is the worst form of Government except all those other forms that have been tried.*

- Winston Churchill, House of Commons, 11 November 1947

This report considers where democracy, the Internet and other information and communications technologies (ICTs) will interact and evolve into Cyber Democracy. As a form of national government, democracy has evolved from the agrarian age at the birth of the modern democratic nations in the 18th century, through the industrial revolution, to the information age of today. The Cyber revolution promises to take democracy into its next evolutionary stage. This report explores beginning applications of ICTs to democracy.

Democracy traditionally includes five core values:

- A belief that **freedom** is essential in a democracy, although it may be defined differently. Freedom may mean freedom from government interference or it may mean freedom to exercise certain rights, such as voting.
- A second core value, **equality**, is also open to varying definitions. By "equality" some mean equal opportunity and others mean actual equality in life conditions or equality of result.
- While the values of freedom and equality focus on the individual, a third value, **stability**, focuses on the need of rules and regulations to be reliably and consistently applied.
- The fourth value is **majority rule while continuing to protect minority viewpoints**.
- Finally, all democracies embrace the value of **participation** by its citizenry.<sup>1</sup>

We add two more values that rise in importance as change accelerates. First, democracies must foster **shared aspiration or vision** and second, democracies must enable **anticipation** of positive and negative changes before they occur. In this report, we will explore some ways that Cyber Democracy affects these values.

Democracy is also government by the people. Usually, democracy refers to Representative Democracy, where citizens elect officials to make decisions. However, with some forms of governmental decision-making, such as initiatives and referendums, citizens vote directly for laws or policies, taking part in what is termed Direct Democracy. Republic is another term that describes a democracy with explicit protections for the minority, a tempering of the will of the majority.<sup>2</sup> As definitions in this report, we will use democracy and republic interchangeably. Our term, Cyber Democracy describes democratic activities enhanced by the Internet and other information and communication technologies (ICTs).

Democracy constantly faces challenges, and as the 21<sup>st</sup> Century evolves, new ones will appear. How will Cyber Democracy enhance (or hinder) the experience and the outcomes of democratic governments over the next two decades? This report presents a wide range of Cyber Democracy's promise and threats. As Winston Churchill noted, while democracy has its problems, all other forms yet tried are worse. It is thus critical to consider how Cyber Democracy in its core components (Cyber Administration, Cyber Voting, Cyber Participation, Cyber Infrastructure, and Cyber Agenda-Setting) contributes to the effectiveness and outcomes of democracy and how it can do so more effectively in the years ahead. This report is a preliminary exploration that serves to target areas in which to develop forecasts and scenarios for Cyber Republic developments.

### **The Growth of Democracy**

The 21<sup>st</sup> Century will see the growth of Cyber Democracy, just as the 20<sup>th</sup> Century witnessed the growth of Democracy. Freedom House, a US non-profit, non-partisan, research organization conducts annual surveys tracking the extent and quality of democratic governance internationally. According to their year 2000 report, there were 39 electoral democracies in 1974. Since then, 81 nations have adopted democratic governments. This figure means that a total of 120 of the world's 192 countries are electoral democracies—a number that represents 63 percent of the world's states.<sup>3</sup>

Freedom House also assesses the qualitative aspects of governance, sorting countries into three categories: Free, Partly Free, and Not Free. According to their survey, there are 86 Free countries (2,465.2 billion people, 40.69 percent of the world population) in which a broad range of political rights are respected. There are 58 Partly Free countries (1,435.8 billion people; 23.70 percent of the world's population) in which there is a mixed record with more limited political rights and civil liberties, and a weak rule of law. There are 48 countries rated Not Free (2,157.5 billion people; representing 35.61 percent of the globe's population), in which basic political rights and civil liberties are denied.<sup>4</sup>

The general global trend has been towards more freedom. Since 1990, there has been an increase of 27 sovereign countries during the decade, largely due to the disintegration and separation of multi-ethnic states, particularly the Soviet Union.<sup>5</sup> Globally, over the last decade the number of Free countries has increased by 21, Partly Free states have increased by 8, and the number of Not Free states has dropped by 2.

### **Connectivity**

Advances in ICTs undoubtedly played an important role in moving more nations towards the democratic ideal. More established tools, such as the fax, satellite broadcasting, and VCRs, all played an important role in piercing national information barriers thus allowing information to flow while giving citizens the opportunity to bypass national censorship and filtering mechanisms.

The Internet is already accelerating the process, by giving citizens the opportunity to directly access vast quantities of information on the Net. Even as countries like Saudi Arabia, the United Arab Emirates, and China are attempting to filter the Internet content to which their citizens have access, freely available software, notably *Triangle Boy* by Safeweb, allows citizens trapped behind filters to circumvent barriers to freely access and explore the entire range of Internet offerings.<sup>6</sup>

The growth in connectivity over the last decade has been dramatic, and there are few signs that the growth in global connectivity will reverse in the short term. Forecasts for the next 5 years show that connectivity outside of Europe and North America is on the rise and that new

modes of access, both broadband and wireless, will increasingly supplement the wired infrastructure.

- **E-mail.** According to a study from the communication company United Messaging, at the end of 2000 there were 891 million electronic mailboxes worldwide, of which 31.8 million were wireless mailboxes (in PDAs and cell phones), up from 3.7 million in 1999. This represents an impressive growth of 67 percent from 1999. This growth has reached the point at which 51 percent of all E-mail messages last year were sent outside the US.<sup>7</sup>
- **World Wide Web.** According to statistics compiled by the Internet research firm StatMarket, almost 55 percent of all web traffic comes from outside the United States. US-based surfers account for 45 percent of all web traffic. The next highest proportion of comes from Germany, where 5.5 percent of traffic originates.<sup>8</sup>
- **Wireless.** According to a March 2001 study by marketing consultants Strategy Analytics Inc, the global cellular market will double in size to 1.7 billion by the end of 2006. More than half of the world's cell phone users are currently in North America and Western Europe, but these regions are expected to account for only 20 percent of growth over the next five years.<sup>9</sup>
- **Broadband.** A 2000 report from the marketing analysts of Multimedia Research Group forecasts that the global broadband audience will top 80 million by 2004. According to their study, there are currently more than 15 million home-based broadband subscribers around the world, a figure that should grow to over 30 million by 2004. When the projected group of 50 million users at work is added, estimates exceed 80 million total broadband subscribers.<sup>10</sup>
- **PDAs** The Gartner Group, a global organizational consultancy, forecasts that by 2007, 60 percent of US and EU populations will carry or wear a wireless communications device for at least six hours a day. These new always-on computing and communications appliances called wireless interactive devices promise to be the next generation of consumer electronics, replacing today's wireless application protocol (WAP) phones and personal digital assistants (PDAs).<sup>11</sup>
- **Internet.** Nua Internet Surveys, a web news portal that synthesizes internet research reports, has constructed a broad global assessment of Internet connections by studying published Internet surveys and adjusting reported figures for the purposes of comparison. Nua estimates there were 407.1 million Internet users online as of November of 2000.<sup>12</sup> IDC, a marketing research firm, forecasts that there will be almost 1 billion users by 2005. Various forecasts suggest that Internet users will double in Europe and the Asia/Pacific region and quadruple in Latin America. While the US, currently the leader, will only grow by less than one-third by 2005.

|                      | 2000 (Nua Internet Survey) | 2005 (Various Forecasts)       |
|----------------------|----------------------------|--------------------------------|
| <b>World Total</b>   | 407.1 million              | Almost 1 billion <sup>13</sup> |
| <b>Asia/Pacific</b>  | 104.8 million              | 192 million <sup>14</sup>      |
| <b>Europe</b>        | 113.1 million              | 246 million <sup>15</sup>      |
| <b>North America</b> | 167.1 million              | 214 million <sup>16</sup>      |
| <b>Latin America</b> | 16.4 million               | 75 million <sup>17</sup>       |

For Cyber Democracy, connectivity raises two related issues. First, how quickly, efficiently and equitably will the technologies for Cyber Democracy, e.g. for cyber voting, be distributed? As

we will consider in the Cyber Voting section, kiosks or ATMs that provide biometric authentication of the person may first become common for E-banking and then be used for voting.

Another issue deals with the new capacities and uncertainties that might be created from the rapid growth of connectivity. Robert Reed, former Vice President and chief scientist for Lotus Development Corporation, has theorized that the value of a network rises on an exponential curve based on the number of potential groups that members of a network can form. The conventional way to assess the value of a network is “Metcalf’s Law”, which states that the value of a network grows by the square of the size of the network. However, Metcalf’s Law may not be the best model for understanding the potential implications of widespread global connectivity, especially when governance and political movements are involved.

Reed’s Law of group-forming networks may function as a better indicator of value. This law emphasizes that network value is derived from the potential interconnections among network members, and not just from the number of members with access to the network. A network like the telephone system mainly facilitates interactions between individual members in one-on-one interaction. The Internet has much greater capacity to form individuals into groups, and allows individuals to interact with entire communities that are often oriented around a common interest, through chat-rooms, E-mail lists, interactive websites, and discussion boards. These groups can evolve and merge with great fluidity, guided by the interests and passions of their members.

The “Swarm Activism” that is described in section 5 on Cyber Agenda-Setting is a prominent example of the effect that group-forming networks may have on the development of Cyber Democracy. Group-formation is an activity that is central to political life, and as the connectivity revolution continues, the group formation facilitated by the Internet could significantly enhance and change the operation of political parties, the relevance of online communities, and the participation of citizen feedback to legislators. The potential of group-forming networks will play an important role in shaping the course of Cyber Democracy.

### **Democratic Underperformance**

Worldwide, mature Republics are showing wear, especially in upholding the values of democracy: freedom, equality, stability, majority rule with minority protection, participation, shared vision and anticipation. Some specific areas of underperformance include:

#### *Low Voter Participation in Some Countries*

There was a steady increase in voter turnout across the world from 1945 to 1990, rising from 61 percent to 68 percent. However, this number diminished to 64 percent in the 1990s. Voter participation in the US sits well below this global trend, with an average turnout of 48.3 percent. US turnout is often contrasted with Western Europe, which has enjoyed both the highest and most stable turnout rates amongst regions, an average of 77 percent in the postwar period.<sup>18</sup> However, as Europe unifies, participation declines. Turnout in the European Parliament elections in 1999 was 49.4 percent. As noted in Section 2 on Cyber Voting, turnout for Tony Blair’s 2001 reelection as Prime Minister fell to less than 60 percent, the lowest electoral turnout in the UK since 1918.

#### *“Real Citizenship” Opportunities Lacking*

In exercising their role as “citizens,” individuals receive little training and few effective opportunities to do the job well. Meaningful civic activities, such as engaging in policy dialogues, setting agendas, and setting priorities are available to citizens throughout the globe in specific cases, but not on a regular nationally accessible, basis. Elections represent the major opportunity for participation. But voting for candidates seldom gives citizens an accurate sense of the range of problems, opportunities, specific options or their consequences that affect their community. After elections are held, legislators seldom involve citizens effectively, if at all.

Some would argue that this is as it should be: once the citizenry has elected its representatives, the officials should be left to do the work. Yet dissatisfaction with this approach is mounting as the challenges democracies confront are growing.

#### *Lack of Shared Vision*

Cyber Democracy will require the creation of more effective, wiser mechanisms to guide communities toward a common vision for the future – toward a so-called “North Star.” This shared vision is essential for communities or government agencies to function effectively. The literature on innovation and effectiveness in the public sector (e.g. John Osborne’s work in *Reinventing Government*) and in the private sector (e.g. Collin and Porras’ arguments in *Built to Last*), point to the significance of shared vision. In its absence, democratic societies are more likely to under-perform. Not taking part in developing shared vision for the polity is a major deficiency in the public’s experience as citizens.

#### **Even Greater Challenges in the 21<sup>st</sup> Century**

There is nothing in place to suggest these factors will reverse themselves. Furthermore, unprecedented new challenges requiring political solutions will emerge. These include global warming, the consequences of information technology, and genetic engineering.

#### *Developments in Technology*

Technology of all types offers great promise, from biotechnology and potential for gene therapies to nanotechnology, which works at the scale of individual atoms. However, these powerful new tools pose the equally great threat of creating major disasters. For example, biotechnology holds promise for preventing or curing many diseases. Conversely, developments in biotechnology could lead to new plagues, either inadvertently dispersed or used as weapons in the hands of bio-terrorists. Nanotechnology, as it reaches the point of having “self-assembling” devices, will enable us to produce almost anything. Yet it may also allow the creation of products that could threaten humanity’s survival.

#### *Global Warming*

While some are not convinced, evidence is mounting that we face major environmental disruptions, flooding, and more variable and extreme weather caused by excessive atmospheric pollutants. Taking action would require coordination among individuals, communities, and nations around the world to change human behaviors. Cyber Democracy’s ability to help the formation of communities of interest may contribute to how we deal with issues such as these.

#### *The Evolution of Humanity and Cyber Democracy*

Some observers believe the textured promise of biotechnology, nanotechnology, and other new processes, will require humanity to accelerate its evolution or face potential destruction. Other observers argue (as this report will consider in Section 5 on Cyber Agenda-Setting) that this is just what cyber tools have already begun to do.

## Components of Cyber Democracy

The prime components of Cyber Democracy for this report are:

- **Cyber Administration** – Or E-government. The use of the Internet and other information and communications technologies (ICTs) to enhance government services. The Internet is helping to expedite a wide range of such services.
- **Cyber Voting** – Internet voting for candidates as well as for policies via initiatives and referenda.
- **Cyber Participation** – ICT-enhanced citizen interaction and input on policy issues or policy development. Such activities include: petitioning legislatures, electronic town meetings, polling, and electronically mediated policy dialogues.
- **Cyber Infrastructure** – In addition to connectivity, cyber tools are being used to enhance participation, deliberation and community building. Among these tools are available groupware and online community development tools, games and simulations, and polling and surveys.
- **Cyber Agenda-Setting** – The use of the Internet and other ICTs to enhance or redirect the political or policy agenda, by established groups such as political parties and non-governmental organizations (NGOs), or by individuals that are able to use ICTs to communicate with others and coordinate group efforts. ICTs are allowing individuals to and groups to “swarm” together in concert and work to enhance or redirect the political or policy agenda.

## The Quality of Participation and Outcomes

What are appropriate measures of success for effective political participation and policy development in Cyber Democracy beyond supporting the values identified above? We have identified several standards. Does the Cyber Democracy activity:

- Give citizens the opportunity to understand the context of issues (current and future trends, problems, opportunities) and to thoughtfully explore policy options.
- Build community.
- Ensure consistency between policy-making and the informed decisions of citizens.
- Generate learning by citizens.
- Enable citizens to experience “citizenship,” with its related challenges and responsibilities in directing the community.

Developments in Cyber Democracy can help achieve many of these objectives, or they can hinder their achievement. As discussed in section 2 on Cyber Voting, the reasons for low or declining voter turnout are only weakly related to the ease of voting (a major purported benefit of cyber voting). More significant reasons for lower turnout are related to the state of the community, the competitiveness of the particular election, and the nature of the party/electoral system. This report explores developments, promises, and threats from Cyber Democracy, which are all taking place within this larger context for successful Democracy. Ultimately, the success of Cyber Democracy will not be determined by streamlined processes or greater efficiencies

alone. Rather, success for Cyber Democracy may be judged on the ability of new ICTs to expand and enhance qualities of good political participation and stimulate the creation of public policies that reflect the shared aspirations and visions of citizens.

### **Futures Approaches to Democracy**

As noted, this scan provides a brief description of Cyber Democracy developments at the dawn of the 21<sup>st</sup> Century. Many of the developments highlighted in this scan are experimental and leading-edge projects. The next steps beyond this report for exploring the implications of Cyber Democracy include the development of forecasts and scenarios. Forecasts could trace the potential trajectory of critical issues in the development of Cyber Democracy; scenarios can combine these forecasts and other important forces into alternative pathways along which Cyber Democracy and its consequences might develop. Exploration of the future of Cyber Democracy can help further describe both the promise – and the pitfalls – of the ICT revolution in governance.

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# 1 - Cyber Administration

## Overview of the Cyber Administration

Cyber Administration involves the use of Internet and other ICTs to make the work of governments, particularly their administrative and regulatory agencies, faster, more efficient and “customer-centric.” Most Cyber Democracy initiatives have involved moving the administrative processes of government online.

The global pattern of E-government initiatives shows a deep integration of government services and data that allow for a high degree of interactivity between citizens and the emerging Cyber Administration. Developing nations are pursuing E-government efforts as well, in some cases having an interest that exceeds their available IT resources. Several leading-edge countries are making substantial E-government expenditures. However, countries with the highest growth rates in IT expenditures are not the E-government leaders. They are the followers that are increasing their relative expenditures in an attempt to catch up.

Common E-government services include transactions such as tax payments, driver licensing and renewal, and car registration. The effectiveness of E-government is being evaluated largely in terms of interactivity and efficiency.

The immediate benefits of Cyber Administration usually take the form of direct cost savings in procurement and more efficient delivery of services. Increased efficiency can also play a role in enhancing local economic development by streamlining and simplifying regulatory processes.

The full implementation of Cyber Administration services is not without its challenges. Improving government ICT infrastructures can often involve significant up-front capital expenditures. Some projects have handled this obstacle by using full or partial privatization. Finding a balance between speed of implementation and the proper degree of control can prove to be an important challenge in E-government projects. In addition, organizational culture can contribute to institutional inertia and a fear of change that can slow the full development of Cyber Administration.

The IT infrastructure of E-government projects is being built to conform to the needs of citizens and is not being based on existing departmental structures. Online government portals are providing a seamless and unified interface for citizens to select E-government services from multiple administrative agencies. The Extensible Markup Language (XML) data standard and new data-exchange technologies are making it possible to bridge the data divides between departments and to move towards a seamless integration of data. While coming upgrades in data exchange can improve the delivery of government services, the ease with which data can be collected and aggregated is beginning to provoke concerns about citizen “dataveillance.”

Improvements in ICTs are making it possible to increase the transparency of government operations by taking obscured or fragmented public data and allowing it to come to light. The increased capacity to share, exchange, and publish data is creating a new ability for E-governments to allocate their internal resources. For example, police departments can map the locations of crime on a daily basis, while redeploying officers to contain emerging crimes waves. These systems also have the potential to help regulate public behavior. By compiling and publishing examples of violation of standards or codes, offenders can be penalized in the

court of public opinion. This form of public exposure can also be used to curb the behavior of corporations, or even used by activists to check the behavior of political leaders.

The creation of Cyber Administration services holds the promise of making government more relevant, convenient, and efficient for citizens.

## 2001 Review of Current Status of E-Government

### The State of Global E-Government

Many E-government projects are still in their initial stages, with the scope of national efforts and available services poised to shift dramatically over the next several years. Surveys of E-government projects are emerging. Two recent studies have taken a systematic approach to measuring the effectiveness of E-government services globally.

The first was performed by the international consulting firm Accenture, which assessed the maturity of national E-government efforts in 22 leading countries.<sup>1</sup> The study argued that these countries can be clustered into four distinct tiers:

- *Platform Builders* describes those countries where many administrative branches are in the process of putting information and publications online.
- *Steady Achievers* is the term for countries that have made significant government-wide progress in publishing or posting online information across government divisions.
- *Visionary Followers* have moved beyond publication to develop interactive capabilities for citizens to communicate with government agencies.
- *Innovative Leaders* describes government administrations that employ ICTs not only to provide information and answer questions but have moved into offering transactional services online.

The 22 leading countries had the following distribution across the four tiers:

- *Platform Builders:* Japan, Brazil, Malaysia, South Africa, Italy, and Mexico.
- *Steady Achievers:* New Zealand, Hong Kong, France, Spain, Ireland, Portugal, Germany, and Belgium.
- *Visionary Followers:* Norway, Australia, Finland, Netherlands, and the United Kingdom
- *Innovative Leaders:* Canada, Singapore, and the United States

The nations with leading E-government efforts - Canada, Singapore, and the US - all had a high degree of interactivity in their offerings, and a relatively high number of transactional services between citizens and the government available online. According to the study, two-way interactivity in the form of transactional services is at the leading edge of E-government efforts in 2001.

The second study, which was performed by McConnell International, a technology policy and management consulting firm, took a somewhat different approach and examined 500 E-government initiatives in developing countries. It ranked the qualities of "e-readiness" for each of the 53 countries.<sup>2</sup> The study sought to identify the states that held the most promise for the swift implementation of E-government by measuring 5 subcategories that reflect important E-government issues.

| <b>Subcategory of E-Readiness</b>            | <b>Measure Used</b>  | <b>Leading Countries</b>                               |
|--|--|--|
| <i>Connectivity</i>                          | Are networks easy and affordable to access and use?  | Korea  |
| <i>E-Leadership</i>                          | Is E-readiness a national priority?  | Brazil, Chile, Estonia, Korea, Taiwan                  |
| <i>Information Security</i>                  | Can the processing and storage of networked information be trusted?                          | Chile  |
| <i>Human Capital</i>                         | Are the right people available to support e-business and to build a knowledge-based society? | Costa Rica, Estonia, Hungary, Korea, Slovenia, Taiwan. |
| <i>E-Business Climate</i>                    | How easy is it to do e-commerce today?   | Estonia  |
| Source: McConnell International <sup>3</sup> |  |  |

The scope of E-government activities in developing countries may lag behind efforts in more developed nations, but the McConnell study indicates that there is considerable effort and interest in E-government in many developing nations. As they research and perfect the designs for services and use "off the shelf" solutions, many of these countries may be willing and able to adopt simple, inexpensive, internet-based solutions.

### **Regional Differences**

E-government expenditures are mounting as more audacious E-government proposals are beginning to emerge. One notable example has been in the UK, where Prime Minister Tony Blair has very visibly pushed the support and development of E-government programs by setting the ambitious goal of making 100 percent of government transactions available online by 2005. The UK is expected to pay an additional £1 billion to finance the implementation of this vision, in its attempt to jump-start a "joined-up" E-government that can bridge the traditional divisions and lack of coordinated effort between separate agencies.

The UK is not alone in making significant expenditures on E-government. The Gartner Consulting Group, an organizational research and consulting firm, forecasts that worldwide public sector IT spending is expected to grow from \$185.5 billion in 1999 to \$247 billion dollars in 2003. In more advanced and Internet-oriented countries, it is likely these expenditures will be spent mostly on E-government growth. However, in less technically advanced countries, most IT spending is maintaining legacy systems or developing Internet capabilities and connections to the outside world.

In the United States alone, Gartner forecasts that federal, state, and local public sector spending on IT will grow from \$84.8 billion in 1999 to \$109 billion in 2003.<sup>4</sup>

Europe is making significant expenditures on E-government as well. According to a May 2000 report by Kable Ltd., a UK public sector IT research organization, EU countries plus Norway will spend almost €55 billion on the computerization of public services this year<sup>5</sup>. Predictably, the biggest spender at € 13.3 billion is the EU's largest economy - Germany. The UK is next,

spending €12.1 billion. France ranks third at €10.0 billion. Nonetheless, absolute spending levels can obscure where the relative *growth* in spending is occurring. EU countries with the slowest growth in IT spending include Germany, Austria, and Norway. Those countries with the highest level include Portugal, Greece and Finland, who all show more than a 25 percent growth in IT spending over the last two years.

### Common Services

Several countries have emerged as leaders in creating systematic benchmarks to improve the delivery of E-government services. While the actual benchmarks are still being discussed and formulated, lists of top E-government services have been developed by several nations. The following tables list these respective services for business and citizens, in the USA, Sweden, and the EU.

