

IS NEWS

The Information Society Unit Newsletter

HIGHLIGHTS  
 EVENTS  
 PUBLICATIONS

Editor's Note

Welcome to our first newsletter of 2012 and an opportunity to reflect on our achievements in 2011. As usual, we published many new reports that might have escaped your attention, so I encourage you to visit the [publications page](#) of our website (or look into the list of recent publications included at the end of this newsletter). As is the norm in our research environment at IPTS, we have withstood a considerable turnover in our visiting scientists as their contracts come to an end and we say goodbye. At the same time, we welcome new colleagues taking up their research posts. The positive side of these disruptions is that we are continuously extending our network of expertise - no-one ever really leaves IPTS and they inevitably continue to contribute from their new remote locations!

One of the major developments in 2011 was the start of a completely new activity focused on quantifying the Digital Economy (DERP) and the digital single market. We have recruited, and will continue to recruit, new talent into the new team which will continue to grow during the course of 2012. DERP is not a short-term activity but one that will be central to our work for at least the next 3-5 years. We will collaborate with our co-funding partner DG INFSO but also expect to work closely with other DG's and the OECD. In addition we are launching four new, modest-sized, research activities this year, which will blend in with our existing work and which have been carefully agreed during the past six months with our policy colleagues in Brussels - more on these activities later in the year. We are also building capacity to include perspectives from behavioural sciences into several of the new projects,

again more on this aspect in the next edition of our newsletter.

There are many advantages to living and working in Seville, but continuous communication and collaboration with our policy customers can suffer. It therefore seemed a natural step to incorporate Web2.0 functionalities into our day-to-day working environment. We searched high and low for a suitable tool without success. We took the decision in 2011 to develop a specialised tool "The Information Society Collaborative Science Portal", which is now in production test on our servers. Over the course of 2012 we shall be introducing this tool into our work with colleagues in the Commission's DGs, with contractors and with our scientific community. Access will be by invitation and through the Commission's ECAS (authentication service). The tool provides the (by now) familiar set of Web2.0 style collaboration tools that we have all grown accustomed to in our leisure activities. In this case, however, they have been specifically customised to make our research more effective and our communications more continuous. Do not be surprised to receive an invitation to join one of our research communities.

So, as ever, the New Year is full of good prospects and interesting challenges. Please do contact us if we are working on topics that interest you and feel free to pass this newsletter to colleagues and associates.

I look forward to, and wish you all, a very successful 2012.

David Broster  
 Head of the Information Society Unit

European Commission  
 Joint Research Centre (JRC)  
 Institute for Prospective Technological Studies (IPTS)

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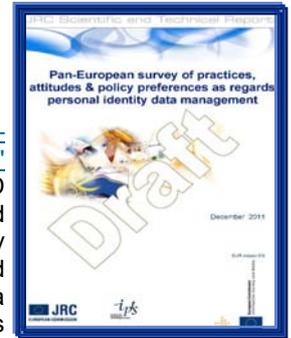
Events

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## Eurobarometer Survey on "Attitudes on Data Protection and Electronic Identity in the EU"

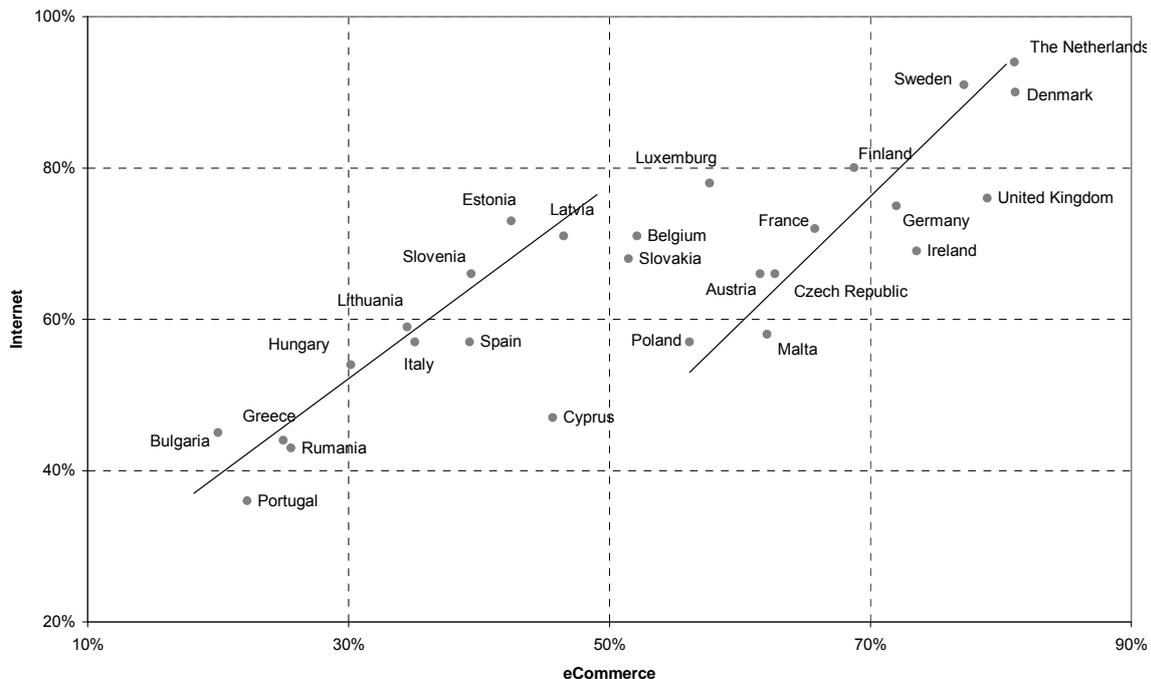
As mentioned in Newsletter 5, the findings of [Special Eurobarometer 359 – "Attitudes on Data Protection and Electronic Identity in the European Union"](#)

was first presented in June 2011. A further analysis of the collected data was performed by the eID team at the IS Unit, and a report entitled "Pan-European survey of attitudes on Data Protection and electronic identity" was authored, presenting the views of Europeans concerning their personal identity data: how and why they disclose them, how it is processed, the degree of protection it enjoys, and should enjoy. Europeans use the Internet frequently and know they have to disclose their data (biographical, social, financial, medical) and manage their online identities if they are to reap its benefits. Almost three in four Europeans accept that disclosing data is part of everyday life and are aware of the risks in online transactions. They understand they are not in control and employ a variety of methods to protect their identity. The report is structured in four sections: e-Commerce, Social Networking Sites (SNS), Authentication and Identity, and Medical Information as personal data. In this Newsletter (6<sup>th</sup> issue) we present the main findings related to eCommerce and SNS.



