EXECUTIVE SUMMARY

Executive Summary

November 30, 2004

INTRODUCTION: AN E-COMMERCE IMPERATIVE

The current international environment has placed a dramatic set of challenges before government and business leaders. The seemingly unlimited possibilities for e-commerce that greeted the onset of the Information Society have become clouded with unforeseen complexity.

Within this context, however, the importance of e-commerce as a litmus test for globalization and an engine for future economic growth has never been more important.

Now, more than ever, the potential of the digital economy to strengthen economic growth, link people of diverse cultures and beliefs and create digital opportunities requires all sectors of society to work together to create a supportive policy environment.

The private-sector - with its detailed day-to-day involvement in a multinational operating environment - is in a unique position to play an important role in shepherding the world through a sensitive period of globalization. Business potentially has a moderating role and a key stake in avert a patchwork of regulation which would stifle the positive impact of e-commerce on economic growth.

Need for Dialogue

The Global Business Dialogue on Electronic Commerce (GBDe) was established 1999 as a forum for the CEOs of leading companies to assess the landscape of the emerging digital economy and to work with policy makers to help shape its development and growth.

Prior to considering the creation of new laws and regulations on electronic commerce, the GBDe believes that governments should strive to consult and coordinate their efforts with industry experts, consumer groups and other e-commerce stakeholders.

Since its establishment the GBDe has created a process which is truly global in scope; demonstrated the willingness of the private sector to engage seriously in the policy development process; and created detailed, consensus-based recommendations on crucial e-commerce issues.

Every year the GBDe has developed consensus-based recommendations addressing the most pressing e-commerce issues. In some years this has involved detailed development of up to 11 different work streams.

In addition, the GBDe has increasingly focused on extending its dialogue with international organizations, with governments and with consumer advocates throughout the world. Based only on the voluntary efforts of its member companies, the GBDe has achieved a level of international engagement that, in itself, represents a unique historical record.

Ubiquitous Vision

The pervasiveness of networks and the ability to transfer data between a range of different devices anywhere and at any time is creating new policy challenges.

In order to navigate successfully within this complex environment we must strive to develop technologically neutral solutions rather than react to every new innovation.

The GBDe plans to create an overarching vision of the "Ubiquitous Society", providing a coherent theme with which to bind together the diverse strands of the digital age.

It is under this broad umbrella, that issues such as privacy/data protection, cyber security, electronic transactions and spam can be effectively addressed.

2004 Recommendations

The GBDe's 2004 Recommendations provide the basis for future investigation within the broad vision of the Ubiquitous Society.

Ubiquitous Society Framework
Building on its earlier work on convergence the GBDe has prepared two papers on the potential impact of the Ubiquitous Society. This represents a preliminary exploration into some of the policy challenges that may arise and general approaches to solving them. Within this context the issue of RFID has generated a great deal of interest. The rapid development of easily-scanned electronic tags has stirred considerable controversy over access and use of the data stored on the tags. The GBDe has signaled its intention to develop a multi-stakeholder dialogue to develop practical policy solutions.

New Business Models
The need for new business models is directly related to the emergence of the Ubiquitous Society. Increasing technological convergence has transformed the telecommunications sector into the electronic communications industry, and this in turn has attracted new players into the market. In addition, broadband access is creating opportunities for new multimedia and content revenue-generating services. The GBDe believes content and service providers must therefore now create new applications and formats to take advantage of the new features provided by convergence and broadband. However, there is a clear need for industry and governments to co-operate in the development of innovative and commercially driven business models within this environment.

Securing Electronic Transactions

The encouragement of secure electronic channels for binding transactions remains a priority for the GBDe. One fundamental issue is whether governments issue digital passports and run a trust infrastructure for their citizens or whether such infrastructure operates under private responsibility. The GBDe does not favor one alternative over the other. However, it is important that governments make a clear statement which path each country will follow.

e-Government

In the area of e-Government the GBDe acknowledges the important linkages with the issue of secure electronic transactions. In some economies, the issuing of PKI-based ID by central Government is overcoming the issue of critical mass which has previously hampered the deployment of this technology. In addition, the private sector continues to promote technological solutions to promote greater participation, compliance and empowerment for citizens at both the local, state and federal government level.

Consumer Confidence

The GBDe continues to support, in cooperation with consumer groups, the development of an international system of online business-to-consumer ADR. The current emphasis involves fostering the growth of a global network of trustmark service providers. The GBDe has been influential in developing increased international cooperation between trustmark service providers since 2000. This cooperation not only lays the groundwork for a globally recognized trustmark but also for a growing network of bilateral ADR arrangements which will further enhance consumer confidence in cross border e-commerce transactions.

GBDe Advocacy Achievements

GBDe Advocacy Achievements 1999-2004

November 30, 2004

1999

September - The GBDe's inaugural conference was held in Paris, France bringing together 400 high-level business and government representatives. The GBDe presented detailed papers on nine key e-commerce issues, known as the "Paris Recommendations". Participants included Bill Daley, US Secretary of Commerce; Dominique Strauss-Kahn, Minister for the Economy, Finance and Industry, France; Kaoru Yosano, Minister of International Trade and Industry, Japan.

November - Several GBDe members attended business meetings held in conjunction with the World Trade Organization (WTO) Ministerial meeting in Seattle, USA. A statement on trade issues was prepared and presented to the WTO.

December - Dialogue was initiated with representatives of European Institutions, including Ana Palacio, President of the Legal Affairs Committee, rapporteur for the e-Commerce Directive and the European Commission; European Commissioner Erkki Liikanen; as well as Directorate Generals of Information Society, Taxation and Internal Market. Bilateral meetings were also conducted with the International Chamber of Commerce (ICC), Business and Industry Advisory Committee of the OECD (BIAC), and the Organization for Economic Cooperation and Development (OECD) itself, to advocate the Paris Recommendations.

2000

During 2000, bilateral talks were instituted with governments and businesses in South Africa, South Korea, Egypt and the US. Regional dialogues also commenced with the Free Trade Area of the Americas (FTAA) and Asia-Pacific Economic Cooperation (APEC). The GBDe initiated contact with the World Trade Organization (WTO), International Labour Organization (ILO), United Nations Development Program (UNDP) and the World Bank, providing input and adding the practical business perspective to broad policy discussions.

February – The GBDe held a meeting in South Africa where a new initiative was launched to assist the spread of new technologies throughout the world. The GBDe, together with members of the South African Government, approached the problem of the less developed countries in relation to the Information Society, and decided to address the digital divide issue.

March - Meetings were organized in Asia including those with the Keidanren in Tokyo and the Infocomm Development Authority (IDA) of Singapore. In Europe, further dialogue commenced with OECD, ICC and BIAC Committee on Information, Computer and Communications Policies (ICCP) and officials of US Government departments. A statement was made by the GBDe on the status of e-commerce in conjunction with the extraordinary meeting of the European Council in Lisbon, Portugal. A presentation was delivered to the Committee of Legal Affairs of the European Parliament as well as to Members of the European Parliament (MEPs) involved in e-commerce activities.

April – The GBDe's mid-year meeting in New York welcomed the US Trade Representative, Charlene Barshefsky for a detailed conversation on global trade. In addition, the GBDe formally launched its Digital Bridges Task Force. The GBDe was requested to give a presentation at the EU ministerial conference on the Knowledge and Information Society held in Lisbon. The GBDe's Paris Recommendations were presented to four EU ministers from countries leading e-commerce development in Europe. The GBDe also sent a communiqué to European Ministers of Telecommunications, Development, Economy and Industry with

copies of the Paris Recommendations and outlining the 2000 work program. In the US, the GBDe conducted a briefing session with staff of the US Trade Representative.

May - The GBDe participated in the APEC e-Commerce convention held in Tokyo, Japan, on May 15 – 16 and made a presentation based on the Paris Recommendations.

June - A productive meeting was held involving GBDe experts together with the European Commission, European Parliament, EU member states and the European Consumers' Organization (BEUC). Working directly with government teams in the US, Japan, France and Canada, the GBDe helped frame an Information Technology Charter for the G8 summit in Okinawa, Japan, underscoring the importance of policy cooperation between the private sector and government.

July - The GBDe provided a briefing of its activities to a group of Members of Parliament from South Africa. A meeting of the GBDe in Cheju, Korea, was addressed by Jae-Il Byun, Assistant Minister of the Korean Ministry of Information and Communications.

September - The GBDe held its second annual conference in Miami, USA, including more than 350 participants. The "Miami Recommendations" were presented on nine e-commerce issues[1] Participating government guests from around the world included Erkki Liikanen, Commissioner for Enterprise & Information Society, European Commission and Norman Mineta, US Secretary of Commerce along with a letter of support for the GBDe from US President, Bill Clinton.

November - The GBDe announced that it was working with governments to help create the Internet-based "knowledge network" to allow government officials, non-profit groups, academics, and others to obtain updated information on digital divide projects around the world. The GBDe was represented at the

[1] The issues where recommendations were made were: 1) Consumer Confidence/ADR; 2) Consumer Confidence/Trustmarks; 3) Privacy; 4) Trade/Taxation; 5) Intellectual Property Rights; 6) Cyber Security; and 7) Digital Bridges.

Digital Opportunities Task (DOT) Force inauguration meeting in Tokyo, Japan, by Overall Co-Chair, Dr Yong-Kyung Lee of KTF. The GBDe signed, in Paris, two Statements of Cooperation with the ICC and BIAC.

December - The GBDe received an address from Ching-Yen Tsay, Minister of State, Taiwan at a meeting in Taipei. Input was made into a consumer confidence forum hosted by the ICC, OECD and the Hague Conference on Private International Law at The Hague, Netherlands.