#### Top E-government Services - USA

|   | Services for Citizens                          | Services for Businesses                   |
|---|--|---|
| 1 | Renew drivers license                          | Search Federal/Local Court records        |
| 2 | Vote on the Internet                           | Obtain a new professional license         |
| 3 | Access one-stop shopping                       | Access one-stop shopping for new business |
| 4 | File taxes                                     | Access criminal history background checks |
| 5 | Recreational park information and reservations | Apply for a business permit               |
| 6 | Access to police reports                       | Obtain a limited criminal history report  |
| 7 | Pay parking tickets/fines                      | Obtain worker's compensation information  |
| 8 | Review real estate records                     | Check employee driving record             |
| 9 | Pay taxes by credit card                       | Track license renewals of employees       |

Source: *Benchmarking the eGovernment Revolution: Report on Citizen and Business Demand*<sup>6</sup>

#### Top E-government Services - Sweden

|    | Services for Citizens             | Services for Businesses                 |
|----|-----------------------------------|---|
| 1  | Income Tax filing                 | Corporation Tax                         |
| 2  | Employment services               | VAT                                     |
| 3  | Certificates (Birth and Marriage) | Employment services                     |
| 4  | Parental leave                    | Company registration                    |
| 5  | Driving license approval          | Vehicle registration and database       |
| 6  | Vehicle registration              | Import and export declaration           |
| 7  | University enrollment             | Start-a-Company                         |
| 8  | Student grants and loans          | One-stop shopping for small enterprises |
| 9  | Police reports and permits        | Submission of statistical data          |
| 10 | Food and health online            | Real property information database      |
| 11 | Pension                           |   |
| 12 | Citizenship online                |   |
| 13 | School quality database           |   |
| 14 | Disability services               |   |
| 15 | Basic geographical information    |   |

Source: *Sweden's top-25 eGov Services*<sup>7</sup>

## Top E-government Services - EU

|    | Services for Citizens                         | Services for Businesses            |
|----|---|------------------------------------|
| 1  | Income Taxes                                  | Social contributions for employees |
| 2  | Job search services                           | Corporation Taxes                  |
| 3  | Social Security contributions                 | VAT declaration and notification   |
| 4  | Personal documents (Passport/License)         | Registration of a new company      |
| 5  | Car registration                              | Submission of statistical data     |
| 6  | Application for Building permit               | Customs declarations               |
| 7  | Reporting to police (filing theft complaint)  | Environmental permits              |
| 8  | Public libraries                              | Government contract information    |
| 9  | Certificates (Birth and Marriage)             |                                    |
| 10 | University enrollment                         |                                    |
| 11 | Change of address                             |                                    |
| 12 | Health services (hospital hours/availability) |                                    |

Source: *eEurope: an Information Society for All*<sup>8</sup>

There is variance in the prioritization of services among the countries, although a few are important to all. Priorities include the filing of taxes, the handling of driver's licenses and vehicle registration. This correlation becomes more apparent if services are directly compared among the three countries. In the table that follows, citizen and business services have been broken into separate tables, and the specific services are compared across all three countries. Equivalent services have been clustered alongside one another in the listings, italicized, and moved to the top of the table:

## Top E-government Services For Citizens – Sweden, EU, USA

| Sweden                                   | EU  | USA  |
|--|---|--|
| <i>Income Tax filing</i>                 | <i>Income Taxes</i>                                 | <i>File taxes</i>                              |
| <i>Driving License approval</i>          | <i>Personal documents (Passport/License)</i>        | <i>Renew Drivers License</i>                   |
| <i>Vehicle registration and database</i> | <i>Car registration</i>                             | <i>Pay parking tickets/fines</i>               |
| <i>Police reports and permits</i>        | <i>Reporting to police (filing theft complaint)</i> | <i>Access to police reports</i>                |
| <i>Pension</i>                           | <i>Social Security contributions</i>                |  |
| <i>Certificates (Birth and Marriage)</i> | <i>Certificates (Birth and Marriage)</i>            |  |
| <i>Employment services</i>               | <i>Job search services</i>                          |  |
| <i>University enrollment</i>             | <i>University enrollment</i>                        |  |
|  |   |  |
| Student grants and loans                 | Application for a Building Permit                   | Vote on the Internet                           |
| Parental Leave                           | Public libraries                                    | Access one-stop shopping                       |
| Citizenship online                       | Change of address                                   | Review real estate records                     |
| School quality database                  | Health services (hospital hours/availability)       | Recreational park information and reservations |
| Disability services                      |   | Pay taxes by credit card                       |
| Basic geographical information           |   |  |

*Top E-government Services For Businesses – Sweden, EU, USA*

| Sweden   | EU                                    | USA  |
|--|---------------------------------------|--|
| <i>One-Stop shopping for small enterprises</i> | <i>Registration of a new company</i>  | <i>Access one-stop shopping for new business</i> |
| <i>Corporation Tax</i>                         | <i>Corporation taxes</i>              |  |
| <i>Import and export declaration</i>           | <i>Customs declarations</i>           |  |
| <i>VAT</i>                                     | <i>VAT</i>                            |  |
| <i>Submission of statistical data</i>          | <i>Submission of statistical data</i> |  |
|  |                                       |  |
| Company registration                           | Government contract information       | Check employee driving record                    |
| Employment services                            | Social contributions for employees    | Obtain a new professional license                |
| Vehicle registration and database              | Environmental permits                 | Search Federal/Local Court records               |
| Start-a-Company                                |                                       | Access criminal history background checks        |
| Real property information database             |                                       | Apply for a business permit                      |
|  |                                       | Track employee license renewals                  |
|  |                                       | Obtain workers compensation information          |

The equivalent categories in the chart reveal the most commonly desired E-government services across these three countries. For citizens, the top three common services include tax payments, driver licensing, and car registration. For businesses, it is simplified registration and "one-stop shopping" for establishing new businesses.

### **Developing Effective Services**

Assessing the effectiveness of E-government services is a task under development. Many projects have adopted a framework with four distinct phases.<sup>9</sup> While the labels for the four phases can vary from project to project, the common features apply across international practices:

1. *Information* – the posting of contact information for government agencies and officials, along with some official documents of importance to the public.
2. *Interaction* – the public is able to access important information and communicate with government officials, typically through E-mail.
3. *Transaction* – the public is able to complete transactions with government agencies online. Services available at this stage include tax filing and payment, license renewals, and paying government fees.
4. *Integration* – ICTs can redefine the delivery of government services by integrating data held by separate agencies to provide a single point of contact, creating a transparent administrative structure that is more effective in providing services to citizens.

Countries with the most advanced E-government efforts have made substantial progress in migrating services to the third stage of transaction and are pushing ahead to fully deploy the fourth phase of integration during the next 5 to 10 years.

Another means of assessing the effectiveness are surveys of the public demands related to E-governance. One major study found that 56 percent of the US public feels E-government will generally be a positive development. Only 12 percent felt that the growth of E-government could have a negative impact. Positive expectations are even more prevalent among members of the public that are Internet users; sixty-two percent share this positive perspective, while 8 percent of Internet users take a dim view of E-government.<sup>10</sup> As a greater portion of the public becomes familiar with the Internet, the public at large could increase its positive feelings towards technology assisted governance.

Another study investigated the present-day experiences of the public. By a large margin, it found that convenience and speed remain the primary perceived benefits of E-government. Respondents were able to pick multiple benefits and selected the following as their top three:<sup>11</sup>

- Streamlined Services 51 percent
- Convenient Hours 32 percent
- Speed of Transaction 28 percent

All other services received less than 10 percent support. The findings indicate that efficiency is currently the primary criteria by which the public evaluates online services. This is likely to continue in the short term, as the current wave of initiatives focus on delivering services faster, better, and cheaper. Increased efficiency continues to be a primary appeal and justification for E-government activities, although the benefits of efficiency can take several forms.

## **E-Government Benefits**

One of the biggest benefits of E-government is the potential to create long-term efficiencies in the administrative functions of government. The most visible forms of current services are manifest in procurement. Less tangible benefits involve business development, especially programs that simplify regulatory compliance. Net benefits will only increase, as the accrued cost savings begin to surpass investment in creating a new IT infrastructure.

### **Cost Savings**

In 2000, US federal, state, and local government spending on materials and services was approximately \$550 billion. Already, some large private sector companies have achieved savings of up to 20 percent by moving internal procurement processes onto the Internet. If a similar degree of savings were achieved for government, upwards of \$110 billion could be saved. For the European Union, government procurement totals about \$778 billion, creating the possibility for up to \$156 billion of potential savings.

Other benefits of moving procurement online include reducing the cycle time for contract delivery; shrinking inventory, with attendant saving in cash flow; and lowering administrative costs by as much as 75 percent according to one estimate.<sup>12</sup> In Virginia, the US Department of Energy operates the Jefferson Laboratory, a \$600 million dollar facility that probes atomic structures using high-energy physics. The facility requires unique and specialized equipment, ranging from exotic magnets to built-to-order parts from subcontractors. To manage the process more than one and a half million products from more than 10 vendor catalogs have been loaded – with pictures and prices – onto a secure intranet, making them instantly available for purchase by authorized users. Advantages of this system include aggregated volume discounts, quicker order fulfillment, and a greater ability to track ongoing expenditures by department.<sup>13</sup>

New avenues for procurement also widen the public bidding process. Many governments require elaborate processes to reduce corruption and political favoritism. Unfortunately, the greater the requirements of a public bidding system, the higher the hurdles are for companies to participate. Moving the process online streamlines and simplifies it, making it easier for a wider variety of private companies to compete for government contracts. Greater competition among contractors can hold down costs and insure that citizens are receiving maximum value from their tax dollars.

When the city of Dallas moved their bid procurements to the web, requests that once generated 2 to 3 responses now generate up to 17 or 20. Orange County, California has had even better results. Projects that used to receive 7 to 8 bids on a solicitation, now elicit upwards of 70 responses.<sup>14</sup> In 2000, the state of Pennsylvania saved \$ 2.5 million by buying the state supply of road salt through a Business-to-Business Internet auction portal. The final auction price was lower than the budgeted amount, allowing savings on appropriated expenses.<sup>15</sup>

### **Economic Development**

State and local governments have been known to use financial incentives to entice companies into staying in a region or a community. Other jurisdictions rely on special tax breaks and incentives to attract and retain quality employers. Signs are growing that well implemented E-government systems are becoming another method for federal, state, and local governments to create a competitive business advantage for their locality. Instead of using direct subsidies or tax incentives, the financial benefits of operating under an advanced E-government lead to reduced regulatory costs and a more compelling bottom line for companies.

DBS International, a computer-hardware design firm, moved a regional operation across the Delaware River, from the state of New Jersey to Pennsylvania. DBS had been seeking a business climate that could respond at a rapid, digital pace. It found what they needed in Pennsylvania. On the day it purchased their new corporate property, they were able to secure a new building permit in a matter of hours - instead of enduring the several-month wait that was the norm in their previous jurisdiction.<sup>16</sup>

The state of Virginia also serves as an example of a business climate that fosters economic development. Virginia has attracted thousands of high tech businesses, including America Online, and created a growing base of high technology companies in Fairfax County, near Washington DC. The strategy of attracting these companies used local government to nurture regional technological development. A non-profit Center for Innovative Technology was created to coordinate local policy and to measure success in terms of jobs and companies created. As a result of this leadership, between 1992 and 1998, the number of technology firms in the state increased an average of 10.2 percent annually. Venture capital investment grew from \$400 million in 1997 to \$1.6 billion in 1999. By 2000, Virginia had reported it was home to 4,324 technology firms employing 386,241 people.<sup>17</sup>

### **Ease Compliance**

In some cases, the problem isn't a slow and inefficient government permitting process. Rather, the problem is an overly complex web of regulations on business operations. While regulations are a necessary evil of the modern age, some E-government initiatives are taking the sting out by using IT to make compliance with complex and legalistic regulations more manageable.

The Pennsylvania Department of Revenue administers 18 different state taxes and collects more than \$19 billion in state revenues annually. Like many American jurisdictions, the tax code in Pennsylvania is largely written by lawyers for lawyers, in language that is difficult for the layman to understand. In 1996, the Department created a website to explain tax regulations to individuals and businesses in plain language. At first it received only a handful of E-mail inquir-

ies a day – a slow pace suited to an administrative system that required secondary reviews for each response. As the popularity of inquiries grew exponentially, the volume of incoming E-mails rose exponentially in tandem. By 1999, the state revenue department was receiving up to 200 E-mail requests a day – responding to a total of 17,019 E-mails over the course of the year. To handle the deluge, their response system was streamlined and linked to taxpayer E-mail histories that allow agents to track communication with a few keystrokes. The new system has increased productivity by 55 percent, enabling the office to provide better service and assisting taxpayers to comply with increasingly complicated tax codes.<sup>18</sup>

Private companies are also making it easier for individuals and companies to cope with increasingly complicated regulations. An American company, Virtual Compliance Inc., produces online systems that wade through the United States federal laws governing occupational safety and hazardous materials. By posing a series of online questions, their products can “tell” users what steps to take in order to comply – all without having to read complicated regulatory language. The tool embeds years of experience into a series of simple software applications. Users need only state their problem. Then the software applies the legal rule and suggests the remedies.<sup>19</sup> This technology could play an important role in supplementing tools E-governments supply – online information repositories and E-mail help-desks.

## **E-Government Challenges**

Implementing E-government is not without its political difficulties. Full public funding of new infrastructures, as with many types of government investment, can require spending tax revenues that may not result in net cost savings for several years. Full or partial privatization can speed up deployment of E-government services but with the risk of becoming reliant on a private provider for ongoing services. Cultural and labor issues in public bureaucracies can also emerge as challenges. Government workers can resist changes to job security or view new efficiencies as a threat to their jobs. These financial and organizational challenges can often pose a greater impediment to the implementation of E-government services than the technical issues of building IT infrastructure.

### **Financing E-government Initiatives**

Methods of E-government project funding range from hiring larger numbers of IT professionals as employees, to creating contracts with private vendors to build and design new systems and services.

In the United States, there is a growing “entrepreneurial” approach that finances E-government services through public-private partnerships. In these cases, private vendors agree to design, build, and operate E-government websites in exchange for a percentage of the fees generated by the E-government transactions. This financing mechanism helps accelerate the deployment of services by circumventing elaborate government hiring or procurement practices, and by giving vendors a financial stake in getting services up and running quickly. Development costs are spread out.

For example, for 2 percent of the fees from each transaction, IBM was willing to design and host a cutting-edge site for the State of Arizona Department of Motor Vehicles. With the new system in place, drivers could register a car within minutes. This allowed Arizona to cut its processing costs from \$6.60 to \$1.60 a car – saving the state government an additional \$1.7 million a year. The cost savings thus provided a win-win-win proposition for the state government, the technology provider, and the taxpayer.<sup>20</sup>

Public-private partnerships also prove effective for internal government websites – intranets – that unify administrative and procurement activities. Private vendors have begun to sell their IT solutions in the US to federal, state, and local governments. For example, the private sector Internet services company the National Information Consortium (NIC) operates governmental portals for the city of San Francisco, 11 states, and 12 federal US Government agencies. NIC helps all these organizations move their purchasing online, buying everything from paper to computer products through a secure website -- and paying NIC a small fee for each transaction.<sup>21</sup>

On one end of the public-private spectrum is full privatization. At the other end are examples of full government financing and staffing. Between the poles is a mixed model with private companies creating E-government services under fully funded government contracts.

Full public funding and development insures complete political and financial accountability, but bureaucratic procedures can slow development. The public funding of private contracts allows for faster deployment and full capture of long-term cost savings. However, the private sector vendor retains the IT expertise.

### **Cultural Issues**

E-government requires a more flexible workforce. In this world, the work week isn't forty hours anymore. It's 168 hours - 24 hours a day, 7 days a week. Surveys show most E-government services are accessed between 8 pm and 2am - a time when managers and staff are at home.<sup>22</sup>

Forrester research, a technology market research firm, recently graded operations of 14 British departments that are implementing Prime Minister Tony Blair's commitment to deliver 100 percent of government services over the Internet by 2005. The average for the 14 departments was a "D." Cultural issues and unwieldy processes were cited as the main obstacles to progress. Although technology exists to meet the 2005 target, government culture was identified as the primary factor impeding full implementation.<sup>23</sup>

Cultural issues extend outside the bureaucratic organization. New E-government services can come under fire when the public perceives IT projects as a drain on funding for popular programs. This was recently the case with the UK's Culture Online, an E-government initiative to create a common access portal that links together all UK cultural institutions – from ballet companies to national art galleries. The initiative has been criticized in Parliament by those who believe that the monies allocated would be better spent supporting the existing arts sector. The perception that new Internet initiatives are diverting funding from existing programs could slow deployment of E-government services.

Cultural barriers also exist between central and local governments, which are increasingly finding a wide range of problems when they attempt to integrate operations. According to a survey of delegates to the 2000 Electronic Government Forum in London, 77 percent of central government managers and 90 percent of local government managers felt that collaboration would be critical to the delivery of efficient online services. However, almost half reported they encountered serious difficulties in working across departments. According to the managers, the primary incompatibility was organizational culture. Each bureaucracy is wedded to its own budgets, strategic priorities, and work cultures, making partnership difficult to achieve.<sup>24</sup>

### **Labor Issues**

Government unions facing workforce reductions among their membership often oppose E-government initiatives. The resistance ignores the fact that the digitalization of government services has the potential to enhance the skills and work activities of many tedious clerical jobs

in government.<sup>25</sup> Over the last 20 years, IT has turned many menial jobs into well-paying skilled positions in many commercial sectors. Over the next 20 years, IT could be just as meaningful for the workers of government bureaucracy.

In America, all political factions see significant labor issues emerging from the digitalization of government services. Robert Atkinson, technology consultant for the Democratic Leadership Council, says that the federal workforce could be slashed by 25 percent over the next decade. According to Steven Goldsmith, appointed President Bush's domestic policy advisor in 2001, the coming of E-government could mean the "end of bureaucracy."<sup>26</sup>

In Germany, cultural hurdles to the implementation of E-Administration are similar to those identified in the US. German civil servants have the option of retaining their positions for life, creating a stable environment that can also breed complacency and stymie programs that are more customer-centric. Furthermore, potential reductions in force caused by new efficiencies may make them resistant to integrating new technologies into government.<sup>27</sup>

Despite the financial and organizational issues that can impede the full deployment of E-government services, none pose insurmountable obstacles to the vision of a "joined-up" government. Thoughtful implementations of E-government services can strike a balance between competing demands and insure the equitable treatment of public workers, public finances, and the public interest.

## Wiring Up E-Government

The leading edge of E-government effort involves the creation of online portals to give citizens a single point of access to online services. These portals provide a coherent interface with multiple government computer systems, but do not foster any greater internal connections between agencies. However, next-generation data interchange formats such as XML will facilitate the seamless interchange of government data across departments and jurisdictions, and balance internal protocols with public and open data standards. The development of data integration between databases has already been used by government law enforcement agencies for monitoring and identifying possible criminals. As integration between databases becomes more common, the aggregation of personal information could potentially subject citizens to governmental scrutiny. These privacy concerns may define the ultimate limits of data integration among government agencies.

### Portals

Leading-edge governments are rethinking their Web strategies, making them more citizen-centric. Instead of launching online services on a department-by-department basis, they are coordinating services across departments accessible through a common portal. An online portal is a single point of access to a wide variety of aggregated Web-based content. In E-government initiatives, the unified portal is becoming the central and primary government website, bringing the entire range of services under one banner.

Government portals create a unique opportunity to package and market government services. Traditionally, divisions in government have been departmental, forcing the public to adjust to the structure of bureaucracy, as they attempt to connect to needed services. Portals enable the multitude of government services to come together in a central location, sometimes accessible in entirely new ways.

In the US, the FirstGov.gov portal of the Federal Government is a leading example of consumer-centric organizing of government services. Specifically, FirstGov.gov has a very familiar

look and feel, mirroring online semantic conventions such as the hierarchical topic directory that have been popularized by Internet portals like Yahoo. FirstGov and similar sites are demonstrating that government portals should adhere to the conventions already familiar to users.<sup>28</sup>

In 1994, Great Britain launched UK Online, a portal that reflects this consumer-centric philosophy. A major section of the site is designed around six “life-episodes,” such as having a baby, dealing with bereavement and learning to drive. This thematic organization allows citizens to interact with the government based on immediate needs, rather than having to guess which branch of the government bureaucracy is most appropriate.<sup>29</sup>

Singapore exemplifies how a government portal can integrate government services into a powerfully integrated whole. Similar to UK Online, Singapore’s eCitizen portal is structured around life events and offers citizens extensive options for online interaction.

Specifically, Singapore has an elaborate National Service program for defense. A two-year stint in the armed forces is compulsory for every able-bodied male, and after that, each has to report back to his unit annually for three weeks of military duty, until he reaches his fifties. Thus, in addition to their profession, Singaporean males play a role as an “NSman” (National Service man). The NSman section of the national website serves as both a window to the armed services for the whole Singaporean community (including parents, partners and employers) and a platform for a wide variety of transactions for the NSman. Via the web, he can claim his training pay and have it deposited into his bank account; book fitness tests and training courses; shorten the length of training by upgrading his skills through an online military academy; and then tell the Ministry of Defense his opinions in a feedback section. Access to confidential information, such as medical data, is available by PIN number, but families have the ability to check the activities and whereabouts of recruits.<sup>30</sup>

Portals are not just for large national governments. They can be created for communities. In St. Louis, the community of Grace Hill has established a local computer network that connects to personal computers in publicly accessible locations. Its innovative service programs include: a computerized neighborhood Time Dollar Exchange for trading volunteer time for services, a neighborhood-based system of education to encourage self-help and self-reliance, and an employment database to help low-income persons overcome the information barrier that prevents them from finding jobs.<sup>31</sup>

The success of this community program supports research showing demand for transactional government services is greatest at the local level. In a survey of US consumers performed by portal services company EzGov, respondents cited local information as the primary need of consumers (85.2 percent), followed by State information (75.3 percent), online petitions (68.8 percent) and Federal Government information (65.0 percent).<sup>32</sup>

The creation of E-government portals is a major initiative in many countries. France has developed numerous portals, both public and private. Switzerland’s Geneva portal is another successful example of a government site. Portals can help bridge the multiple information platforms that have evolved in government departments, but they do not create the integrated departmental data exchange that could reshape the structure of government bureaucracy. The next generation Internet could bring information sharing and exchange into the heart of the bureaucracy.

### **XML and the next generation Internet**

Over the last decade, the web has evolved. During 1992 and 1993, it was the *Publishing* web, focused on the presentation of static, text-filled pages of information. Between 1994 and 1997, websites became the *Transaction* web, with dynamic content being extracted from online databases and consumers buying products online. More recently, the Internet has become the

*Process web*, in which applications present and exchange data.<sup>33</sup> There are many signs that the pace of change is going to continue well into the next decade. IBM research teams forecast that there will be a million-fold increase in bytes available on the Internet in the next 10 years. It took 15 years to increase bandwidth 10 times, but in the next 5 years new broadband technologies could grow up to 150 times current capacity. The next generation Internet will be blazingly fast, always on, accessible everywhere, intelligent and easy to use.

One key in making this vision reality is XML - eXtensible Markup Language - a standard for online information that can encode data from any source.<sup>34</sup> XML is a syntax that allows data to be presented in a format that is independent of the applications that use the data. The content of a data file is typically tied to the program or computer system that generates that data. XML's difference is that it can encapsulate data in a format that makes it accessible to any application that can interpret the data.

What exactly is XML? The flexible tagging conventions for XML are designed to create a semantic structure that can be parsed and interpreted by other computer programs. XML describes the information in terms of *what* it is, enabling computers to directly interact with textual information. XML tags allow data to be encapsulated in formats that describe and separate each piece of individual content. Currently, when you perform an Internet keyword search, you get results of every use of that word regardless of the context. XML allows computers to interpret the *context* in which data is contained, making it possible to automatically tell the difference between the use of a name in the headline of an article, a passing reference in a footnote, or an entry in an online address book.

XML enables a user to create an infinite number of tags for information. However, in order to achieve interoperability and share information with other computer systems, agreed-upon data conventions are required. All told, some 200 groups are working to create XML conventions and vocabularies for a host of document types, processes, and industries. The flexibility of XML makes it an IT solution applicable across both profit and non-profit sectors – everything from E-commerce websites, Business-to-Business auction portals, to government initiatives.<sup>35</sup>

Consistent tagging allows new capabilities that are a step beyond simple transaction. Application-specific tags make possible the following sorts of activities.<sup>36</sup>

- *Precise Searches.* If jurisdictions use similar tag protocols, searches for specific information can be targeted simultaneously across the computer systems of multiple government entities.
- *Automation.* Clicking on documents or listed government services can automatically pull up an E-commerce application to fulfill the order.
- *Data Interchange.* Properly tagged data from one government entity can be seamlessly merged into other data streams.

