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SPECIAL ISSUE: ON e-DEMOCRACY

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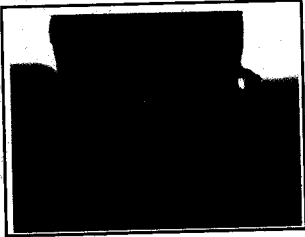
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I t gives me great pleasure to introduce this special issue of The IPTS Report on e-Democracy, prepared jointly with the Greek presidency of the EU.

We all know technology modulates the pace of change in our societies and occasionally even its direction. This impact is usually felt through the economic repercussions of technical change. But where Internet technology comes into play to enrich the scope and texture of the democratic process, its political and social impact may be more direct.

I find it very fitting that this interest in and experimentation with e-Democracy should be championed by and during the Greek Presidency of the EU. The fact that ways of developing and expanding democracy should be the subject of technological exploration at a time when the Presidency is wielded at the birthplace of democracy is highly symbolic.

There are three points I wish to make in this brief introduction: first, e-Democracy initiatives should not simply facilitate interaction between citizens and government and the establishment of on-line forums. They should also aim to foster popular involvement in the decision-making process, so making it clearer and more inviting too. Technological development in this area and collaborative practices can grow in symbiosis to tackle key challenges.

Second, key challenges in this context involve expanding Internet access among our fellow citizens and bolstering the security and user-friendliness of the interactive technologies concerned. Experimentation with e-Democracy will hopefully provide a new boost to overcoming these technical-economic hurdles.

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The large-scale on-line poll timed to coincide with the UN Earth Summit has demonstrated the potential of digital democracy and the demand for this kind of democratic participation that exists worldwide.

EDITORIAL

e-Democracy for the European Union

George A. Papandreou, *Minister of Foreign Affairs, Greece*

It gives me great pleasure to co-edit this special issue of *The IPTS REPORT*, one of the first monthly journals to be published on the Internet. This special issue on e-Democracy coincides with the culmination of the Greek EU Presidency (January - June, 2003), which saw the launch of *e-Vote*, a bold initiative to enhance and expand e-Democracy across the European Union.

Building on our long history of democracy, Greece is committed to supporting and developing new democratic practices for our increasingly interconnected world. In the public meeting places of ancient Athens, such as the Pnyx or Agora, people could express their concerns before their leaders and fellow citizens simply by jumping onto a rock. As long as they shouted loud enough and had something valuable to contribute to the debate, their voice would be heard.

Radical New Possibilities

Ever since, democracy has been evolving and expanding. The technology of communications, from the first printing presses to broadcast media, has brought more information to more people, faster than ever before. More recently, the internet has created radical new possibilities to reinvigorate and enrich democratic dialogue. With interactive electronic communications, millions of people from all corners of the globe can

actively participate in the public and political debate simultaneously.

These developments are taking place as the European Union is itself undergoing a far-reaching transformation, as it expands from 15 to 25 member states. Enlargement is a bold undertaking that calls for an equally radical overhaul of our democratic processes, in order to create a new framework of European governance equal to the wide-ranging needs and demands of its constituents. As the Union embraces some 450 million citizens, we must find new ways to ensure that citizens across the continent can identify with and partake in European politics. Preparations are already underway for a European Constitution that will reshape our democratic institutions and mechanisms to guarantee greater inclusion, transparency, and accountability for our growing number of citizens.

e-Democracy Is About Participation

The *e-Vote* project is evidence of the Greek Presidency's commitment to ensure that EU institutions respond to European citizens' real concerns and needs. This innovative online voting project uses the latest technology to give citizens new ways to participate in ongoing debates and decisions about the key issues facing the Union, as it prepares to undertake the biggest enlargement in its history.

The views expressed here are the author's and do not necessarily reflect those of the European Commission.

bodies and to harness the positive aspects of globalisation. New technology allows people to mobilise around common causes and build trans-national networks across regions, religions, and races, thus strengthening civil society, an essential pre-requisite of democratic governance.

What People Want

The extensive feedback we have received from both e-voters and the media has been overwhelmingly positive. One of the main reasons e-Vote has been such a success is the Greek Presidency's commitment to sharing the results with top-level

decision-makers in the Council, Commission and Parliament, thus ensuring citizens' voices are heard. Far from being 'lost in cyber-space', the opinions of interested citizens have a real impact on EU policy-making. In addition, the Presidency has not shied away from asking controversial and even politically sensitive questions, which are not usually voiced through 'traditional' channels of communication with government bodies and official institutions.

Through e-Vote, we hope to develop a new dimension to e-Democracy, which has the power to mobilise citizens across borders to address the issues that concern and affect us all.

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About the author

George A. Papandreou is the Greek Minister of Foreign Affairs. He has been a Member of the Greek Parliament since 1981 and has held several government posts, including Minister of Education. A Founding Member of the Helsinki Citizens Assembly and a Member of the Advisory Board of the Cambridge Foundation for Peace, he received the East-West Institute's Statesman of the Year Award in 2000, together with his Turkish counterpart Ismail Cem, for their efforts at improving relations between their countries.

http://www.mfa.gr/english/the_ministry/ministers/

last few decades. IT now makes it possible to meet some of the demands for openness and greater participation being made by some sectors of the population. Thus, in terms of its impact on public opinion is concerned, it may not be an exaggeration to call it the greatest revolution since the invention of the printing press.

This new model of citizenship constitutes a formidable challenge for political leaders given a number of specific issues raised by the Internet:

- Regarding legitimacy: All sites, in particular those belonging to Non-Governmental Organizations (NGOs) or alternative movements, are likely to have some degree of legitimacy in the democratic debate. In this respect, it could be argued that the focus of legitimacy is moving towards the community and that democracy is not only founded on the majority principle, but on a "multi-minority" democracy.
- Regarding the instantaneity of debates: We are moving from an intermittent democracy regulated by elections, to a continuous democracy. This will inevitably affect our way of thinking and our decision-making. How, for example, should one decide when debating has finished and the time has come to make a decision?
- Regarding the nature of the nation state: Means of communication have always been a powerful tool in the hands of the authorities. In France, Louis XI used the postal service to unify the kingdom. But what will the States of tomorrow be like, in the context of international law and the emergence of planetary citizenship? Will tomorrow's levels of power shift away from the nation state to the global and local levels?
- Regarding the organization of our societies: Are we heading towards a new form of tribalism, lobbies locked in the defence of personal interests, or towards a true universal conscience?