2001

February - The GBDe and Asia-Pacific Economic Co-operation (APEC) Business Advisory Council (ABAC) signed a cooperative agreement to coordinate their efforts and expertise to address the digital divide. A meeting of the GBDe in Mexico City was addressed by Pedro Cerisola Weber, Minister of Transport and Communications, Mexico. Together with the National Consumers' League, the GBDe hosted a Federal Trade Commission (FTC) Workshop on Alternative Dispute Resolution (ADR) in Washington, DC. A GBDe delegation held discussions with the Egyptian Government on aspects of e-Government.

March - A presentation on the GBDe's work on consumer confidence was delivered at an OECD workshop in Berlin. A communiqué was delivered the European Commission regarding the communication entitled "Creating a Safer Information Society by Improving the Security of Information Infrastructures and Combating Computer-related Crime". In addition, the GBDe participated in a public hearing on this issue in Brussels, Belgium. The GBDe participated in the third Global Forum on e-Government in Naples, Italy, led by the Italian Government and the United Nations in conjunction with other international organizations such as the OECD and World Bank.

April - The GBDe half-year meeting in Madrid was joined by high-level government representatives from Japan, US and European Union as well as representatives from European accession countries Hungary, Poland, Slovenia and the Czech

Republic. A cooperation agreement was signed between the GBDe and the Global Cities Dialogue (GCD). A presentation on the digital divide was delivered to the Conference of Montreal, an annual forum on major e-commerce issues.

May - A presentation was given on Human Capacity Building to an APEC high-level meeting in Beijing, China by one of the GBDe Overall Co-Chairs. A Privacy Conference was hosted by the GBDe in Ottawa, Canada, with government officials, consumer and trustmark/ADR groups gathering to discuss the challenges of harmonizing privacy laws and regulations worldwide. A meeting was held between the GBDe and GCD in Paris, France.

June - An official letter was delivered to the WTO along with the draft Trade/WTO Working Group recommendations for 2001 in an effort to push for continuing services liberalization and supporting the General Council's decision to agree hold a special session on e-commerce trade in Geneva, Switzerland. A meeting of the GBDe in Montreal was joined by three Canadian representatives on the G8 DOT Force, who spoke on the development of the Genoa Action Plan. The same meeting allowed the first discussions on a potential future cooperation between the GBDe and the Global Internet Policy Initiative (GIPI), a partnership of Internews and the Center for Democracy and Technology (CDT).

July - The GBDe called on G8 leaders gathering in Genoa and members of the DOT Force to continue to intensify efforts to create global digital opportunities and urged for ongoing engagement and consultation. A consumer confidence technology demonstration and seminar was hosted in Bristol, England to demonstrate and discuss technologies designed to empower and protect online consumers.

August – A communiqué was issued to APEC Senior Officials in the lead up to the October Leaders' Meeting in Shanghai, China addressing issues of digitized trade.

September – The GBDe's third Annual Conference was held Tokyo, Japan on September 13 and 14 – two days after the devastating attacks on the World Trade Center in New York. Keynote addresses by Government representatives were delivered

by Philippines President, Gloria Macapagal Arroyo; Japanese Minister of Economy, Trade & Industry, Takeo Hiranuma; Japanese Senior Vice-Minister of Public Management, Home Affairs, Posts & Telecommunications, Kenji Kosaka; and EU Commissioner for Enterprise & Information Society, Erkki Liikanen. Opening remarks included a written statement from Korean President, Kim Dae-Jung. The GBDe's "Tokyo Recommendations" featured a record 11 different work streams, including continued support for ADR and trustmark providers, as well as with consumers organizations. Other main achievements were the development of high-level general principles applicable to copyright protection technological measures, and the support of certificate infrastructures to protect the security of electronic commerce globally. The first response to the convergence phenomenon from industry, suggestions to governments for bringing the Internet closer to citizens, plus recommendations on indirect taxation and digital trade were also among key issues at the Tokyo Conference.

November – A meeting in Berlin provided an important opportunity for the GBDe to consider input on its proposed 2002 work plan with representatives from European, Japanese and US Governments. Among those addressing the Berlin meeting were Baudilio Tomé, Secretary of State for Telecommunications and Information Society at the Spanish Ministry of Science & Technology; US Commerce Department, General Counsel, Ted Kassinger; Erika Mann, Member of the European Parliament, Vice President European Internet Foundation; and Alfred Tacke, Undersecretary of the German Federal Ministry of Economics and Technology. A speech on GBDe activities was delivered at meetings including the French Minister of Justice, the President of the National Assembly and the Chairman of the Juridical and Internet Market Commission of the European Parliament.

December – A letter was sent to WTO-member Trade Ministers applauding the launch of a new round of trade negotiations at the Qatar WTO Ministerial in November 2001. GBDe members met with representatives of Consumers International (CI) to discuss opportunities to work together to encourage the development of consumer-friendly global ADR programs. Apart from clarification of some issues concerns, CI felt that they and the GBDe were on

the same track in the development of consumer-friendly ADR guidelines. Tokyo Recommendations were presented at the Mercosur EU Business Forum in Argentina.

2002

January – The GBDe gave a presentation on ADR at a German Consumer Organization workshop including representatives from Consumers International, ICC and EU. Trade discussions were held with the Japanese Government at the Keidanren in Tokyo regarding electronic commerce in WTO service negotiations.

February – GBDe 2001 Recommendations were used as a basis for discussion on the implementation of the 2002-2005 eEurope Action Plan at a Meeting in meeting in Vitoria, Spain. A letter from the GBDe was sent to more than 100 Government economic/trade Ministers reaffirming the importance of e-commerce for further economic growth and urging a more coordinated global policy dialogue on e-commerce issues. The GBDe IPR Recommendations were presented at a European Commission Workshop on Digital Rights Management. An Interagency Meeting was held between the US Government and GBDe representatives in Washington DC. GBDe representatives presented policy recommendations to the OECD and APEC TEL 25 Working Group. The GBDe delivered a letter outlining its position on taxation to the European Union Economy and Finance Ministers (ECOFIN) to be considered during its meeting on February 12.

March – The GBDe hosted a meeting in Manila, Philippines including representatives from the World Economic Forum (WEF) and Association of South East Asian Nations (ASEAN) for a discussion on digital divide issues. The GBDe called-on European leaders to take urgent action to boost the widespread deployment and usage of broadband Internet access in order that European citizens and businesses reap the benefit of the Information Society. In an open letter to leaders gathered at the European Summit in Barcelona on March 15-16, the GBDe warned that the European Union was lagging behind other regions in terms of access to broadband connections.

April – The GBDe urged the European Union to strengthen cooperation with Latin America in order to speed-up progress towards a seamless international e-commerce regulatory environment. The GBDe called on government ministers from the EU, Latin America and the Caribbean meeting in Seville on the impact of the Information Society to work closely together, especially in the areas of e-Government and technological convergence. The GBDe extended its cooperation with the Global Information Infrastructure Commission (GIIC) and sent high-level representation to the GIIC forum in Beijing, China.

May – An Expert-Level Meeting was held between the GBDe, the European Commission and Members of the European Parliament to discuss current GBDe policy recommendations in detail with each of the relevant policy units at the European Parliament Buildings in Brussels, Belgium. GBDe representatives were hosted at a dinner by the European Internet Foundation in the evening.

June – An advocacy meeting was held in São Paulo, Brazil, including members of the Brazilian business community and government. The GBDe issued a statement to the European Summit at Seville, Spain urging greater Government support for broadband deployment. A letter was sent by the GBDe to key global business leaders calling on them to support the growth of international e-commerce.

July – A meeting was held in Washington DC involving representatives from the European Commission as well as Canadian, Japanese and US Governments. The GBDe was addressed by Grant Aldonas, Under Secretary for International Trade Administration; Bruce Mehlman, Assistant Secretary for Technology Policy, US Department of Commerce; and Nancy Victory, Assistant Secretary for Communications and Information and Administrator NTIA, US Department of Commerce.

August – GBDe representatives reported on cyber security policy recommendations to the APEC TEL 25 meeting in Moscow, Russia. GBDe e-Government recommendations were presented to a local government seminar in Madrid, Spain.

September – A meeting on e-Government initiatives was held in Spain between representatives of the GBDe, EU and GCD.

October – The 4th Annual Conference of the GBDe was held in Brussels, Belgium. One of the highlights of the meeting was the "Brussels Declaration" signed by Ministerial-level representatives of 10 nations including Japan, UK, US and Canada supporting the GBDe and urging an expansion of the dialogue process. The GBDe also signed a cooperation agreement on the digital divide issue with the GIIC and WEF calling for the establishment of an enabling environment to encourage infrastructure investment. Government representatives included US Deputy Secretary of Commerce, Samuel Bodman and EU Commissioner, Erkki Liikanen.

December – GBDe representatives presented 2002 policy recommendations at an International Seminar on e-Commerce hosted by the Korea Institute for Electronic Commerce in Seoul, Korea.

2003

January – The GBDe participated in the annual conference of the Arab Business Forum of Information and Communication Technology (ABFICT) in Cairo, Egypt. GBDe representatives were addressed at a luncheon meeting by the Egyptian Minister of Communications and Information Technology, Dr Ahmed Nazif. GBDe representatives attended the OECD/APEC Global Forum: Policy Frameworks for the Digital Economy in Hawaii, US.

February – Presentations on privacy and cyber security issues were provided at the APEC Electronic Commerce Steering Group (ECSG) 7th meeting at Chiang Rai, Thailand.

March – US Federal Trade Commissioner, Mozelle Thompson and representatives from the US Departments of Justice and Commerce as well as representatives from the Japanese and Canadian Governments attended a GBDe meeting in Washington DC focusing on finalizing an agreement on ADR guidelines between the GBDe and Consumers International. The GBDe

participated in OECD trade meetings in Tokyo, Japan and at the APEC TEL 27 meeting in Kuala Lumpur, Malaysia.

April – A meeting was held with the Japanese Ministry of Economy, Trade and Industry to discuss e-commerce trade-related issues.