The potential for seamless data interchange can transform data from static information into dynamic knowledge.<sup>37</sup> Once the proper standards and systems are put in place, data from localities can flow automatically into regions, then up to a national government. This could greatly automate the collection of government statistics, simplify the aggregation of data for policy makers, and could even give citizens and non-government organizations wider access to the full range of government data.

The widespread interest in XML for intergovernmental data interchange affirms the belief that web browsers and the Internet will form the basis of government IT policy for the foreseeable future. It is a signal that the days of Byzantine proprietary systems used within government

agencies are coming to an end and that a new era of open standards and interoperability is about to begin.<sup>38</sup>

In the past, IT integration firms would customize software for government entities because officials were unwilling to ask unionized workforces to change their practices to accommodate off-the-shelf products. The openness and flexibility of XML is a good compromise. XML enables customization, but still adheres to common data interchange standards.<sup>39</sup>

### **Privacy and the Joined-Up Government**

The public's privacy concerns about E-government have largely been muted during the early phases of implementation. Generally, most efforts begin by moving existing government information and services online, making it more accessible. However, potential privacy abuses lurk in both government and business scrutiny of Internet use.

In the US, surveillance concerns have focused on Carnivore, the Internet monitoring system being developed by the FBI to find E-mail going to and from identified criminals. Pieces of the Carnivore system are already in place and have been used dozens of times by the FBI to gather evidence in their investigations, but so far the American courts have held the FBI to a high burden of proof in obtaining search warrants based on Carnivore. Some privacy advocacy groups fear that hard-wiring law enforcement monitoring devices directly into the Internet will facilitate continuous surveillances of citizens on the Internet.<sup>40</sup>

The United States isn't alone among democratic nations in insuring that the Internet remains a public space that retains the capacity for surveillance. In the UK, their national intelligence agency MI5 is building a new £25 million E-mail surveillance center that will have the ability to monitor all E-mails and Internet messages sent and received in Britain. The government is beginning to pressure major Internet service providers to hardwire links to the new computer facility so that messages can be traced across the Internet.<sup>41</sup>

Another surveillance controversy involves Echelon, a classified electronic surveillance system designed by the US National Security Agency to monitor all European electronic communications. Since 2000, a temporary committee of the European Parliament has investigated whether the system – operated by the U.S., U.K., Australia, and New Zealand – has been used to spy upon European businesses and give American firms an advantage in international commerce. The ongoing investigation has brought concerns about privacy into mainstream political debate.<sup>42</sup>

Currently, E-government activities have not yet come under privacy criticism because most initiatives have focused on moving preexisting government services online. However, XML and emerging technologies for data sharing are poised to create an infrastructure that will make it possible to tightly knit together personal information contained in disparate government databases.

The same technology that makes possible enhanced access to government services also raises the specter of government surveillance of the public at large. The emerging infrastructure creates the possibility that the government could monitor everyday activities through some form of "Dataveillance."

Dataveillance is the use of systems to investigate or monitor the actions of individuals. Large-scale databases make it possible to keep track of billions of individual records, all cross-indexed for easy reference and searching. Sophisticated data mining and pattern recognition techniques make it possible for the records of an individual to be correlated across multiple independent databases. Dataveillance is significantly less expensive than physical and elec-

tronic surveillance because it can be automated. As a result, the economic constraints on surveillance are diminished, and more individuals and larger populations are subject to monitoring.

The potential for dataveillance of the public does not mean technology is destiny. The EU has implemented comprehensive data protection standards that closely regulate the collection, use and dissemination of personal information in electronic databases. The EU Privacy Directive, which requires companies to follow a strict set of privacy rules, is becoming a regulatory model worldwide. Since it was adopted in 1995, Argentina, Australia, Canada, Switzerland, and New Zealand have adopted or are considering similar rules.<sup>43</sup> So far, the US has maintained a *laissez faire* policy towards privacy protection. As E-government databases continue to be joined together to create enhanced functionality for citizens, protecting the privacy of that data and establishing the scope of its use will become increasingly important issues.

## Transparency, Bureaucracy and Regulation

### Intergovernmental Efficiencies

The deployment of IT within government agencies can streamline and improve operations by targeting limited resources. The dramatic crime reductions in New York City during the 1990's were due in large part to extensive data collection and tracking practices that allowed for more efficient deployment of law enforcement resources.

Specifically, in 1994, the New York Police Department under Mayor Rudolph Giuliani deployed Compstat, a computerized system for tracking crime statistics. As numbers flowed into the system daily, law enforcement managers were able to identify crime "hot spots" and move swiftly to redeploy officers to those areas. Other cities, such as New Orleans, have followed New York's lead and set up Compstats of their own, and have experienced crime reductions above national averages.<sup>44</sup>

Sometimes entire processes have to be reengineered to capture the efficiencies of deploying IT within government. In Indianapolis for example, during the 1990's the mayor was determined to streamline the business permit process. To this end, they hired an outside engineering firm to computerize the permits for drainage approvals. Twelve months and \$600,000 dollars in expenditures later, the permit-granting procedure was still stalled.

It turned out that the outside contractor had fully complied by reviewing drainage permits and helping to put them online. Nonetheless, the whole permit system was broken. However, after a more thorough round of analysis, process reengineering and consolidation, waiting times fell by two-thirds. This example shows that moving one bureaucratic system online may gain very little efficiency, especially if the system is badly designed in the first place. However, when re-engineering identifies multiple barriers, it is possible to achieve dramatic savings and efficiencies.<sup>45</sup>

Benefits from systemic reform can also be achieved by applying ICTs to the internal workings of governance. In August of 2000, Estonia digitized the work processes of the Cabinet ministers. The new Estonian "E-Cabinet" now features a meeting room with cordless keyboards and LCD terminals that ministers can activate with smart cards. Officials are able to read and edit documents electronically, approve measures using digital signatures, and even participate in meetings from remote locations, electronically. The innovations have cut meeting times from an average of 90 to 60 minutes. Digital document handling has reduced the need for making photocopies, saving about \$90,000 dollars in the first 7 months of operations. According to one government advisor, the new E-Cabinet facilities are expected to recover about \$150,000 in 2001.<sup>46</sup>

### **Regulation through Exposure of Sensitive or Embarrassing Information**

New government websites are putting new types of information online and making it publicly available:

- The state of Rhode Island has recently launched a searchable database of the licenses of doctors, dentists, and other health professionals – including any licensing violations.
- In New York City, the local Department of Health posts health inspection reports for restaurants.
- Toledo, Ohio, has posted a page on its local government portal called "Houses of Shame," which lists the names and addresses of owners of ill-maintained or crime-plagued properties. *Governing* magazine reports that seven of the first 12 landlords named to the "House of Shame" have brought their properties into compliance within two months of appearing on the list; two others are trying to sell their buildings.<sup>47</sup>
- The twin-cities of Minneapolis-St. Paul, have applied the principles of public shaming to crackdown on prostitution. Photographs of arrested prostitutes and their customers are placed on the police department website.

Exposing offenders in public through community websites is a new capacity for governance that has emerged from E-government initiatives. This new process of transparency is not just limited to citizens monitoring E-government portals. The increased availability of information can also be used to target and identify corporate scofflaws. The Community Right to Know Act of 1986, made the U.S. the first country to require companies emitting certain toxic chemicals to report on those emissions, a strategy imitated by many other nations.

Organizations are beginning to take a role in accumulating and synthesizing this type of public data. In the U.S., for example, the Environmental Defense Fund (EDF) uses emissions data to create an environmental scorecard. People can go to the EDF website, type in their zip codes, and find out what industries are meeting EPA standards. Local polluters can be identified and mapped, their pollutants and emission levels presented. Moreover, all of this local information can be systematically compared to national averages.

No longer is the "public" information buried in the basement of a government office, where few people will ever see it. Now data of this kind is on the web, where community leaders, politicians, educators, and activists have access to it. The widespread availability of information makes it increasingly difficult for companies to evade criticism of their business practices. This information empowers community watchdogs, to credibly expose corporate misdeeds to a wide audience on a slim or nonexistent budget.

South Korean officials are using the Internet to bring public leadership under greater scrutiny. One initiative has been the creation of an official website to receive complaints about government corruption. The site is named *Sinmoongo*, after a legendary drum that was struck to gain the King's attention and action.<sup>48</sup> The site allows citizens to bypass the multiple levels of bureaucracy and make their complaints of official misconduct directly to the highest levels of government. This anti-corruption measure opens a new channel of communication between citizens and political leaders, and could potentially help to keep policymakers better informed about citizen concerns.

In another initiative, the Korean National Elections Committee (NEC) published the public records of political candidates on its website. According to the Korea Herald, the site recorded 150,000 hits when the military and tax records of 1,176 election hopefuls were posted. The Citizen's Coalition for the 2000 General Election (CCEJ) – a federation of more than 470 Korean civic groups – used the information to do extensive background research on 320 politicians. The CCEJ published a "blacklist" of 86 "unfit" candidates on its site, complete with background sources. Of the 86 candidates, 58 lost in the April 13, 2000 elections.<sup>49</sup>

The power of transparency and potential disclosure can also work to restrain policymakers. The mere presence of new IT capabilities and data-scouring activists can act as a disincentive to backroom dealing and corrupt political decision-making. Citizens who are relatively indifferent to political information can retain their political power as long as the information environment makes it possible for candidates, political activists, the media, and others to occasionally call public attention to the actions of government officials.<sup>50</sup>

E-government or Cyber Administration brings greater transparency to both internal government operations and a wide range of state-citizen interactions. This new capacity is making it increasingly possible to achieve a qualitative difference in the way administrative agencies use and deploy information. Increasingly, government agencies may pay greater attention to making data publicly available in a form that can be searched, combined, and syndicated by interested citizens and organizations.

Cyber Administration E-government activities are the most prominent of E-government projects. Internationally, governments are making considerable expenditures to bring government services online. Benefits of Cyber Administration include greater efficiency for both government agencies and citizens, but achieving these efficiencies can be costly and can be impeded by bureaucratic culture. XML promises to bring greater integration between government agencies, and facilitate exchanges of data that can bring public exposure to violators of the law. In Cyber Administration, the role of citizen is as a passive consumer of existing government services. The next section on Cyber Voting will address a facet of Cyber Democracy in which citizens have a much more active role – voting for government representatives and public policies.

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## 2 - Cyber Voting

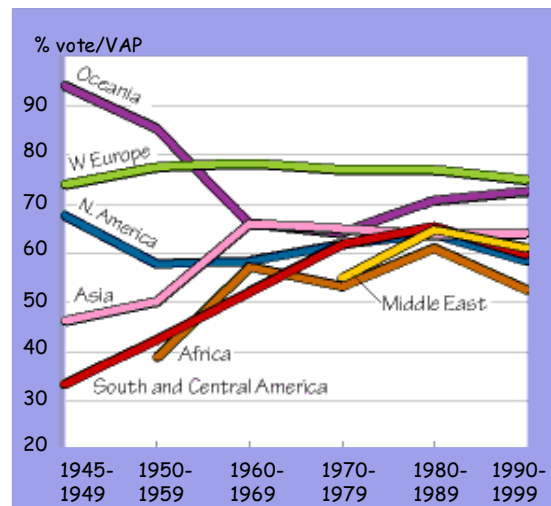
### Overview of Cyber Voting

Elections give citizens the chance to shape the political landscape by selecting their government representatives and in some cases by directly enacting laws through initiatives and referendum. The Internet potentially alters the system by making it more convenient for citizens to participate in this process. However, it remains uncertain, whether this single benefit is enough to reverse declining rates of voter participation. Some changes in voting practices have shown results. The State of Oregon, for example, achieved a 60 percent participation rate among eligible voters in the 2000 presidential election by using a mail ballot. It is unclear whether or not online voting can have the same effect. Already, the US, UK, France, and Brazil have conducted partial or experimental elections using Internet voting technologies. These technologies are still under development. A key concern is ensuring authenticity for both votes and voters. Cyber voting has the potential to facilitate participation in the democratic process. Ultimately, the success of Cyber voting will be judged on whether it makes the electoral process more responsive, and helps to increase turnout, but whether it makes the process more meaningful for the voter and wiser in its outcomes.

### Voting Patterns

In all regions except Asia and Oceania there was a slight decline in voting participation in the 1990's. According to the International Institute for Democracy and Electoral Assistance (IDEA), among the 36 democracies they categorize as "established," the historical voting data shows a clear pattern: turnout increased until 1950, stabilized between 1950 and 1970, and has been declining ever since.<sup>1</sup>

Globally, levels of turnout are beginning to converge at a figure representing between half and three-quarters of the voting-age population of any given country. Turnout in Western Europe, North America, and the Caribbean has remained fairly constant over the last 50 years, although European levels have been 10-15 percentage points higher than the Americas. Participation levels in South America and Asia had climbed steadily while Africa and the Middle East hit high points in the 1980s but have since slipped back.<sup>2</sup> Since 1945, Western Europe has maintained the highest average turnout, at 77 percent, while Latin America has grown to 60 percent.<sup>3</sup>



Source: International Institute for Democracy and Electoral Assistance (IDEA)

## **Voting and Turnout**

Securing voting rights has been an important concern for several civil rights movements, which worked to secure voting rights for the poor, women, and minorities. However, the general decline in turnout rates remains a concern among academics and political activists. Against this backdrop, declining voter turnout is viewed as a problem confronting the advanced democracies. Explanations fall into the following categories:

- Administrative Obstacles
- Cynicism
- Declining Social Capital
- Decline in Competitive Elections
- Election systems

These factors are issues in a number of mature democracies including the US, where some experts claim they have combined to significantly depress voter turnout levels.

- *Administrative Obstacles*  
Authenticating voter eligibility can depress turnout, with complicated registration procedures serving as one barrier. Once registered, voters face time constraints for casting their vote. Reforms like the “Motor Voter” laws that automatically register licensed drivers to vote and expanded use of absentee and mail ballots, have already been used to reduce the barriers to voting. Other reforms that have been proposed, but not yet implemented, include multi-day voting, Election Day voter registration, and making the US Election Day a national holiday.
- *Cynicism*  
Alan Keenan of Harvard University has cited public cynicism as an especially important factor in the decline of voter participation in the US. Reasons for this attitude may include the legalized corruption of modern campaign financing; influence-peddling; growing inequalities in wealth; and persistent social problems – poverty, affordable housing, drug addiction, ecological destruction – that political leaders seem unwilling or unable to address. According to Trevor Potter of the Brookings Institution, the perception that politicians are more responsive to lobbying by special interests than to their electoral mandate can decrease the degree of public participation in elections.<sup>4</sup> In the US, increased attention to the personal scandals in the private lives of political leaders and the rise of the “politics of personal destruction” has helped to reinforce the negative perceptions of an increasingly skeptical electorate.<sup>5</sup>
- *Declining Social Capital*  
Harvard sociologist Robert Putnam has argued that “social capital,” embodied in public norms of reciprocity and trust, is an important precondition for a well-functioning democracy.<sup>6</sup> The decline in voter participation rates parallels decreased membership in civic organizations. According to Curtis Gans, director of the Committee for the Study of the American Electorate, voter disengagement is caused by a variety of factors including but not limited to declining civic education, the decline of major institutions such as churches and civic groups that integrated communities, and the conduct of political campaigns.<sup>7</sup> According to Gans, these deeply rooted problems of civic life must first be addressed if the long-term decline in voter participation is going to be reversed.

- *Decline in Competitive Elections*

Non-competitive elections in which one party or candidate has a significant advantage can depress voter turnout by making voters feel their vote is irrelevant. Incumbency, financial resources, and local political traditions can all play a role in creating elections with low turnout and high margins of victory. This commonly happens in US Congressional elections. For example, in the year 2000, less than one in ten races were won by competitive margins of less than 10 percent.<sup>8</sup> However, this phenomenon is not confined to the US. The June 2001 election of Prime Minister Tony Blair in the United Kingdom is another example of the low turnout that often precedes landslide elections. The Labour party captured a plurality of 45.7 percent of the vote, compared to 29.6 percent for the Conservatives and 17.6 for the Liberal Democrats. Less than 60 percent of those eligible chose to vote, the lowest electoral turnout in the UK since 1918 – the height of WWI. Labour veteran Tam Dalyell expressed his concerns about the degree of low voter turnout: “I am absolutely dismayed about the turnout but not surprised. All politicians, especially those of us with substantial majorities, ought to take note.”<sup>9</sup>

- *Election Systems*

Across the globe, there is wide diversity of election systems, and evidence that the structure of such systems can impact voter turnout. According to data from the IDEA Global Report on Political Participation, election systems can be divided into nine sub-families within three broad categories: Plurality-Majority, (First Past the Post, the Block Vote, the Alternative Vote, and Two-Round Systems); Semi-Proportional (Parallel systems and the Single Non-Transferable Vote); and Proportional (List Proportional, Mixed Member Proportional and the Single Transferable Vote). In terms of the three main families of election systems, voter turnout in Plurality-Majority and Semi-Proportional systems are generally lower than the turnout in Proportional systems by as much as 10 percent. When turnout for the three voting systems is compared, Plurality-Majority and Semi-Proportional systems only average 59-60 percent while Proportional systems average 68 percent.<sup>10</sup>

These five factors (Administrative Obstacles, Cynicism, Declining Social Capital, Decline in Competitive Elections, and Election Systems) can combine in a variety of ways to depress voter turnout in individual countries. The application of ICT to enable Internet voting has the immediate promise of reducing administrative obstacles. However, several research studies indicate that overcoming administrative obstacles to voting may not be enough to reverse declines in voter participation rates. In 2000, the State of California released the report of its Internet Voting Task Force, which concluded that practices to make voting more convenient have had little impact on increasing turnout in US elections. From 1964 onward, despite less restrictive registration requirements and increasing national education levels, turnout in the US has continued to decline. Even the "Motor Voter" laws of the 1990s have been followed by declines in turnout.<sup>11</sup>

In January of 2001, the Committee for the Study of the American Electorate (CSAE), a non-partisan research organization based in Washington, D.C., released a comprehensive report on the effects of innovations aimed at increasing voter participation. Part of their report addressed the all-mail balloting system and extended election period that the State of Oregon adopted. The ease of voting that all-mail balloting affords may be comparable to the ease that Internet voting may provide. The report found that while Oregon did show improvements in voter turnout, it was not necessarily due to more convenient balloting. Turnout did increase by 3.1 percent in 2000. This rise was greater than the 2.2 percent increase in average voter turnout nationally. However, Oregon was a battleground state actively courted by both US presidential campaigns, and its increase fell short of the 3.4 average percentage-point rise in all 16 of the battleground states.<sup>12</sup>

The vote counting controversies of the US 2000 Presidential election have led to an increased interest in election procedures and processes. In the summer of 2001, two major reports proposed specific recommendations for improving US voting systems. The Voting Technology Project, a research partnership between the California Institute of Technology and the Massachusetts Institute of Technology, created one report, and The National Commission on Federal Election Reform, a commission co-chaired by former US presidents Jimmy Carter and Gerald Ford, released the second. Neither proposed Internet voting. Instead both studies emphasized improving existing election processes to reduce ambiguity and doubt.

The report from The Voting Technology Project highlights a series of basic flaws in the 2000 US election and urges that localities hold off implementing Internet voting for at least another decade. Their report found that between 4 and 6 million Americans who attempted to vote for president either failed to cast votes or had their votes invalidated due to faulty equipment, mis-marked ballots, polling place failures, and administrative errors. Using election returns data, the teams estimated that faulty equipment or confusing ballots caused 1.5 million to 2 million votes to be unmarked or mismarked. The report advises that, in the short term, changes to elections should focus on improving mechanical balloting technologies. Localities should not leap to implement Internet voting because the flaws of in the US voting system are systemic, and can't be fully addressed by simply changing voting technology.<sup>13</sup>

The National Commission on Federal Election Reform outlined several common-sense proposals to improve US elections. Its recommendations include financial grants to states for upgrades of voting equipment, statewide vote-counting standards, making Election Day a national holiday, and a voluntary media embargo on election results until the voting is completed on the west coast. The group also recommends statewide systems that would allow voters to register anywhere and have the information relayed to their specific precinct. The Internet could play an important role in allowing hundreds of statewide polling places to share a common voter database and individual precincts to have access to up-to-date registration information on Election Day.

## Voting For Representatives

### Methods for Internet Voting

The Internet could integrate every aspect of the voting process – from registration, authentication, ballot casting, and vote counting. Only a handful of jurisdictions such as: the US, UK, France, and Brazil are among the nations that have conducted elections using some form of Internet voting technology. Experimental implementations have generally followed three distinct approaches, each with different techniques:<sup>14</sup>

- *Wired polling sites* describes voting conducted at computer-equipped local voting centers, supported by the Internet, and linked to a voter registration database. A terminal displays the voter's ballot on a kiosk or computer terminal screen. The citizen uses a touch screen or keystroke to record his vote.
- *Authenticated E-mail* is Internet voting that functions as “virtual” absentee voting. Ballots are requested and distributed via secure E-mail. The ballot is completed on a computer where it is encrypted, transmitted, validated, and returned to the election office through an E-mail transfer.
- *Web voting* establishes a central election website where voters log on through secure means, verify their identities, and cast an electronic ballot. This can take place wherever Internet access is available.

### **Leading Edge Internet Voting Experiments**

The following are examples of the newest experiments in the electoral process. Each focuses on one aspect of the voting process: such as party primaries, absentee ballots, local referendums, and partial preference voting systems. The experience gained from these limited experiments creates a foundation for the further expansion of Internet voting.

#### *USA*

The first use of the Internet in a statewide election of national candidates occurred in the Arizona Democratic primary for the 2000 presidential election. State Democratic Party officials allowed local registered Democrats to cast their ballots for presidential nominees over the Internet. Citizens who wished to vote from home downloaded a form prior to the election, which, when signed and submitted, enabled them to receive an ID code through E-mail. On Election Day, the voter went to the party's website and entered his ID number to verify their identity. At the end of four days, nearly 36,000 people – half of the total primary voters – used the Internet to vote in the Democratic primary election. However, participation was still low, with only 10 percent of those registered casting votes.<sup>15</sup> This test was generally regarded as a success, and several other states (notably California and Washington) are seriously investigating similar systems for state elections. In Arizona, this experiment increased participation among certain population groups. Adam Clayton Powell III of the Freedom Forum notes that some Arizona Indian tribes experienced a 300 to 400 percent increase in turnout, largely because laptop computers were taken to tribal meetings, facilitating the ability to vote.

#### *Brazil*

In Brazil, where voting is mandatory, an estimated 90 million people cast ballots in the November 2000 elections for the Senate and the House of Representatives. This election presented the first opportunity for Brazilians to vote via the Internet. However, this trial was limited to about 200,000 absentee voters who cast their ballots at designated stations. These stations were located at embassies, schools and other areas where E-poll workers could monitor the process. The main innovation was that absentee ballots were digitally transmitted to election offices via the Internet. This test was only the beginning of Brazil's Internet voting initiatives. In 2001, the Brazilian government is expected to spend about \$200 million on expanding their electronic voting system, including the purchase of 300,000 PCs. All of the machines will be equipped with a network port that will make it possible for citizens to connect to the Internet in future elections. Although Internet voting was limited to absentee ballots this year, the technology that Brazil is putting in place is likely to be applied on a much larger scale in the near future.

#### *United Kingdom*

In 2000, a referendum on council tax rates in the London Borough of Croydon and Bristol City was one of the first major public elections in the UK to offer an Internet voting option. More than a million Britons had the chance to vote on this issue online. According to Electoral Reform Services, the company that assisted in administering the election, most voters chose not to use the new forms of Internet voting. In Bristol, 115,702 voters, representing 40.2 percent of the electorate, voted in this election.<sup>16</sup> Given the option of voting by mail, phone, or Internet, nearly all – 94.2 percent – chose postal votes, and 3.1 percent voted by phone. Only 2.7 percent voted via the Internet. In Croydon, 35 percent of the electorate of 230,000 cast votes. The Internet did slightly better there than in Bristol, with 3.4 percent of voters voting online compared with 91.7 percent choosing postal votes and 4.9 percent voting by phone. Of all citizens eligible to vote in either of these elections, only 0.9 percent cast their ballot online.