### eCommerce

eCommerce is becoming mainstream in Europe; about 40% of all EU27 citizens engage in this activity (almost 60% of European Internet users). Overall, the typical eCommerce user is older (22-55), typically male, better educated, and a heavy Internet user. Thus, socio-demographic characteristics (i.e. affluence, education, age) are the factors that strongly influence eCommerce uptake overall, while national factors (regulation, market maturity, or supply of services) are responsible for the uneven take-up of eCommerce in Member States. There appears to be two groups of Europeans, one at a lower level of eCommerce uptake and one at a higher level; for both blocks there is an almost perfect correlation between Internet use and eCommerce.



#### Location

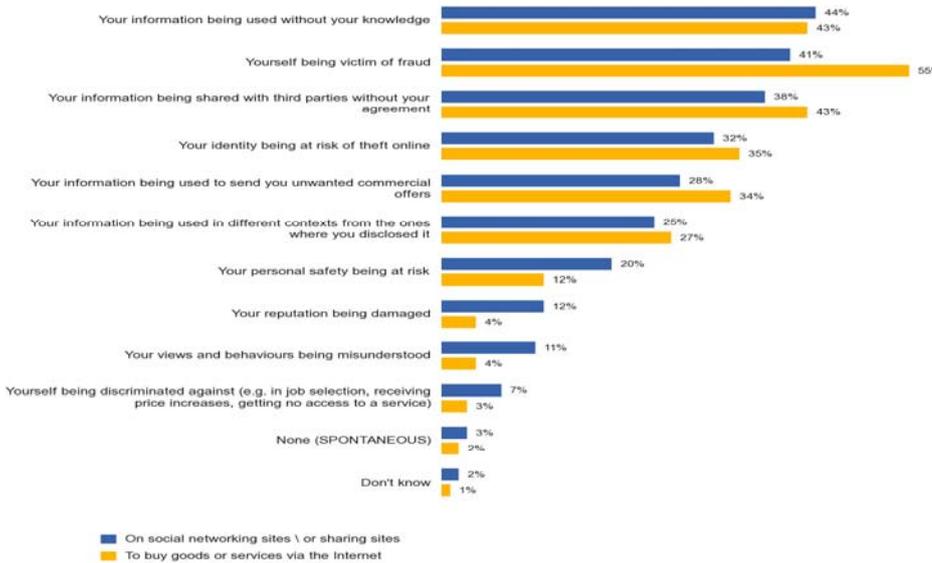
While 46% of all EU Internet users shop online within the EU, very few of them make cross-border online purchases. There is little difference between those buying online (18%) from an EU Member State other than their own and those buying online (13%) from a location outside the EU. It can be said that virtually nobody shops cross-border without first shopping in their own country. However, people shopping online in their own countries also tend to do home banking and eGovernment, which indicates that online shopping within national borders is more ingrained in the national Internet experience. People who do more online also shop cross-border and outside the EU; they also largely support the need for coherent regulation of data disclosure cross-border.

#### Risks

The main and most frequent risks reported by the respondents regarding their eCommerce activities concern fraud (55%), stealth use and stealth sharing of one's information with a third party (both at 43%), and identity theft (35%). Risks to reputation and personal safety are mentioned by far fewer respondents. Perceptions of risk do not vary significantly across eCommerce contexts and thus do not hamper cross-border eCommerce. Identity theft is considered more of a risk in the UK and Ireland while fraud is more reported in France, Sweden and the UK; Germany, the Netherlands and Belgium perceive more risk in third-party re-use of personal data.

## Social Networking Sites (SNS)

More than a third (34%) of all Europeans use SNS (52% of Internet users). Typical SNS users are more likely to be younger, female, well-educated, heavier-Internet users and still studying or unemployed. SNS users consider their social information more personal than off-line respondents do, but much less than the average Internet user. They thus disclose it while they do not disclose sensitive (financial, medical) information. There are significant national differences in the uptake of SNS users in Europe; SNS are used most often in Hungary (80%), Latvia (73%), Malta (71%) and least in Germany (37%). Age rather than Internet use plays a key role at national level; for the age group 15-39 Internet and SNS use is almost synonymous while for the age group 55+ Internet use includes very little SNS use (the 40-54 age group tend to behave like the 55+ group).