May – The GBDe hosted its third EU Expert Level meeting in Brussels, Belgium involving representatives from the European Commission. The GBDe attended a dinner hosted by the European Telecommunications Network Operators (ETNO). President of the World Summit on the Information Society (WSIS) Preparatory Process, Adama Samassékou addressed the GBDe and expressed his desire for the business community to play a vital role in the Summit. GBDe representatives later attended a dinner focused on the WSIS issue at the European Parliament hosted by the European Internet Foundation. The GBDe participated in a conference on the Council of Europe's Convention on Information and Legal Cooperation Concerning "Information Society Services" involving representatives from national governments. The conference was followed by a bilateral dialogue between the Council of Europe and the GBDe.

June – The GBDe launched a major policy initiative on unsolicited electronic communications (spam) with an expert-level workshop in Ottawa, Canada which gathered international input on ways to combat this threat to e-commerce growth. GBDe representatives attended a meeting in Kuala Lumpur, Malaysia including a dinner hosted by the MDC CEO, Datuk Dr. Mohamed Arif Nun and the Malaysian Minister of Energy, Communications and Multimedia, H.E. Datuk Amar Leo Moggie. Closer cooperation on e-Government issues formed the basis of a meeting with the GCD in Madrid.

July – The Quad Group of Government representatives from the EU, Japan, US and Canada joined the GBDe in Washington DC to discuss the 2003 work output of the GBDe and key issues moving forward. The GBDe provided a high-level business representative to speak on behalf of the private sector at the WSIS Intersessional Meeting in Paris, France. GBDe representatives attended the EC eGovernment Conference at Cernobbio, Italy. The GBDe

participated in a Keidanren Mission on Doha Development to the WTO, Geneva, Switzerland.

August – GBDe representatives attended the APEC ECSG 8 in Phuket, Thailand.

September – The GBDe sent a letter to US President Bush urging him to develop a comprehensive, detailed, national broadband strategy. GBDe representatives attended the 5th WTO Ministerial Meeting in Cancún, Mexico, an AUTO ID Center/EPC Symposium on RFID in Chicago, US, and the WSIS PrepCom III meeting in Geneva, Switzerland. Separate update meetings were held with Ministry of Public Management, Home Affairs, Posts and Telecommunications in Japan. A presentation on internet payments was provided at a Computer Science Conference in Leipzig, Germany.

October – GBDe advocacy on cyber security and consumer confidence issues focused on participation in an OECD Information Security Workshop in Oslo, Norway, an EC Workshop on Spam in Brussels, Belgium, and an ICPEN Conference in Helsinki, Finland.

November – The GBDe's fifth Annual Conference in New York, US, featured a detailed discussion on the development of the Ubiquitous Society, featuring interoperability and flow of information between a range of different devices and appliances. This next wave of technology will fundamentally affect the Information Society policy framework. The New York Summit featured the delivery of GBDe recommendations on spam and the signing of an historic agreement with Consumers International on minimum guidelines for online ADR providers. The GBDe's recommended toolkit approach to the spam issue was later adopted by the OECD's anti-spam task force.

December – A meeting with Government and private sector representatives was hosted by the GBDe in Taipei, Taiwan. There was considerable interest in cyber security and the implications of RFID technology. A number of high-level GBDe members attended the first phase of WSIS in Geneva and participated in several key panels.

2004

February – The GBDe sponsored a luncheon at the APEC ECSG Santiago, Chile. GBDe representatives also attended OECD Workshop on Spam, hosted by the European Commission Information Society Directorate-General in Brussels, Belgium. The OECD's Business and Industry Advisory Committee (BIAC) commented positively on the GBDe's spam policy.

March – GBDe representatives participated in the UN ICT Forum on Internet Governance in New York, US. The GBDe continued to collaborate closely with the ICC's Coordinating Committee of Business Interlocutors (CCBI). The GBDe sent representatives to APEC TEL 29 in Hong Kong.

April – The 4th GBDe-EU Expert-Level Meeting was hosted in Brussels by the GBDe. The meeting involved participants from the European Commission and private sector. A range of ongoing issues were discussed including internet payments, RFID, spam, consumer confidence and intellectual property rights.

June – The GBDe hosted a Consumer Confidence Forum in London, England with representatives from Consumers International and Trustmark Service Providers. The focus of the meeting was the implementation of the ADR agreement between the GBDe and Consumers International ratified at the GBDe's New York Summit in 2003. GBDe representatives attended the FTC RFID Workshop in Washington DC on June 21.

September – The GBDe was one of the sponsors of, and also participated in, the Asian Trustmark Alliance (ATA) Conference in Taipei, Taiwan. The GBDe is a key supporter of the principle of a Global Trustmark Alliance as a means of developing an international cross-border ADR network. GBDe members attended the OECD's 2nd Workshop on Spam in Busan, Korea.

October – The RFID issue was the central issue in a meeting on the Ubiquitous Society hosted by the GBDe in Chicago. The meeting marked the commencement on a multi-stakeholder

dialogue, supported by the GBDe, to develop consensus-based generic privacy guidelines incorporating technologies such as RFID. The GBDe co-hosted, with Telstra, an advocacy meeting in Australia including business and consumer representatives immediately following the Australian General Election. The GBDe hosted a meeting on Securing Electronic Transactions in Berlin, Germany featuring government and private sector representatives of the German Signature Alliance.

November – The GBDe was one of the sponsors of the Latin America e-Business Forum held in São Paulo, Brazil. GBDe representatives participated in the GCD's 5th Annual Conference in Miraflores, Peru, and provided a presentation on e-Government recommendations.

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GBDe 2004 Recommendations

e-Government
Recommendations
November 30, 2004

Leading Co-Chair (Europe/Africa)

José María Víla
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INTRODUCTION

In business activities today, what is produced and offered is more important than how we produce them.

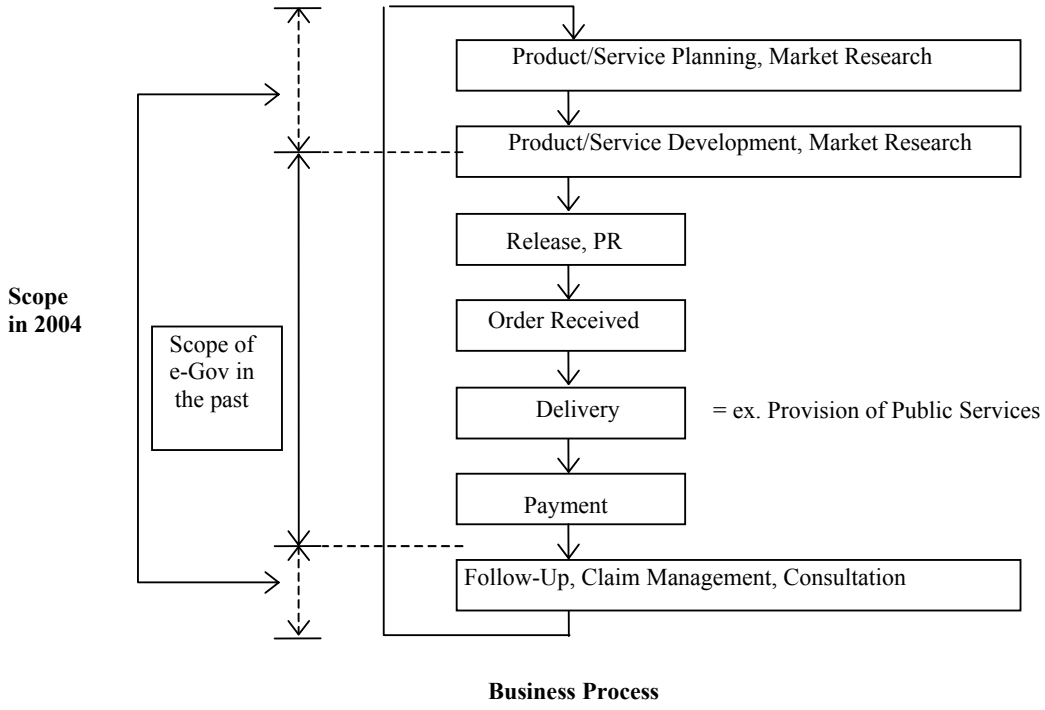
In point of fact, if the words "speaker", "contributor", and "voter" are replaced by "consumer", "purchaser", and "statements" and/or the words "contributions" and "opinions" are substituted with "inquiries" and "orders" of products and services, it is readily seen that the very same environment is necessary for e-commerce. Citizens and businesses making requests or opinions to Government are no different than consumers who make similar requests to shops or companies.

It is important to gather opinions from customers efficiently and effectively, responding to their needs, to ensure that their wishes are reflected in products and services. This is true for Government and administrative agencies as well.

Therefore, “e-Participation” is, in a certain sense, the same as marketing activities and CRM (Customer Relationship Management) in the private sector.

From 2001-2003, the GBDe’s e-Government Working Group made recommendations on issues such as the provision of public services using IT technology, as well as other issues including the sale of goods, and payments between Government/administrative agencies and businesses/citizens. These topics fall within the broad scope of “e-Government”.

In 2004, the working group has continued to focus on this objective, and has also examined processes around the core of this value proposition.



1. Requirements for an e-Participation environment

For the opinions of businesses and citizens to be reflected promptly and accurately, the following environment is necessary:

1. Secure networks where confidentiality of the speaker and the statements are protected (as discussed in the GBDe Securing Electronic Transactions (SET) Working Group);
2. Ubiquitous networks where people can voice and send their opinions from anywhere, anytime (discussed in the GBDe Ubiquitous Society (USF) Working Group);
3. Simple procedures for contributions;
4. Transparency when making clear who the contact person is for requests/opinions and which section is responsible for processing it at a given time;
5. Prompt reply, regardless of the content of the response; and
6. When some fee or cost is required, the ability to easily access (send requests/opinions) and receive a response.