#### *France*

In September of 2000, voters in Brest were given the opportunity to participate in an experimental Internet referendum on the length of the presidential term. This experimental referen-

dum was conducted by *election.com*, a UK vendor of election software to the public and private sector. They offered citizens at the central city hall the opportunity to use Internet voting equipment after they had cast their official paper ballot. Thirty-five percent took the opportunity to cast unofficial votes using Internet terminals. More than 71 percent of those who voted online thought the French presidential term should be reduced from seven to five years, 14 percent responded "no" and the rest were without opinion. This result from online voting was similar to the results by voters using traditional voting stations.<sup>17</sup>

#### *Australia*

Canberra recently announced plans for a test of electronic voting in its October 2001 elections. This will be the first time a ballot in a complicated preference voting system will be processed and transmitted electronically. In preferential voting, voters must rank-order all electoral candidates, rather than voting for one specific candidate or party. A \$405,000 (Australian) trial will use four pre-election polling places that will be increased to 10 polling places on Election Day. The votes will be transmitted to the central election office using a secure computer network. Although this is not technically an "Internet" election, it is an important step towards moving preferential voting and transferable vote systems online.

#### *Estonia*

The Estonian Justice Minister has proposed allowing Internet voting in the 2003 parliamentary elections. Procedures would be modeled after absentee ballot practices, with citizens registering as Internet voters and using digital signatures to affirm their ballots online. Twenty-eight percent of Estonians are logging onto the Internet at least weekly, and more than 80 percent of private workplaces are connected to the Internet. Rural residents have access through a series of 170 Public Internet Points in libraries and municipal buildings across the country. These multiple points of access have made it possible for 82 percent of Estonians to perform their banking transactions on the Internet.<sup>18</sup> If Estonia follows through with the plans for 2003, their comfort with online transactions could lead to Internet voting rates significantly higher than the current 2 percent usage of absentee ballots.

### **The Evolution of Internet Voting**

Internet voting shows great promise for making the election process simple, easy, and as convenient as any other online transaction. Eventually, it will be possible for everyone to vote online from the comfort of home. However, before this advance becomes reality several technical issues must be overcome.

The California Internet Voting Task Force issued an in-depth study of Internet Voting issues. According to this report, an incremental approach allows voters to become comfortable with "virtual" election activities while allowing technical security issues to be resolved at a gradual pace. The Task Force identified three phases that form a protocol for online activities.<sup>19</sup>

#### 1) *Internet Voting at Any Polling Place*

Internet connectivity comes into traditional precincts and polling places. Each site is connected to a central voter registry that can be updated in real time. Citizens can select any site in the jurisdiction, with the central online database preventing voters from casting their ballot twice.

#### 2) *Internet Voting From Dedicated Computers*

Prior to the election, voters are provided with a password or digital signature that is used to "login" to Internet voting machines at community polling stations. Poll workers are not necessary for identification, so voting can take place at any time the facility housing the machines is open for use. In this way, dedicated computers act as a "Voter ATM machine."

### 3) *Remote Internet Voting from Any Internet Connection*

Voters use their password or digital signature to access the election through any computer connected to the Internet. The online voting website has safeguards insuring that only ballots cast by authenticated voters are counted. Remote Internet Voting allows polling to take place at the citizen's convenience, in the privacy of one's home.

Traditional election systems have already developed elaborate safeguards to protect the integrity of the ballot and verify the identity of voters. Internet voting must address these same issues, and develop safeguards appropriate to a new voting environment. Designers are finding ways to verify **votes** (authenticating vote integrity, secrecy and accuracy), as well as **voters** (authenticating their identity).

**Authenticating Votes:** The transmission of votes cast online is a relatively straightforward issue. Widespread consumer interaction with online banking and E-commerce has familiarized many potential Internet voters with secure online transactions. Some vendors feel that the 128-bit encryption systems of the Secure Socket Layer (SSL) protocols currently used in E-commerce, provide adequate security for the transmission of digital votes over the Internet.<sup>20</sup> Still in development are the advanced encryption protocols that will ensure that online votes remain as anonymous, accurate, and auditable as current voting approaches. To protect against fraud, traditional election systems place trust in authorities, such as election officials, party members, and election observers, who all monitor each other to help insure a fair process. Ideally, no single authority can compromise an election without detection by another authority. Internet voting systems face the challenge of providing a comparable level of accountability and protection by designing similar safeguards into the mechanisms of Internet voting software.

- *Encryption and Vote Counting*  
Companies such as Election.com, VoteHere.net and Safevote.com have begun to develop and market secure Internet voting systems for corporate and organizational elections, with some tests in public elections. Their proprietary systems use encryption protocols to secure counting of digital votes, as well as a series of digital envelopes, signatures, and certifications to insure the integrity and anonymity of the vote. After votes are submitted, the identities of the voters are validated and then passed on to another server. The votes are then tallied without including the identifying voter information in order to insure anonymity. The final results can be accessed only when election officials simultaneously access the system using electronic "keys." These cryptographic safeguards prevent both insiders and outsiders from changing the outcome of an election.<sup>21</sup>
- *Open Source Voting Software*  
Proprietary software for tabulating digital votes has the advantage of offering a "turnkey" system to election officials, who can run an election without a great deal of technical expertise. However, critics have raised concerns that without access to actual source code of the software, it is more difficult for third parties to independently determine that the software is free of glitches, backdoors, and security holes. One proposed solution has been to develop "open source" digital vote tabulation software, in which the original source code is made freely available for examination and distribution. One project of this type is GNU.Free, currently being developed and translated into nine languages. Governments and organizations could use open source Internet voting software as a free and open foundation for building inexpensive and customized Internet voting systems.

**Authenticating Voters:** The second challenge is authenticating actual voters. The prospect of online voting gives rise to concerns about duplicate ballots, voting in improper jurisdictions, and even online ballot stuffing. Currently, election registration procedures require using paper forms with manual signatures for authentication. The physical presence of the voter is re-

quired, either when registering to vote or when casting a vote on Election Day. As the registration and voting process move increasingly online, authentication will have to become increasingly digital. Biometrics and smart cards are two technologies that can aid the process.

- *Biometrics*

There are many physical features that could be used to verify the identity of an individual voter. Biometric devices such as voice print analyzers, finger print readers, laser retina scanners, and facial imaging devices are several examples of technologies that could potentially be used for this purpose. Each of these devices is already under consideration or being deployed on an experimental basis in government and private sector applications. For example, a fingerprint reader in a mouse could be a widely accepted confirmation of identity in many types of E-transactions. Banks have already begun to use biometric identifiers at ATM machines on an experimental basis – a development that could potentially make ATM machines the election booths of the 21st century. According to Johann Dreyer, executive chairman of Mosaic Software (an electronic funds transfer developer): “[ATM Voting] has the capability to present the user something on the screen that allows them to cast their ballot in a touch-sensitive way in a secure environment.”<sup>22</sup> The commercial infrastructure of biometrics, whether deployed in terminals like ATM’s, or as a home computer peripheral, is likely to play an important part in the identity authorization processes that are needed for more widespread use of Internet voting.

- *Smart cards*

“Smart cards” – credit card-sized objects that contain a computer chip and on board memory– are already common in Europe and being used by many jurisdictions in the US. Driver’s licenses and identification cards are increasingly being issued on smart cards. Smart card memory can carry a wide variety of data, including individual digital certificates and digital signatures for each citizen. Countries across the world – with the conspicuous exception of the US – have begun to issue national ID documents that include onboard smart card chips. In countries that require citizens to have ID cards, smart cards can especially help streamline the voter identification process and even add another layer of security. For example, the digital “envelope” that holds the digital ballot can be required to include the voter’s smart card digital signature. The largest and most widespread use of smart cards is likely to be in China where the state council has approved a plan that calls for issuing plastic identification cards with embedded microchips to all of its 1.26 billion citizens over the next five years.<sup>23</sup>

### **Dark Side: Losing Voting as Civic Ritual**

When Internet voting reaches maturity – that is, the stage where the majority of citizens are able to vote from their own home – voting will have been transformed from an act that occurs in the public sphere to an online transaction that occurs in private. Even with a secret ballot, the mechanics of voting are still designed in a way that reminds us that, in principle, we are all members of a common political community. Some experts argue that moving to Cyber voting could erode this civic value.

For example, according to Political Science professor Rick Valelly, standing in line at a polling place is a form of civic ritual, when, for a brief moment we can stand side by side with our fellow citizens and have a tangible experience of political equality. Rich or poor, young or old, we all have to wait in line for the chance to step into an identical voting booth and use an identical ballot to cast an identically weighted vote. To some degree, this civic ritual can make us more aware of the common good, and the simple act of voting as part of a wider political community makes us more aware of a wider sphere of concerns, lifting us up above mere self-interest.<sup>24</sup>

In a country like Switzerland, which has a very strong tradition of electoral participation, an integral part of the voting experience has always been the affirmation of community that occurs

when the entire village shows up in the town square to vote.<sup>25</sup> Internet voting, some experts argue, threatens to put an end to this civic ritual by moving voting into the private sphere, transforming voting into just another transaction that gets squeezed in between answering our E-mail and reading the latest news headlines online.<sup>26</sup> Internet voting at home is devoid of the environmental cues of the wider political community, and is a private act that occurs within the context of an online transaction.

Thus there is the prospect for greater loss of community and important civic rituals. On the other hand, as noted in the discussion above of factors affecting turnout, the intensity of community has declined in many areas, particularly in the U.S. and other developed countries. Some would argue that much community was lost before the rise of the Internet. In addition, as discussed in the Cyber Infrastructure section below, there are many companies and groups actively experimenting with how community enhancement can take place in cyber space.

### **Tactical Voting/Vote Trading**

Voting typically represents choosing preferred candidate or policies. If your candidate loses in their election, you lose. The Internet has enabled this dynamic to change. Even before the full deployment of Internet voting, there is evidence that online elections facilitate voting for tactical reasons, with a complexity not originally intended. During the 2000 US presidential election, several websites such as [www.nadertrader.org](http://www.nadertrader.org) and [www.voteswap2000.com](http://www.voteswap2000.com) promoted the "exchanging" of votes between Gore and Nader supporters. Democrats in states where Gore had large leads over Bush could exchange their vote with a Nader supporter in a "battleground" state where Bush and Gore were neck-and-neck. Vote-traders would cast a "tactical" vote, but rely on the honor system for their counterpart to cast their "intended" vote. These informal exchanges, which were intended to insure that anti-Bush voters would not work against each other, gave Gore votes in states where he needed them, while giving Nader votes that contributed towards getting 5 percent of the popular vote, the level needed to qualify the Green party for simplified ballot access and public campaign funds in future elections.

This system of vote bartering was designed to exploit the unique structure of the US Electoral College system (where all electoral college votes in a state go to the highest vote-getter), and keep concerned Nader and Gore supporters from "wasting" their vote in uncontested states. According to Jamin Raskin, the American University professor whose article on Slate.com inspired the vote-swap enablers: "It's hard to quantify, except anecdotally, but I feel confident that tens of thousands of people did this, I've gotten just hundreds and hundreds of e-mails about it."<sup>27</sup>

Vote trading crossed the Atlantic in 2001, showing up in a recent British election for Parliament. Tacticalvoter.net targeted marginal seats that had majorities of less than 2000 votes, and hoped to get Liberal Democrats and Labour supporters to swap votes in an attempt to rout the Conservative party. If only 165,000 members of each party were to swap, the Tory conservatives could have been pushed into third place. While the organizers of Tacticalvoter.net wanted to have a direct influence in up to 15 house seats, only a few thousand voters pledged to swap their vote on the website.<sup>28</sup>

Vote trading systems such as these are enabling citizens to use their vote strategically. The opportunities for this type of voting exchange could expand if voters gain confidence in online vote trading systems.

## Voting for Policies

### Direct Democracy (Initiatives and Referendum)

The discussion thus far has focused on the use of ICTs in voting for candidates and electing our representatives. Technology may play a more important role in “direct democracy” – in which citizens vote on issues or actual legislation through initiatives, referendums, or other electoral processes.

An **initiative** is a legislative proposal that originates with the citizens rather than with elected officials. Commonly, petitions have to be signed by a certain portion of the electorate. If the petitions are approved and the signatures are valid, the proposal can be voted on. Upon passage, the proposal directly becomes law without the need for legislative approval. **Referendums** are submitted by the government to the people for their approval and commonly involve authorization of actions such as bond issuance or constitutional amendments. Decisions may also be non-binding, used in order to give a formal indication of voter opinion on an issue.<sup>29</sup>

Switzerland and the US are two countries with extensive experience in initiatives and referendums and are useful examples to consider the potential implications of using Internet voting for their approval.

Switzerland has a long tradition of using initiatives and referendums for everything from deciding membership in the European Union to enacting a local ordinance. The unique Swiss political culture deeply embraced direct democracy long before any of the new digital communication technologies were on the horizon. In Switzerland, two styles of citizen’s initiatives are especially prominent.<sup>30</sup> The first is fairly standard. Small groups sign petitions to put issues on the ballot. The other gives citizens the ability to veto legislation, a power that is usually held by the executive branch. Only 56 of the 155 citizens vetoes have been approved since the practice began in 1866.<sup>31</sup>

The Swiss Canton of Geneva has launched several studies of ICTs specifically examining how the Internet could shape the referendum process with new capacities for online voting and signature collection. One report states that new technology could multiply the number of citizen initiatives by opening the process to a wider variety of political groups. However, the report observes that increased access to the process could open the floodgates to marginal initiatives and suggests this could result in larger signature requirements as a way to keep fringe issues from clogging up ballots.<sup>32</sup>

In the US, certain states have enacted limited powers of initiative and referendum. In 1984, 41 initiatives were on the ballot in states throughout the country. This number grew to 64 in 1990 and to 94 in 1996. At the state level, California has proven itself to be a leader in this type of politics, where initiatives are not just a supplemental means of setting policy but a dominant one. Within a period of 68 years, from 1911 to 1978, Californians passed 42 initiatives. Accelerating in growth from 1980 to 1996, Californians passed 40 more.<sup>33</sup>

One reason for the growth of initiatives in American politics is cynicism about elected officials. According to political commentator David Broder:

“Most Americans believe their elected officials look out first for themselves, then for their contributors, and put serving the public well down on their list of priorities. To tell American voters today that a politician is better motivated, more civic minded, and a better custodian of the commonweal than the voters themselves might be an insult to their intelligence.”<sup>34</sup>

In recent years, multi-state initiatives, where similar measures are considered in several states simultaneously, have emerged as a new trend in American politics. For example, in 1992, 14 different states had citizens casting ballots to determine whether there should be a limit on the number of terms legislators could serve. A national organization called U.S. Term Limits helped coordinate these initiatives, often having to satisfy demanding signature requirements to prove widespread public support. All passed by an average of 67 percent. Just two years later, another 12 states passed similar bills via initiatives. The Internet makes these multi-state efforts easier and less costly to pull off.<sup>35</sup>

Political observer Norman Ornstein of the American Enterprise Institute argues there is a risk in Cyber democracy that initiatives may become more common than they should. Ornstein said that while initiatives are an appropriate "last resort" check on insensitive elected representatives, they have become a serious alternative to the legislative process. There are dangers in this trend, according to Ornstein, because during the legislative process, opinions usually evolve as debates take place. In turn, draft legislation evolves, improves, and progressively gains more support. However, most initiatives are drafted by a small elite and there is often little prospect for further amendments to the proposal. As more issues make their way onto the ballot, the less attention voters are able to pay to any single issue. Speeding up this process through Internet voting will not be the sole catalyst to the creation of better governance or policy.

The Internet can greatly facilitate voter education on issues, making it cheap and easy for political groups of all persuasions to educate potential voters. Online voting raises possibilities of cutting the cost of holding elections and may introduce a new flexibility into the voting process. To keep public attention high, voting could be gradually staggered throughout the year. Alternatively, similar issues could be bundled together into theme ballots in order to focus the range of issues that are considered by the public in an initiative or referendum.

Given the increasingly connected world in which we live, Internet voting is likely. Experiments are underway around the world. The spoiled ballots in the 2000 US presidential election has generated a major focus on election reform in the US. Nonetheless, most proposals do not anticipate Internet voting in the near term. Reports such as that of the California Internet Voting Task Force, have recommended an evolutionary approach. The CalTech/MIT Voting Technology study concludes Internet voting should be put on hold for a decade to perfect more basic election reforms in the present. The larger question will remain whether the voting context enhances citizen's roles in governance. The answer to this question is explored further in section 3 on Cyber Policy Participation.

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## 3 - Cyber Policy Participation

### Overview of Cyber Policy Participation

Beyond voting, new technologies are poised to transform the way citizens can interact with political leaders and play an enhanced role in shaping public policy. Cyber Policy Participation deals with the application of ICTs to non-electoral forms of public participation in government. The massive and growing amount of E-mail being sent to legislators is the most obvious technological tool used by people in order to influence government priorities. In some cases, legislators themselves are inviting new kinds of feedback, organizing informal electronic referendums, or participating regularly in online policy discussions involving both citizens and political leaders. Other efforts have focused on the creation of "Electronic Town Meetings" (ETMs), which enable a group of citizens to explore and investigate policy issues in a sustained fashion while better informing public officials of their needs and desires. These channels of communication are expanding the opportunity for non-electoral political participation while enhancing the capacity for civic dialogue. These changes are helping to create new political communities based on shared visions and aspirations, potentially leading to a broadening of the role a "citizen" can play in society.

### Legislative Interaction

Citizen feedback to elected officials has always been a cornerstone of representative democracy. New ICTs are enhancing the current channels of communication between the two and even creating new capacities for two-way interaction between the public and office holders.

One approach for increasing the degree of direct interaction between citizens and political leaders is the informal electronic public forum. These forums give the public the opportunity to express positions on pending legislation and to help shape the policy agenda of their elected officials.

For example, MP Ted White, a Reform Party legislator representing the district of North Vancouver in the Canadian Parliament, contracted with Maritime Telephone and Telegraph (MT&T) to use its electronic voting system in his district to allow his constituents to deliberate and vote on two issues pending in Parliament. The elaborate system involved sending a confidential Personal Identification Number (PIN) to each registered voter in his district. The PIN would then be used throughout a 6-day period to vote on three related issues involving juveniles and the criminal justice system. This experiment in populist democracy did not even rely on public funds as a means of financing; participants in the experiment paid a \$1.95 phone charge in order to register their opinions.<sup>1</sup>

Prior to this citizen's forum, participants received a mailed pamphlet outlining the issues. The packet included opinions supporting or debunking the measures. Since the issues involved directly affected teens, MP White also gave PINs to students in grades 10-12 so that they could cast votes as well. The tallies showed overwhelming consensus on the proposals — including the votes of the students.

This exercise in community engagement reached a broad cross-section of the population, and created a new opportunity for citizens to directly confront important political issues and com-

municate with their elected representatives. The experiment relied heavily on traditional communications technologies, such as phone and mail, as the means to provide the public a new forum for measuring opinion. Widespread adoption of the Internet is creating a technology platform that will make similar informal consultations inexpensive, easy and common.

## Digital Petitions

A handful of legislatures and parliaments have begun to use new technologies to allow the public to directly communicate opinions on issues to their elected representatives more easily. Petitions have long been a feature of representative democracy, giving citizens opportunities to express their opinion on an issue through the simple aggregation of signatures and delivery of collected results to elected officials. Moving this process online is increasingly possible. For example, the State of Nevada has effectively created virtual petitions by giving citizens an online surveying capacity, allowing the expression of support or opposition to any piece of legislation currently pending. To provide their feedback, citizens merely need to go to the main website of the state legislature ([www.leg.state.nv.us/](http://www.leg.state.nv.us/)), select *Opinion*, and choose legislative proposals they support or oppose. During the 2001 Legislative session, the bills and issues that garnered the most votes included benefits for same-sex relationships (4,133 votes), public employee retirement (2,886 votes), and standards for dental licensing (2,575 votes).<sup>2</sup> During this early stage of implementation, comments came mostly from those individuals directly affected and interest groups. That result may be a function of how aggressively governments build support for participation, such as the mailing in the Canadian forums. However, there are indications that the civic feedback mechanisms, as they become more widespread and better known, may attract a greater number of citizens to legislative websites. According to the web designer of the Nevada State Legislature, monthly Internet traffic has more than quadrupled, an increase attributed to the presence of the online “petitioning” capacity.<sup>3</sup>

Most state legislative websites in the US currently focus on the calendar, not the content of legislative deliberations. In March 2001, the nonprofit OMB Watch released a survey of these sites. According to its findings, in 2000, 65 percent of state legislatures provided online access to a legislative floor schedule. Only 18 percent provided reports for the session. Further, only 12 percent provided updates on legislative activities. Conversely, states listed contact information for 92 percent of legislators, but only 12 percent provided enhanced forms of communications through mediums such as bulletin boards or discussion forums.<sup>4</sup>

In Europe, Scotland has already integrated online petitions into their legislative process. The new Scottish Parliament, working with the International Teledemocracy Center, a Scottish academic research center for integrating ICT and governance, has agreed to accept public petitions via the Internet. The World Wildlife Fund used this system to gather 337 signatures to lobby for a marine component to a national park system for Scotland.<sup>5</sup>

Some groups are taking the idea of E-petitioning even further. The “Transnational Radical Party,” an activist group headquartered in Brussels, is pressing for a unified Internet portal to petition governments. It wants to create a site that facilitates simultaneous petitioning of Parliaments throughout Europe. Additionally, they are pushing for a central E-petition site for the EU Parliament where European citizens from across the region can express grievances and wishes to governments via digital petitions.<sup>6</sup>

As a component of their political coverage, an Indianapolis newspaper and television station collaborated to give their audience the capacity to petition the state legislature during the 2001 legislative session. Using ballots printed in newspapers or available online on each of the partner’s websites, citizens were given the opportunity to prioritize pending legislative issues. Property taxes finished at the top of the list, followed by a proposed ban on telemarketer phone

calls. About 3,400 participants submitted responses that were passed to legislators and published. Six of the ten issues on this “People’s Agenda” were addressed during the legislative session.<sup>7</sup>

## Feedback to Representatives

Providing communications outlets to elected representatives is a less formal method than petitions expressing political views. E-mail has emerged as an effective link between citizens and their elected representatives and is growing significantly as a tool to shape legislative agendas. Supporters of electronic communications emphasize its benefits, which include a potentially greater citizen voice as well as the ability of representatives to know constituents better and respond to their concerns more quickly.

E-mail has added to the speed and volume of information, as it has eased access in communication between citizens and their elected officials. The US Congress has been especially overwhelmed by these improved channels of communication. The volume of E-mail messages to the US House of Representatives rose from 20 million in 1998 to 48 million in 2000, and continues to grow by an average of one million messages per month.<sup>8</sup>

Controversial public issues exacerbate the load. Debates about prescription drug benefits, the 2000 presidential election, and the Senate confirmation hearings of John Ashcroft for U.S. Attorney General generated thousands of often identical messages that landed directly in the E-mail inboxes of every member of Congress. Most were ignored, according to a study conducted by the Congressional Management Foundation and George Mason University.<sup>9</sup>

Even though E-mail has created new demands on legislators, staffing levels for representatives have not increased in proportion to the growing demand. In 2000, the US House of Representatives provided offices with a 9.6 percent budget increase to help them address deficits in staff and technological capabilities, a small investment towards managing a growing tide of e-citizenry.

Advocacy organizations have created mechanisms for citizens to rapidly send emails to Congress. As a result, E-mail messages are sent by individuals to all members of the legislature – not just the individual’s representative. Postal mail can always be sorted by mailing address to insure that the mail from district residents is always given top priority. E-mail does not include such geographic identifiers, which can result in district residents’ messages sitting in an inbox queue amongst thousands of others.