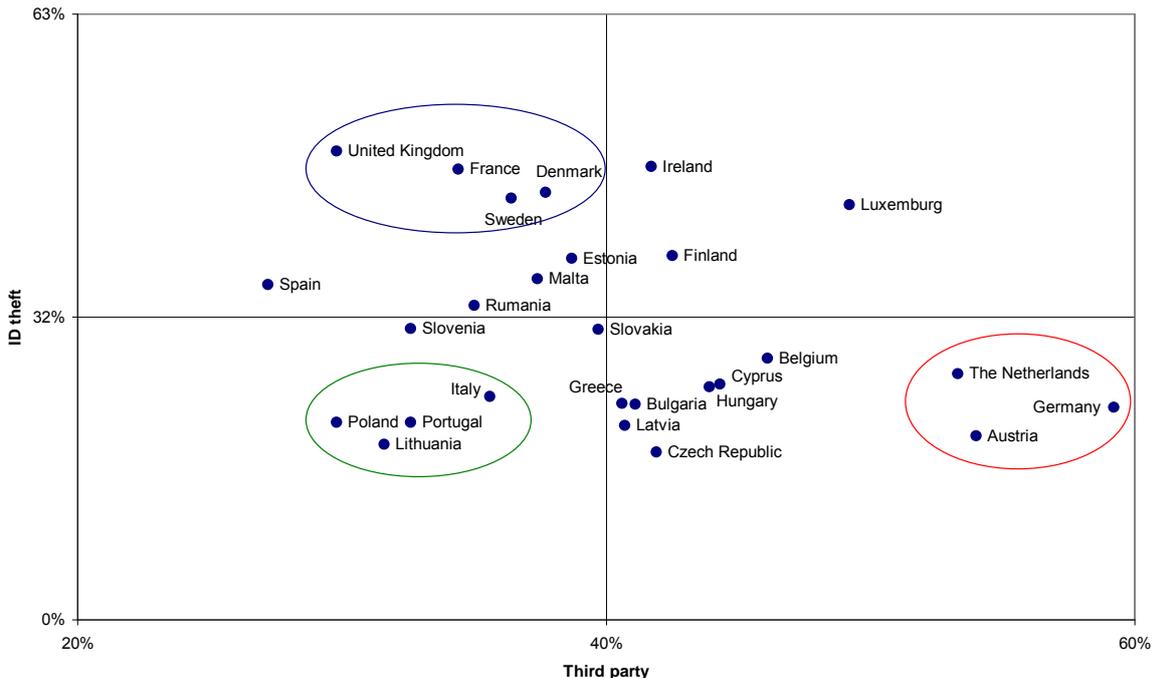


### Perception of Risk SNS vs eCommerce

Practically all survey respondents (98%) perceive some sort of risk in using SNS. SNS users are likely to consider use of their information without their knowledge the greatest risk (44%), followed by fraud (41%). SNS users share similar risk perceptions with eCommerce users, with the exception of being the victims of fraud, or reputation being damaged which are perceived as more of a risk for SNS users. It thus seems that the transaction environment (financial vs social), which is in turn related to the type of information being disclosed, has little effect on the perception of risk, even for specific risks such as fraud (41% SNS vs 55% eCommerce) or reputation (12% SNS vs 4% eCommerce) where differences are not as large as may have been expected.

### Identity theft and unauthorised use by country

Comparing risks of 'identity theft' and 'unauthorised third party use', three groups of countries are distinguished. First, the countries with high perceived risks of unauthorised re-use of personal data, but low perceived risk of identity theft on SNS [The Netherlands, Germany, Austria]. People in these countries may assume that SNS are internally safe but controlled environments. The second group presents high perceived risks of identity theft, but low perceived risks of unauthorised re-use of personal information disclosed in SNS [UK, France, Sweden, Denmark]. In these countries, people may trust SNS operators more than the average EU citizen. Finally, the third group of countries is where both the mentioned risks are above the EU27 average [Poland, Lithuania, Portugal, Italy]. However, in the Member States last mentioned, SNS activity is perceived as less risky overall.



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## Digital Natives

Digital natives were born and raised with digital technology. They are the younger Europeans (aged 15-24) and still mostly studying. They use the Internet more (94% vs 66% the EU average use), practice SNS more (84% vs 52% EU) and use websites to share pictures, videos, movies (73% vs 44% EU). They are less likely to shop online than older Europeans (54% vs 60% EU), perceive disclosure as unavoidable (41% vs 28%), disclose more social information in exchange of free services (48% vs 29% EU), feel more in control and perceive less risk in using the Internet. They also read privacy statements and adapt their behaviour accordingly, believe in strong uniform protection of their data and value their digital profile as much as others. In general, they behave in ways that are beneficial to them now but detrimental to their best interests in the long run as they leave behind a digital trail that would be difficult to conceal or manage. They seem not to understand the systemic risks that result from their actions: were they to do so, they would wish for safety net.

### Methodological Note

Multivariate and multi-level analysis was performed on the answers to the 39 questions posed to 26,574 European respondents of the Eurobarometer 359 survey. The aim was to identify clusterings of attitudes, geographic areas where perceptions and attitudes diverge or converge, analyse socio-demographic variance and interpret behaviour so as to contribute to address key policy challenges.

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## IPTS launches its Digital Economy Research Programme

The Information Society unit has recently launched a new Digital Economy Research Programme. This programme focuses on some of the core economic policy issues of the [Digital Agenda for Europe](#) – a flagship initiative under the [Europe 2020 policy agenda](#). It is co-financed by the European Commission's Directorate-General for Information Society and Media (DG INFSO) and provides economic analysis in support of the Digital Agenda policy measures. At the same time, it broadens the IPTS customer base to other DGs involved in the implementation of the Digital Agenda, most notably the Directorate Generals Internal Market and Services (MARKT) and Health and Consumer Protection (SANCO).

The main components of this economic research programme are:

- ◆ Identifying and quantifying remaining barriers to e-commerce and contributing to the achievement of the Digital Single Market;
- ◆ Capturing the economic effects of copyright-related issues in the Digital Single Market;
- ◆ Developing a methodology to quantify the economic costs and benefits of changes in privacy;
- ◆ Measuring the contribution of the Digital Economy to economic growth and jobs in the EU.