2. e-Participation: Examples of the application of technology

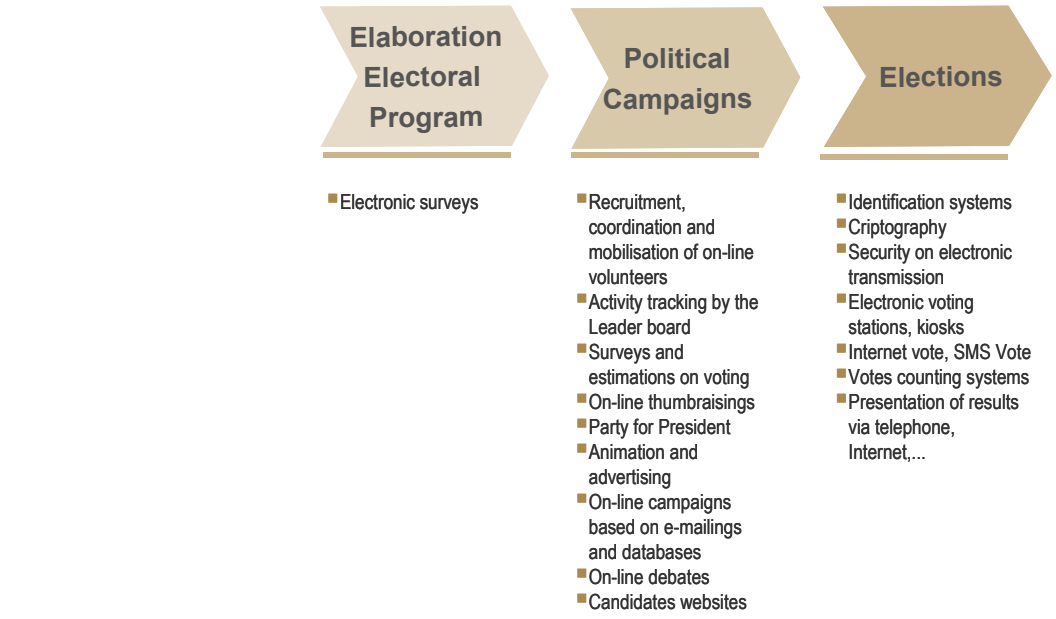
The participation of citizens in effective policymaking is essential, in the same way that the opinion of the users in the design or in the evaluation of a product is the basis for the continued development of improved versions.

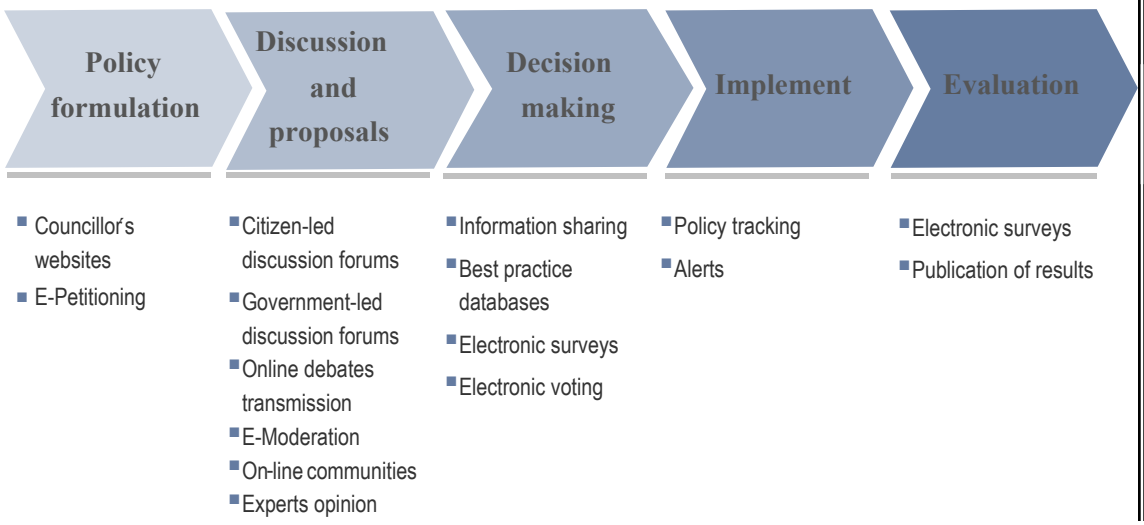
Technology can provide the means to support this process. Examples of the application of technology that are currently being used are:

- Electronic voting stations
- Internet vote, vote online, SMS vote
- E-Counting systems
- Electoral campaigns via Internet or via satellite
- Automation of data management
- Presentation of results via telephone, MTT, PC, Internet
- Mobile services
- E-voting in General Assembly Meetings of companies
- Documents accesible to the public via Internet

- Identification systems, security and cryptography
- Customer relationship management tools
- Knowledge management tools
- Marketing campaigns via the web

EXAMPLES OF APPLICATION TO e-DEMOCRACY (Public Sector)





3. e-Participation: Main advantages of the use of ICT

Some of the advantages that the use of ICT can bring are:

- Consultations can be more interactive and the results can be obtained almost immediately.
- New technologies can improve levels of participation (in particular in local consultation exercises).
- New technologies may be used to attract some segments (e.g., young people) whose voices are not usually heard during traditional consultations.
- It brings transparency to the process since the results of e-Consultations upon which decisions have been adopted may be published on the web.
- Lowering the cost of the consultation process. Additionally, the use of ICT allows citizens or businesses easier access to the issues under discussion.
- The use of ICT in consultations may help to increase the number of users of the existing initiatives based on certification. This would allow a decrease of the cost per user, which in turn, would allow a generalisation of the use of certificates.

4. Frameworks of e-Participation

The following frameworks are necessary for governments to consider e-Participation:

- From a public sector perspective, the creation of an e-Participation environment can be a powerful tool for the future development of democracy. It is also an essential part in the development of e-commerce and in the interaction of opinions between the private sector and Government.
- It would be desirable to create a common and shared environment in which the public and the private sectors could operate. This would increase the number of overall users and reduce cost per transaction.

- Using this environment for e-commerce will make businesses and citizens aware of its application for e-Participation, and its significance will be greater.
- The GBDe recommends that Government should promote the creation of this environment. Although there are challenges, we believe that they are able to be solved.

5. Recommendations for Governments

It could be said that the public sector is walking along the same path that the private sector completed some time ago. Government can benefit from the experiences of the private sector.

Implementation of e-Participation, as well as many other e-Government applications, is a slow process that requires a transition period.

In order to facilitate this transition the GBDe recommends:

a. **Create a culture of consultation and dialogue which will improve the communication currently lacking between citizen and Government.** e-Participation should not be viewed as a substitute for existing methods of involvement but should add value to them. The development of e-Participation tools should be viewed as an evolving process linked to the confidence and assessment of citizens, representatives and governments.
b. **Start with local Government.** Local Government plays a key role in this process and is the best candidate to drive it, since it is the main contact in a citizen's every day life. This is the level of Government that more directly represents the interests of the general public.
c. **Establish criteria to determine which decisions could be taken in a participatory form.** Not all politics and decisions can be taken in a participatory way. Some decisions require very specific knowledge and expertise.
d. **Provide a citizen space for consultations and a public forum for discussion.** This space must include a register of central government consultations. Citizens can be notified in different ways, including e-mail and SMS.

e. **Produce e-Participation guidelines.** Experiences in e-consultations show that, in general, Government does not have clear guidance on how to make the best use of electronic media for this purpose. To overcome this, the GBDe recommends the development of a toolkit and mandatory guidelines for departments in charge of coordinating these kinds of initiatives.
f. **Bring the citizenship closer to the new technologies.** In order to make the most effective use of these new technologies it is important that citizens receive adequate training, support and guidance.
g. **Drive pilot programs, share and analyze experiences and develop policies on the basis of best practices.**
h. **Pay attention to change management among public servants.** It is important to prevent the perception that decisions are now taken by people who haven't the same level of skills and experience.
i. **Security and confidentiality.** Viability and trust are key issues in e-Participation.

6. How the private sector can help

The following are barriers to the realization of e-Democracy:

1. Regulation of the legal system;
2. Lack of appropriate planning;
3. Self-regulation and a concern regarding the possibility that private information could be leaked; and
4. The use of the wrong technology for the job.

The GBDe believes that the private sector can cooperate to eliminate the barriers listed in points 2 and 4 in the following ways:

- Encourage closer cooperation between Government and the private sector in the definition of e-Participation models.
- Match the private sector's know-how and experience with Government's needs.

- Develop platforms and tools to improve trust and confidence. In particular, it is necessary to work on the interoperability of the existing infrastructures.
- Maximize the use of common standards.
- Examine how technologies used in other fields can be applied to e-Participation.

New Business Models

Recommendations

November 30, 2004

Leading Chair (Europe/Africa)

Luis Lada
Vice President,
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INTRODUCTION

The emergence of new business models in the provision of online services can be considered intrinsically linked to two major factors that have dramatically reshaped the landscape of the ICT sector.

On the one hand, increasing technological convergence between telecommunications, IT, consumer electronics and content industries has transformed the telecommunications sector into the electronic communications industry, and this in turn has attracted new players into the market.

On the other hand, advent of broadband access as a mass market technology provided through multiple and competing open platforms is creating opportunities for new multimedia and content revenue-generating services, thus adding value to the current business models often limited to selling broadband connectivity. It is foreseen that a much broader range of applications and services will become available as the market matures and broadband connection speeds increase.

Content and service providers must therefore now create new applications and content formats that take advantage of the new features and advantages provided by convergence and broadband. However, there is a clear need for industry and governments to cooperate in the development of innovative and commercially driven business models for the broadband environment, in order to overcome the different barriers that are hindering its development.