Democracy adapts to changing times and to citizens' new lifestyles. We are going through a major democratic shift, particularly on a local level, where local government has experienced a real revival through the introduction of Information and Communication Technologies.

Local representatives were the first to become fully aware of the potential of the information society. Being closest to the electorate, they quickly realized that the Internet was not just a passing phase, but that it carried the seeds of a profound change in the relations between elected representatives and citizens. The first experiments – often the most innovative – took place in cities. These experiments included online services, and it was on a local level that representatives learned to communicate with these new tools.

It is no coincidence that some of the most innovative mayors get together today on a common network, the "Global Cities Dialogue!" (See Box 1). The 138 members, from all over the world, symbolize this realization and claim their rightful place in the debates on the Information Society. In the face of this alliance of cities such as San Francisco, Boston, Buenos Aires, Bamako, Melbourne, Stockholm, Athens or Barcelona, central governments have to give a concrete response.

Finally, any discussion of electronic democracy would not be complete without mentioning the debate on voting via the Internet. This is a subject which continues to spark off emotional reactions. Clearly, we cannot simply brush aside a system, which could facilitate voting, increase the methods of voting and allow all those who wish the chance to vote via the Internet.

Voting has been evolving continually since it began. Who can seriously argue against electronic voting just because it involves less effort and does away with voting booths and the ritual of travelling

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Role of S/T
in Policy Making

The issues raised by the new model of citizenship include the legitimacy of the different players in the debate, how debates are to be structured, and the shift of power from the national to the local and global levels, or towards well-organized pressure groups

Being closest to the electorate, local representatives were the first to become fully aware of the potential of the information society and many of the most innovative initiatives have taken place at the city council level

Dr. Jean-Marc Moulinaux has been involved in a European research project funded by the European Commission and a consortium including several universities in France (Kista-Stockholm in Sweden, Bremen in Germany and Issy-les-Moulineaux). The project aims to create an online voting prototype integrating a high security and privacy protocol. This is supported by an innovative voting protocol specially designed based on the use of advanced cryptographic tools. This protocol ensures confidentiality and guarantees the integrity and confidentiality of their vote whilst they are being counted and also whilst the votes are being counted and checked. (More information on the project is available on the following website: www.aucybervote.org).

The system was implemented for the first time on 11th December 2002 during the elections for representatives to sit on the District Council.

The representatives were thus elected for the first time exclusively via the Internet, from voters' homes, offices or public facilities. The counting took place in the offices of the French administration and specialists in the field of technology. The system was used to complete the count.

In order to ensure the integrity of the vote, several days before the election the town hall sent voters a secret code. The voters had to pick up these secret codes from the post office – they received proof with acknowledgment of receipt – or from the Town's Local Democracy Centre on the day of the election. In all cases, voters had to show their identity with their secret code. This procedure, which may appear a little clumsy, was implemented because a secret code sent by normal mail could have been opened and used by the voter's household.

With their secret code, voters were invited to create their own, entirely confidential account using the CyberVote system. Once authenticated, they could choose between the candidates and cast their vote. Their ballot paper was numbered by computer using their secret code. The ballot papers were never decrypted individually. If voters used the system, they refused the second vote, telling the voter they had already voted.

The votes from the two computers in each of the 4 polling stations specially equipped for this purpose were confidential. Voters voted in polling booths specially fitted out with this system. The results were posted on the city's website (www.lissy.com) and also appeared on the town hall's website. The list of candidates, along with their photos and their names, was also posted on the website.

The system uses an ElGamal threshold encrypting scheme. This means that, working together, the scrutineers possess a single public-private key pair. In a draw, 8 people from the town hall were appointed as scrutineers and their task was to count the votes. In fact, in order to ensure the integrity of the vote, there must be a minimum number of scrutineers, each holding part of the private key. They have to decrypt the results of the vote together and are therefore dependent on each other. The private key is never really reconstituted and this makes the system secure against any form of decryption. This means that the product of all the encrypted votes is not affected by the encryption of the final count. This is why the scrutineers can never know the results of the vote until the final result.

The system also uses a ballot box containing the list of voters and the encrypted votes were sent to the town hall after the vote. These documents were then destroyed. In addition, the ballot box was burnt onto a CD-ROM and kept for the 15-day period in the

We need to take into account the ways in which our lifestyles are changing. Today, we are more mobile than in the past and spend more time away from home. At the same time, our society has become a service society; online services are multiplying in all areas of our everyday life. If we can control our bank accounts over the Internet, do our shopping or pay our taxes online, why should we not be able to exercise our civil duty using the same system?

In this context, the Cybervote (see box 2) prototype was implemented for the first time in December 2002 during the elections for local representatives to sit on the District Council. The representatives were thus elected for the first time exclusively via Internet, from polling stations, voters' homes, offices or public facilities. On the same day the industrial tribunal elections took place in France. Participation was even lower than five years ago, with less than a third of voters taking part. How can

The Internet: The best has yet to come

Derek Wyatt, *Member of Parliament, UK*

Issue: The EU has taken something of a wait-and-see attitude to the impact of the Internet on our political system and on our governments. As the phases of initial over-enthusiasm and the current phase of disappointment, largely reflecting the rollercoaster performance of technology stocks, come and go, the Internet will eventually mature and show its true potential for affecting politics and government.

Relevance: Recent experience, e.g. in the UK, shows that efforts to reap the fruits of the Internet in terms of its impact on politics/government are more effective when not dispersed across different departments, i.e. when there is a clear policy-'owner' at very high level, ideally close to the head of government. Besides this policy-locus issue, experience also underscores the importance of promoting universal access, in order to reap the positive externalities of access/connection for society as a whole.

After the dot-bomb scares of the 2000-02, EU thinking is caught between two schools of thought. The first is that the Internet is just another part of the fabric and it will settle down in the overall constituency that makes up the financial and democratic worlds we live in. The second is, and it is one this writer subscribes to, that the Internet is a revolutionary force and that the bubble of the early 2000s was the end of its childhood. The Internet is now in its adolescence and will emerge a fully-fledged adult between 2006-2010.