The completion of the EU Digital Single Market remains the main policy priority of the Digital Agenda. Obstacles for the single market are regulatory barriers to e-commerce. Discussion on policy options on these issues has been hampered by the absence, reliability and/or outdated official statistics on e-commerce. The proposed IPTS research will follow a different route. It will harvest up-to-date statistics directly from the internet to map current e-commerce flows in and between EU Member States, and use these to estimate the economic impact of various regulatory, socio-economic and infrastructure-related barriers to e-commerce.

Digital technology has weakened the effectiveness of copyright protection in media industries. At the same time, differences in copyright protection regimes across Member States are perceived as a considerable obstacle to a Digital Single Market. However, the economic implications of all this for creative media are not well understood. The Digital Economy programme aims to shed more light on these subjects.

Citizens' privacy is a major issue for policy makers. So far, most research has focused on the legal and regulatory aspects of privacy. This new research line will approach it from an economic angle, aiming to quantify the benefits as well as the costs for consumers of changes in privacy protection and the economic drivers of these changes.

There is potential here to use insights from behavioural economics accumulated elsewhere in the Joint Research Centre (JRC) and in DGs SANCO and MARKT.

A substantial part of digital economy research to date essentially focuses on the supply side: the impact of investment in ICT equipment on productivity and economic growth. This new IPTS research line aims to shift attention towards the (far less studied and understood) demand side: it will quantify the uptake and benefits of digital technology for consumers, how it affects consumer behaviour and consumption patterns, and how this drives economic growth. The supply side will not be neglected however, as the research line also aims to develop new methods to measure the economic footprint of digital technology and the impact on labour markets – questions that remain highly pertinent.

The overall approach taken by the Digital Economy Research Programme is to build separate economic modules that give responses to the policy issues mentioned above. The long-term ambition would be to interface these modules into a macro-economic simulation model, ideally building upon existing models at the IPTS. However, in the shorter term, the emphasis will be on delivering less comprehensive but relevant and timely research results for information society policy makers.

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The Polish Presidency of the European Union and the European Commission's Directorate General for Information Society and Media

organised the 6<sup>th</sup> Ministerial eGovernment Conference, "[Borderless eGovernment Services for Europeans](#)", which took place on 17 - 18 November 2011 in Poznań, Poland. This conference was a major event of the Polish Presidency and attracted some 900 stakeholders from around the world, including ministers from EU Member States, officials from national, regional and local administrations, industry and civil society representatives and experts.

David Broster, Head of the Information Society Unit, made a visionary presentation entitled "Digital Governance Tomorrow: Extrapolation or Discontinuity?" in [Session 1: Scenarios of Future eGovernment and eSociety](#), which was partly based on the work of the FP7 Support Action "[CROSSROAD - A participative roadmap on Electronic Governance and Policy Modelling](#)". The presentation aimed to establish a dialogue on electronic identity and potential behaviours in a Digital Society.

He also presented key findings from the pan-European Digital Identity survey [see article on page 2-4], which was jointly funded by the European Commission's Directorate Generals JRC, INFSO and JUST and carried out by EUROBAROMETER. These findings gave a representative view of European citizens' perceptions of digital identity today. The relationship between these perceptions and the ways Digital Governance could evolve in the future was then discussed, highlighting possible gaps and challenges. The presentation concluded with some thoughts on the potential

of social media for governance in relation to citizen engagement and participation, with a specific focus on the interplay between identity management and possible ICT-stimulated behaviour in a digital society.

The other speakers in the session included Ms Samia Melhem, chair of the eDevelopment Community of Practice and leader of the ICT unit's Knowledge and Learning Program at the World Bank Group, and Dr. Pierre Rossel, senior scientist at the College of Management at the Ecole Polytechnique Fédérale de Lausanne, Switzerland. Ms Melhem presented the World Bank's eTransform Programme, highlighting tensions between growth/rate of change of ICTs, innovations in private sector and the public sector's "inertia" and inability to simplify/streamline its administrative procedures and management. She emphasised the role of agents of change, in particular that of youth in a time of economic constraints, and the need for ICT and service delivery improvements. Dr Rossel's presentation on 'Scenario design stakes and hurdles for eGovernment in a learning intensive society', suggested that while Europe, like the rest of the world, has a highly turbulent and uncertain future, the eGovernment domain may possibly be a stabilizing factor. In this context, a key question is not only how to envisage the future, but how to reflect on it in order to better assess emerging options and be ready to evaluate the depth, robustness and inspirational value of forecasts, scenarios and visions as proposed by academic and institutional researchers and consultants. He argued that being ready, willing and able to assess the strengths and weaknesses of prospective studies is a necessary first step towards reaching a deeper and more robust future in the eGovernment domain.

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## Bridging Communities for Next Generation Policy Making

CROSSOVER is a Support Action for scientific networking funded under the European Commission's Seventh Framework Programme (FP7), Objective 5.6 "ICT solutions for governance and policy modelling".

CROSSOVER started in October 2011 and will last 18 months. Its main goal is **to consolidate and expand the existing community active in the domain of ICT for governance and policy modelling** through:

- ⇒ bringing together and reinforcing the links between the different global communities of researchers and experts;
- ⇒ reaching out to and raising the awareness of non-experts and potential users, particularly high-level policy-makers and policy advisors; and
- ⇒ establishing the scientific and political basis for long-lasting interest and commitment to next generation policy-making, beyond the mere availability of FP7 funding.

The CROSSOVER Consortium is composed of the following core partners: Athens Technology Centre (ATC), University of Rome La Sapienza – CATTID, Tech4i2, UK, GEIE ERCIM (France), the European Host of the World Wide Web Consortium W3C, Millennium Institute (USA) and the European Commission, JRC-IPTS. There are also a number of supporting partners, which are at present: The Lisbon Council, IBSG Cisco, The Food and Agriculture Organisation (FAO), The United Nations Department of Economic and Social Affairs (UNDESA) and the World Economic Forum - Working Group on The Future of Government.