2. Barriers to the Development of New Business Models

2.1 Open Standards and Interoperability

In a competitive broadband and convergent services environment, there are multiple actors at different levels of the value chain (network operators, equipment manufacturers, content creators, content providers, content aggregators etc.). In this multi-stakeholder context, the use of open standards and platforms is crucial in order to ensure the three levels of interoperability necessary for the development of successful new business models:

a) Interoperability of Networks

All platforms providing broadband access should be open and interoperable in order to facilitate the circulation of content. Consumers should be able to freely choose the service and the delivery channel they wish.

b) Interoperability of Devices

Consumers should have access to content and services from multiple and interoperable devices using open standards and protocols for data streaming, downloading and storage.

Together with the IPR protection issue, the main reason for the lack of success of the recording industry business models developed so far is that consumers could not use legitimately downloaded music on the multiple audio devices in use, beyond

the PC. Market development will depend on broad horizontal interoperable working systems.

c) Interoperability of Products and Services

Business models based on broadly supported content standards prove essential to develop mass market deployment. ICT companies have strong commercial incentives to make their products and services (i.e. software programs and applications) interoperate with others.

Governments should allow industry to lead in promoting technical interoperability, including the development of voluntary, consensus-based open standards. Public policies that would mandate or extend preferences to specific technology solutions or platforms should be avoided.

2.2 Access to Content

Access to content is a key factor for the development of new business models but several knots have to be untied in order to ensure its full accomplishment.

Content providers should make content available under a non-discriminatory basis among the different platforms providing broadband access. Long-term exclusivity of contents could hamper the take up of innovative services and become a barrier for the development of the Information Society as provision of online content services and network development are interdependent. Consumers should have the chance to access high quality content services under a multi-platform competitive environment.

Governments should create an open environment that facilitates access to content. The fact that broadband content and services emanate from the convergence of the content creation sectors, with the information, communications and technology sectors, creates a need for cohesion among the different public authorities responsible for telecommunications, broadcasting and content

creation that should always act under the principle of technological neutrality[1].

Public administrations, on the other hand, can act as a catalyst for the development of the broadband content market through the implementation of specific initiatives in the fields of e-Health, e-Education and e-Government.

2.3 Protection of IPRs

Directly linked to the lack of availability of attractive broadband content is the fact that content and service providers have experienced copyright violations which have diminished their revenues, limiting their online presence.

Content and service providers must create new applications and content formats that take advantage of the new features and advantages provided by broadband. However, piracy and illegal copying need to be addressed by fostering dialogue between stakeholders in order to create an adequate framework for viable business models. It is a fact that certain content providers are reticent to enter the market until implemented solutions successfully fulfil their demands (e.g. record labels), which is currently slowing the development of the market. New technological measures such as DRM systems will be instrumental to obtain an adequate level of copyright protection.

The main objectives of DRM systems should be to ensure a successful exploitation of intellectual property rights in online content, as well as to ensure appropriate revenue for all players along the value chain. For this to become a reality, technical solutions must be generally accepted to provide value for both the service provider and user. Competition between different DRM systems providers that ensure interoperability without one point of control will allow for an increase in the services provided and a decrease in the prices of these systems, preventing management of intellectual property rights from becoming a heavy burden for

[1] The principle of technological neutrality should however not lead to applying the same regulation to services that differ in nature, access and reception (i.e. broadcasting vs. information society services).

value-chain stakeholders. However, an industry accepted open and interoperable DRM standard for both fixed and mobile services in a horizontal market will provide the necessary critical mass, ease of use and lower burden for the final customer.

In this respect, it seems necessary to include the concept of "authorised domain" in the framework of DRM, which would be made up of devices, networks and interfaces used for consuming contents both in and outside a domestic environment, and which are the property of consumers or are under their control. Within the domain, consumers can exchange content (music, video, games, etc.) with certain freedom amongst the different devices that are part of the domain. However, outside this domain, services and access to content will be subject to rules previously determined by the rights holder.

Currently, a number of market players have opted for the implementation of temporary solutions such as "forward-locked" solutions that avoid the re-sending of content, and therefore fraud. However, they limit the development of the market and are not appropriate solutions in the medium and long-term.

With the availability of DRM based compensation systems, public authorities must re-evaluate the application of national copyright levies to online content and digital devices. In fact, public authorities should refrain from extending copyright levies or any new type of levy (e.g. broadband levy) to broadband equipment and media, (e.g. mobile handsets, storage devices PCs and printers). Otherwise, there is a risk of consumers having to make multiple payments through levies on equipment, media and via a DRM system.

It is important to remind policymakers that the main obstacles to successful DRMs include interoperability issues including the development of open standards that will enable the development of a satisfactory model for all players along the value chain.

The GBDe believes that key recommendations in order to achieve successful DRM systems should include the following:

- The need to define an open and interoperable DRM system with open certification criteria with the aim of solving the current lack of interoperability.

- The need for an active cooperation between all players along the value chain.

- The development of an adequate supranational framework.

- The need to maintain consumers' capacity of use of legitimately downloaded content.

- The need to avoid multiple compensation for content through the application of levies on equipment and media, and via DRM systems.

2.4 Customer satisfaction

Until now consumers have demonstrated little willingness to pay for content and services provided over the Internet. The need to create the appropriate climate for users' willingness to pay for online services is not only a matter of industry provision of personalised/tailor-made services, optimising price and quality for each customer. A joint effort with public authorities is necessary, focusing on the following priorities:

- The need to inform users about the benefits of broadband content and services.

There is a real lack of awareness and understanding of the benefits of broadband content and services, and how they can positively impact business, government and consumer activities. Cooperation between stakeholders to make customers aware of their possibilities in terms of multiple access platforms and wider range of content availability is needed.

- Fostering consumer confidence.

The development of the global Internet network and improvement in telecommunications technologies, have brought substantial

benefits to consumers, including convenience and access to a wide range of goods, many kind of services and various forms of information at lower cost. However, these benefits cannot be realised fully until consumers develop confidence in commercial and other internet-based activities conducted over global networks and feel secure about the use of their content/data.

To address this challenge there exists a consensus on the need of a common framework to develop closer and more efficient cross-border cooperation among all stakeholders and to encourage the development of a global marketplace that offers safety, transparency, and legal certainty.

3. Recommendations

- Public authorities should not jeopardise or hinder the development of new business models through inappropriate regulation.

- Public authorities should allow industry to lead in promoting technical interoperability, including by developing voluntary, consensus-based open standards.

- Public policies that would mandate or extend preferences to specific technology solutions or platforms should be avoided.

- Public authorities should encourage the creation of an open environment that facilitates access to content.

- Public authorities should develop their role of demand aggregator for broadband content and services in the field of public services: e-Health, e-Education, e-Government, etc.

- Public authorities, in cooperation, with all industry players should encourage the adoption of open and interoperable DRMs.

- Public authorities should avoid multiple compensation for content through the application of levies on equipment and ICT technologies and via DRM systems.

- Public authorities should maintain consumers' capacity of use of legitimately downloaded content.

- Public authorities should foster consumer confidence encouraging the development of a global marketplace that offers safety, transparency, and legal certainty to all stakeholders.

Securing Electronic Transactions

Recommendations

November 30, 2004

Leading Chair (Europe/Africa)

Hermann-Josef Lamberti
COO and Member of the Board
Deutsche Bank AG

INTRODUCTION

For e-commerce, as well as e-Government, it is important to be able to use electronic channels for legally binding transactions such as closing a deal or filing a petition. The recipient of electronic data must be able to prove that data is integer and authentic.

As long as integrity and authentication of data is not achieved, application owners have the choice to either:

- accept the potential risk that they might not be able to prove that the customer initiated a transaction (e.g. closed a deal or authorized a payment), or
- not allow transactions on the Internet and ask customers to use other channels (for example, a paper-based document).

As a consequence, the lack of authentication might become a limiting factor for e-commerce and e-Government. Hence, there is a need for an infrastructure of trust.

In 2003, the GBDe contacted payment service providers and content providers from various regions and business sectors and asked about challenges in e-payments. Among the answering parties, the implementation of a widely available infrastructure of

trust was top priority. Furthermore, examinations like those of Prof. Jeffrey Cole, which were presented at the 2003 GBDe Summit, show that consumers are sensitive to the problem of identity theft, even when they do not take a financial risk.

Today, there is still no widely accepted trust infrastructure in most countries. In this paper, we want to analyze the current situation, identify reasons for the current stalemate and discuss ways to overcome the problems.

Existing trust infrastructures

Digital passports issued by government

Some countries run a public key infrastructure (PKI) and have already started to issue digital passports that may be used for electronic signatures. These digital passports are smart-card based and can be used for e-Government as well as private purposes. For example:

- **Belgium:** The Belgian Government started to introduce digital passports in 2003 that are mandatory for all citizens. In order to have a stable workload at the local authorities, all citizens will obtain a digital passport by 2009. Each digital passport will be valid for 5 years.
- **Estonia:** Estonia is the only EU member state that has a digital passport that is mandatory for all citizens. As of January 2004, 368,000 cards, in total, were issued.
- **Finland:** Finland was the first EU member state to introduce a (not mandatory) digital passport. At the end of 2003, about 15,000 cards had been issued.
- **Brunei:** Brunei made a full roll-out of a digital passport to all its citizens. At the end of 2003, about 350,000 cards had been issued.
- **Malaysia:** Malaysia issued more than 4 million digital passports (as of April 2003).
- **Macao:** Macao issued about 15,000 cards (as of April 2003).
- **Hong Kong:** Hong Kong started issuing digital passports in July 2003.

- **Oman:** Oman started to roll-out digital passports in October 2003.
- **Taiwan:** The Taiwan government launched a smart-card based digital passport for all citizens in April 2003, which can be used for e-Government as well as private purposes. The digital passport is not mandatory, but free of charge until the end of 2004 (500,000 passports have been issued as of September 2004).