The Internet has not yet changed EU governments or even the EU as drastically as it might. This is for a variety of reasons but a key underlying one

is that the civil services that support our weighty democracies fear change. Some fear this particular change because it may threaten their very being, and also because it is uncontrollable. Some fear it too because as much as 90% of its traffic is not in their own indigenous language; 90% of it is in English. Furthermore, there are philosophical problems for some of our partners. They are nervous of the sociological and cultural implications for a younger generation that receives its news, music, culture, sport and fashion in another language without a stronger role for government consent. It is the fear of change that is the fundamental concern. We had better understand this concern and, offer a route map for it, if the EU is really to set us alight over the next 10-15 years. If the EU countries do

The Internet has not yet changed governments in the EU, or the EU itself, as much as it might. This may partly be due to fear of change or concern that the process may get out of control

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in Policy Making

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 ... (Andrew Pinder). The current e-Envoy has three objectives:
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dimensional but it is a start. We also have a public service broadcaster, the BBC, whose own on-line service is the biggest in Europe (www.bbc.co.uk), a fact to be taken into account in considering other portals launched.

The second was the National Health Services (NHS) Direct Online site: www.nhsdirect.nhs.uk. The NHS is the UK's biggest employer (over 1 million) and were it to be placed on the Stock Market it would easily make the FTSE top 10. NHS Direct is opening up a huge array of opportunities including an online university. Clearly, there is both a front end to our citizens wanting advice and a back end to offering our hospitals and surgeries an internal shopping experience for products. The UK government has also adopted Stanford University's Skolar project (www.skolar.org) providing medical practitioners with an on-line source of information. The third was the rolling out of online centres

across the UK. This has been spectacularly successful. Rather like the onset of the railways in the 19th century, today no adult or no child is more than a couple of miles away from an Internet café. Money has been made available through the UK Lottery (probably the most successful in the world in terms of money raised for the causes it supports) to create in our poorest areas first, a range of computer centres in village halls, in Libraries, on housing estates and in shopping malls. This has followed on from another project for schools called National Grid for Learning where the Department for Education & Skills made funding available for all UK schools to develop a smart classroom and for staff to have easy access to computing at home.

In six years the UK has come a long way. We have experimented with internet voting and more experiments are due in May 2003 when once again we go to the polls in our local council elec-

Governments have tended to replicate their departmental structure on the web rather than putting the Internet at the centre of government

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On-line success stories in the UK include the UK online portal, which offers access to a range of government services, and NHS Direct, providing health information

Government services in the UK

Government services in the UK were established in the US by President Clinton's decision to appoint an e-Czar, the first e-Envoy (Andrew Pinder). The current e-Envoy has three objectives:

1. To create the best environment in the world for e-commerce

2. To ensure that everyone who wants it has access to the internet by 2005

3. To ensure that government services are available electronically by 2005

These objectives are ambitious because they imply the civil service has to set targets across 524 service departments. The Audit Office report: *Better Services through e-Government* published in 2001 (www.audit-comptroller.gov.uk) It said: "....Just over half of the service departments provide information only - for example seven services (three of which are the DVLA, HM Revenue and Customs and the DVVLA) provide benefits on line and none collect revenue. Departments are expected to be able to provide information on line by 2005 and to see electronic services because service delivery on line is more efficient and because of the efficiency improvements IT can deliver."

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Government services in the UK

Government services in the UK you only have to look at the author's own constituency of Sheppey in North Kent. We have seen a profound change since 1997. The constituency is equipped with servers and other computers. One secondary school in Sheppey has broadband connections; most will have broadband from the end of 2002. The Sheppey Association, won the Microsoft Gold Award for call centre management in 2001. Amicus and Christ's College, Canterbury won nearly 1 million pounds from the Lottery in three rural areas on the Isle of Sheppey and on one of our islands (the money was used to build a house for the purpose). Other funding has enabled a former shop to be converted into a Youth Centre for young adults, when it opened its computer centre in 2001. The Prime Minister! Our public libraries, which we like to think of as the backbone of the community, all have Internet cafes or similar. Again, the UK Lottery also funded this.

On-line success stories in the UK include the UK online portal, which offers access to a range of government services, and NHS Direct, providing health information

e-Democracy: The experience of Barcelona

Joan Clos, *Mayor of Barcelona*

Issue: ICTs offer enormous possibilities for the modernization of public administration and new ways of addressing well-identified challenges in service delivery and transactions with citizens. e-Democracy is one of the new ways of interacting with the public, and aims at broadening citizen participation and making decision-making processes clearer to citizens. It thus goes beyond the simple creation of online forums, portals or voting tools to encompass the idea of genuine participative democracy.

Relevance: Effective e-Democracy arises from the synergy of new technologies and new concepts of public participation. However, both ICTs and citizen participation can tend to be inward looking and concentrate on developing their separate domains. The challenge is to get both staying close to each other and through collaborative working, continue to develop a joint strategy for the emergence of a real culture of e-Democracy, which will inevitably imply serious consideration to issues of equal access, usability and security as far as new technologies are concerned.

Introduction

The new information and communication technologies allow us to conceive and develop new tools and strategies. These tools will be able to extend citizen participation and help elaborate and clarify the decision-making processes within public administration and deliberating assemblies for citizens. This phenomenon has been captured by the term of e-Democracy. Unlike existing initiatives allowing citizens to complete online administrative procedures, e-Democracy goes beyond the provision of online services and supplements the technological advances it re-

presents by creating the opportunity to link representative and participative democracy.

e-Democracy means more than translating traditional participation activities on to the Internet, it also initiates a genuine rethink of the extent to which the public is able to take part in the decision-taking process. In Barcelona we have had decades of participation experience cutting across national boundaries and political philosophies. Public leaders have become increasingly committed to the value of participation by citizens and they have been engaged in a search for the tools to do so effectively. e-Democracy is one of these tools

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For online voting and referendums, the savings in terms of time and costs are similar but the process forces us to approach specific characteristics of the voting process in question carefully. The use of secure data transfer technology is required to guarantee the privacy and security of personal information.

In this context, the EUROCIPI pilot project was completed in Barcelona in August 2002 and the trial carried out on secure online voting and referendums universally revealed an optimistic assessment of progress for the immediate future. It demonstrated that Public Key Infrastructure (PKI) is able to support digital signatures and certificates satisfactorily and enables strong security protocols. Now the priority for us is to participate in the definition of a common framework and regulations and to cooperate with all levels of European, national, regional and local authorities in order to ensure interoperability of products. Without this level of cooperation online voting and referendum applications are not possible and the investment may not be as sustainable and efficient as it should be. There is an urgent need, therefore, to create a precise legal framework that could be flexible enough to keep up with the ongoing march of technology.