**Call for Animators:** The CROSSOVER project consortium seeks to appoint up to 5 researcher and practitioners as members of the CROSSOVER Animators Committee, in order to stimulate global collaboration and peer-to-peer exchange between practitioners, researchers and public officials in the field.

More information on CROSSOVER is available at [www.crossover-project.eu](http://www.crossover-project.eu). Contact: [Gianluca.Misuraca@ec.europa.eu](mailto:Gianluca.Misuraca@ec.europa.eu)



## International Conference

### "Global ICT industry: changing landscape? - The future of European ICT R&D"

19-20 October 2011, Brussels



The Information Society Unit at JRC-IPTS has been investigating the Information and Communication Technologies (ICT) sector and its R&D for several years as part of the [PREDICT](#) research project. The PREDICT report series offers an analysis of the EU ICT industry and its R&D over several years. The conference was organised to disseminate the results of this research and also as a forum to discuss the questions raised by these results, such as:

- What are the global challenges that affect the ICT industry and its R&D? How is the European ICT industry adapting to these new times?
- What is happening in the new telecom, media and internet ecosystem? How is this impacting other parts of the value chain?
- Is the role played by the EU ICT manufacturing industry in Europe decreasing? Can Europe let its ICT manufacturing relocate to other regions of the world?
- What is the future of the software industry in Europe? How can Europe benefit from the increasing role and importance of e-services?
- How can the innovation capacity of the EU ICT industry be strengthened? How can the "innovation gap" between R&D and commercialisation be filled?
- How can the EU ICT industry better take advantage of internationalisation of ICT production and R&D? How are EU ICT companies positioning themselves on the markets of emerging economies?
- How should policies help at EU, national, and regional levels?

The conference was attended by one hundred participants. These included a balanced mix of representatives from industry, policy, academia and consultancies. Twenty-five presentations were made by speakers from

these different areas. The presentations and subsequent discussions had a strong international dimension. The main discussions of the [conference](#) are briefly summarised below.

#### The place of Europe in the global ICT industry ecosystem

A new ICT industry ecosystem is emerging where the roles and ambitions of existing and new players are being redistributed across different interconnected layers (e.g. manufacturing, services, telecom, media, internet, software-based applications, etc.). A diagnosis on whether or not the state of the EU ICT industry has improved in recent years clearly varies according to the segments of the industry.

Europe is an important producer of ICT (4.7% of its GDP in 2008), with a strong ICT services orientation (3.7% of GDP). European ICT companies are, however, smaller and less numerous than in the US, and do not grow as fast. In addition, companies from South Asia are emerging, essentially from Korea, Taiwan and more recently -and more strongly- from China.

The 2009 economic crisis reshaped the industry worldwide. In some segments, US and Asian ICT companies have emerged stronger from the crisis than EU companies (e.g., smartphones, internet). Though EU ICT companies have reacted to changes in the ecosystem, it looks as if the EU telecom ecosystem has not managed to lead the mobile internet wave. On the telecom equipment side, EU companies already face increasing competition from large emerging actors from China with strong ambitions (e.g. Huawei) and this will grow in the future. Take up of internet-based solutions in all sectors of the economy is expected to generate a new wave of innovation and market

opportunities (cloud computing is an example).

Europe is an important location for ICT R&D also, as is the US. This is shown by levels of investment and patenting, though the EU ranks behind the US in volume of ICT R&D in part because of the smaller size of its ICT sector. South East Asia is emerging as a new location for ICT R&D, with US companies seemingly taking better advantage of knowledge sources in South East Asian than EU companies.

Not surprisingly, talents are considered to be a key resource for companies. World regions with the best supplies of talent – sometimes niche talents- are preferred locations for R&D facilities.

The role of SMEs is probably underestimated by available R&D statistics, but in an economy where services are overwhelmingly based on ICT, this role is central.

#### What is Europe's vision?

A key question debated at the conference was: What does Europe want to be, as a user or producer of ICT and as location for ICT R&D? There is no doubt that the EU is a very big market for ICT products and services, however its use of ICTs may not be sufficient to benefit from their economic potential. South Korea for example is aiming to become the world's fifth largest IT exporter by 2015. Taiwan managed to become a "king maker" because of organisational innovation and the role played by Taiwanese suppliers in the value chains of their main customers (such as Apple, HP), creating a less visible but highly effective alliance with US companies in the R&D production process.

A possible strategy for Europe is to remain an important source of talents and an important node in global production networks, able to capture a large share of value added. As for European companies, in order to remain competitive, they must take advantage of local talents, resources, and markets, globally. They need to develop their own bold vision of the role

they want to play: for example, that of a main value node in their value chain, in the context of new forms of competition created by the new ICT ecosystem (with blurred borders between manufacturers, application and service providers, media and internet).

### The role of R&D and innovation

EU ICT companies, like their global competitors, invest a significant amount of revenue in R&D. Several EU ICT manufacturing -and also software-companies invest more than 15% of their revenues in R&D.

A series of puzzling facts on ICT R&D were however presented and discussed during the conference.

Data show that in recent years R&D investments by ICT firms globally have been mostly pro-cyclical (i.e. correlated with sales trends), though one would have expected them to be counter-cyclical. Some large EU ICT companies report that R&D budgets are increasingly limited by financial constraints (from shareholders, financial markets). Is R&D therefore increasingly seen as an investment in an existing business model with hopes of a short-term fixed return on investment, rather than a way to develop new forward looking business? Some speakers also questioned the importance, for large firms, of public funding in ICT R&D (e.g. EU programmes). Also a very successful US company, Apple, reports rather low investments in R&D compared to its level of sales (although this might be the result of Apple's value chain organisation, where a good part of R&D is invested by its partners).