There are pilot projects or feasibility studies in many countries, for example:

- Local authorities in France, Ireland, Italy, Spain, UK and Israel participate in the pilot project eEpoch[1] for local e-government. As a first step, they want to reach a proof of concept and run interoperability tests.
- Austria, Belgium, Bahrain, Japan, Saudi Arabia, Switzerland, Thailand and United Arab Emirates have completed pilot projects or feasibility studies.
- The German government started the private-public-partnership initiative "German Signature Alliance" in 2003. Details are described below.

Existing systems in the banking sector

Many banks run systems that allow their customers to check their accounts, transfer money or do online-brokerage. Below are some infrastructures used in order to secure these transactions:

- **Password-based systems:** The customer and bank agree on some password that allows login to the bank's server. In order to close a transaction, sometimes one-time passwords are used. The PIN/TAN-system works that way: The personal identification number (PIN) is used for login, a list of transaction numbers (TAN) serve as one-time passwords.
- **Token-based systems:** A security token generates passwords (transaction numbers) on demand. These passwords are valid for a short time (only minutes) and are used in order to authenticate transactions.

[1] eEpoch is a demonstration project funded by the European Communities conceived as proof of concept of the eEurope Smart Card Charter.

- **Signature Cards:** Some banks have already issued signature cards that can be used for login and financial transactions. However, the number of signature cards is still small.

Existing private sector initiatives – an example of a bridge-CA

In order to connect existing company PKIs and make them useable for secure e-mail transfer, bridge-CA initiatives like the European Bridge-CA (EB-CA) were founded. The heart of a bridge-CA is a collection of root-certificates of the participants that commit to a set of basic rules. In particular, these rules ensure technical e-mail interoperability. Employee's certificates can be checked using the associated root-certificates stored in the bridge.

A bridge-CA is a non-hierarchical approach that allows secure communication without expensive exchange of certificates.

Applications

Following are PKI-usage examples from different regions of the world.

Example form Asia: Japan
There are four different certification infrastructures in Japan: The Government PKI (GPKI) used for online applications between citizens and the government; the Local Government PKI (LGPKI) used for the interaction among local governments, the Public Certification Service for Individuals, JPKI, to issue electronic certificates for residents, and the Certificate Service Providers (CSPs) built for corporate entities. The cross-certification between LGPKI, JPKI, CSPs and GPKI enables to make online applications for the government.

Enterprises, trying to make online applications to the government, may be registered by private CSPs (as of November 2004 there were 20 such CSPs in Japan). These CSPs have to run through an accreditation process, which means that they have to pass a test (including an investigation)

The Public Certification Service for Individuals, JPKI, started on January 2004, and electronic certificates have been issued for residents by Prefectural Governors at the offices of municipalities. Electronic certificates are valid for three years with issuance commissions of five hundred yen. With electronic certificates, residents can make electronic applications such as tax declarations, pension matters, passport, transfer via the Internet from anywhere and anytime.

Example from Asia: Taiwan

In Taiwan, a government PKI was established in 1995. Certificates are issued for enterprises, organizations and individuals. The infrastructure is in particular used for the official inter-government document exchange (G2G), e-procurement service (G2B) and e-tax service (G2C), making use of the PKI infrastructure.

Today, the PKI is rarely used in e-commerce. However, it is likely that the government PKI will influence e-commerce in the long run.

The Government Root Certification Authority (GRCA) is the highest certification authority in the hierarchical structure of government PKI. The GRCA also acts as the interface between CAs within and without the government PKI. Under GRCA, the certificates issued by "Government CA" are used for all government agencies, the certificates issued by "Ministry of the Interior CA" are used for all citizens, and the certificates issued by "Ministry of Economic Affairs CA" are used for business groups. In order to encourage government departments and private companies to develop PKI applications, the "Government Test CA" provides testing certificates as well as developing kits.

Example from Latin America: Brazil

In Brazil, a public key infrastructure called ICP-Brasil was implemented by the Federal Government. The infrastructure is mainly used for public services (e.g. in the Department of Justice). Today, there are token-, Smartcard- and computer-based solutions in place. There are trials on the local level to integrate all public related services (e.g. health care, social insurance issues, IDs and driver's license) in a Smartcard-based infrastructure. The most

popular application is the ReceitaNet-system, which allows all citizens to process their personal tax declaration electronically. Currently, this system is used by more than 90% of Brazilian taxpayers.

In business, trust infrastructures are used in the financial sector. More than 90% of Brazilian Internet banking services are based on a PKI. Some banks issue smartcards in order to secure financial transactions.

Example from Europe: Belgium
In Belgium, a national PKI called CERTICOM was introduced in 2003. It is based on the national electronic ID card that can be used for authentication and (qualified) electronic signature. Starting with specific user groups like notaries, all citizens will obtain their (mandatory) electronic ID until the end of 2008.

The infrastructure is run by the Government and is used in both e-Government and private sector applications. Status information on certificates is provided free of charge.

The legal framework

Europe
Following the European Electronic Signature Directive, most EU member states have regulations in place that define electronic signatures and clarify the obligations of the CSP.

The signature directive defines qualified signatures. Such signatures are mostly smartcard-based and require a secure identification of the card-holder by the CSP. These qualified signatures are an electronic equivalent to hand-written signatures.

Electronic signature laws slightly differ in each of the EU member states, particularly for the underlying identification processes that are required for CSPs that issue qualified certificates. Each member state has its own supervisory system. Furthermore, some member states allow (qualified) company signatures, others do not. The EU directive ensures that certificates, which are qualified in one member state, are qualified in all.

The EU directive also mentions non-qualified signatures like advanced signatures (based on a PKI, but they might be software certificates). Such signatures might be used in a legal claim in order to brought forward evidence. The usage of advanced signatures is sufficient for most business purposes. However, only qualified signatures come along with a formal shift in the burden of proof.

Japan

In Japan, "Legislation on electronic signatures and certification system" is in place. If, by construction of the PKI, no one but the principal is able to sign, then an electronic signature is equivalent to the principal's seal or the hand written signature. Certificates originally issued to enterprises for G2B purposes might also be used in private communication (i.e. B2B or B2C). The certification is provided through 20 CSPs, which are accredited by the Government.

Furthermore, the Japanese Government (Ministry of Justice) has adjusted the business register law in order to allow special electronic seals. The corresponding certificates (business entity name and name of representatives) are issued by a designated specific registry, which operates under government responsibility.

Prefectural Governors have issued electronic certificates for the Public Certification Service for Individuals, JPKI, based on Law concerning Digital Signature Certification of Local Public Entity

The current situation

Today, in most countries, there exists no widely available trust infrastructure which allows authentic transactions over electronic channels. One reason is that such an infrastructure comes with a high initiation effort:

- All participants have to be registered.
- Certificates, and often hardware-tokens, have to be distributed.
- Private PCs have to be fitted with appropriate software readers for additional hardware (e.g. smartcard reader).

- The certificate service providers (CSP) have to run servers that guarantee (real-time) validation of certificates.
- Application providers must integrate the trust infrastructure into their processes.

Significant shares of the total running costs are fixed costs. Hence, the costs per user depend crucially on their total number. In the same way, the benefit for customers and application owners is related to the number of participants: For customers, the number of applications is crucial, for application providers it is important to have a large number of customers that are able to use the system.

If there is a large number of customers and applications, then the total benefit for the participants will exceed the total costs, and one may get a positive business case for the infrastructure.

If, however, the number of customers and applications is too small, then the total benefit will be below the total costs, and a positive business case cannot be achieved. Critical mass problems are typical for infrastructures in which the benefit depends on the number of participants. In case of trust infrastructures, we have to reach critical masses for both customers and applications. This situation is sometimes called the chicken and the egg problem.

So far, most infrastructures cannot reach the critical mass. Most success-stories known are infrastructures for closed user groups like enterprise implementations, for which the CSP is the application provider at the same time.

Barriers that prohibit building infrastructures of trust

The costs of building and running the trust infrastructure play a crucial role: The higher these costs are, the more participants are needed in order to reach the break-even point. This means that any measure that increases the costs of the infrastructure is an economical barrier and decreases the likelihood that the critical mass can be reached.

Such barriers can be regulations that:

- do not allow the usage of standard software with the consequence that customers or application owners have to implement new software, or
- define processes that differ from existing, well-established ones.

Furthermore, if the infrastructure may only be used for a certain purpose or by special user groups, then this will limit the benefit for all participants. For example, non-harmonized regulations or a lack of technical interoperability might prohibit cross-border transactions and create such a limitation.

A pragmatic approach

Technical issues
In order to minimize the initiation effort for all parties, an infrastructure of trust should be based on well established technical standards. In particular, it must be possible to use standard software.

Business case
There must be a clear business case for all stakeholders, private customers, application owners and infrastructure providers (CSPs).

Private customers usually have to pay for the convenience of taking part in the infrastructure. However, application owners usually have the largest benefit. Hence, it is more likely that customers will participate in the infrastructure if they do not have to pay the total cost. There are business models in which application owners pay some fee to the CSP or provide incentives for customers. Such approaches look promising.

If application owners have to pay for usage of the infrastructure, the fee must be smaller than the estimated benefit to the application owner.

Models, in which fixed costs of running the infrastructure are allocated to a small group of early users, come with high fees for

customers and application owners. It is unlikely that such models will be successful. It is a general observation that a large number of transactions are needed to reach the break-even.

Legal issues
National laws should set a legal framework for trust infrastructures, in general and electronic signatures, in particular, that:

- guarantee legal certainty – since this is the fundamental benefit for all infrastructure users,
- allow usage of international technological standards – otherwise solutions become proprietary and non-interoperable,
- do not hinder usage of existing infrastructures – minimizing the initiation effort,
- allow realization of a viable business case for all stakeholders.