Consultation before and after concrete projects

Going a step further into the participation process, e-Democracy also addresses a new political trend towards empowering citizens and communities by allowing them to participate directly in decision-making and projects (which may or may not form part of the provisions of existing legal frameworks). The use of ICT is significant here. Deliberative systems offer unlimited possibilities for citizens to discuss –simultaneously or otherwise– concrete issues dealing, for example, with city planning or mobility. As an example of a back-

ground tool, an application enabling citizens to design or modify an architectural project, automatically learning from the effects that these changes have on the city, could enhance citizen's awareness of the potential of ICTs and public management issues. Here citizens not only give their opinion on a specific project or policy but are able to participate with full knowledge of the consequences of their decisions. The effective implementation and the common use of such systems requires adjustments in the decision-making process. Close collaboration on research between government departments, the private sector and universities will hopefully lead to the development of suitable tools. It will also remain important thereafter to keep citizens updated on the repercussion of the common actions and decisions to generate confidence and consolidate practices. Providing information on the impact participation has had could thus ideally accompany the development of deliberative tools/systems, and each would profit from equal visibility.

Changes in the democratic process

Spreading e-Democracy thus largely requires changing the public organization from bureaucratic to collaborative style, and demands constant efforts to orient Internet technology research so that future technological development can meet the needs of citizens and public administrations.

The reasons and benefits of reinforced participation are clear. Productivity is increased as barriers are removed and citizens' ideas are taken into account. Cost reductions are achieved through greater efficiency, and the quality of public products and services can be enhanced by feedback from citizens. There is still a lot to do but we need to go from the concept of public services being delivered to citizens, to public services being provided in conjunction with citizens. Step by step, e-Democracy may make possible the goal of

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in Policy Making

Online polling and survey tools provide means of reaching greater numbers of citizens – far more than could be interviewed face-to-face or by classical mail and telephone techniques – and also leads to cost benefits

The EUROCIPI pilot project in Barcelona demonstrated that Public Key Infrastructure (PKI) is able to support digital signatures and certificates satisfactorily and enables strong security protocols

e-Democracy addresses a new political trend towards empowering citizens and communities by allowing them to participate directly in decision-making and projects

everyday languages of citizens and communities will be considered as important as presentation in order to facilitate communication.

A number of public administrations, similar to that of the city of Barcelona, have already begun working on e-Democracy applications. Many of them are engaged in re-engineering processes, which are advancing more slowly due to the complexity of putting them into practice but prove the consideration of the need for adapting the

Public Administration process to the integration of participating process. Hopefully, all initiatives –pioneering or not– carried out in this field, could be shared among all the cities during numerous meetings and events so that the voice of a new standard in public participation and engagement will be heard. Furthermore, through perseverance and cooperation between all of the ongoing common undertakings on e-Democracy, we can hopefully together enable the design of a common framework to validate e-Democracy processes. ●

Keywords

e-Democracy, participative democracy, online voting, communities portal, EUROCITI

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institutions, which they felt were unaccountable and inscrutable.

However, a key finding of the BBC research ran counter to this tide of disaffection: the emergence of a 'citizen consumer' whose apathy stems from feeling out of place and out of step with the old-style world of party politics. As consumers, people now play an active part in securing their rights in commercial life, but, as citizens, they feel powerless to do so in their civic lives. Our research found that people are becoming more confident about their opinions and more assertive about wanting greater transparency in politics. They want information which is not defined by party politics but by the issues that interest them; they want to be able to judge what a politician promises; and if they disagree, they want to register this more than once every five years.

The digital revolution has the potential to be the dynamic tool that facilitates the emergence of new forms of political transaction which might re-engage the consumer citizen. With its power to create a two-way street in communication, the web is undoubtedly contributing to the death of deference and to the forces dismantling old, accepted hierarchies. Interactive media allow people to come together and share expertise in a dynamic way that can have real impact, which is what the consumer citizen wants. And it's already happening. For example, last year in the UK, people spontaneously organized themselves online to protest against an extension of the government's Internet snooping legislation. The proposal was killed within 48 hours of it becoming public knowledge. Here was an informed coalition of interest coming together exerting their aggregated power fast, much faster than in previous eras, and challenging the opinions of the political establishment. It's a good example of how the web might act as a lightning rod for a new 'people's power', exploding the opinions not only of the

political establishment, but also of traditional broadcasting, too.

What we are seeing then, is the beginning of the end of the 'broadcast' model of communication which we are all used to; that is, the top-down provision of information from us – the media or government – to them, the audiences or citizens. What we're already exploring in its place, from on-line forums to some new TV programmes, is a new 'interactive' model which allows lots of conversations in lots of directions. Not only do the 'broadcasters' communicate to users, but users are communicating back in ever increasing numbers. What is less developed is the equal potential for users to communicate with each other, both through the 'broadcasters' and independently of us.

Digital media, like interactive TV, SMS text messaging and the Internet are creating new networks of information. The BBC, is now exploring how to use these new networks to re-engage people with politics. BBC research with Internet-friendly users revealed that people cited two main reasons for not participating more in civic life: "I don't know where to start" and "I can't make a difference on my own". It struck us that the Internet is particularly well placed to help people with these needs. It can provide in-depth content which can help people find who they should contact in officialdom or other useful organizations, and how best to make that contact. The Internet also has the ability to connect people who are interested in the same issues in their area or indeed all over Europe, so they no longer have to feel isolated in their concerns.

As a result the BBC now has a team working to develop an interactive political service which combines both authoritative content with interactive applications which foster communities and allow users to create their own networks and content. The work is informed by a number of key

The research found that people tended to feel alienated and distant from institutions and that the political process fails to produce evident and assessable outcomes

One key finding of the BBC research ran counter to the tide of disaffection: the emergence of a 'citizen consumer' whose apathy stems from feeling out of place and out of step with the old-style world of party politics

With its power to create a two-way street in communication, the web is undoubtedly contributing to dismantling old, accepted hierarchies and perhaps facilitating forms of political transaction which might re-engage the consumer citizen

So perhaps the biggest challenge of all is what amounts to almost a cultural revolution. For government at any level, to deliver on the promise of e-Democracy requires not just technical development but deep cultural change where the 'citizen consumer' is given a recognized role in the political process. If they don't, there's a danger that the Internet will just add to the cynicism of a generation that feels politics is unaccountable and out of touch, thus undermining the democratic dynamic of the Internet before it is even realized.

But before we all get too carried away by the long-term vision, we must not forget that fostering e-participation raises a basic issue of digital inclusion. Online participation will enable people to act together to aggregate their influence in democracy, and to gain faster, more efficient access to institutions of governance and public services. How can those who don't have ready access to the Internet be included in these benefits?