New innovation models have recently emerged, including "open innovation" and "social innovation". Some large EU ICT companies are going through a "democratisation of innovation" with hundreds of thousands of contributors. Other companies – like again Apple - claim that their own vision is what drives their innovation. Creation of new markets is however often the result of many technologically-driven innovations coming together (convergence). To take the example of on-going mobile internet development, it could not happen without innovation in terminals, network technology, software, semi-conductors, etc.

Only a few really innovative companies are successful in creating new markets. Most companies follow (rather than "surf") the innovation waves, and for these, innovation is essentially competition-driven.

It may also be misleading to think about innovation as being just science and technology; many innovations are "frugal" and occur outside the traditional scientific environment (as shown, for example, by the case of India).

R&D remains nonetheless an important tool in an industrial strategy and it is becoming very international in nature. EU companies, especially large ones, are now actively chasing the best talents globally.



### An EU innovation and entrepreneurship gap – Enabling the growth of new firms

The observed gap between the EU and the US in ICT R&D investment and performance figures might not necessarily be the sign of a gap in ICT R&D *per se*, but rather the result of the smaller EU ICT sector which has smaller companies. Europe probably suffers more from an innovation and entrepreneurship gap than a pure ICT R&D gap. Several speakers mentioned that in many ICT R&D fields, Europe is either a world leader or is very strong. Europe seems, however, to have difficulties in translating this strength into a stronger industrial position. There seems to be a gap between the shares of ICT R&D and of ICT manufacturing. For instance, in the large solar energy market, the EU has the largest R&D centres but is lagging behind in production, and subsidies to consumers are used for the acquisition of foreign equipment. The same is happening in other key enabling technologies.

Europe also suffers from difficulties in supporting the creation of new firms and in enabling them to grow into global players. It is more difficult for young companies in Europe to grow than in other parts of the world. This is particularly obvious in new sectors like

the internet industry, in which no EU company has yet reached a global scale.

### Policies and indicators

What is the role of public policies in this context? What policies are needed? And what is needed by policy makers in order to design the right policies?

If Europe wants to remain a significant economic player in ICT, and an important source of ICT R&D, rather than just a large market for ICT products and services, it needs to further strengthen its industrial and innovation policies. Particularly important are those policies that help the EU to grasp the opportunities of new innovation waves, and help new companies to emerge and grow into large global players.

Europe needs policies that create conditions for a competitive environment and conditions for new companies to emerge and grow on a global scale. It needs support for fast and flexible entrepreneurship, easier access to finance, development of a real single EU market, European IPR homogeneity, and education policies to ensure the supply of talents. This support should encourage dense networking of actors, natural enterprise turnover, trial and error, incremental innovation, and development of personal services (such as games, virtual presence, geolocation, etc. - sometimes called "non-serious").

EU, national and regional policies should be better aligned.

In terms of international R&D collaboration, particularly with Asian countries (and notably China), there is a need for reciprocal agreements and rules.

With increasing internationalisation of ICT production and of ICT R&D, several indicators should be watched beyond official statistics: such as the evolution of global distribution of value added in different ICT sectors and ecosystem layers, the global distribution and networking of R&D centres or the distribution and mobility patterns of ICT R&D employment. Shares of global ICT exports and ICT-related investments should also be watched.

Continues on page 8...

## Future Outlook

The conference helped to better understand the positioning of the EU ICT industry and its R&D in the global landscape. Not all initial questions could be answered and new key questions were asked, for example: What do we (Europeans) want as our future? What initiatives at European, national or regional levels should we take to get what we want? What role can the ICT sector play in achieving our goals? Is there a need for a new ICT-specific innovation policy, built on a different basis to current European initiatives, and that would target both innovation in the ICT sector itself and ICT-enabled innovation in the rest of the economy and society?

The conference outlook was neither negative nor pessimistic. Recommendations for policy makers were to develop bold visions, which should aim to "facilitate" the fight against fragmentation, to build and develop strengths (important to develop skills), and to work with the rest of the world.

As one of the speakers underlined, innovation and ICTs may not be given enough attention by policy makers, though they are key to the recovery and future of Europe: "The four key drivers of ICT (geo-economics, demand, business models and innovation) are all changing radically, and a 'fifth element' is necessary to 'keep them together'. It combines collaboration (with new roles for public policies), focus on content, value, skills, and imagination. And Europe is uniquely placed to combine all of the above, and turn it to its global advantage" [See keynote presentation by Dr. Bruno Lanvin on the [Conference webpage](#)].

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### Related reports published in 2011 by JRC-IPTS

- ◆ *The 2011 Report on R&D in ICT in the European Union*. G. Turlea, D. Nepelski, G. De Prato, J.-P. Simon, A. Sabadash, J. Stancik, W. Szewczyk, P. Desruelle, M. Bogdanowicz
- ◆ *The Top World R&D-investing Companies from the ICT Sector: A Company-level Analysis*. D. Nepelski, J. Stancik
- ◆ *Internationalisation of ICT R&D*. G. De Prato, D. Nepelski, J. Stancik
- ◆ *Performance of ICT R&D*. G. De Prato, D. Nepelski, W. Szewczyk, G. Turlea
- ◆ *The ICT Landscape in BRICS Countries: Brazil, India, China*. J.-P. Simon

All reports are available on the [PREDICT webpage](#).

## ICT for Learning and Skilling

IPTS research on ICT for learning and skilling focuses on the use and potential of technologies for learning and on changing educational needs in terms of new skills and new pedagogies. In this section, we offer an update of the three major projects currently being carried out by the IPTS in this field.

### The Final Report of the Future of Learning project has been published!

***The Future of Learning: Preparing for Change (2011)*. C. Redecker, M. Leis, M. Leendertse, Y. Punie, G. Gijsbers, P. Kirschner, S. Stoyanov, B. Hoogveld. JRC-IPTS, EUR 24960 EN**

The "[Future of Learning](#)" study, launched by JRC-IPTS in 2009 on behalf of the Directorate General for Education and Culture (DG EAC), employed a series of structured stakeholder consultations, involving experts, policy makers and teachers, to envisage how and what European citizens will learn in 2020-2030.