Part of the solution will be innovations in E-mail filtering software. Microsoft’s Adaptive Systems & Interaction Group is researching an application named *Priorities*, which routes and prioritizes the messages. Similar software could eventually be adapted to sort incoming mail based on keywords by issue, position, or sender address.

E-mail between citizens and legislators is a conduit for feedback that could lead to more meaningful interactions. Beyond Microsoft’s software, others will evolve that will enable legislators to have meaningful, ongoing exchanges with large numbers of constituents. Internet-based Policy Discussions and Electronic Town Meetings also point in this direction, and have the potential to open up new communication channels between citizens and political leaders.

## Internet-Based Policy Discussions

The Internet is enhancing a range of political processes. Between specific legislative websites and the structured “electronic town meeting” described in the following section, lie online policy discussions.

In the state of Minnesota, the MN-Politics E-mail list provides sustained two-way interaction between voters and elected officials. In this forum, citizens discuss state and local political issues most significant to them and engage in ongoing debate about activities in the state legislature. The forum began in 1994 as a simple vehicle for online discussion of Minnesota state elections. Enthusiastic participants became so engaged in online discussions, they continued well past the election – and have been going strong ever since.

Over time, local journalists, political leaders, and community activists have joined the ongoing discussions, creating a mix of political “talkers” passionate about issues, and political “doers” who actually help implement public policy. A nucleus of 400 to 500 direct subscribers has become highly active in local politics, and discussions on the list are beginning to influence the policy agenda in Minnesota. One example was seen in the Minnesota State Treasurer’s announcement on MN-Politics that he was not running for office one day prior to his press conference. Another example was the formation and coordination of an official political action committee opposing public financing of a baseball stadium, which solicited online feedback on draft legislation for the St. Paul City Council.

This combination of talkers and doers enables online discussion forums to serve political discourse in Minnesota. Talkers help move sometimes unpopular political agendas forward. Doers can insure that the ideas painstakingly developed during extended online discussions reach the public policy agenda. The greater the real-world impact of online policy discussion, the greater incentives there are for citizens and leaders to engage each other online.

## Electronic Town Meetings

“Electronic Town Meeting” (ETM) is an umbrella term for a growing array of structured efforts to link citizens to policy makers and to hold policy makers accountable for responding to the recommendations these efforts generate. ETMs are community meetings or processes in which interested members of the public engage in a structured exploration of issues. The term “town meeting” emerged at the time when communities, particularly in the American Colonies, were governed by “gatherings,” where all eligible citizens participated. (In the 1700s, eligible citizens usually meant property-owning, white males.) In effect, these meetings acted as citizen legislatures. Modern day ETMs are more inclusive and often use one or several ICTs to enhance public discussion. They do not have the formal legislative status of their historical namesakes. Most are informal or advisory. Participating public officials often organize or sponsor the forums and translate recommendations into policy initiatives. However, there are cases when citizen groups have been given direct authority over decisions.

The participatory budget process in Porto Alegre, a city of over a million located in southern Brazil, is one example of a success that emerged from formal interactions between community groups and public officials. In the early 1990s, the city was plagued by problems common to other urban areas, including high pollution and aging infrastructure. Civic leaders knew solutions would require money and political support, so it sought greater community input into the budgeting process. In order to create a “participatory budget,” the mayor’s office handed power over the budget to citizens through a system of open forums. Now, community mem-

bers attend these forums annually and directly establish spending priorities. The political party that created this system has been re-elected twice, and the success of the experiment has drawn interest from both the World Bank and the United Nations.<sup>10</sup>

At their best, ETMs allow citizens to become producers, rather than mere consumers, of political discourse. Establishing closure, or making recommendations, often by voting, is very important to the ETM process. Without some form of resolution, political discourse can become an end in itself, rather than serve as a mechanism for the coherent formation of a public will.<sup>11</sup>

ETMs can focus on specific geographical communities or be national in their scope and focus on big issues. An example of a national ETM in the US was Americans Discuss Social Security, (ADSS) a project that ran from 1997 through 1999, funded by the Pew Charitable Trusts at a cost of \$12.5 million. The basic idea was to use a variety of electronic and face-to-face techniques to involve a large number of American citizens in an in-depth discussion on the future of the government-supported retirement system in the US. The project involved survey polling, paid advertising in print media and radio, interactive video teleconferences known as National Town Halls (NTH) broadcast simultaneously in 10 cities, individual forums in large cities comprised of 500-750 people, local forums of 175 to 300 citizens in Congressional districts, and grass roots organizing to sustain citizen involvement across the country.

The ADSS project involved more than 25,000 Americans and reflected the country's population by age, income, gender, rural-urban environments, and ethnic/racial background. These citizens spent 4-6 hours on a Saturday learning detailed information about the Social Security program as it works today and exploring a wide range of the options for reform. Broader outreach was made possible by linking 10 of the large city forums via interactive TV teleconferences. Local and national TV broadcasters covered these meetings, stretching the public reach to literally millions of Americans thus involving them in the national discussion. The NTH also involved approximately 5,000 college students from more than 100 campuses in all 50 states. ADSS involved members of Congress in the sessions in their district, with many of the members adopting ADSS' innovative approach for their sessions with constituents. Participants were able to explore a range of policy options and said they were willing to consider higher payroll or general taxes. These proposals surprised most politicians, since few believed that citizens would seriously consider paying higher taxes. However, not only did participants discuss the possibility of raising taxes, they often recommended this measure.

In terms of ICTs, ADSS used one of the leading group-ware tools, COUNCIL, to accelerate their discussions. COUNCIL created a local wireless computer network for participants at many of the ADSS sessions. Working in small groups, participants could deliberate more rapidly by typing in their own comments and reading the comments of others. The participants were also able to use COUNCIL's various tools for voting in real time.<sup>12</sup> (COUNCIL, after a decade of development and deployment at large and small meetings, primarily in corporate settings, has created WebCouncil, to facilitate such group discussion via the Internet).

While the tangible policy results of the ADSS are still uncertain, ADSS was close to having major national-level policy reform movement on Social Security when the Impeachment activities during President Clinton's administration derailed bipartisan efforts in Congress.<sup>13</sup> ADSS ended its operations but its leaders are using the same powerful tools to consider the future for the District of Columbia, employing ADSS' sophisticated processes and information technology, and engaging political leaders and thinkers in developing their vision for what the District could become.<sup>14</sup>

### **Precursors for Cyber Democracy**

Enhancing democratic participation is more often a social challenge than a technological one. Can the social challenges of greater involvement be overcome? If they can be overcome for a

project, can they have a lasting impact on the communities where they occur? In fact, there is more than three decades' worth of "electronic town meeting" efforts, using the most sophisticated ICTs of their day. These efforts demonstrate that democratic participation can be significantly enhanced electronically. The sustainability of such efforts (and the role that ICTs can play in that) is less certain. The emerging developments identified in this global scan are part of an ongoing trend – toward more foresight in government along with better public participation. The Institute for Alternative Futures' first book in 1978, *Anticipatory Democracy* described what effectively were the precursors of many of today's examples. The lessons learned in Washington State and metropolitan New York City were significant for benchmarking current efforts.<sup>15</sup> ETMs in these regions dramatically enhanced citizen understanding and input through public deliberations that included a consistent focus on the future, while using telephones, print, and broadcast media in effective and engaging ways.

In the State of Washington, then Governor Dan Evans initiated a program called Alternatives for Washington. In 1974, the project involved 50,000 people to discuss issues and set policy priorities. Alternatives for Washington used media throughout the state to inform citizens and to enable them to cast "media-based issue ballots." Most of the newspapers in the state included a ballot, along with articles timed to coincide with television broadcasts on the same topic. Some 40,000 participated in the second phase of the program, which asked citizens to set their budget priorities. Five years after the program ended, despite the election of the new governor of a different party who was critical of the program, most of the citizens' high priority agenda had been put into effect.<sup>16</sup>

"Choices for '76" in the greater New York Metropolitan Region focused on 51 policy choices that would shape the region's growth. Material describing the choices was published in local newspapers and in a book. In addition, all eighteen commercial and educational television stations in the region took part in broadcasting each of five related television programs on clusters of issues such as transportation, housing, and the environment. Based on Nielsen ratings and back-up surveys, approximately 600,000 people watched each of the five shows over the three days of broadcasting. An average of 26,500 individuals cast their ballots on each of the five "Choices for '76" clusters. These responses were tabulated and presented to regional and state policy-makers and were used in subsequent legislative planning.<sup>17</sup>

These programs demonstrate that ICTs can deepen citizen learning, significantly enhancing democracy by giving the public the opportunity to formulate and express their choices. The Internet and related technology will facilitate these benefits by providing various forms of intelligent agents, simulations, and other tools to move the process along further. However, as the discussion in section 2 on Cyber Voting has demonstrated, technology is less important to political participation than factors such as political culture, strength of community, and the commitment of the leadership.

The readiness of communities for Cyber Democracy has also been aided by ETM-like efforts that have focused on specific policy areas, particularly health. According to University of California/Berkeley Professor Len Duhl, the Healthy Community movement began in the mid-1980s and spread over the next 15 years to more than 75 countries, involving more than 4,000 communities globally. In the US, this movement included 1,300 local communities and 27 states. In addition to their health objectives, these efforts have often had "spillover" effects. For example, the US Federal Reserve Board has acknowledged that success in Healthy Community efforts makes communities more economically viable and more likely to be credit-worthy for development loans. Healthy Community efforts often set health goals or targets for the communities. Web-based tools are emerging to help the program set goals and monitor success. The ACT Project (Accelerating Community Transformation)<sup>18</sup> has created tools for assessing and enhancing community health, including its "social capital."<sup>19</sup>

## **The Broader Role of Citizen: Aspiration and Vision**

An important function of ETMs, regardless of subject matter, is the guidance that they give participants to find meaning and identity in civic activities beyond voting. ETMs can give citizens a defined role in the highest sense of enhancing the community.

This is particularly true for establishing shared vision for the community. Citizens can often punish political leadership, particularly visionary political leadership, if they themselves have not had the opportunity to confront their personal aspirations and work with others in the community to develop shared aspirations. The experience of successful ETMs and similar activities argues that their success is dependent on many factors, one of which is a shared sense of vision or a nobler end that the community is committed to achieving. Having this sense (what organizational development expert Steven Covey calls the “north star” of vision) often stimulates more creativity and willingness to sacrifice for the common good. Achieving shared vision in a community requires effective dialogue and skillful facilitation.

One reason for the cynicism discussed in connection with low voter turnout in section 2 is lack of shared vision. Another factor contributing to cynicism is the failure of political leaders to deliver on promises and government underperformance. In this regard, tools for setting vision and measuring accountability are becoming available over the Internet. Tyler Norris, a leader in the community participation field, has pioneered web-based tools for measuring community performance on outcomes that include health and quality of life.<sup>20</sup> Norris argues that the growth and effective use of these Internet tools in genuine community efforts will accelerate the evolution of true democracy. Other leaders in this field agree and are developing methods to enhance online community. These are among the topics explored in section 4 on the Emerging Infrastructure for Cyber Democracy.

## Cyber Policy Participation Endnotes

- <sup>1</sup> Website: <http://www.auburn.edu/tann/tann2/project4.html#Reform> Accessed 24 April 2001.
- <sup>2</sup> Website: <http://www.leg.state.nv.us/71st/opinions/MostResults.cfm>
- <sup>3</sup> Personal Interview, Sandy Jones, web designer, Nevada State Legislature Information Services Branch.
- <sup>4</sup> OMB Watch. "Plugged In, Tuning Up: An Assessment of State Legislative Websites," Website: <http://www.ombwatch.org/npadv/2001/stlg/index.html> Accessed 3 May, 2001.
- <sup>5</sup> Website: <http://www.wvf-uk.org/action/parliament.htm>. Accessed 14 May 2001.
- <sup>6</sup> Website: [http://www.agora.stm.it/democracy/app\\_ing.htm](http://www.agora.stm.it/democracy/app_ing.htm) Accessed 12 May, 2001.
- <sup>7</sup> "Journalism Interactive," Summer 2001 *Civic Catalyst Newsletter*, Pew Center for Civic Journalism Website: <http://www.pewcenter.org/doingci/civiccat/index.php>
- <sup>8</sup> Goldschmidt, Cathy, Nicole Folk, Mike Callahan, and Rick Shapiro. *E-mail Overload in Congress: Managing a Communications Crisis*, Website: <http://www.congressonlineproject.org/email.html> Accessed 1May 2001.
- <sup>9</sup> "Most E-mail to Congress Ignored," MSNBC News Website: <http://www.msnbc.com/news/540014.asp> Accessed 15 May 2001.
- <sup>10</sup> Becker, Ted and Christa Daryl Slaton. *The Future of Teledemocracy* (Westport, CT, 2000), 174.
- <sup>11</sup> Casaregola, Vincent and Robert A. Cropf. "Virtual Town Halls: Using Computer Networks to Improve Public Discourse and Facilitate Service Delivery" Website: <http://www.gonzaga.edu/rr/v4n1/cropf.htm> Accessed 14 May 2001.
- <sup>12</sup> COUNCIL is a product of Co-Vision. AFA has used COUNCIL in its corporate work on four continents to effectively accelerate our scenario and vision work among companies. IAF has done the same to accelerate policy and research discussions. COUNCIL's addition of a web based set of tools is indicative of the growing capacity that will be available <http://www.covision.com/>
- <sup>13</sup> The final report of the project is available at <http://www.network-democracy.org/social-security/final-report.pdf>
- <sup>14</sup> "Envisioning a Future Washington," Carol O'Cleireacain and Alice M. Rivlin June 2001. Website: <http://www.brook.edu/es/urban/gwrp/DCfuture.HTM> Accessed 4 August 2001.
- <sup>15</sup> Clement Bezold, ed. *Anticipatory Democracy: People in the Politics of the Future*, (New York, 1978).
- <sup>16</sup> See, Robert Stilger, "Alternatives for Washington," in Clement Bezold, ed., *Anticipatory Democracy: People in the Politics of the Future*, (New York, 1978), p. 88-99. Information on the passage of citizen priority programs within 5 years after the project ended is from a National Conference of State Legislatures meeting in 1982.
- <sup>17</sup> David E. Baker, "State, Regional, and Local Experiments in Anticipatory Democracy: An Overview," in *Anticipatory Democracy*, 22.
- <sup>18</sup> "Accelerating Community Transformation," Website: [http://www.healthforum.com/HFComHealth/asp/act\\_summary.asp](http://www.healthforum.com/HFComHealth/asp/act_summary.asp) Accessed 3 May 2001.
- <sup>19</sup> "Virtual Town Halls: Using Computer Networks to Facilitate Public Discourse and Improve Service Delivery," Website: <http://www.communityinitiatives.com/perspjan.html> Accessed 8 May 2001.
- <sup>20</sup> "Virtual Town Halls: Using Computer Networks to Facilitate Public Discourse and Improve Service Delivery," Website: <http://www.communityinitiatives.com/perspjan.html> Accessed 8 May 2001.

## 4 - Cyber Infrastructure for Enhanced Participation

### Overview of Cyber Infrastructure

Outside of the formal political system, a new infrastructure for political participation is beginning to emerge, creating new opportunities for citizens to interact with each other and government to help shape public policy. In this chapter, “infrastructure” will refer primarily to software and participation processes that are being used or show promise to support Cyber Democracy. Online communities allow businesses and public groups to discuss issues in a convenient and organized fashion, and in some cases, to actually build virtual interest groups. Games and simulations are moving slowly toward an enhanced capacity for citizens to put themselves in the place of decision-makers and gain a more realistic understanding of policy tradeoffs. Online polling and focus groups are creating an enhanced capacity for investigating, sharing, and changing public opinion. This emerging Cyber Infrastructure is creating a system for political learning that can enhance capacities for citizens to join political communities, study policy choices, and make their opinions known.

### Online Community

Research for this report uncovered a lively debate about community or lack thereof, as an important characteristic in Cyber Democracy. Critics charge that cyber enhancements will lessen community, or that community will be reinforced primarily within already defined subgroups. Can cyber tools truly build community? Can they do it in ways that make citizens less “isolated” or polarized? Political developments building community online around the globe are maturing. Some of these are covered in the sections prior and subsequent to this, such as the rise of swarm activism. This section will focus on key applications of technology in community building in politics, in physical and virtual communities, and in businesses.

Innovative applications of ICTs are giving engaged citizens new capacities for public participation, allowing them to interact with each other free of the constraints of geography, the limitations of schedules, and the hectic pace of modern life. Group discussion and deliberation has always been the cornerstone of democracy – from the *agora* in ancient Athens, to meetings in Colonial America’s New England commons. With so many changes in global work and lifestyles, this facet of political life has been in decline. However, with ICTs, prospects are changing.

### Political Community Building

The example in section 3 of the MN-Politics online discussion group between Minnesota politicians and the public was described as the development of a successful online political community. Another successful approach of web-based participation has been bringing together a diffuse political community and mobilizing it into concerted action. One of the most effective examples of this approach has been MoveOn.org.

This website had its origins during the impeachment proceedings against US President Clinton, when a few individuals created a place to catalyze public frustration with the process and vent their anger about the political climate in which the impeachment was being conducted. Through electronic word-of-mouth, MoveOn.org became the primary anti-impeachment advocacy group, with more than 500,000 registered users. The site allowed opponents of impeachment to express their desire for Congress to "move-on" and to focus on legislative issues instead.

MoveOn.org delivered more than 2 million emails to Congress and helped mobilize thousands of volunteers to meet with representatives in 219 congressional districts in 44 states. MoveOn.org ran a campaign reaching more than 4 million individuals by E-mail. After impeachment, MoveOn.org began a pledge drive for "electoral participation" in the 2000 election. By the end of the trial, more than \$13 million dollars and 800,000 hours of volunteer time had been pledged by supporters. In June 1999, MoveOn.org began endorsing candidates and contributed more than \$2 million in 30 key congressional races.<sup>1</sup>

MoveOn.org channeled widespread displeasure with impeachment into an online community capable of applying sustained political pressure in a variety of ways. The website became an enabling infrastructure that could bring disaffected citizens together to share their grievances and to help convey the depth of their concerns to the political leadership. This website provided the ICT infrastructure for the creation and maintenance of a robust and effective "opposition" online political community.

The second sense of "online community" comes from efforts to develop commercial community-building products. A recent assessment by Jim Cashel in his *Online Community Report* (a respected newsletter covering these developments) noted that, while most online communities are not economically viable, many with a focused audience can be both profitable and successful. These businesses build community focus based on the consumers' need for effective E-learning, advocacy or employment.<sup>2</sup>

In effect, community building can translate into increased business. According to the McKinsey consulting firm, in a study that evaluated 300 million user sessions between January and June 2000, visitors to online communities spent 80 percent more time connected than users of Internet sites with no community features.<sup>3</sup>

Some writers have gone so far as to promote online community-building as a critical skill that businesses will have to master to remain competitive. In 2000, several marketing consultants published the *Cluetrain Manifesto*, a series of essays that describe the ways in which the Internet has changed the business environment. The authors declare, "markets are conversations" in which producers, suppliers, and consumers are all interacting.<sup>4</sup> However, the Internet has changed the nature of this debate by creating new channels of communication in the marketplace. Given this new communications landscape, they advocate flattening the communication hierarchies within companies. They also support the empowering of employees to play a greater role in directly interacting with customers in an authentic human voice, rather than using the more processed rhetoric recommended by corporate public relations or marketing departments. The creation and maintenance of online communities that bring together companies and customers may play a growing role in maintaining competitive advantage in the marketplace. As more businesses enhance their capacity for online communication, participation in online communities could become more widespread across society and affect the ways political issues are discussed by citizens.

### **Community-Enhancing Software**

One significant component of the cyber revolution is new software consciously intended to enhance community. In section 3 on Cyber Participation, COUNCIL was described as the deci-

sion-support technology that was used by participants in the Americans Discuss Social Security town meetings. COUNCIL was developed to accelerate discussions and decision-making at business and community meetings. Furthermore, it has been used globally. Originally used to link a small number of people in one meeting place, it has grown in capacity to link up to 1,500 people at one site, or in the case of ADSS even more people at multiple sites. It has now moved online so the same tools can be used in virtual meetings with almost unlimited numbers of people taking part.<sup>5</sup>

ICT-enhanced deliberative processes like COUNCIL have several important advantages over traditional group decision-making. They facilitate anonymity in commentary and voting, allowing participants to propose heretical ideas and cast ballots without the threat of public censure. The focus on ideas and not personality prevents charismatic participants from shifting the focus of the agenda. The use of typed feedback on computers allows introverted participants to contribute on an equal footing with their extroverted peers. Recently, CoVision – the creators of COUNCIL – developed WebCouncil, a system that replicates COUNCIL decision-making process on the Internet. WebCouncil participants can log in from their home or office computers and view streaming video or PowerPoint presentations, send feedback through instant messaging, and vote using a real-time online poll. WebCouncil makes IT-enhanced decision-making available to groups unable to meet in a central location, allowing the deliberative process to take place free of geographic constraints.

Other software for facilitating discussion is coming online. Generically, it's known as "meetingware." Whereas COUNCIL or WebCouncil requires an experienced facilitator to manage the process, these new tools for online communities are developing self-moderating capacities that allow groups to run their own meetings. A new company, Bodies Electric LLC, led by Benjamin Barber, the author of *Strong Democracy*, is developing PnyxUnchat, named after the semicircular platform that held Athenian citizens during public debates. The software allows users to set the parameters for their own debates and moderate their own conversations.

In PnyxUnchat, moderators are chosen online from among participants for a given period of time. When the designated time elapses, participants vote either to continue using that moderator or to switch to another. Participants also allow group decision-making to play a critical role in everything from the agenda to the rules governing debate.

According to Barber: "[The Internet] has both enhanced some of the virtues of local politics – instant communication, ongoing interaction, quick response time – and strength of community. The problem is that it also enhances the vices of local politics – gossip, rumors, lies, anonymous slurs."<sup>6</sup> Software applications like PnyxUnchat are taking the first steps toward curbing problems of online discussion and enhancing the potentials of online communities.

### **Hearing Only Your Side: Group Polarization and Filtering**

One potential downside to these online communities is group polarization – the tendency of people to become more extreme in their thinking following communal discussion. When like-minded people debate issues together, persuasive arguments and the need for peer approval can result in a more extreme consensus. The degree of polarization is determined by the quantity of arguments and the degree of suasion.<sup>7</sup>

University of Chicago Law professor Cass Sunstein recently published *Republic.com*, which discusses how new ICT-enhanced community can lead to polarized views. He observes that in traditional political discourse, citizens are almost inevitably presented with opposing views on the most important issues. The handful of television networks that dominated the first 40 years of television were a narrow conduit for information used by all factions of political debate. Furthermore, in many cases, narrowly partisan newspapers reported on a broader range of per-

spectives as the industry consolidated. Traditional political discourse worked against polarization by insuring that opposing viewpoints were heard.

The Internet however, has made it simple to filter out opposing viewpoints. Successful web discussion boards usually attract audiences of other like-minded people. Potential participants disagreeing strongly with the predominant theme of online discussion groups can often find themselves ignored or “flamed.” The result in either case is to drive away those with opposing viewpoints, and to create an online world in which the most shrill and extreme are able to set the agenda.

While the potential for online polarization is possible, online discussion is in its infancy, and the social standards that would regulate conduct are just beginning to emerge. Traditional political debate had to evolve rules such as “parliamentary” procedures to keep discussions from breaking down into shouting contests. Online community and discussion technologies are evolving parallel mechanisms to preserve the diversity of opinion in the face of potential factional dominance.

## Games/Simulations

The widespread adoption of ICT has helped to facilitate the growth of simple computer games and simulations designed to help interested citizens understand public policy. While scientists, academics and policy analysts have had access to simulation models for decades, computer enhancements such as these have been unavailable to the general public. These policy “games” allow interested citizens to put themselves in the shoes of policy-makers and to experience the difficult decisions they face. In addition to simulations from traditional policy-makers, the infrastructure for Cyber Democracy includes games young people play.