In the first instance, this is about the equitable distribution of e-skills – At present, EU household access to the Internet ranges from 65% in the Netherlands to less than 10% in Greece. Public service broadcasters in each member country can play an important role in helping increase Internet access and e-skills. At the moment, the BBC is promoting e-skills through its Webwise scheme, which has seen 500,000 people undertake its taster course in IT skills. But digital inclusion is also a question of access combined with good content to attract people online. The BBC is working to deliver content at points of access for those who don't have Internet at home or work – at museums, libraries and councils sites, and at

its own open centres around the country. Digital TV is another path, and it can attract lower socioeconomic groups who do not have Internet access. Then there are the possibilities of SMS text messaging. Currently, 41 percent of European adults use SMS, compared to 30 percent who use the Internet/e-mail². European television broadcasters are embracing SMS text messaging as an interactive tool for especially younger viewers to interact with television programmes. SMS-TV is seen as a substantial revenue-generator, but public service broadcasters are innovating with it also. Watchdog, the BBC's primetime TV consumer programme, is currently experimenting with a unique SMS poll. Increasingly, when planning new programmes, the BBC sees a joint strategy employing all three interactive media platform with their different attributes as the way to create widespread impact.

We know that e-Democracy is rarely likely to be a main driver of Internet usage. But for people who make the Internet or other interactive media an important part of their lives, it will be a natural extension to use these media to manage their civic lives. I believe there's enough evidence that institutions like the BBC should be taking the interactive, political plunge. And it appears from the work of the Greek Presidency that we are in good company in that opinion. But let's also be aware of the challenge we will have to rise to: that if we are to truly use the interactivity of the new media and truly listen to the consumer citizen, we must also be open to our citizens and audiences telling us that we have got things wrong, that they want something different. And we must actually believe them!

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Fulfilling the potential of e-Democracy requires not just technical development but deep cultural change where the 'citizen consumer' is given a recognized role in the political process

As well as efforts to deliver content at points of access for those who don't have Internet at home or work, public service broadcasters can also play a role in promoting interactivity through television

The Internet and the Transformation of the Polis

Nicholas Negroponte, *Chairman of the Media Lab, MIT*

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Issue: The long-term effect of the internet on world politics will be the texture of democracy – the size, structure and location of peoples. New forces in telecommunications will change the balance of democracy and autonomy.

Relevance: A new geography will become apparent, driven by massively distributed systems that are moving people away from broadcast and toward peer-to-peer systems. Wireless communications is about to be transformed by these same forces.

World without periphery

Civilization emerged along navigable rivers and around protected harbours, at a time when transportation and telecommunications were one and the same. Nature was not necessarily fair-minded with its geographic features. Rivers in Africa are far less navigable than those of Europe. Also, Africa is over twice the size of Europe, but has a much shorter coastline, with fewer natural harbours. This led to less trade, which in turn led to greater isolation. The introduction of railways and later cars made geography less important. Telecommunications was the next step and provides the potential for all parts of the world to become equally prosperous.

Scandinavia is the poster child of connectivity, with more Internet usage than the United States. Why? The reasons normally cited include tax

policies, telecommunications regime, population density and command of English. Hardly ever mentioned is the fact that these countries are at the geo-political edges of Europe and in some cases quite remote. In the past, isolated places could not provide economic or intellectual leadership to rest of the world because of the limitations of physical movement. While the telephone linked distant places, it is only the Internet that widely diffused ideas and allowed for the electronic delivery of real goods and services, creating the potential for a world without periphery.

Being rural and being rich

The past two hundred years of economic development have been synonymous with urbanization. The growth of cities and the increase of wealth have been inextricably linked, as employment migrated from agriculture to factories to

In the past, isolated places could not provide economic or intellectual leadership to rest of the world because of the limitations of physical movement. Today, the Internet allows ideas to diffuse widely regardless of geographical limitations

The views expressed here are the author's and do not necessarily reflect those of the European Commission.

scale. Like roads, a central authority maintains the network. This made perfect sense when the telephone industry was totally wired and literally built like roads. The first twenty years of wireless copied this model. The next may not.

The key to the future of telecommunications is spectrum and understanding it better than we do. For example, radio waves do not interfere as you might imagine. They do not behave like a crowded sidewalk. Instead, they are like light, where two beams can pass through each other, without creating havoc at their intersection. For this and other reasons, spectrum is far more unlimited than we think. Unlicensed spectrum will play a bigger role in telecommunications, as evidenced by the startling growth of 802.11 style wireless broadband or so-called "WiFi."

People keep asking what the business model of WiFi is, but look in the wrong place. It may not be

a service at all. It may be a business of artefacts, used for personal and communal needs, akin to flowers.

Civic planting is done in two ways. One is through government managing parks and roads, and attending to everything from medium strips to public buildings. The other is the individual action of people who spend their own money on things like flowerboxes, enjoyed from both inside and outside. While it sounds outrageous to think of telecommunications in the same manner, it is not. This is because increasing intelligence in the devices will allow them to collaborate at little or no cost, in ways previously assumed impossible without centralized control. Each laptop or PC will become a router, creating a cooperative, telecommunications mesh built by the people, for the people. While this is by no means the only or biggest infrastructure of the future, its existence is a certainty.

Keywords

Internet, spectrum, e-Democracy

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The radio spectrum available for mobile communications is much less limited than previously thought. Rather than try to make money from it, people might choose to provide it as a civic service

A Poll, a Vote ... or What?

What, exactly, was the Online Global Poll? From the very beginning, we struggled with what to call the project. We knew that it could never be a scientifically representative survey that accurately reflected the attitudes and opinions of all the 6-plus billion people in the world, since only a small percentage have access to the Internet, and, of those who do, only a tiny few would take the poll or even hear about it. Additionally, with all the problems associated with the "digital divide," we knew that many groups would not be represented at all.

Some might say that all this makes any Internet-based, online polling meaningless. Others would argue that this particular project was more of a vote than a poll. While we wouldn't debate these points, we believe that this sort of analysis misses the mark. The important point, to us, is that the Online Global Poll represents the first outpost on democracy's next frontier — the use of new techniques and technologies to expand the circle of deliberation and decision-making.

A Global Experiment in e- Democracy

We took several steps to ensure that our project was truly worldwide in scope. As noted above, our media sponsors collectively enjoy enormous global reach, and their participation was crucial to our success. Additionally, we announced the pro-

ject at a special press conference in Johannesburg with representatives of the international media in attendance, and followed that with special interviews and promotion. Also, we made a particular effort to reach a global audience by having questionnaires on the site in seven different languages².