The overall vision generated on the basis of extensive stakeholder consultations is that personalisation, collaboration and informalisation (informal learning) will be at the core of learning in the future. The central learning paradigm is thus characterised by lifelong and life-wide learning and shaped by the ubiquity of

Information and Communication Technologies (ICT).

Furthermore, generic and transversal skills will become more important due to fast advances in technology and structural changes to European labour markets that are related to demographic change, globalisation and immigration. These skills will support citizens in becoming lifelong learners who flexibly respond to change, are able to pro-actively develop their competences and thrive in collaborative learning and working environments.

To achieve the goals of personalised, collaborative and informalised learning, holistic changes need to be made to curricula, pedagogies, assessment,

leadership, and teacher training. Mechanisms also need to be put in place which make flexible and targeted lifelong learning a reality and support the recognition of informally-acquired skills.

[Five vivid animations](#) have been produced which illustrate how each individual may benefit from the variety, flexibility and scope of future lifelong learning opportunities. The findings of the study and also these scenario animations were presented at a lunchtime conference with DG EAC in Brussels, which was attended by over 70 participants.

More information on the [project webpage](#).

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## Developing a framework for digital competence

The [DIGCOMP project](#) (identification and European-wide validation of the key components of digital competence for all levels of learners) aims to develop a framework for digital competence by identifying its key components in terms of the knowledge, skills and attitudes that citizens need to be digitally competent.

The first step for the development of the framework consisted of a mapping exercise, in which both academic and policy literature was scanned in order to understand how digital competence is currently perceived and conceptualised. The [conceptual mapping report](#) placed digital competence at the convergence of multiple literacies, namely: media literacy, information literacy, internet literacy and ICT literacy.

The second step consisted of the identification, selection and analyses of 15 frameworks for the development of digital competence. Cases were drawn from school curricula, implementation initiatives, certification schemes and academic papers. The analysis of the cases highlighted three dimensions to be reported upon, namely: definition of digital competence, competence areas and levels. The following encompassing definition is proposed:

*Digital competence is the set of knowledge, skills, attitudes (thus including abilities, strategies, and awareness) that are required when using ICT and digital media to*

*perform tasks; solve problems; communicate; manage information; collaborate; create and share content; and build knowledge effectively, efficiently, appropriately, critically, creatively, autonomously, flexibly, ethically, reflectively for work, leisure, participation, learning, socialising, consuming, and empowerment.*

The competence areas that emerged from the selected frameworks can be summarised as follows:



Finally, three main criteria for establishing levels of Digital Competence could be identified: 1. age of target group; 2. cognitive complexity; 3. width or depth of the application-related content (i.e. how many applications the user can operate or how sophisticated their use of applications is).

The project is being carried out for the Directorate-General for Education and Culture. Its aim is to contribute to Action 58 of the [Digital Agenda for Europe](#) on developing tools to identify and recognise ICT skills which, in the case of the DIGCOMP project, refer to the competences of ICT end-users.

The reader is encouraged to follow the progress of the project on the [project webpage](#).

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## Future Scenarios on Teacher Collaboration Networks

JRC-IPTS ran two future scenario workshops on teacher collaboration networks at two eTwinning events. The first took place as part of the conference '[eTwinning: Leading 21<sup>st</sup> century Schools](#)' (10-12 November 2011) held in Berlin, which was attended by around 250 school leaders from all over Europe. The second workshop was held in Genoa, at the [Policy and Innovation Committee meeting](#), as part of the [Eminent: European Schoolnet Conference for policy makers, practitioners and industry](#) (16-17 November 2011).

The data collected during these events will be presented in the final report of the [Teacher's Lifelong Learning Network](#) (Tellnet) project in 2012. The IPTS scenarios on future teacher collaboration are also on the [TELLNET blog](#) and were highlighted in EUN's newsletter of December 2011.

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## ICT to support migrants' integration

The [Europe 2020 strategy](#), building on the i2010 inclusion policy framework, establishes that ICTs constitute an important means of tackling social and economic inclusion. In this context, since 2006, IPTS has been providing specific policy support and research activities focusing on Digital Inclusion initiatives and the enabling role of ICTs for migrant integration.

Details on projects, events and publications available on the relevant [webpage](#).

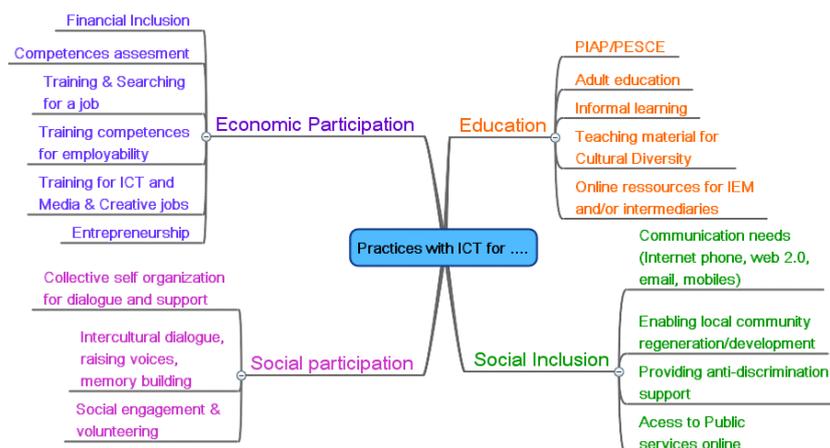
Contacts: [Clara.Centeno@ec.europa.eu](mailto:Clara.Centeno@ec.europa.eu),  
[Gabriel.Rissola@ec.europa.eu](mailto:Gabriel.Rissola@ec.europa.eu)

### ConnectIEM: A survey study of 5000 migrants in 8 EU member States

Information and communications technologies (ICT) have great potential to help immigrant communities participate more fully in society, through improved learning, social life, and access to employment. However, hard evidence on migrants' usage of ICTs and how these support their integration in their host countries and communities is still very limited.