One example of a game designed to help educate the public was SimHealth, designed by Maxis (the creators of SimCity, a very popular series of games that allow the player to build and operate cities) in partnership with the non-profit Markle Foundation. The simulation was released in 1994, just as the US debates about healthcare waned. SimHealth used traditional computer game elements to educate users on the complex issues of national health care. Its mission was to help a broad range of users find a fun and painless way to understand and evaluate current health care policy and new proposals. The game allowed users to act as decision-makers to implement policy and watch those policies unfold. They could then revisit plans to find a better outcome. SimHealth engaged and empowered the user by letting him/her play the role of a national leader responsible for developing a health care policy.<sup>8</sup> As yet in the US, games such as SimHealth have had a limited impact on health care policy.

Other policy education tools depart from the game model and illustrate policy scenarios instead. These “simulations” are typically interactive websites that allow the user to make a variety of policy decisions and gain immediate awareness of the implications. The University of California, Berkeley’s *Center for Community Economic Research* created a website on which users can attempt to create a balanced Federal Budget. The website (<http://socrates.berkeley.edu:3333/budget/budget.html>) divides the 1995 Federal Budget into its component categories and gives users the chance to set spending levels for programs and tax rates. The budget simulator even has an “expert” mode, which allows interested users to study program areas in depth for more detailed understanding.

More recently, New York University’s Department of Journalism created a policy simulation website to help set out the policy alternatives involved in cutting the US defense budget. The experimental university website: *Protecting America: Build your own Defense Budget* (<http://www.nyu.edu/globalbeat/defensebudget>) divides the budget into eight basic categories,

and gives users a series of multiple choice questions that reflect major policy options. Participants select from among the alternatives and, at the end of the process, the software recalculates the funding implied by selected policy choices. The simulation allows interested citizens to test the practicality of their political viewpoints and have a better understanding of policy tradeoffs.

In Europe, academic institutions are also promoting simulation. The Department of Applied Economics at the University of Cambridge in the UK builds computer models to analyze micro-economic and social policy. Recently, the department's simulation unit was contracted by the European Commission to create *Euromod*, an integrated European benefit-tax model for the 15 Member States of the European Union. This model was designed to integrate econometric data from across the EU and to help investigate how policies in different countries can support common objectives. The model, completed in 2000, is a tool for policymakers to evaluate national policies within a European perspective.<sup>9</sup>

Finally, in the US South Carolina resort town of Myrtle Beach, a local newspaper is planning to use an online simulation to educate citizens on the implications of land development. The game will allow participants to implement his or her vision and then to see how those changes affect the environment. A participant could decide to put up a high-rise building and then watch the change on nearby trees and the oceanfront. Although this is a relatively simple simulation, it gives citizens the opportunity to act as if they were decision-makers and see the consequences of their actions.<sup>10</sup>

These five simulations, each with a policy application, reflect the growth of games as a policy-planning tool. While still in their relative infancy, it is likely that Cyber Democracy will see the development and deployment of more effective simulation tools.

From the consumer side, the growth in the use of SimCity and its progeny means that certain segments of the population will expect to use games or simulations to understand policy. Douglas Rushkoff, the author of *Playing the Future: Learning from Digital Kids*, is hopeful that the next generation's facility with these tools may have a positive impact for democracy:

I anticipate a generation dedicated to re-instating Civil Society. Interactive media is serving as remedial help for a culture that's lost the ability to communicate with itself. When these kids grow up, they will turn to live events, community action, and civil activities. That's what's lacking in our culture...<sup>11</sup>

## **Polling and Focus Group Testing**

Polling and focus group testing have come to play an increasingly important role in shaping the formation of political policy. Policy makers often use polling to determine which initiatives to pursue or avoid, to shape arguments to describe and promote their policies, and to position their election campaigns. Polling is the most common form of citizen consultation for some political leaders.

Today in the US, polling is used in the majority of elections – national, statewide, local – and is also common in national elections worldwide.<sup>12</sup> In US campaigns at presidential, gubernatorial, and congressional levels, the pollster serves as one of two or three major consultants in each candidate's brain trust. Polling costs an average 5 to 10 percent of the total campaign budget.<sup>13</sup> Elected leaders use polls conducted by the media, activist groups, and their political parties to shape the content and presentation of the modern political agenda.

While polls interview individuals and seek to build an appropriate sample to generalize about the population, focus groups are used to test individual reactions to ideas or policy options. Campaigns typically use focus groups of 10-12 voters to discuss campaign issues and candidates. Issues are often explored in depth and with open-ended questions that allow participants to respond using their own terminology and points of view. The ensuing discussion is videotaped and analyzed, and the rhetorical frameworks of the discussions are studied closely to gain a deeper understanding of the intensity and roots of the expressed opinions.

Former US President Clinton used focus group testing extensively during his first year in office. His pollster paneled more groups than did former President George Bush in all four years of the previous administration.<sup>14</sup> During the rest of the Clinton administration, focus groups were used to generate a tactical framework for political programs and to navigate through the public scandals that threatened to consume the presidency.

Focus groups are qualitative research. Polls are quantitative research. According to political pollster Frank Luntz, upwards of 70 percent of all corporate consumer research is qualitative, using methodologies such as focus groups. By comparison, only 10 percent of all political research is devoted to qualitative formats, and less than one fourth of all US House and Senate candidates have had experience with focus group techniques. However, new forms of Internet polling promise to make a new hybrid of polling and focus group testing available to a wider group of political leaders.<sup>15</sup>

### **Internet Polling**

Because of the declining costs of telephone technology, modern political polling became cost-effective and attractive in the US. However, the public has become resistant to participating in telephone surveys, which are also used extensively in telemarketing solicitations. Over the last decade, the phone poll response rate has fallen from 40 percent to 15 percent. This trend is forcing pollsters to increase the quantity of telephone calls to generate viable statistical samples, which, in turn, alienates respondents even further.<sup>16</sup>

Internet polling is likely to emerge as a successor to telephone opinion gathering. However, online culture deems the solicitation of Internet readers – spamming – as even more distasteful than unwanted telephone surveys. One potential solution is to allow Internet users with an expressed interest to participate in controlled online polls. This approach has a significant problem in that it is more difficult to construct statistically significant samples required of opinion measurement. People interested in taking part in online polls are a self-selected sample that may not reflect the broader opinions of the public at large.

Despite these difficulties, many pollsters feel that polling on the Internet will eventually overtake that on the telephone. According to pollster Peter Hart, by 2010, 90 percent of polling will be conducted over the Internet.<sup>17</sup>

Knowledge Networks, a Silicon Valley company pioneering new forms of online polls and surveys, has developed an innovative approach to creating statistically valid polling groups among Internet users. Instead of developing a statistical method to compensate for sampling bias, or being more active in recruiting Internet survey participants; Knowledge Networks has begun to recruit its own network of respondents from which demographically accurate survey samples can be easily constructed.

The company solicits demographically desirable participants and provides them free WebTV Internet connections or other incentives, some financial. Thus, the company ensures it will have a willing and able pool of respondents diverse in age, economic status and political viewpoints.<sup>18</sup>

By 2002, some 250,000 homes across America will be outfitted with survey feedback boxes from Knowledge Networks. These devices will allow surveys to be disseminated over the Internet. Participants will be able to digest questions and ponder answers at their own pace, rather than feel pressured by a hurried phone interviewer. The format may produce a greater number of respondents because it may prove easier than listening to questions read over the phone.

The scale of this willing participant pool makes it possible to investigate public opinion in entirely new ways. Specific ethnic, religious, or lifestyle subcultures can be targeted easily for in-depth survey research. Knowledge Networks even offers a service in which a target pool of respondents can be tracked throughout the course of a political campaign. This would help identify key issues motivating the larger group of supporters.<sup>19</sup>

In the 2000 US Presidential Election, CBS News used Knowledge Networks polling to enhance its post-debate analysis. For example, as soon as the third Gore/Bush debate ended, CBS was able to send seven questions to 700 Knowledge Networks respondents, and receive replies within a matter of minutes. Within 20 minutes, CBS was able to report on who gained the edge in the debate and to what extent voters were willing to change their vote. Traditional phone polling would have required hours to contact a proper sample, but this form of Internet polling could gather data on the election debate almost immediately.

Polling and focus groups have come under greater attack as a primary cause of gridlock in the American political system. While to some extent, this is the result of the diversity of public opinion and the separation of power in the American government, it is also clear that leaders can become shackled to research results, unwilling to voice visionary or innovative ideas that might make them look foolish to the public.

Even worse, some experts have argued that polling will contribute to greater declines in voting. They claim the more accurate and reliable reports become, the fewer incentives each individual has to cast a vote. Why bother to participate or vote in an election when the choice of the majority is already known ahead of time? Why cast a vote or bother with politics at all, if the will of the majority can always be anticipated and expressed in a poll?<sup>20</sup>

The political technologies of polling and focus groups will enable political leaders to manage issues and maintain majority support more efficiently. What remains to be seen is whether this increased efficiency will lead to policies that more accurately reflects the wishes of the entire electorate, or instead lead to incremental policies that are designed to satisfy the desires of the majority of the moment.

Alternatively, cyber technologies will enable consumer and interest groups to create Internet polling capacities similar to Knowledge Networks. Likewise, the growth of simulations and games to provide more complex, interactive learning and decision experiences suggest that the future of polling and of qualitative focus groups could be beneficial to the political process. The Electronic Town Meetings discussed in section 3 have traditionally used “media-based issue balloting” to generate feedback from the public. Polling and focus groups, along with these other approaches, will continue to change with new technological enhancements. Particularly in the US, polling is criticized as an excuse for political leaders to follow rather than lead. These types of assertions fail to acknowledge the role of media coverage, particularly the tendency of the media to report conflict but not context, a practice that may contribute to public cynicism.

This section on the growing Infrastructure for Cyber Participation indicates that more powerful tools are developing. Whether these tools enable citizens to play a more effective role will depend on the effectiveness of the larger political system supporting them. The next section on

Cyber Agenda Setting considers the formal and informal ways in which the Internet is changing the political environment.

## Cyber Infrastructure Endnotes

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## 5 - Cyber Agenda-Setting

### Overview of Cyber Agenda-Setting

Cyber Agenda-Setting, the last facet of Cyber Democracy, combines placing issues on the agenda, policy development and priority setting, and uses the Internet and other ICTs to enhance political or policy activities. Because of their important roles in agenda-setting, we will consider the media, political parties and Non-Governmental Organizations (NGOs) as significant players. We will also explore the emergent phenomenon of swarm activism that is beginning to shape policy debates. Finally, we will consider the steering capacity of democracies in relation to the challenges ahead.

### The Media and Agenda-Setting

#### Patterns of Media Agenda-Setting

The media (print, broadcast, and Internet) play an essential role in public learning, particularly when the information is related to political events. The media investigate and expose corruption, hypocrisy, and scandal among political leaders and within government institutions. They also provide a context for evaluating politics and community. While a visible role of the media has been to intensify partisanship and report conflict, there is a debate on the role of media in creating community via civic or public journalism. These issues will be explored in this section on Cyber Agenda-Setting.

Newspapers in many US cities began with clear partisan affiliations. By the 1920s, the goal became objectivity. US reporters were trained in professional standards, such as fairness and avoiding partisan biases. Newspapers were free to express strong opinions on the editorial page but not on the front page. During this time, Europe maintained a strong tradition of publishing competing partisan newspapers. More recently in the US, analysis and commentary have become more significant in political coverage.

The proliferation of new media outlets has created demands for more content, and an increased need to gain public attention. In the US, new forms of political reporting are developing, including cable news networks that spend much of their programming freely airing personal opinions, if only to a small audience. Shows like *Crossfire* on CNN, *Hardball* on MSNBC, and the *O'Reilly Factor* on Fox Cable News emphasize strong political opinions as the core feature of their popular broadcasts. In an increasingly competitive media environment, the heat and passion of confrontational political commentary has grown in importance.

Compared to the US, European broadcasters generally have a quieter, more regulated media environment with greater emphasis on policy debate. However, there are signs that deregulation and commercial pressures are changing the nature of news reporting. One effect of the increased competition facing European broadcasters is the reduction of programming devoted to news and public affairs reporting and an increase in the amount of entertainment programming. Between 1971 and 1996, the percentage of news and public affairs programming on public service broadcast channels significantly declined in most European countries. Countries with the largest percentage change included: Sweden (-26 percent), Norway (-24 percent), France (-22 percent), Ireland (-12 percent), Finland (-11 percent), and Denmark (-11 percent).<sup>1</sup>

Although these declines occurred within the context of increased programming time brought about by the enhanced capacities of satellite and cable delivery, they indicate a relative de-emphasis on the importance placed on news and public affairs programming.

Cable and satellite television were just the first phase of the expansion of media outlets. The Internet has taken information distribution to an entirely new level. Its communication capabilities have made it possible for individual journalists – both professional and amateur – to reach a global audience easily and efficiently. A prominent example can be found in Matt Drudge, who played a critical role in breaking and shaping coverage of the Monica Lewinski scandal. As an amateur, Drudge felt little compunction about publishing uncorroborated rumor and speculation on his website. In some cases, mainstream media outlets were familiar with the same rumors, but their journalistic standards prevented them from publishing and broadcasting the stories. Publication by Drudge on the Web transformed rumors into a form of public information, and provided a pretext for the mainstream press to engage the story. By giving the mainstream press an ability to justify their coverage, Drudge amplified the reporting on his website to a global audience, with the assistance of the mass media. His controversial reports were later vindicated when studies found his reporting on the Lewinski matter more than 80 percent accurate.

The Internet now allows budding journalists to reach a mass online audience directly, without having to rely on the mass media to distribute their reporting. In recent years the "Weblog" phenomena has become increasingly popular. Interested individuals from practically every background use their websites to link to – and comment on – other news sites with fresh and breaking developments. The Internet allows these Weblog creators to function as their own editorial board and create a personal context for the news of the day. The personalized nature of Weblogs offers fresh viewpoints on important issues, and gives passion to grassroots publishing.

One of the most successful Weblogs is Slashdot.org, which has evolved into a significant venue (with 30 million monthly page views) for publicizing and discussing a wide variety of IT-related issues. Every day, Slashdot readers forward to its editors articles and web-sites that would be of interest to readers. The editors select up to 20 each day and then allow the readers to discuss and comment. Supplementing this core activity are online "interviews" with IT industry figures and regular columns. In July of 2001, Slashdot played a significant role in publicizing the case of the Russian programmer Dmitri Sklyarov, who was arrested in Las Vegas for violating the Digital Millennium Copyright Act – a US law that criminalized the breach of digital copyright protections.<sup>2</sup>

The programmer had devised a way for other programs to read a proprietary Adobe Software e-book format, and was arrested at US computer conference by the FBI. Slashdot brought the arrest of Sklyarov to the attention of its readership and continued coverage of the arrest by linking to an online petition demanding his release. Slashdot also covered local protests in three cities that had been organized by outraged computer programmers. The story was generally ignored by the mass media but was of significant interest to this specialized online community.

The Internet has democratized the publication and broadcast processes, giving any individual with an Internet connection the potential to reach a global audience at minimal cost. This capacity becomes more relevant as segments of the public shift away from using traditional media, relying instead on the Internet for news, information, and entertainment. A 2000 study of US online users by Scarborough Research found that significant numbers were watching less television (23 percent), reading fewer magazines (20 percent), reading fewer newspapers (15 percent), and listening to less radio (8 percent).<sup>3</sup> Unlike more traditional media forms, where competition was curbed by limited capacity and the high costs of infrastructure, the Internet has the potential to infinitely expand the selection of media sources, allowing individuals to receive information from sources as diverse as a global conglomerate or a lone amateur publisher.

In a sense, the emerging media environment is a reflection of an earlier age, when individual pamphleteers took strong positions and played important roles in shaping public debate. The democratization of new media channels is making it possible for new voices to clearly express themselves. The initial phases of this movement have tended to emphasize the sensational aspects of news stories, but evolving standards and expectations may bring about an elevation of the political discourse.

### **Mass Media Fragmentation and Consolidation**

Mass media throughout the globe is simultaneously fragmenting audiences while its business structure is consolidating. The content of media broadcasts is not the only thing that has changed. The structure of mass media networks has also gone through a dramatic transformation over the last two decades. The range and quantity of media outlets for communicating with the public are more diverse and competitive than ever, while the ownership of media empires is now largely concentrated among a handful of multinational corporations.

One avenue of fragmentation has been the rapid increase in niche programming in radio, print, and on the Internet. By 1999, in the US alone, a dizzying diversity of talk radio shows (4,000), newsletters (more than 1 million), radio stations (more than 12,000), and magazines of various sorts (over 20,000) had evolved.<sup>4</sup> This proliferation of conduits has made it difficult to reach a mass audience through any one publication or broadcast. On the other hand, the segmentation of the media audience in a fragmented media environment has made it easier to communicate with audiences that have specific interests or fall into narrow demographic categories.

Television is a good example. In the US, the clubby network world of ABC, CBS, and NBC has given way to nearly 100 channels. The audience among all households for the "Big Three" network programming dropped from about 60 percent in 1976 to 28 percent in 1998. Among television viewers, network share fell from 90 percent in 1976 to 47 percent in 1998, as much of the traditional viewership shifted to cable.

Regardless of whether anything newsworthy has happened, all-news channels such as CNN, MSNBC, and Fox News offer political coverage around the clock. Local news stations have moved aggressively into the coverage of national political events, with some local stations offering their own national news broadcasts. In Europe, state-subsidized national networks have begun to face increasing competitive pressure from local cable channels as well as from international programming available on satellite.

This fragmentation of media outlets and markets is coupled with dramatic consolidation of the ownership of mass media. In 1983, fifty corporations dominated the majority of print, radio, and TV markets. Until this date, the biggest media merger was a \$340 million deal. At that time, the strategy of most of the fifty biggest firms was to gain market domination in one medium – to have the largest market share solely in newspapers, magazines, broadcasting, books, or movies, but not in all of them. By 1987, the fifty leading companies had shrunk to twenty-nine. By 1997, the biggest firms numbered ten. This figure was partially the result of the 19 billion dollar Disney-ABC deal, the largest ever at the time. However, the biggest merger of 1983, worth \$340 million, would give way seventeen years later to the \$350 billion dollar merger of Time-AOL a corporate fusion that was more than 1,000 times larger than the deal that marked the 80s.<sup>5</sup>

In 2001, this process of media consolidation has now reached the point in 2001 where seven media conglomerates have come to dominate the TV, Radio, Movie, Music and Telecommunications industries:

- AOL Time-Warner
- Vivendi Universal
- Disney
- Viacom
- News Corp
- Bertelsmann

Many critics and activists have become increasingly wary and vocal in their opposition to the consolidation of media ownership. So far, however, there is little evidence that corporate ownership has had a significant impact on the editorial decision-making process in newsrooms. Ironically, competition among media outlets has never been greater, with ever increasing demands for fresh and relevant material that can successfully capture the attention of a jaded audience.

The integration and fragmentation of the media is giving the public the capacity to play a more active role in educating itself about public issues. No longer do viewers and readers have to rely on analysis from a single source. They can now flip or click onto a different perspective. If really motivated, they increasingly go to newspaper or news channel websites to check out the original text of a report, statement, or speech. By facilitating access to information, filtering significance, and creating a meaningful frame for information, the media will continue to play a crucial yet changing agenda-setting role in the evolving world of Cyber Democracy.

### **Interactive Journalism**

In exploring Cyber Agenda Setting, interactive journalism has an important role to play. The media played a critical role in the success of Electronic Town Meetings, discussed in section 3 on Cyber Participation. News outlets were the forums for public learning and discussion on issues of public concern that contributed to decisions made through public vote. Opportunities of this type for the media will grow. However, it takes leadership on the part of editors and owners to pursue them.

Within the media, there is a major debate on whether news organizations should play any role in enhancing community and, if so, what is the nature of this function. Proponents of what has been called “civic journalism” or “public journalism” argue that journalists should actively encourage members of the community to work toward solving their collective problems. To that end, major programs have been launched by newspaper chains and foundations, particularly the Markle Foundation, and the Pew Foundation’s Center for Civic Journalism.


In the summer of 2001, the Pew Foundation conducted a survey of all daily US papers with circulations of 20,000 to assess changes in the way newspaper editors perceive their role in the community. The survey found that 90 percent of respondents felt that the future health of their business depended on more direct interaction with readers, with only 10 percent answering that they were content with current relationships. The survey also found that 87 percent of editors thought that newspapers should play a broader role in the community, and that 27 percent of newspapers had taken a step towards greater community interaction by convening conversations about a key issue with citizens. According to an editor from Spokane, Washington: “Journalists are realizing their role is to connect with readers and interact with communities, not be disconnected and aloof.”<sup>6</sup>

Editorial boards at newspapers are placing increasing importance on community interaction as an important role for newspapers to adopt. As part of the Pew Foundation survey, newspaper editors were asked to rank the roles that they thought newspapers should play. They chose *news explainer* as their preferred role, followed by *news breaker*, *investigative watchdog*, *catalyst for community development*, and *community steward*. The role of *disseminator of just the facts* finished last.<sup>7</sup>

Local media outlets are the leaders of interactive journalism, because they can engage the public in important community issues. In Tucson, Arizona, broadcasters and newspapers are collaborating to host a succession of town meetings and a series of stories about local education issues. Media organizations hosted 9 community conversations that brought together teachers, parents, and educators to discuss ways to improve education. The ideas generated were used to frame a major “Town Hall” meeting where issues would be discussed in greater depth. According to meeting organizers, at the start of the project they believed policy changes to be the best route to education reform. However, through the process, they came to believe that interactions among stakeholders seeking common goals might represent the best hope for local schools.<sup>8</sup>

The local newspaper in Everett, Washington used public meetings and an interactive website to catalyze community input on proposed redevelopment plans for their waterfront. The newspaper used a four-part series and town meetings to generate interest among the public. To make the process more interactive, the newspaper created a website that allowed readers to view four different maps of proposed redevelopment sites, and develop each by selecting icons that represented parks, museums, restaurants, sports facilities, and other options. The results of reader selections were compiled, publicized in the newspapers and delivered to public officials who were in the process of formulating plans. The newspaper viewed its role in this interactive experiment as facilitators of a robust public discussion. Rather than offering solutions, the process gave citizens an enriched opportunity to express their ideas and to give decision-makers more concrete feedback about community wants and needs.<sup>9</sup>

Interactive journalism provides an important opportunity for the news media to remain vibrant. As the Internet enables journalists and 21<sup>st</sup> century “pamphleteers” to go directly to the public, organized media is having to rethink its “value-added” role. In its work with media organizations, the Institute for Alternative Futures and its for-profit subsidiary, Alternative Futures Associates, have observed this movement up a “value-added ladder.” Civic journalism represents its higher rungs and information technology is a key in its development. The figure that follows compares this search for “value-added” in the news media to parallel experiences in corporate activities, electronic messaging, quality health care and US military medicine.

| <b>Trends in Value Added/Visionary Directions Across Sectors/Industries</b>                             |                               |                                     |                |                                     |                                  |
|---|-------------------------------|-------------------------------------|----------------|-------------------------------------|----------------------------------|
| <i>Journalism</i>   | <i>Corporate Activities</i>   | <i>Electronic Messaging</i>         | <i>Quality</i> | <i>Health Care</i>                  | <i>Military Medicine</i>         |
| <b>Value Added</b><br> | Interactive Journalism        | Wisdom                              | Vision         | Syndrome Prevention, Design, Equity | Anti-War, Health, Sustainability |
|   | Providing What is Significant | Knowledge                           | Strategies     | Community Health                    | Community Health                 |
|   | Providing What is News        | Information                         |                | Disease Prevention                  | Personal Prevention, Fitness     |
|   | Accurate Facts                | Profits<br>Efficiency<br>Operations | Data           | Operations                          | Disease Treatment                |

Source: Institute for Alternative Futures

## **Political Party Agenda Setting**

### **Roles of Political Parties**

Political parties in developed democracies often work to bridge the narrow interests of individuals and groups and bring them together in wide but shallow coalitions of support.<sup>10</sup> By organizing under a broad ideological banner, individual political interests are channeled and focused to pursue policy goals with widespread public support. Modern political parties have been constructed around a hierarchy that extends downward from the national level to the smallest local political district. This structure is well adapted to the mass media communications environment, where political communications are commonly formulated and disseminated from a central or national party committee.