Role of Governments
There are different actions governments can take in order to foster the development of trust infrastructures:

- Governments may run their own trust infrastructure, which can be combined with a digital passport. In this case, governments should use open standards and allow private sector to make use of the infrastructure.
- Governments may encourage private sector to build up privately owned trust infrastructures, and link these infrastructures up with their e-Government projects. In this case, e-Government projects may be important in order to achieve the critical mass of users.

Examples of initiatives

German Signature Alliance
In spring 2003, the German Signature Alliance was founded as a private-public-partnership between Federal German Government and private sector representatives. After the first year of its existence, the alliance has more than 30 members, including all major German banks and technology partners.

The alliance brings together private and public sector parties in order to promote the use of electronic signatures and establish a

standard for interoperable applications. The members also want to define basic economic rules that allow a return on investment for the infrastructure provider. Furthermore, the participants agreed to adjust regulations so that well established business processes, like existing processes in the financial service industry (for bank cards), may be used to issue signature cards. In April 2004 Germany's Federal Government initiated a revision of the German Signature Law.

e-Government applications should be launched on a large scale in order to generate demand for usage of the new infrastructure. The German Government plans to replace a paper based social security ID and related annual notifications with an electronic system where the information is stored in a large database. In this case, a personal signature card issued by any private company might serve as a key to this information (and make the social security ID obsolete). Such an application has the potential to generate demand for signature cards, which would help to reach the critical mass.

Recommendations

It is a fundamental decision whether governments issue digital passports and run a trust infrastructure for their citizens or whether such infrastructure operates under private responsibility. The GBDe does not favor one alternative over the other. A chosen alternative may be related to the legal situation and the cultural background in each country.

We note that it is unlikely that both systems can co-exist in one country. In particular, when governments issue mandatory digital passports, there would be no need for privately issued citizen-IDs. Therefore, it is important that governments make a clear statement which path the country will follow. Otherwise, one may end up in a stalemate, in which companies only create small-scale infrastructures for their employees or customers.

Depending on the decision, there are different implications to all stakeholders – leading to different recommendations.

1. Governments or publicly owned institutions run the infrastructure.

In this case the GBDe recommends that:

- The infrastructure should use international industry standards. Furthermore, it should be possible to use standard software in order to process digitally signed documents. Proprietary technical solutions should be avoided.
- If the infrastructure is based on smartcards, then these cards should only be used for identification (like a passport) and PKI issues. All further data should be stored in the application rather than on the smartcard.
- The regulatory framework should provide legal certainty for all users of the trust infrastructure. If electronic signatures are used, they should serve as a pendant to handwritten signatures.
- Experience shows that it can be hard to sell digital IDs to citizens. If the cards are not mandatory, they must be low priced and provide a significant benefit for each citizen.
- Private sector companies should be allowed to use the infrastructure, i.e. accept digitally signed documents and integrate them in their workflow.
- Private companies should make use of the infrastructure in their applications.
- Governments should implement attractive e-Government applications based on the infrastructure.
- Existing private sector knowledge should be included when the infrastructure is built up. Governments may also make use of private companies for maintenance.

2. Governments or publicly owned institutions will not run the infrastructure.

In this case the GBDe recommends that:

- Governments should clearly communicate the decision and encourage private companies to build-up an infrastructure of trust.

- The number of private infrastructures should not be limited. Therefore, the infrastructures should be based upon the principle of interoperability.
- In order to lower initiation effort, it should be possible to build up infrastructures of trust based on existing infrastructures (e.g. smartcards issued by banks or telcos). Regulations should ensure that digital signatures based upon such infrastructures may be used for all purpose – without a need for significant changes in the existing processes.
- A viable business case is crucial for a privately run infrastructure. If e-Government applications make use of a private infrastructure and thereby save costs, then governments should be willing to pay for the usage. It is unlikely that a private infrastructure will be successful if the citizens pay all the costs and application owners receive most of the benefits. In particular, national law should not prohibit such business cases.
- Cooperation in the private sector is more likely to reach the critical mass of users and applications. Therefore, the GBDe encourages companies to work together in order to build up and run infrastructures of trust.

Ubiquitous Society Framework[1]

Recommendations

November 30, 2004

Leading Chair (Asia/Oceania) Tomakazu Hamaguchi
President & CEO
NTT DATA Corporation

INTRODUCTION

We are on the verge of the "Ubiquitous Society". The definition of ubiquitous is "exists everywhere", and thus, the Ubiquitous Society implies a paradigm where everything is connected by networks.

After the burst of the bubble in 2001 and 2002, e-commerce is now reaching another level, and is beginning to take shape. The telecommunications industry is recovering from the post-bubble devastation, while the remains of the dotcom companies are back on track and showing profits. The speedy progress of broadband and mobile communications, as well as the fusion of the RFID sensor and network, have enabled continued progress of e-commerce, and are bringing both a better life for society as well as industry growth.

We are expected to share this vision, in order to adequately prepare for the coming of the Ubiquitous Society. To fully realize its potential, in correspondence with attending technological advances, it is necessary to remove any obstacles and to adopt rules and regulations so that people may enjoy its benefits. The GBDe, established in January 1999 as a worldwide, CEO-led, business initiative, has continued to focus on the development of a policy

[1] Rapporteur Teruyasu Murakami, Chief Counselor, Nomura Research Institute

framework for the progress of a global online economy. The GBDe is expected to continue its contribution for attaining industrial progress in the ubiquitous era.

2. The ubiquitous society and its framework

The word "ubiquitous" is used frequently in Japan and Korea and elsewhere, e.g., Ubiquitous Network, Ubiquitous Society and U-life. The usage of the word goes far beyond a network technology context, and implies new services or business and societal innovation which lead to these new services. Many large firms have adapted the word "ubiquitous" into their corporate mottos, and it is also being used in national information strategies, such as U-Japan or U-Korea.

Phrases such as "ubiquitous computing", "pervasive computing", or, in the case of mobile terminals, "Life Goes Mobile", at mobile terminals, and "Ambient Intelligence" in the EU are just a few of the applications that heat up the Ubiquitous Society.

Telecommunication companies are presenting various visions to enhance their networks as Next Generation Networks (NGN). "Ubiquitous" is accepted as the word that unites and leads these visions. It represents an environment where any person, or object can be networked whenever, and wherever they are. Further, not only does it refer to the network layer, but also in a broader scope, including terminals, applications and a lifestyle and societal layer. It is agreed that this implies the expansion of the scope of e-commerce and the creation of new markets.

3. Creation of new market

In a ubiquitous society, many services and markets which could never have existed will be born. Many countries are currently undertaking steps to promote broadband networks, because they have brought tremendous ripple effects in the economies of many places. The Ubiquitous Society is showing even greater positive impact. Widespread use of mobile phones and their fusion with the Internet have become a reality. Links with mobile and sensor

technology are also advancing. In particular, the development of close range wireless technology and reduction in costs have enabled “always on” communication, anywhere, anytime, and at exceptionally low cost. The attachment of small wireless tags or sensors has given us the prospect for an application that satisfies both safe society and efficiency.

These types of sensing/tracking functions have the potential ability to resolve many societal issues including environmental problems, energy conservation and security, and therefore create high demand for telecommunications and a market for socio-economic applications. Merely a few examples include an efficient supply chain, efficient recycling process and environmental measures, and traceability for food safety. These are all non-fiction. Some trials are already being carried out in the field of supply chain management. Traceability for food safety, for instance, is being implemented with the increasing awareness for such issues. Other projects currently underway include the recycling industry, where used products or parts of a product may be traced by using embedded chips, enabling efficient collection and assisting in the prohibition of illegal dumping.

The ubiquitous environment can considerably improve a product’s performance from the consumer’s viewpoint. For example, there currently exists a system that controls a remote construction machine in real time using GPS and sensors. This enables automatic detection of mechanical problems, and automatically sends replacement parts before any trouble worsens. For the customer, this ensures a longer up-time of an expensive machine and for the supplier, there is a benefit of being able to provide the consumers with high value added service. In the ubiquitous era, these models apply to everyday household appliances, mobile phones, PDAs and home appliances. This large number of devices means that network providers, as well as content providers, will have a huge potential market.

All these innovations also mean society becomes more and more “user-centric”. The term “ubiquitous broadband” is often used and means a user-centric broadband service environment, where the user defines services responding to their unique needs, independent of the network or device they use. This means they will not be

further encumbered by the complexity that plagues many communication services today.

This kind of change will affect the medical, transportation, and many other industries. To bring about the positive effect of these changes, a review of regulations is essential. Not only the convergence of communications and broadcast, but other inter-sector convergence is expected. To fully achieve the Ubiquitous Society, we reconfirm the GBDe's stand that traditional regulations should be kept to the minimum necessary to ensure a fair and competitive environment, giving priority wherever possible to self-regulation and policy cooperation rather than government regulation.

4. Changes in environment and issues associated with public policy on the ubiquitous society

What are the public policy issues for the Ubiquitous Society? For GBDe, many regulatory environments have had different meanings between pre- and post-bubble.

Over-expectations for e-commerce have receded, and private sector governance on its rules has declined. Many of the efforts on the development of institutions necessary for e-commerce should also be credited.

After 9/11, interest in safety and national security has risen dramatically, and government involvement has become a priority.

After the Enron Scandal, trust from the consumer market for corporate governance has dropped, and companies are increasingly coming under high public scrutiny. For example, companies are responsible for their compliance regarding leaks of privacy data.

There are some negative sides to the Ubiquitous Society, which are ever increasing. Spam, for example, has gone far beyond what can be considered as mere junk mail, deteriorating the trust of consumers, and sometimes going as far as criminal offense. This is a matter of concern for the continued growth of e-commerce.

The GBDe strongly recognizes that these problems cannot be solved without the cooperation of the public and private sectors, as well as consumers. The GBDe also believes the key to solving these problems is innovation and a healthy development of the market based on cooperation among industries and governments.