But the biggest factor in boosting global participation seems to have been the hard work of ordinary people who recognized the unique nature of this project, and were eager to get others involved. There were literally thousands of non-profit organizations, NGOs, companies, foundations, governments and individuals that helped us build global reach. They forwarded our poll to their members, employees, associates and friends. They published articles, did media interviews, and posted our Online Global Poll banner on their websites. Their creativity and dedication were astonishing, and clearly demonstrated to us the desire among average people the world over to leverage new technologies to expand the notion of democratic participation.

Five Unique Elements

This poll was the first online global poll of its type ever developed that was devoted to global political and public affairs issues relevant to the environment and sustainable development. It was unique in that, for the first time, five key public opinion research elements were combined in one poll:

Although the poll cannot be claimed to reflect the attitudes and opinions of all 6 billion people in the world, not least because of the digital divide, it was nevertheless an important step in expanding the frontiers of democratic decision-making

Thousands of non-profit organizations, NGOs, companies, foundations, governments and individuals made a huge effort to ensure that the poll reached as many people as possible

The level of involvement in the poll clearly demonstrated the desire among average people the world over to leverage new technologies to expand the notion of democratic participation

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... mobilizing participation
... as a first bold experiment towards gauging,
... in this sense independent on-line polls
... with the objective to mobilize their active
... and, thus, enhancing the inclusiveness and
... of democracy in and for the information society
... to feel committed, by duty, conviction and

Source: address to The United Nations General Assembly by George Papandreu, Minister of Foreign Affairs (Greece) September 15, 2002

radical new possibility afforded by the digital age is interaction – real people responding and participating in real time. This poll is but one example of political interactivity, and many others are being attempted (online debates, chat session, live web-cast, voting by mobile phones, SMS for political activity, etc.), though none on a global basis. The Online Global Poll was the first time an international event like the WSSD has had a major interactive component open to all. It was global e-Democracy in its earliest form.

Why is e-Democracy important? The Internet and other new communications technologies are radically changing the world. In every aspect of our lives – from commerce to entertainment to

education to government – these technologies are opening up exciting possibilities. But many governments have been slow to see the emerging opportunities – too often, they have not been willing to take chances, and aggressively search for new and better ways of addressing the world's most challenging problems.

The e-Democracy movement is dedicated to using the new power that the digital revolution has placed in our hands to expand, strengthen and enhance democratic decision-making and participation. Understanding global opinion about important public policy issues like the environment and sustainable development is an important first step in the process.

Keywords

e-Democracy, citizen participation, on-line poll

Notes

1. including the BBC, AOL Time Warner and Microsoft.
2. The languages used were English, Arabic, German, Spanish, Portuguese, Turkish and Greek
3. From the very beginning, we went to great lengths to design and develop this poll to the absolute highest technical and professional standards possible today. The following organizations lent their experience and expertise to the project:

PoliticsOnline.com – The poll was developed and implemented by NetPulse Global Poll, a new division of PoliticsOnline, Inc. of Charleston, South Carolina, USA.

Universal Technical Services – The technical support for this poll was provided by Universal Technical Services based in Rockford, Illinois, Olney, England and Pune, India.

TK Solver – The poll was operated by TK Solver, a PC software firm.

Fredricks Polls – This firm, which has over 23 years' experience in professional public opinion research, provided data analysis for the project.

The Andreas Papandreou Foundation – The poll was sponsored by the Andreas Papandreou Foundation (APF), which was established in 1996 in commemoration of former Greek Prime Minister Andreas Papandreou. APF is an independent, non-profit organization with the mission of contributing to the fields of social research, political analysis and peace-building both nationally and internationally.

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About the authors

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Andreas A.

Papandreou is Assistant Professor of Environmental Economics at the University of Athens, Greece. He was a member of the Centre for Social and Economic Research on the Global Environment (CSERGE), University College, London, and a fellow of the Stockholm Environment Institute. He is the author of *Externality and Institutions* (1994), Oxford University Press.

How can the Internet enhance involvement?

The Internet has dramatically changed the lives of European citizens, especially the young. According to Eurobarometer (EC 2001a, p.3), in 2001 only 6% of the respondents in the youth survey stated that they did not use the new information and communication technologies. Statistics on Internet usage (e.g. the Austrian Internet Monitor) make clear that the importance of the Internet has become extremely high among all age groups but especially among the young, who are literally growing up with this communication and information tool. But the development also leads one to expect that its importance will continue to increase and change all our lives dramatically, especially considering the emergence of mobile technologies which support multimedia and which will make people independent of their own location in addition to making them independent of the location of others to which the classic stationary Internet is confined.

This independence of location already facilitates direct communication now – for example between politicians and the population. On-line newspapers have now, for some time, arranged chat sessions where politicians are available for Internet users irrespective of their physical location for immediate and direct discussions. Another general aspect is clearly that the Internet is a much more immediate means of information transfer and communication than any other, only perhaps comparable to TV, which is, however, not interactive and therefore does not support genuine involvement.

Additionally, the Internet allows a flattening of hierarchical structures - which can even be reversed in this media which gives ample opportunity for experimentation. Finally, people of the most diverse backgrounds can share a virtual en-

vironment and thus benefit from each other, while personalization allows each to be met on their own level.

Thus, it can be said that even on a very general level, the Internet has considerable potential to improve involvement of young people in politics. However, in order to make the best use of the Internet, this potential has to be used on the application level. Below we will look more specifically into the factors that make interactive policy games and tools not only successful as a game but also immersive and a real support for political issues.

How can the requirements for involving young people successfully be applied to Internet games?

From various studies, especially the one carried out by the Joseph Rowntree Foundation (JRF 2000), and the wide ranging consultations for the EU White Paper on Youth Policies, a set of indispensable requirements that have to be fulfilled in any effort to involve young people in politics – not only via the Internet - can be identified. These can be categorized into three groups: general requirements (1), issue related (2) and process related (3) ones (see box 1).

Success Factors in the Internet - Success Factors in the Off-line World

Some prophets of the Internet have said that the Internet will, as a new paradigm of communication, boost political participation through its mere existence (e.g. Morris 1999, p.107, Leggewie/Maar 1998). In contrast, we believe that political participation will depend on the fundamental requirements for successful interaction with voters and citizens, and these requirements are basically the same in the off-line world and the on-line world (see box 1). What is different about the Internet, is that it provides a range of new possibilities for

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The Internet has become important to all age groups but especially to the young, who literally grow up with this communication and information tool

The Internet has considerable potential to enhance young people's involvement in politics. However, in order to make the best use of the Internet, this potential has to be used on the application level

Success of political games and applications

There are a number of factors that make political games successful. Here we describe a few examples of applications that have been published by sysis¹ in this area and explain how they meet the requirements.