The rise of mass media and the strengthening of national political parties have increased the importance of mediated interactions with voters through mail, phone calls, and television advertising. This trend is especially prominent in the US, where the majority of campaign expenditures are channeled toward expensive television advertising or other forms of mass political advertising. Political advertising and outreach efforts by political parties have become an increasingly important means to generate coalitions of public support for a system that supports two major parties, for the most part.

Political parties are creating a presence on the Internet. In many cases, these initial forays have enhanced top-down political messages from central party committees. One use is as an administrative tool for the easy dissemination of information to a far-flung membership. An-

other common use is marketing or campaigning, for candidates or issues.<sup>11</sup> Some are beginning to raise money as well.

Other political parties are using the Internet to adapt to a changing political culture. In Korea, large public rallies historically served as a common means for parties and candidates to mobilize supporters. However, according to the Korean National Election Commission (NEC), the number of such gatherings declined significantly during the 2000 election. Attendance at those held has dropped 50 percent since 1992. Party officials concluded that the decline can be attributed to the high cost and low efficiency of this form of organizing. The Internet has emerged as a new conduit for communication between candidates and citizens. In the 2000 election, 45 percent of the 1,038 candidates competing for the 227 seats created personal Web pages. According to a BBC analyst: "[Korean] political parties see the Internet as a particularly important means of targeting younger and first-time voters, who are often seen as apathetic or disenchanted with politics."<sup>12</sup>

Some political organizations have not yet adjusted their traditional mass-media marketing practices to be effective online. In one example, *Le Monde* reports that the political portal [www.France-elections.net](http://www.France-elections.net) hosted a total of 340 French campaign sites during the 2001 election. Most of these sites resembled online political brochures that were very conventional in form and content, not taking advantage of the medium's interactive potential. Only a few innovative approaches were used by more "alternative" candidates. Because the content of many of the websites is generally lackluster, this political portal is struggling to remain relevant and running.<sup>13</sup>

The Internet has reversed the logic of traditional political marketing. Vacuous sound bites and carefully staged visual events were political tactics of the television age. The Internet demands very rich political discourse for its content. To maintain credibility as "good", the site has to go beyond a nice layout or a convenient repackaging of standard campaign materials. Good websites must provide substantive background papers as well as position statements on the widest variety of issues. The only restriction on the volume of accessible online information is its management – ensuring that it is navigable, presentable, and understandable for the casual browser.

Although parties can be an important source for interested citizens, Internet users show an increasing interest in getting policy information directly from its source. A 1998 scholarly study of US Internet users found that 38.5 percent gathered their news directly from government sources. Although the percentage rates remain higher for national newspaper portals (60.9 percent), cable news portals (54.6 percent), and network news organizations (39.1 percent), this finding represents a dramatic increase over use of other media, such as newspapers, magazine, and television.<sup>14</sup> The trend suggests that interest in unfiltered information about issues could force political parties to tone down their rhetoric and to offer voters more objective information.

### **Adapting Campaigning to the Internet**

The use of the Internet by political parties does not yet seem to favor either the left or right wings of the political spectrum. A May 2000 study by the European survey firm Sofres found that Internet users tend to represent both sides of the political spectrum, in about equal proportion, although they were found to gravitate towards the extremes.<sup>15</sup>

One explanation for this finding is that the Internet is inherently an egalitarian battleground for political competition. Fringe and minor political parties can create inexpensive websites that are just as elaborate, useful, and sophisticated as those of more mainstream parties.<sup>16</sup> On the Internet, many of the advantages of organizational size and funding are diminished, giving marginal parties a better chance to capture interests and loyalties.

According to Sofres, American elections have shown that political websites work best for raising money and recruiting and organizing campaign workers.<sup>17</sup> In a handful of examples, partisan organizations are finding entirely new ways to mobilize volunteers and to draw disenfranchised citizens back into political life.

During the 2000 US presidential primary, Republican challenger John McCain used his website to fuel his insurgent campaign. His website allowed interested supporters to make instant campaign donations using a credit card. When McCain won the New Hampshire Republican presidential primary, \$1 million in donations were processed online in the following 48 hours. According to one campaign source, over half of the online donors were first-time givers to a presidential contest.<sup>18</sup>

In another insurgent American political campaign, ex-professional wrestler Jesse Ventura won an upset victory during the 1998 election to become Governor of the State of Minnesota. Running on the ticket of the local branch of the Reform party, his under-funded campaign relied extensively on grassroots volunteers and was organized online using his website and mailing lists. Instead of working at a costly central campaign office, the volunteer force was spread throughout the community, often in individual homes, and coordinated through the campaign website. This fresh approach attracted jaded citizens back into politics, especially disaffected young voters.

One mainstream political party that has been able to successfully energize an online community is the Swedish Moderates Party. It has E-mail lists with more than 25,000 recipients, and its online discussion forum has more than 4,000 registered users, who post hundreds of messages daily. Party officials at all levels participate in the online discussions, giving rank-and-file members direct communication with party officials. This commitment to online discussion from the party leadership has created an incentive for party members to participate in online conversations long past Election Day. To maintain the momentum in non-election years, it has organized an additional forum for participants to discuss the party's future and has convened a panel of party supporters to act as an online sounding board for ideas.<sup>19</sup>

The cases of McCain, Ventura, and the Swedish Moderates show that the grassroots use of the Internet can play an important role in injecting new life into political parties, and new capabilities to shape the public agenda.

## **NGO Agenda-Setting**

Non Governmental Organizations (NGOs) are playing a growing role in forming a global "civil society" that seeks to shape, monitor and enforce emerging international standards of conduct for governments and corporations. The Internet and other developments in ICT are creating entirely new ways for NGOs to organize supporters and apply rapid and effective pressure on public bodies.

### **Amnesty International Uses the Internet to Reduce Torture**

Amnesty International, the world's largest human rights organization, has turned to the Internet to tackle persistent human rights abuses. Through E-mail and websites, activists can organize programs and events. They can also distribute education materials and action alerts more quickly and to a wider audience than ever before. For example, after responding to the devastating 1997 massacre of 45 people in rural Mexico by the Mexican military, an activist with Amnesty International started the Mexico Solidarity Network. He sent out 50 E-mail invitations for a rally. 250 people showed up, and the numbers on the network kept growing. Today, the network represents a coalition of 90 organizations and boasts an E-mail list of 2,500 members.

In October 2000, Amnesty International kicked off an Internet-based campaign against the pervasive problem of torture and titled it the FAST (Fast Action Stops Torture) network. Through electronic messaging, this network puts thousands of activists directly in touch with suspected torturers, and their superiors. Upon receipt of information that someone is under threat, Amnesty International alerts FAST members immediately by E-mail or cell phone about the danger at hand. Within hours, the would-be perpetrator receives thousands of E-mails. Significantly, instead of waiting days or weeks to implement a letter-writing program, E-mail can start the process in a matter of minutes, allowing Amnesty International to intervene on a global scale, practically in real-time.

### **The Kyoto Agreement and the Esso/Exxon-Mobil Boycott**

The activist groups Friends of the Earth, Greenpeace, and People and Planet have announced a joint UK campaign to boycott Esso, known as ExxonMobil in the US, over its stance on the Kyoto agreement and on the role of fossil fuel emissions on climate change. Under the common banner of the “Stop Esso Campaign,” these activist groups are rallying supporters to boycott Esso/Exxon-Mobil products because of their prominent role in opposing the Kyoto global environmental agreement. The campaign is using its website ([www.stopesso.com](http://www.stopesso.com)) to publicize their cause, sign up supporters, and collect contributions.

Although the boycott is primarily centered in the UK and only began in the spring of 2001, there are signs the campaign is beginning to have an effect. During a May 2001 Esso/Exxon-Mobil shareholders meeting, more than 8.9 percent of shareholders voted for a resolution that called on the company to change its focus from fossil fuels to a more non-polluting and environmentally friendly energy mix. This was an increase from 6.2 percent on a similar resolution the year before, and represented a voting bloc that amounted to an estimated \$23 billion worth of shares.<sup>20</sup>

### **Patents and AIDS Drugs**

The controversy surrounding patents on critical drugs, specifically for AIDS, is another example of NGO’s ability to use the Internet to mobilize supporters in new ways. A constellation of activist groups has brought increasing pressure to bear on the intellectual property policies of major pharmaceutical companies, which prevent cheaper generic drugs from being made available to impoverished populations.

On April 18, 2001, their collective efforts bore fruit. Thirty-nine drug companies dropped a three-year lawsuit against South Africa to prevent the government from authorizing the importation and production of generics. This compromise by the pharmaceutical industry would not have been possible without the loosely affiliated network of activists, activist groups, and NGOs that worked in concert – and with the aid of ICTs – to achieve their goal.

- Ralph Nader’s Consumer Project on Technology fought for the right to produce or import generic versions of the AIDS drug d4T, at cost, for distribution in Africa and other developing nations.
- American student groups became loud voices in the movement, using E-mail lists to organize and encourage universities to divest school endowments of pharmaceutical interests.
- Doctors Without Borders/Médecins Sans Frontières (MSF) created an online petition on the issue—one that eventually received more than 293,000 signatures.

- Individuals also made significant contributions: Amy Kapczynski is a Yale law student whose efforts resulted in Yale and Bristol-Myers Squibb agreeing to relinquish their South Africa patent on a crucial AIDS drug.

While no single NGO spearheaded the fight to liberalize drug-patenting policies, the ease of communication that the Internet enables made it possible for smaller groups to work together and coordinate efforts as part of a greater movement. The Internet allows smaller NGOs to amplify their influence through alliances and in-tandem work. This process of online collaboration helps even the smallest NGO play a part in setting the agenda for issues of global importance.

## Swarm Activism

### Swarm Activism and Networks

Swarm Activism, a term coined in a RAND study of the Chiapas insurgency in Mexico and its global network of supporters, refers to the ability of groups, often without a leader, to coalesce and act – sometimes violently. They can “swarm,” joining rapidly and adjusting their direction just as quickly. Swarm activist “groups” have evolved into a networked structure where the goals and actions are shaped and defined in an ongoing process of mutual communication, rather than by a central group or leadership.

What swarm activists lack in organizational structure, they compensate for in flexibility and responsiveness. When there are internal factional battles, traditional hierarchical organizations can shatter, and the chain of command can be slow in formulating responses to both threats and opportunities. By contrast, swarm activists and the networked structure of their organizations thrive on factionalism. Small groups of like-minded thinkers link up with similar factions, who, in turn, link up with larger factions as the process builds momentum. Through this constant reiterative process of communication, linkage, and affiliation, swarm activists mobilize to act in the real world. The interests and passions of their membership guide the collective, and as a result, activities with little member support are pushed to the fringes of the swarm.

### Etoy versus eToys—More Than Just a Name

The now defunct portal eToys.com attempted to wield its corporate power over a Swiss-based group that happened to own the domain name “Etoy.com.” The original Etoy was a collective of conceptual artists who satirized and mocked corporate behavior as an elaborate form of performance art. eToys.com sued the artists, accusing them of trademark infringement, trademark dilution, and unfair competition after customers complained that they went to the art site by mistake, only to discover offensive language and graphic images. Based on eToys.com’s complaint, in November 1999, a Los Angeles Superior Court judge issued an injunction against Etoy.com.

The preliminary injunction forbade Etoy from using the domain name, essentially closing down the website. The judicial action overlooked evidence that Etoy.com was formed prior to eToys, and had not intended to engage in “cybersquatting,” the term for those who preemptively register prominent company product names and then demand payment to relinquish them. With the injunction filed, the court set about to determine who had the legitimate interest in the domain name – the original legitimate users, or the company with commercial interest in protecting its trademark.

Ultimately, the decision was made in the marketplace. An Internet community finally decided that it was infuriated by what it perceived as the increasing commercialization of the web and

unleashed its fury. Crowded message boards called for “virtual riots,” and protested to news media. As the online furor progressed, there were financial consequences for eToys.com, whose stock dropped from 70 dollars to 26 dollars a share – in the midst of the internet boom – as the lawsuit and controversy dragged on.

### **Nike: De-Branding the Brand**

A recent online confrontation between Nike and MIT graduate student Jonah Peretti demonstrated the remarkable extent to which one individual can use the “political space” of the Internet to set the agenda for a large multinational corporation, in this case putting it on the defensive about its labor practices.

It all started when Nike began a promotion on its website that allowed consumers to purchase a pair of shoes online, with a customized word or phrase on the side of each shoe. Peretti, a graduate student in media arts and sciences, mindful of the controversies surrounding Nike's overseas labor practices, requested that Nike fulfill his request with the phrase: “sweatshop.” Soon afterward, the student received a polite reply denying his request to use the word. Thus began an elaborate E-mail exchange with the Nike representative coming up with even more elaborate – and ridiculous – justifications for denial.

The bemused student collected the series of E-mails into one message and forwarded it to a dozen friends. After that, the E-mail circulated among more friends and co-workers. In just a few weeks, the Nike Corporation found itself facing a stinging public relations disaster, without even a foe to confront directly.

Unlike more conventional criticisms of Nike, the circulating message did not condemn its labor practices, demand a boycott, or even directly criticize the company. Instead, it managed to do something much more threatening: it began to pick apart the carefully constructed image of “cool” that Nike has spent millions of advertising dollars to create and maintain in the minds of global consumers. Nike carefully controls the image of the company as representing the integrity of that brand. The E-mail pierced this corporate facade and revealed a side of Nike that engages in double-speak, evasive answers, and hypocrisy.

Stories about this controversy began showing up on alternative media websites and soon appeared in mainstream publications such as *Time*, and the *Wall Street Journal*. Finally, Peretti himself appeared on an NBC Today Show interview. Although the action was touted by the media as a “David and Goliath” battle, Peretti was quick to note that the real battle was between the power of a company with access to mass media versus a network of citizens plugged into the “micromedia” of political speech on the Internet.

Peretti's exchange with Nike exemplified the power of a message circulating without the direct guidance of the initial messenger himself. The message circumnavigated the globe, through the collective initiative of individuals who received it and passed it on to friends. This exchange is just one case of what may be a new form of social protest, made possible only through unprecedented technological advances.

### **The Evolution of Swarm Activism**

In the last few years, swarm activist groups have been the most visible force behind the “anti-globalization” movement, staging often violent protests at major economic conferences in Europe and America, from meetings of the World Trade Organization (WTO) in Seattle, the World Bank in Washington DC, the International Monetary Fund (IMF) in Prague, and the G8 meeting in Genoa. Swarm activists have mobilized to disrupt activities promoted by institutions representing a more integrated, worldwide economic order, and use these disruptions to bring attention to the anti-globalization movement.

While swarm activities play out in world capitals, this phenomenon had much humbler beginnings. In his 1998 report *The Zapatista "Social Netwar" in Mexico*, David Ronfeldt of the RAND Institute was one of the first to note the importance of distributed communication networks and "swarming" in emerging political movements. His report analyzes the way in which the Zapatista movement in the Mexican state of Chiapas was able to mobilize sympathizers from around the world and use global public pressure to counterbalance the military force of the Mexican government.<sup>21</sup> When local insurgents led by the Zapatista National Liberation Army (ELZN) rose up in March of 1994, Mexican authorities moved swiftly to crush the nascent rebellion with military force. The Zapatista counter-attacked, but their most effective weapon was not bullets or bombs. Rather, it was their connection to sympathetic international activists and their skills in attracting the notice of the global press in the US, Mexico and Europe.

These activists began to "swarm" against the Mexican government, using phone, fax and video to generate international public condemnation of the situation in Chiapas. After just 12 days, the Mexican military had to call a halt to their action. Since then, there has been intermittent low-intensity conflict – with the power of the Mexican government tempered by pressure from an international community of activists to come to a peaceful and equitable settlement in Chiapas.<sup>22</sup>

Organizers involved in the swarm activism against the Mexican government took many of the lessons learned and applied them to the 1999 WTO protest in Seattle.<sup>23</sup> The Zapatista experience demonstrated that activist groups using computer, fax, and telephone could stop an army in its tracks, especially with the help of the global media.

In 1999, just prior to the Seattle meeting, an obscure organization called [www.J18.org](http://www.J18.org) used its website to coordinate an international protest of globalization in the form of a surprise protest in London. The protest coincided with the G8 conference of world leaders in Cologne. In London, bankers and traders in the financial district found themselves under siege. Two thousand anti-capitalists gathered there, shouting slogans and spray-painting buildings. Local authorities were caught flat-footed. The organizers had quietly and methodically planned the action without advertising or using traditional calls to arms that would have tipped off the authorities.

The ensuing protest was a dress rehearsal for what came next, as street protestors from a wide variety of groups united in their opposition to the "corporatist globalization agenda." Beneath this banner, 40,000 activists from more than 100 countries convened in the streets of Seattle to call for a more equitable alternative to globalization. Their actions turned violent and disrupted the meeting. Furthermore, they changed the nature of debate on global treaties. The success of protestors in Seattle led to much higher security for certain World Bank gatherings and meetings of the G8 countries. Major protests at a G8 summit in Genoa in 2001 led to the scheduling of the next G8 summit in a remote venue in Canada.

## **Planetary Challenges and Societal Evolution**

The items described above demonstrate a range of issues around which groups and individuals have been "cyber-enabled" to change the agendas of governments and business. The examples thus far have typically been reactions to specific problems: political torture, sweatshop labor practices, or inequitable global development. These have been protest movements, but Cyber Agenda-Setting need not be.

There are numerous issues, like global warming and economic development, which draw debate. However, there are many others not yet receiving the attention they deserve. Dealing with some of these will call for greater wisdom and will test the limits of Cyber Agenda-Setting.

Consider the questions posed by Bill Joy, cofounder of Sun Microsystems. Joy, writing in an April 2000 *Wired* magazine article entitled "Why the Future Doesn't Need Us,"<sup>24</sup> argues that within 50 years, technological advances in genetics, robotics, and nanotechnology might mean the end of the human species. Using genetics, we might intentionally or accidentally create a plague of epic proportions; using robotics, we will be able to download human consciousness into machines, thus ending humanity as we know it; or, using nanotechnology, we could create a "gray goo" (a nanomachine generating life killing substances equivalent to a plague) that could turn the biosphere into dust in a matter of days. Scientists that he quoted set odds at 30 to 50 percent that humanity will not survive the century.<sup>25</sup>

Systems thinker and author Ken Wilber argues that we may well face these challenges and that they require an increase in what he calls collective maturity. He argues that humanity will evolve and devise integral solutions (e.g. legal/policy approaches and moral/societal approaches) that will require the interior growth of wisdom and consciousness.<sup>26</sup>

There are signs that collective solutions to these large problems are beginning to emerge. One recent example of "swarming" or "flocking" by humans – an explosion in bird watching in the US – may have evolutionary implications in the human capacity to address immediate environmental problems.

### **Bird watching**

Author and Washington Post reporter Joel Garreau notes that bird watching, an activity pursued by 71 million Americans according to the National Survey on Recreation and the Environment, has been significantly enhanced by the Internet.<sup>27</sup> Many bird watchers are linked to one of several websites. This is a movement that Garreau believes "alters the physical nature of the planet so as to make it more amenable to the birds that are indicator species of global environmental health."

His observations dovetail with those of the late Pierre Teilhard, who wrote in 1940 that "Some day our technology would allow us to create a web of thought and action that would make the world more complex, diverse and alive, moving mankind toward ultimate evolution." Garreau quotes John Fitzpatrick of the Cornell University Laboratory of Ornithology as saying "What's new about the bird watchers' responses to environmental protection is the rise of humans connected by the Internet, acting like a flock without leaders, changing the physical planet a fraction of an acre at a time, for the benefit of other species and thus the entire world...the Internet is the first point in human history in the creation of consciousness at a massive and biologically meaningful scale." In terms of bird watching and enhancing local environments for birds, the use of the Web is transforming these activities into a "global community on a local scale, that ranges from rain forests in Guyana to urban America and everything in between."<sup>28</sup>

Murray Gell-Mann, an active birder and pioneer in the study of complex systems at the Santa Fe Institute, comments on this phenomena, arguing that: "The Internet has accelerated a phenomenon of people finding one another with all sorts of consequences, some wonderful and some terrifying... bird watchers were very much concerned about the issues directly related to nature conservation. Lately they've understood the links to a much wider spectrum of issues, such as energy, air and water pollution, a whole range of population issues, and even problems posed by rural poverty...their awareness of interlinking...is growing." The implication is that the electronic support of this hobby creates more political awareness and potentially, activism on the behalf of birds. This is an ecological and emergent route to Cyber Agenda-Setting.

Ralph Abraham, a developer of complex system theory, agrees:

"When you increase the connectivity, new intelligence emerges...The World Wide Web makes the consciousness of birders akin to a flock of birds, or a termite colony

in which the individuals act in harmony. A consensus emerges on what to do. The behavior of the whole thing changes... The reason this is so exciting is that it is total grassroots, bottom-up emergent behavior. The World Wide Web increases the connectivity between individual birders into a kind of global consciousness...It cares in its altruistic loving soul for the interest of the birds...What we're hoping for is a global increase in the collective intelligence of the human species, without which we cannot survive on this planet. All who dream of a sustainable future for their children and grandchildren are begging for a quantum leap in the consciousness of the human species. If that happens, it is the best and most important thing to happen to the environment."<sup>29</sup>

While Wilber suggests that humanity would need to evolve, Abraham argues that a global increase in the collective intelligence of the human species is needed to survive. Yet several leading systems thinkers are arguing that this bird watching and the swarm response to enhancing the environment for birds is just such an example of enhancing collective intelligence needed to set political agendas that sustain life.

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## Observations and Recommendations

### The View of Cyber Democracy

Cyber Democracy is a collection of new technologies and old habits, with tremendous promise and terrible risks. It embodies both aspirations and fears, with the potential for improvements in government services and possible enhancements in human evolution. It comes at a time when challenges facing governments and societies are significant, and only show signs of becoming greater.

In democracies, we, as voters, get back what we invest in the process. Yet most democracies do little to train us how to be citizens, especially on how to develop shared aspirations and visions that could steer our polity or how to anticipate important changes.

The two main catalysts to the development of Cyber Democracy are:

*Initial experiments:* Around the globe, but particularly in the most “connected” regions, significant experiments are being carried out to test new structures and processes in government administration, voting, political participation, and new forms of policy-making. This report reviews leading examples of these developments.

*Emergent possibilities:* The current experiments only hint at the possibilities. To capture the potential, we must invent and put in place new methods to increase democratic values and to build upon innovations in connectivity to increase our collective intelligence.

This report explores current activities and comments on issues shaping its growth. Developments are coming rapidly, most notably in Europe and the US, but also throughout the world as well. In this conclusion we summarize trends suggested by our research.

Cyber Administration is most clearly understood because its development is more widespread and better studied, yet many questions remain. Cyber Voting, Cyber Participation, Cyber Infrastructure, and Cyber Agenda Setting are all newer and more experimental. There are fewer examples to compare and fewer systematic studies on the topics. However, intriguing experiments and research initiatives now underway could have important implications for the future.

### Democratic Underperformance

The ultimate outcomes for Cyber Democracy are uncertain because it is not clear how well we will use our intelligence and wisdom, or whether the various forms of participation will help build wiser citizens. Successful overall outcomes will also depend upon effective:

- Protection of privacy from government, business, and criminal observation
- Protection of the safety of persons and property
- Protection against discrimination
- Success in establishing shared vision and goals among wider communities
- Success in calling forth sacrifice and anticipation

The five core values of democracy are: freedom, equality, stability, majority rule with minority protection, and participation. Cyber Democracy has the potential to enhance all five of these values while adding the values of: shared aspiration and anticipation.

### **Discussion**

Democracy has evolved from its roots in an agrarian society to the needs of industrial society, and is proving to be suitable for effective governance in an information age. Historically, democracies have expanded their definitions of “citizen” – beyond an initial narrow elite – to include all members. A big and open question is whether Cyber Democracy can effectively enhance the role of all members of a community in the information age. The process begins with technological support for administrative functions and expands from there.