5. Policy issues

We must share the awareness of issues concerned in attaining the Ubiquitous Society. The objective is to make the vision for the Ubiquitous Society and the scope of the policy task common knowledge. This is the basic principle behind each section rather than specific suggestions.

5.1 Spectrum Management Policy and Licensing Approaches

The GBDe, in its 2002 proposal on Convergence, made 9 recommendations regarding spectrum management policy and licensing approaches. We must remind ourselves that much of the technological advances owe a lot to wireless technology. Especially it must be noted that:

1. Flexible allocation of frequency is needed for ubiquitous application.
2. Charging for spectrum usage must not be aimed to increase the short-term revenue of Government, but to increase the benefit to consumers, such as technological advances and market growth.
3. There must be global harmonization of spectrum usage.

Ubiquitous society means the existence of an enormous number of appliances using spectrum. Any unreasonable charge in this usage of spectrum would hinder technical innovation and the creation of new markets.

5.2 Privacy concern and the use of RFID and Sensors

Recently, a major international apparel company announced its plans to embed RFID tags in their garments. However, it was met with opposition from some consumer groups for its lack of privacy protection, and the project was stopped. This issue is currently causing great controversy. The RFID embedded clothing would make distribution efficient.

Embedding RFID tags in goods is realistic due to reduction in the cost of chips.

However, the opinion of consumer groups is that a person wearing an RFID embedded piece of clothing can be traced i.e., that the fact that he possesses such clothing, as well as a log of his activities, are could be considered an invasion of privacy. On the other hand, RFID and sensor technologies could also be used upon a user's consent, to fulfil innovative service that would ensure safety and convenience for the user. It also provides applications to serve the public interest, such as environmental protection. Thus, like many other cases, this new technology potentially encapsulates two intrinsic issues, economic benefits and privacy protection.

The GBDe believes this should be pursued with satisfactory solutions, for both privacy issues and the benefits the new technology brings, through innovation and setting rules. New technologies to control the functions of RFID are being developed. In June 2004, a new "Privacy Guidelines for ID Tags"[2] was issued in Japan. Many suggestions have been proposed by various organizations. Guidelines are very important in order to reduce regulatory uncertainties and promote business development. We must, at the same time, reinforce the thought that too much pre-regulation will hinder innovation and business development. The emphasis on public awareness and education are also very important. In November 2003, GBDe proposed recommendations on RFID. These kinds of advances are realized only by innovation, the challenging efforts of the private sector and communication among parties.

5.3 To actively secure the social safety and security

After September 11th, the fight against terrorism is a large factor in the safety of society. The demand for a safe and peaceful society is continually increasing. The Ubiquitous Society must be developed to pursue convenience but at the same time to fulfill such needs. A fine example is an international logistics system that uses traceability, or an electronic seal system. There are also GPS

[2] Released by MIC and METI jointly.

technologies where we can monitor transportation of harmful substances, or secure the safety of an individual. These technologies, on the other hand, have the danger of conflicting with privacy issues. However, we believe safety, security and privacy issues are not exclusive. Many solutions are proposed to satisfy all needs. With fair market competition and ingenuity, the best solution is likely to be reached. The GBDe's opinion here is that, again, the initiatives from the private sector play a key role.

5.4 National Strategy

Recognizing the value of national strategy, including e-Government, the GBDe welcomes the initiatives from public and private sectors working together to realize the ubiquitous society, such as U-Japan, U-Korea and many other national IT strategies.

The Ubiquitous Society will also benefit developing countries as well, and thus narrow the gaps of digital divide. The appearance of second-generation mobile technologies around 1995 helped developing countries deploy basic telecommunication infrastructure without relying on expensive fixed line infrastructure. We expect that ubiquitous technology will help developing countries leapfrog ahead, helping the global economy flourish in our connected world.

5.5 Overcoming the negative side of ubiquitous society

As the Ubiquitous Society develops, so does the negative side of the society. The most obvious case is spam. Spam affects corporate activity, greatly deteriorating productivity. With a fast advance in technology, it is becoming more serious, with a strong tendency for criminal activity. The problem has further developed to the point where the reliability of the electronic society is questioned, providing a major concern for the development of e-commerce and industry. The GBDe proposed a toolkit approach in 2003. There is no universal cure for this and it means that a comprehensive measure is needed, comprising technological, regulatory, and business issues. The GBDe approves the approach the OECD has undertaken.

5.6 Convergence

Conventional regulatory structures seem to be increasingly incapable of coping with inherent challenges in convergence. In

addressing this issue, the central policy challenge lies in the modification or abandonment of laws and rules that no longer serve the public interest. In the Ubiquitous Society, the scope of convergence is not only limited to telecommunications and broadcasting, but also includes convergence of the real and virtual worlds, including such industries as telecommunications, medical, transportation and the environment. We require a vast number of addressees for the appliances which exist ubiquitously. The GBDe has made many recommendations on convergence, and published 14 important issues and recommendations in 2001. These points must be reiterated as we move forward into the age of the Ubiquitous Society. We must preserve the market's dynamism and speed to produce optimal results from the convergence process.

6. Conclusion

The vision for the Ubiquitous Society is its promise to be the new growth engine for the post-bubble era. In the time of great upheaval for e-commerce, many rules were made with both public and private sector cooperation. As we rise from the devastation of post-bubble trauma to the new growth and realization of the Ubiquitous Society, we once again remind ourselves of the GBDe's principle to resolve issues that we may face.

Ubiquitous Society Framework[1]
RFID
Recommendations

November 30, 2004

Leading Chair (Asia/Oceania)

Tomokazu Hamaguchi
President & CEO
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INTRODUCTION

In 2003, the GBDe held several discussions on RFID and indicated that, while this technology has tremendous implications for the Information Society, there are also many issues to be resolved.

RFID usage is not a technology of the future, but has fast become a reality, causing great debate over the past year. There is a significant gap between the technology supplier and consumer groups concerned with the privacy protection issues related to the use of RFID. It is a crucial element of the Ubiquitous Society, and development in the correct direction is mandatory.

1. RFID and its usage

RFID is a generic term for technologies that use radio waves to automatically identify individual items. The most common method for identifying an object using RFID is to store a serial number that identifies a product, and perhaps other information, in a microchip attached to an antenna. The chip and the antenna together are called an RFID tag or RFID transponder. The RFID reader

[1] Rapporteur Teruyasu Murakami, Chief Counselor, Nomura Research Institute

converts the radio waves returned from the RFID tag into a form that can be transferred to computers.

The application of RFID covers the full value chain, from production to distribution, sales, and after service. As its usefulness is increasingly recognised, various experimental approaches for the implementation of RFID have been used. To list a few of these cases:

1. Wal-Mart and other Western retailers have announced the gradual introduction of palette or case-level RFID in their SCM (Supply Chain Management) from 2005. In its full implementation, a reduction in handling costs, inventory costs and the possibilities of efficient production planning, the minimization of inventory and activation of B to B commerce are expected.
2. In an effort to assist in the prevention of terrorist activities, which have become a greater global concern since 9/11, stricter passport controls, implementation of CSI and application to customs 24 hours beforehand have been enacted. These restrictions are vital in securing the safety of a country and the global standard RFID seal (ISO T/C) will gain momentum in the near future.
3. Food safety, i.e. obtaining information on the production, processing and distribution of meat and vegetables wherever they are produced, is critical in managing risk factors which may affect human wellbeing. A system development for realizing traceability was discussed at ECR Europe (www.ecrnet.org) and in Japan, The application of RFID technology was discussed as a method to enable the streamlining of the supply chain and the disclosure of information to consumers, both for customer satisfaction and the enhancement of additional value. Demonstration studies are already taking place to measure the degree of impact of such cases.
4. In the medical field, studies have been made where RFID has been used to prevent incidents of medical malpractice. The US FDA has announced its planned use of RFID (2007 -) aimed to prevent the distribution of counterfeit drugs.

5. Attachment of RFID at product level in the distribution flow is also in an experimental stage, causing much debate. It is expected that inventory control at a unit level, efficient POS and prevention of counterfeit articles will be some of the results.
6. By using RFID at a production level in products or parts, streamlining of production process and an efficient recycling process can be expected, which may prove positive in relieving certain environmental problems. It may also respond to the social imperative, including issues such as the illegal dumping of harmful materials. Depending upon the disclosures a consumer will allow, companies can ascertain the status of their own product at any time, enabling measures, such as the speedy recall of a flawed product, or to further upgrade their quality of service.

2. Privacy Issues

Many debates are currently being held regarding the contact point with consumers in the value chain. Many consumer groups stress that there is a danger of being able to obtain personal information by granting RFID to products that is eventually owned by consumers, and therefore object to its use.

The GBDe believes that these reasons should not preclude the adoption of this new technology. Further technological innovation to satisfy both the matters of consumer privacy and benefit should be promoted. Technology-neutral, horizontal rules to protect privacy also play an important role. Public awareness and education must be emphasized. In Japan, RFID guidelines were published this year. Many organizations are also announcing guidelines. These guidelines enable higher predictability for a firm's business and we must understand that these guidelines also aim at making innovation have greater impact on economic growth and the eventual benefit to consumers' lives.

3. Global Approach

In today's global economy, value chains inevitably cross the border, demanding international standardizations or inter-operability of systems. For example, spectrum bandwidth for RFID or its licensing system must be compatible among countries as well as coding architecture.

In East-Asia RFID's handling mandate is expected as these countries become the global factory for electronic appliances. In the field of global logistics, an electronic seal on freight containers has already been implemented and experiments are being conducted in the region for food traceability.

4. Conclusion

On October 8, 2004, the GBDe held a successful Ubiquitous Society Forum October in Chicago, where valuable interaction was made between multiple stakeholders. The GBDe will continue to promote these processes and facilitate meaningful dialogue.

Currently, the main public policy issues are:

1. New application and market growth;
2. Consumer trust and privacy protection;
3. Standardization and allocation of resources; and
4. Other concerns.