Age of users: This aspect must be observed in all details when conceiving and implementing a game. It can be seen as a prerequisite for all the following points. In *Austropolis*, a political simulation that has been launched three times in Austria, 49% out of 2,300 users stated that they were between 18 and 25 years old. In the community, users are represented by an agent (or avatar)², which takes part in the discussion of issues and by trying to gain enough influence to become president of the virtual community. The first challenge is to create the agent by giving her or him first appearance, personality and a set of values. The second challenge is to give the user a clear and consistent guidance (see Figures 3 and 6).

Age of users: The users between 19 and 25 years old, 38% were even younger. The *Votemonkey* was launched in the US presidential elections in London in 2000 and in the UK parliamentary elections in 2001, as a voting consultant. It attracted more than 10,000 users. The general aim of sysis' voting consultant is to help the users with the issues that are relevant in the parties' or politicians' election campaign by showing them which candidate holds most of their own views.

Technical requirements: It is necessary to comply with the basic values established across the EU and a set of technical requirements. There are some steps that can be taken in the development of an on-line application. First, they take care to limit the technological requirements, e.g. only use browser technologies. Second, they always make sure the application runs on browsers other than the dominant ones.

Routes to enter the political process: With regard to the Internet, there are two main routes. First, young people do not accept traditional routes as readily as other demographics. Second, the Internet nowadays plays an essential part especially in young people's lives. The development of communication to meet people where they currently stand, it is absolutely necessary. The Internet is a fixed element of politics.

Personalization and individual development: Personalization is the basic way that helps meet this requirement. In a community application, it is important to offer information in the relevant context, to offer personalized results and to introduce new users extensively. In a voting consultant application, it is important to be able to compare one's own view to the views of the other users. Additionally, it is important to offer a personalized result that is presented to the user. Figure 1 shows a presentation of the user's own views. This application was equipped with an additional tool, the grinder, which enabled the user to compare his own views to the other users' views by showing him the degree of consent between his own views and the views of other participants who had used the *Votemonkey* (see figure 2).

Design and language: For political on-line games, this is the core aspect that decides about success. The design and language, the right language, transparency of the messages and the evolution of the game, the use of questions and using intelligent humour are the key issues to be observed. The design of the application is a challenge as well as a guarantor for success. Figure 3 shows how the design of the application is a challenge as well as a guarantor for success. Figure 4, taken from *Austropolis*, shows how language, metaphor and illustration (and animation) were combined to create an appealing, involving and homogenous application.

Examples of successful applications: Some of the applications mentioned above that went down well with the audience are *Austropolis* and *Votemonkey*. The application *the Candidate* which attracted more than 100,000 users in the US presidential elections. The slogan chosen for this application was "a fight in 12 rounds".

Values and fundamental values: That the fundamental values of European societies must be observed is a prerequisite for success. The challenge lies in convincing the target group that these values are the right ones. The design and language and design are the elements which decide if the audience feels their expectations are met.

Political participation: Politicians today are more and more confronted with the expectation of being accessible to the citizen – a demand that is hard to meet because of limited resources. On-line applications offer a new possibility in establishing interactive exchange between a politician and the public.

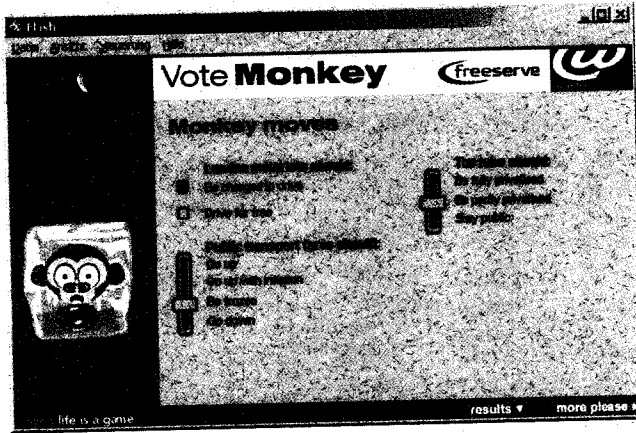
Personalized results: Apart from providing personalized results, the most important aspect for building a community is active participation – in short: give players a choice and a voice.

Discussion and being able to discuss with others: Discussion and being able to discuss with others are essential. Figure 6 shows the election advertisement of *Lagalista* in order to win the presidential elections. The user gave to her agent *Lagalista* in order to win the presidential elections. The user gave to her agent *Lagalista* in order to win the presidential elections. The user gave to her agent *Lagalista* in order to win the presidential elections.

Community and social network: One of the important targets of games that accompany political campaigns (not only in the case of voting consultant types) is to acquaint the user with topical issues. In community applications, the most important aspect for building a community is active participation – in short: give players a choice and a voice. In *Austropolis*, there was a good team of editors. In *Austropolis*, topics were updated weekly and were presented in a kind of on-line newspaper, which also gave a daily status of the basic data of the simulation and the economic development of the simulation.

Gender and social network: In design and implementation, special care has to be given to including females. The challenge lies in convincing the target group that these values are the right ones. The design and language and design are the elements which decide if the audience feels their expectations are met. The challenge lies in convincing the target group that these values are the right ones. The design and language and design are the elements which decide if the audience feels their expectations are met.