The examples here suggest that experiments, large and small, in all continents, in many countries, are providing services more effectively and with greater customer focus. This is occurring in developed and developing countries alike.

New ICTs are creating new capacities to connect government agencies, allow citizens to “talk” to public officials, and to support sustained and meaningful interaction among those officials and politically engaged citizens. These emerging systems are also enhancing citizens’ abilities to interact with each other.

In terms of national patterns, Table 1 in Appendix A correlates E-government efforts by country with examples described in the report. Several observations emerge from the chart:

- Leadership occurs at all levels of national development. Brazil and Estonia are as creative in their Cyber Democracy programs as are the US and the UK.
- Countries with extensive projects in Cyber Administration are more likely to have experiments in the other Cyber Democracy areas, such as Cyber Voting.
- Much more is going on than is evident on the chart. Leading edge examples of Cyber Democracy are not necessarily distributed or publicized internationally.
- At least 67 of the world’s 192 countries are experimenting with some form of Cyber Democracy. There is every indication that experiments will grow in number and sophistication.

The previous section of the report discussed the emerging phenomenon of “swarm activism” and noted that some observers believe it to be a sign of an emerging collective intelligence made possible by technology. Joel de Rosnay, author of the *Symbiotic Man*, argues similarly that the challenges this emergence will pose for Cyber Democracy will require:

Elevating the intelligent conduct of these societies to a superior degree of thought and action through a creative compromise among natural laws, political action, and spiritual aspirations. The transition from the social individual to the symbiotic human, consciously and naturally integrated within one or many supra-societal macro-organism, stands as one of the greatest challenges ever faced by humanity throughout its entire evolution. It is as crucial a stage as the transition from single-cell life to multi-cell integrated organisms...The challenge is so complex that it stands beyond the management abilities of current government structures and operations.

- Joel de Rosnay, *The Symbiotic Man*, (p. 152)

## Cyber Democracy Observations

### Cyber Administration

- The combination of greater clarity in the purposes and goals of government services – needed to establish online programs – and greater transparency in government performance because of them, will provide a new opportunity to enhance government accountability and performance.
- Leading Cyber Administration projects feature a high degree of interactivity between the state and the citizen.
- As the technological infrastructure of E-government becomes less expensive and more standardized, developing countries with a burgeoning demand for such services could quickly join the ranks of movement leaders.
- XML and related data interchange technologies are making it feasible for administrative data to be easily integrated between and among government agencies. Information will be able to flow to other departments, down to citizens and organizations, and up to policy makers. This fluidity and flexibility can allow information to be easily customized, while retaining the capacity standardization. This complex matrix could result in greater integration among sometimes isolated or competing government agencies.
- New capacities for inter-governmental exchange will draw public attention to the collection and use of data, with corresponding concerns for protecting personal privacy. The concerns parallel those now expressed about aggregating marketing information by commercial enterprises. Voluntary codes are developing in the private sector. However, most commentators think that insufficient attention is being given by businesses or government to privacy issues. Advanced techniques in database analysis, and the surveillance potential of enhanced connectivity will certainly emerge as important needs to be addressed, as Cyber Democracy evolves.
- An important new facet of public accountability is “Regulation through Publication,” a 21<sup>st</sup> century form of more traditional practices of “public shaming.” Whether practiced by agencies on those who break laws, or on agency shortcomings by other agencies or the public, this will become a more common tool for enforcing community standards and curbing civil offenses. As data begins to flow freely from government databases, it will become easy to aggregate, correlate and expose rule-breakers – whether they are businessmen, politicians or whole agencies. However, this practice can easily be transformed from watchdog behavior to a witch-hunt. The media can play a significant role in moderating this process.
- Greater intelligence in software applications, in biometrics, and in more effective personal bio-monitoring may result in greater customization of health and safety regulations. Individualized definitions of environmental protection or of pharmaceutical safety and efficacy could lead to corresponding changes in regulation (e.g. pharmaceutical safety regulation tailored to various genotype groups in the larger population). ICTs make the adoption and administration of this phenomenon more feasible. Customized regulation could be viewed as a benefit or as a new opportunity to stigmatize and discriminate.

### **Cyber Voting**

- The decision to vote is a complex calculus, often unconscious. In most developed countries, the calculus is leading to lower turnout for a number of reasons including disaffection with political leaders and parties and a declining sense of community. For disenchanted citizens to make the effort to actually vote, they need to feel that there is an important issue at stake and that their vote could play a part in determining the outcome. Innovative solutions for increasing the *significance* of a vote rather than increasing the *ease* of voting may help turn around low voter participation rates. Cyber Agenda-Setting can deepen that sense of importance among political participants.
- Internet voting will eventually, though gradually, be implemented. There will be time to observe and correct gross mistakes and to slowly acclimate voters to the new technologies being used.
- The prospect of using kiosks or ATM machines – with secure biometric capacity – as voting booths is an important option which may compete with Internet voting from home. Alternatively, an infrastructure that includes low cost home/consumer biometric devices could enhance the security of voting at home but would require additional efforts to protect the privacy of the ballot.
- The range of voting systems used around the globe suggests that countries have many options to experiment with. Evidence that up to a 10 percent difference in turnout can be attributed to having election systems such as proportional voting rather than “winner take all” systems may make these alternatives more popular. Furthermore, cyber tools could make new electoral designs more efficient and practical, with related effects on political parties in two-party countries such as the US.
- Vote trading, which has already begun in the US and UK, is likely to grow as the Internet makes it more feasible to exchange votes via an online forum.
- Intelligent agents and trusted intermediary groups used for advice on voting options will become more common in the electoral process. Done well, these tools and groups can build local community and enable voters to make more informed choices.
- Initiatives and referenda are growing in popularity in several countries and states. Yet the California experience shows that initiatives often allow citizens (and special interest groups) to pose choices that are just as poor as those framed by political leaders. Cyber developments will make it easier to enlist public support to put initiatives on the ballot. ICTs can make the education of voters on issues less costly, more convenient and comprehensive; a development that could enhance the process.

### **Cyber Policy Participation**

- The new connectivity will make it easier for constituents to understand and review the choices facing their elected representatives and engage them in the issues. Digital petitions, E-mail feedback, and online policy deliberations are creating new forms of citizen feedback, and new demands for responsive elected officials.
- Trusted intermediaries (including NGO's, some chat groups, and virtual communities) and expert agents will enable individuals to identify critical decision makers and arguments to pursue.
- Electronic Town Meetings continue to function as major opportunities for policy innovation. They show real promise in bringing together community stakeholders: local policy makers, citizens, community groups and the media. As more news media become in-

teractive, the opportunity for web-enhanced news-media support of those projects grows easier and cheaper. The result could be deeper integration with legislative and budgetary processes on behalf of the public.

### **Cyber Infrastructure**

- The capacity to build online communities, based either on geography or subject, is a key benchmark for evaluating the future of Cyber Democracy.
- Software designers will need to consider how their products supporting Cyber Democracy enable citizens to share diverse viewpoints online while avoiding polarization. Finding new ways to track the consistency and integrity of all participants would be a helpful innovation.
- Games and simulations give citizens the opportunity to put themselves in the position of political decision makers and gain insight into the consequences of their viewpoints. This form of educational tool may give individuals a greater understanding of the complex trade-offs inherent in the policy making process. Simulations can facilitate more reflective thinking on a range of choices, particularly those related to vision and shared community goals.
- Polling and focus groups will continue to have a major influence on political marketing and framing public policy debates. As polling moves online, it will create an expanded capacity to analyze the opinions and attitudes of the minutest demographic data. The use of this information to develop and to market policy alternatives will show the potential for more responsive (or more manipulative) policymaking and participation.

### **Cyber Agenda-Setting**

- Fragmentation of media audiences has created new opportunities for impassioned reporting with strong personal points of view directed at niche audiences. More rigorous standards – for both amateur and professional “journalists” – may help civic consensus develop.
- Interactive journalism is emerging as a way for media organizations to add value to their brands. Increased interactivity among the media, citizens, and public officials on civic issues can play an important role in enhancing the public engagement with current political questions, with all parties gaining from the experience.
- Political parties are beginning to move their marketing activities online. While the Internet doesn't seem to favor any political persuasion, the web can give the statements of extremist or marginal groups the appearance of the gravity enjoyed by mainstream political groups. The web-publishing environment demands substantive content to provide interested “readers” with information deep enough to engage them. This trend runs counter to the general prevalence of symbolic sound-bite politics.
- Political parties with strong grass roots support and political leaders with populist appeal have been able to make the most effective use of the Internet, using websites to attract and engage motivated citizens. In the short term, leaders and parties with populist appeal may remain the driving force moving partisan politics online.
- The Internet is making it possible for NGO's to work to coordinate their efforts as part of greater movements. Smaller NGOs can amplify their influence through alliances and by working in tandem with other organizations. This Internet-facilitated collaboration

helps even the smallest NGO to influence agenda setting for issues of global importance.

- The rich communications and networked structure of Swarm Activist groups enable them to thrive in the midst of factionalism and distributed leadership. Swarm activism is driven by the shared interests and passions of their members. Groups functioning through this organizational principle are able to shift direction rapidly with a minimal need for central coordination. The speed of swarm mobilization often outpaces opponents who operate in a centrally organized organization.
- Swarm activism has been likened to enhanced collective intelligence. The challenges faced by the global population will require such intelligence. In the years ahead, ICTs may allow entirely new forms of collective intelligence to develop. New capacities for information can create different perspectives on the world and facilitate new ways for individuals to coordinate their actions for the benefit of all.

### **Anticipating Critical Junctures for Cyber Democracy**

In considering the findings from this research, it is clear that Cyber Democracy will be a major force, hopefully for good, possibly for harm. To ensure that Cyber Democracy makes its best contribution, and that we wisely anticipate the choices we will have to make, we must develop forecasts. It is critical that major stakeholders, particularly in the media, support and take part in these efforts.

At its broadest, Cyber Democracy will support the collective intelligence and the imagination of humanity. A more immediate and practical future will transform current discussions of connectivity, regulation, the digital divide, and media concentration and fragmentation into a global movement.

To achieve a proper degree of foresight, more specific forecasts are needed in both technical and social arenas, particularly these ten:

1. The degree and nature of connectivity; particularly the capacities that poor populations are likely to have and what the trends mean for the growth of democracy.
2. Advances in “embedded intelligence” in appliances, organizations, and communities.
3. Privacy and the need to secure devices, tools and infrastructures from unauthorized use.
4. Direction setting – the range of options for developing shared vision within and across communities, while ensuring that those shared visions guide subsequent actions.
5. Steering mechanisms – the combination of various options for anticipating and dealing with individual critical issues and budget priorities consistent with shared vision; and considering the relationship to specific issues, national budget priorities, and societal/global evolution.
6. The ideal designs for direct democracy – what are the appropriate design options for having citizens reflect on issues, consider options, and cast votes?

7. The role of the representative. Where their constituents are casting direct votes on issues, what leadership and value-added roles can and should elected representatives play?
8. The options for protecting privacy and freedom as Cyber Democracy advances.
9. The future of employment: jobs, service, meaning, and contribution as ICTs affect the nature of work: what role can Cyber Democracy play in dealing with these issues?
10. The opportunity for Cyber Democracy developments to eliminate disparities (including the digital divide) within communities, nations and globally.

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## Appendix A – Report Overview by Country

The following chart has been constructed to illustrate the national distribution of the Cyber Democracy activities that are contained in the sections of this report. These are highlighted within the context of a list of nations that ranks the relative progress in E-government activities. The ranking was constructed using two major global surveys of E-government progress: *E-Government Leadership: Rhetoric vs. Reality* from Accenture, and *Risk E-Business: Seizing the Opportunity of Global E-Readiness* from McConnell International. The Accenture report focuses on E-government activities among developed nations, while the McConnell report focused on the readiness in developing nations.

The chart takes an average of the 6 E-readiness characteristics of the McConnell report, and uses that average to rank the developing nations. These are grafted together with the rankings of the Accenture report, which identified 4 general tiers for progress among developing nations. The leftmost “E-Gov Relative Ranking” column combines the rankings of the two studies into a common scale, with the higher numbers being furthest along in E-government development. Countries with the same relative ranking number are at a similar stage of development, and are not ranked within each given stage. Sweden, Switzerland, Korea, and Austria were not covered by either of the two surveys, but they did have examples that are illustrated in the Cyber Democracy scan. For the sake of clarity, we have inserted these countries into the chart, and ranked them among countries with comparative level of E-government sophistication.



| Country     | E-Gov Relative Ranking | Accenture Report | McConnell Average | McConnell E-Leadership |              |                      |               |                    | Cases Included in the AFA Cyber Democracy Report |              |                     |                      |                      |  |
|-------------|------------------------|------------------|-------------------|------------------------|--------------|----------------------|---------------|--------------------|--|--------------|---------------------|----------------------|----------------------|--|
|             |                        |                  |                   | Connectivity           | E-Leadership | Information Security | Human Capital | E-Business Climate | Cyber Administration                             | Cyber Voting | Cyber Participation | Cyber Infrastructure | Cyber Agenda-Setting |  |
|             |                        |                  |                   |                        |              |                      |               |                    |  |              |                     |                      |                      |  |
| Slovakia    | 1.6                    |                  | 1.6               | 2                      | 1            | 2                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Jamaica     | 1.4                    |                  | 1.4               | 1                      | 2            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Jordan      | 1.4                    |                  | 1.4               | 1                      | 2            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Philippines | 1.4                    |                  | 1.4               | 1                      | 2            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Romania     | 1.4                    |                  | 1.4               | 1                      | 2            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Turkey      | 1.4                    |                  | 1.4               | 2                      | 1            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Venezuela   | 1.4                    |                  | 1.4               | 1                      | 2            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Bulgaria    | 1.2                    |                  | 1.2               | 1                      | 1            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Colombia    | 1.2                    |                  | 1.2               | 1                      | 1            | 2                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Egypt       | 1.2                    |                  | 1.2               | 1                      | 2            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Kuwait      | 1.2                    |                  | 1.2               | 2                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Pakistan    | 1.2                    |                  | 1.2               | 1                      | 2            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Panama      | 1.2                    |                  | 1.2               | 1                      | 2            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Peru        | 1.2                    |                  | 1.2               | 1                      | 1            | 2                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Russia      | 1.2                    |                  | 1.2               | 1                      | 1            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Sri Lanka   | 1.2                    |                  | 1.2               | 1                      | 1            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Thailand    | 1.2                    |                  | 1.2               | 1                      | 2            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Ukraine     | 1.2                    |                  | 1.2               | 1                      | 1            | 1                    | 2             | 1                  |  |              |                     |                      |                      |  |
| Bangladesh  | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Bolivia     | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Ecuador     | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Ghana       | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Indonesia   | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Kazakhstan  | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Kenya       | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Lebanon     | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Morocco     | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Senegal     | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |
| Tanzania    | 1                      |                  | 1                 | 1                      | 1            | 1                    | 1             | 1                  |  |              |                     |                      |                      |  |

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## **Appendix B – List of Interviewed Experts**

We wish to acknowledge the experts we interviewed for this report:

*Jim Cashel*, Chairman of Forum One Leadership

*Keon Chi*, Council of State Governments

*Esther Dyson*, Author *Release 2.0*

*Todd Erickson*, CoVision Software

*Michel Godet*, Chair of strategic prospective at the National Conservatory for Arts and Industries, Paris

*Pam Greenberg*, National Conference of State Legislatures (NCSL)

*Trevor Hancock*, Public Health consultant

*Ed Janairo*, Council of State Governments

*Carol Lukensmeyer*, Executive Director of Americans Discuss Social Security

*Don Mazzioti*, former CIO of the State of Oregon

*Tyler Norris*, President of Community Initiatives Inc.

*Norman Ornstein*, Resident Scholar, American Enterprise Institute (AEI)

*Adam Clayton Powell III*, VP of Technology and Programs at the Freedom Forum

*Alice Rivlin*, Senior Fellow at the Brookings Institution

*Alan Rosenthal*, Professor at The Eagleton Institute of Politics at Rutgers University

*Joel de Rosnay*, Director of Strategy for Science and Industry Complex in La Villette, Paris

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## Appendix C – Glossaries

### Cyber Democracy Glossary

**Advocacy:** Active support of a cause, idea, or policy.

**Citizen:** A person entitled by birth or naturalization to the protection of a given state, including privileges of voting and other related forms of participation. Being a citizen conveys obligations to support the state with voting, taxes, and other responsibilities.

**Cyber Administration:** Or E-government. The use of the Internet and other ICTs to enhance government and administrative services.

**Cyber Agenda-Setting:** The use of the Internet and other ICTs to add to or redirect the political or policy agenda, comprised largely of citizen-initiated campaigns conducted through these capabilities.

**Cyber Democracy:** Democracy enhanced by the Internet and other ICTs. Cyber Democracy typically encompasses more direct forms of government, stressing different aspects of political participation, particularly discussion and political activity through communal forms of participation. Also Cyber Republic.

**Cyber Participation:** Classic forms of citizen participation (e.g. having political discussions, petitioning representatives) using the Internet and other ICT capabilities.

**Cyber Republic:** Government elected and directed by the people governed, enhanced by the Internet and other ICTs. Cyber Republic typically encompasses more direct forms of government, stressing different aspects of political participation, particularly discussion and political activity through communal forms of participation. Also Cyber Democracy.

**Direct Democracy:** Direct policy-making by citizens, often through initiatives and referendums. Direct democracy as opposed to representative democracy where decision-making is conducted by the elected representatives of the citizenry.

**Electronic Community:** A group of people collaborating and sharing their ideas over an electronic network (e.g., in this report, the Internet). Communities optimize their collective power by affiliation around a common interest, by the compression of the time between member interactions (i.e., communicating in real time), and by asynchronous "postings" that reach more participants and collect more discussion content than real-time interactions.

**Electronic Democracy:** Electronic Democracy focuses on the improvement of representative democracy, rather than on the establishment of direct forms of democracy. The greatest potential of new IT is to improve democracy through enhanced media, largely through the growth of information channels.

**Electronic Government (E-government; E-Gov):** The emerging capability enabled by IT to perform politics more efficiently, with potential promise of renewal in democracy, administration, and citizen involvement. The current focus of E-government is largely on moving government and public services online and streamlining activities accordingly.

**Internet Voting:** Full Internet voting will allow voters to cast their ballots from the privacy of their home, or in kiosks located in various public or commercial places, with the process secured by encryption. The votes are tallied by computer at a central location. Although Internet voting is not yet in place for major elections, it is increasingly being implemented on an experimental basis.

**“joined up”:** The bridging of traditional divisions between different departments of a government, enabled through E-government capabilities.

**Mail Balloting:** With mail balloting, voters receive ballots in the mail, indicate their votes on the ballots, and mail them back to the election office. Election administrators count the ballots in a centralized location. Either optical scanners or punch card readers can count the ballots, or election workers can manually enter the ballots into a touch screen or push-button machine. Jurisdictions can also count mail ballots by hand.

**Mass Media:** Media that achieves mass distribution, in particular, radio, television, broad circulation newspapers and magazines. Mass media provides the same content to everyone by “broadcasting,” rather than targeting information to individuals or small groups.

**NGOs:** Non-government organizations, such as human rights organizations and other related activist groups. In recent years, NGOs have successfully used the Internet to mobilize supporters to promote their causes.

**Political Party:** A formal political organization grouped around a broad ideological banner, which promotes their ideals through the principles and candidates they support for public office.

**Regulation:** The act of controlling or governing behavior through principles or laws enforced primarily by government agencies.

**Representative Democracy:** Representatives are elected by the public, usually by region. Representatives may function as a trustee (given the capacity to use their judgment in representing their constituents) or as a delegate (required to follow the wishes and will of their constituents to the extent that it can be known).

**Swarm Activism:** Activism carried out through an evolved network structure where the goals and actions of the group are shaped and defined in an ongoing process of mutual communication, rather than following directions set by a central group or authority.

**Teledemocracy:** Teledemocracy strives to establish more forms of direct democracy within the American political system and aims to employ new communication technologies to this end. Teledemocrats claim that change in American politics today is propelled largely by the explosive growth of new telecommunications media, specifically the remarkable convergence of television, telephone, satellites, cable, and personal computers.

**Transparent, transparency:** The term used to describe when information is visible or accessible. Transparency is the characteristic of openness of the information. In politics and government it includes more effective reporting of the actions and outcomes of public officials, government agencies and political candidates.

**Voting:** The process of formally expressing endorsement for a candidate for office or for a proposal on a specific issue.

## Information and Communication Technology (ICT) Glossary

**Biometrics:** A system that uses software to analyze handwriting, fingerprints, or other biological features to provide authentication of someone's identity.

**Cyberspace:** The Internet/electronic/digital environment.

**Digital Certificate:** An "electronic ID" that is issued and maintained by a certificate authority, and is used as part of the digital signature process, containing an encryption key and other identifying information.

**Digital or Electronic Signature:** A code or symbol that is the electronic equivalent of a written signature, used to assure a recipient that a specific individual created a document or file.

**Domain Name:** A unique identifier for an Internet site that consists of at least two (but sometimes more) parts separated by periods (e.g., <http://www.dhhs.gov>). Enterprises must register top-level domains with the Web Internet Registry and pay a yearly fee to maintain the registry.

**Electronic Mailbox:** A designated holding location for electronic transmissions located on the receiver's computer or on a third-party network.

**Implementation:** The stage of a project that follows development, delivering a service to users.

**Information and Communications Technology (ICT):** Refers to the use of equipment that provides an information and communications system.

**Information Technology (IT):** Refers to the use of equipment that provides an information system.

**Integration:** The ability to make separate systems work together easily. This could refer to data integration (ensuring that information in multiple databases is compatible) or systems integration (ensuring that multiple hardware systems are compatible).

**Internet:** The worldwide collection of networks communicating through common languages and protocols. Also refers to the basic infrastructure for the new economy over which information can be transferred, transactions made, and work done.

**Password:** A secret data item that is used to authenticate an entity. Passwords are often words or numbers that an individual memorizes. The system authenticates the person on the assumption that the password is known only by the person to whom it belongs.

**Personal Identification Number (PIN):** A unique number consisting of alphanumeric characters used to ensure integrity and authentication.

**Portal:** At its optimum, a portal is a high-traffic, broadly appealing, unifying Website of which the intent is to be a single point of access to online services. It provides a coherent interface to a wide range of aggregated content, services and vendor links. Government portals create a unique opportunity to restructure the packaging and marketing of government services, and typically include services such as e-mail and community chatrooms.

**Private Sector:** Term used to describe commercial enterprises or companies.

**Punch Card:** In a punch card voting system, the voter uses a stylus to punch out tiny circles or rectangles in a card. The cards are fed into a mechanical card reader that detects which holes have been punched and records the vote totals accordingly.

**Smart Card:** A small plastic card similar in shape and size to a credit card, that contains a silicon chip capable of storing data and performing computations, often used to store and implement digital signatures. Provides an extra level of security because it requires the possession of a specific piece of property (something you have) in addition to a PIN or password (something you know). Based on these capabilities, smart cards can serve as personal identification, a credit card, an ATM card, a telephone credit card, a medical record and as cash for small transactions, all in one.

**Supplier:** A company that provides products or services on a commercial basis to part of Government or a company. Term often used in relation to suppliers of IT-related products or services.

**Transmission:** The process of electronically sending data from one trading partner to another.

**Website:** A collection of files in the form of linked pages of information through hyperlinks, usually organized around a menu. A website is typically accessed through a “home page” bearing the domain address, and covers a particular theme or subject, managed by a particular person or organization. A website’s pages are on a Web sever, and are accessible from any browser on the World Wide Web 24 hours a day, seven days a week. Websites typically use the Hypertext Markup Language (HTML) to format and present information and to provide navigational facilities that make it easy for the user to move within the site and around the Web.

**World Wide Web:** A collection of information located in many Internet servers that can be accessed with a browser or by navigating via hyperlinks.

**XML:** eXtensible Markup Language. XML is a syntax that encodes data, enabling one to describe information in terms of *what* it is, so that computers can directly interact with this textual information. In the future, it is likely that XML or something like it will serve as a format for next-generation data interchanges, facilitating deeper data sharing and coordination among databases and organizations.