Figure 4. Example for hot community issues in the Votemonkey



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Figure 5. The "Candidator" (www.candidator.com) asking Americans if they favour Gore's or Bush's policies on arms

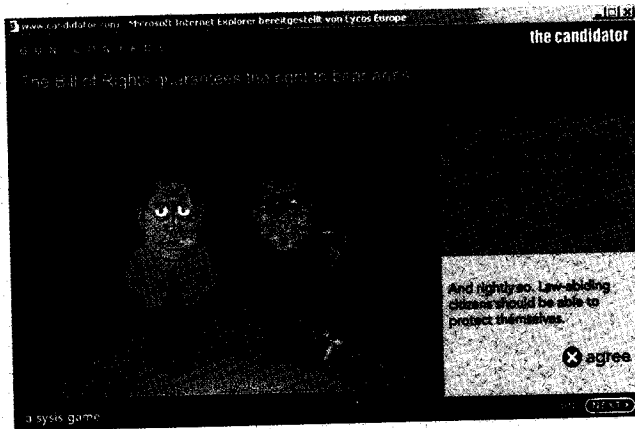
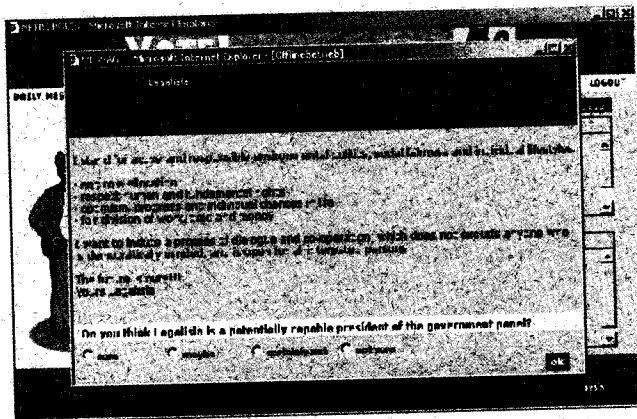


Figure 6. Example Austropolis user "tuning" their avatars in order to let them run for virtual presidency



Keywords

political participation, young people, e-Democracy, interactive tools, Internet games

Notes

1. sysis interactive simulations AG is a Vienna based company which specializes in intelligent web and mobile applications for campaigns and long-term use. sysis operates B2B across all industries (www.sysis.at).
2. In Austropolis, these characters are referred to both as avatars and as agents, because they are defined by the user but subsequently act autonomously.

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Barbara Neumayr studied business administration in Vienna where she has also worked as an assistant professor in teaching and research for 5 years. As a co-founder of sysis, she has 10 years experience in multimedia simulations in different transmission channels and various topics.

answered themselves, and in any case *replied to the correspondent in the original language*. This is quite simply nothing short of heroic; but it is also, in the long-run, unsustainable. Woefully understaffed and under-budgeted, embedded deeply in the bureaucracy of the EP, this operation can hardly be characterized as the spearhead of a strategic parliamentary e-thrust into the consciousness and political habits of the EU citizenry.

The description of the existing European Parliament interface given in box 1 does not cover any of the points of access available through the personal websites of those of the current 626 Members of Parliament who have websites. But a cursory scan suggests that often Members provide little other than the opportunity to contact them. Last but not far from least, the inadequate technical infrastructure of the Parliament itself, renders much e-experimentation moot anyway.

Three preliminary conclusions seem fair based on this picture:

- i) Citizens have to work pretty hard to find the interactive cyber-links to the European Parliament.
- ii) Existing channels do not really connect users to any of the live policy and legislative processes as they unfold.
- iii) Nevertheless, many more citizens than one might expect manage to navigate around i) and ii). In other words, the *demand* is clearly there.

All of which leads to the more fundamental conclusion that technological infrastructure improvements (without which further e-experimentation may be impractical) and a more user-friendly e-experimentation can help the EP reap the benefits of e-Democracy initiatives. More specifically the European Parliament could potentially

benefit from a number of measures or approaches, such as:

- An agreement between the parties involved on the structure and process to be put in place to explore e-Democracy initiatives.
- Resource allocation made so as to enhance e-initiatives – without resources strategies remain mere statements.
- *Starting small and building*: successful strategy depends not only on the level but also on the right concentration of resources. It doesn't even matter so much what the political issues are in a first stage; what matters is learning what combination of concepts and tools is both effective and sustainable for this unique institution.

No doubt difficult questions will arise at every step of the way in this voyage of discovery. What is the proper relationship between the cyber efforts of the Parliament *per se*, its political groups, and their individual members? How deeply into the substance of Parliamentary legislative processes can – or should – e-Democracy tools take individual citizens? How will it be possible to cope with the very real anti-democratic risks inherent in e-polling, where the samples are “self-selected”, and can be manipulated easily by organized interest groups?

These are not only difficult questions, they are central to the entire concept of e-Democracy at every level of political organisation. But progress in understanding and application is being made by a vanguard of representative bodies around the world. Those 76,000 people whose e-mails to Parliament last year were diligently processed by an over-stretched team tucked away in Luxembourg may represent an important part of the European Parliament's future interaction with – and support by – European citizens.

Keywords

e-Democracy, European Parliament

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Role of S/T
in Policy Making

Although the existing EP website is not particularly easy to use, the level of public response it has obtained shows that demand from citizens for this kind of communications channel is considerable

About the author

Peter Linton has been a European affairs consultant in Brussels since 1972.

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which brings together elected politicians and European business, academic and non-governmental leaders to share understanding, and experience of the digital revolution's impact on Europe's economies, societies and political systems.

A B O U T T H E I P T S

The Institute for Prospective Technological Studies (IPTS) is one of the seven institutes making up the Joint Research Centre (JRC) of the European Commission. It was established in Seville, Spain, in September 1994.

The mission of the Institute is to provide techno-economic analysis support to European decision-makers, by monitoring and analysing Science & Technology related developments, their cross-sectoral impact, their inter-relationship in the socio-economic context and future policy implications and to present this information in a timely and integrated way.

The IPTS is a unique public advisory body, independent from special national or commercial interests, closely associated with the EU policy-making process. In fact, most of the work undertaken by the IPTS is in response to direct requests from (or takes the form of long-term policy support on behalf of) the European Commission Directorate Generals, or European Parliament Committees. The IPTS also does work for Member States' governmental, academic or industrial organizations, though this represents a minor share of its total activities.

Although particular emphasis is placed on key Science and Technology fields, especially those that have a driving role and even the potential to reshape our society, important efforts are devoted to improving the understanding of the complex interactions between technology, economy and society. Indeed, the impact of technology on society and, conversely, the way technological development is driven by societal changes, are highly relevant themes within the European decision-making context.

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The IPTS collects information about technological developments and their application in Europe and the world, analyses this information and transmits it in an accessible form to European decision-makers. This is implemented in three sectors of activity:

- Technologies for Sustainable Development
- Life Sciences / Information and Communication Technologies
- Technology, Employment, Competitiveness and Society

In order to implement its mission, the Institute develops appropriate contacts, awareness and skills for anticipating and following the agenda of the policy decision-makers. In addition to its own resources, the IPTS makes use of external Advisory Groups and operates a Network of European Institutes working in similar areas. These networking activities enable the IPTS to draw on a large pool of available expertise, while allowing a continuous process of external peer-review of the in-house activities.