In order to address this gap, the Directorate General for Information Society and Media and IPTS are carrying out a study which for the first time will gather through an on-line survey statistically representative and comparable cross-country data on the ICT skills, access and usage of "connected migrants" from the main migration groups living in 8 EU Member States. It will then explore the relationship between internet usage and integration processes and will develop evidence-based policy options.

Contact: [Gabriel.Rissola@ec.europa.eu](mailto:Gabriel.Rissola@ec.europa.eu) Project website: [www.connectiem.net](http://www.connectiem.net) (Active) On-line survey: <http://www.15minutescloser.com>



## Recently PUBLISHED Reports

### Bridge-IT Booklet: Good Practices of ICT initiatives for migrants' integration

The [Bridge-IT Booklet](#) presents a selection of 60 Good Practice initiatives that aim to use ICT for better education, economic participation, social interaction and civic engagement of immigrants and ethnic minorities (IEM), thus exploiting the possibilities offered by the information society within a culturally diverse Europe. Initiatives are located in different places and Member States within the EU.

This inventory of practices has been prepared by IPTS in collaboration with the University of Barcelona and more than 20 organizations across Europe, in the context of the Bridge-IT Thematic Network funded by the European Commission's Competitiveness and Innovation Framework Programme (CIP ICT PSP Programme). It provides guidance, inspiration and food for thought to all stakeholders involved in the development / usage of ICT-based solutions which target immigrants' and ethnic minorities' needs.



### ePractice Workshop Report: Understanding the Role of ICT in the Integration of Immigrants and Ethnic Minorities (IEM)

The [ePractice Workshop Report](#) reflects the presentations, discussions and conclusions of a workshop (Brussels, 23/11/2010) which aimed to identify good practices among ICT-enabled or supported initiatives promoting IEM participation in lifelong learning, and improving their employability, entrepreneurship and social integration.

This workshop showed that though ICT already plays a diverse and positive role in the integration of migrants and ethnic communities in Europe, its huge potential has yet to be exploited. Participants stressed the importance of continuing to promote digital inclusion measures, and to support awareness-raising actions and the training of social actors to use ICT in their integration projects.

New policy options for the expansion of existing initiatives were discussed, particularly the funding of networking activities and platforms for exchanging good practices among multiple stakeholders across Member States.

### ICT for the Social and Economic Integration of Migrants into Europe - Analysis of supply and demand

This is the [final report](#) on a study carried out by IPTS on 'The potential of ICT for the promotion of cultural diversity in the EU'. The study explored ICT supply and demand aspects for and by immigrants and ethnic minorities in Europe and the related policy implications in their integration context.

This report analyses a selection of the main findings from 5 previous publications from the study: an overview of digital support initiatives for/ by IEM in the EU27 (2008); a more detailed analysis of ICT supply and demand in IEM communities in France, Germany, Spain and the UK (2009); and three reports on case studies in France, Germany and Spain (2009). It puts these findings into theoretical perspective, indicates the policy implications and makes recommendations.

### The role of intermediaries in eInclusion

#### Under the Radar: The Contribution of Civil Society and Third Sector Organisations to eInclusion

EU eInclusion policy goals included in the 'Digital Agenda for Europe (2010-2020)' aim to develop digital competences for empowerment and emancipation and also to use ICT in support of social inclusion.

The vast majority of eInclusion initiatives in this field are being carried out by third sector and public sector organisations. In order to better understand how EU-third sector synergies could be strengthened in favour of the eInclusion process, JRC-IPTS has carried out an exploratory research study of the structure, characteristics, needs and challenges of civil society and Third Sector Organisations (TSOs).

#### Key findings

1. TSOs contribute to eInclusion objectives by:
  - a. Performing activities, which increasingly use ICT as instruments, including digital inclusion, to fight exclusion and help socially disadvantaged groups,
  - b. Offering employment opportunities, e.g. they engage large numbers of volunteers who get the opportunity to be exposed to and practice with ICT,
  - c. Providing ICT support to other TSOs,

- d. Carrying out ICT research and development and developing free culture.

2. TSO initiatives also contribute to the wider DAE objectives by supporting digital inclusion; empowering users and actors / volunteers; acting as social inclusion agents; and providing a reservoir of social innovation and creativity.
3. There is a need to identify those TSOs which are "under the radar". There are large numbers of diverse small, medium and/or ephemeral organizations in this category which enable citizens to experiment, innovate and explore new uses, training and development of ICT.

The policy options suggested aim to increase the capacity of the third sector and develop opportunities for partnerships between public authorities and TSOs.

JRC-IPTS Report: [Under the Radar: The Contribution of Civil Society and Third Sector Organisations to eInclusion](#) (2011).  
Authors: A. Haché, Editor: C. Centeno. EUR 24857.

More information available on the [webpage on eInclusion](#).

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#### Measuring the Impact of e-Inclusion Actors in Europe

The implementation of the Digital Agenda for Europe, and in particular, the implementation of the Digital Literacy and Skills Objectives for Empowerment and Emancipation requires a sustained level of participation and commitment from different stakeholders.

In this context, digital inclusion and social inclusion actors such as Public Internet Access Points, public libraries, Third Sector Organisations

including NGOs and eInclusion 'intermediaries' such as social workers play a crucial role. They provide digital literacy to members of excluded groups and use ICT to support the social inclusion of people at risk of exclusion by helping them to acquire new skills or find work.

In spite of the importance of the role of these actors, little is known about who and how many they are, their specific roles, their target groups, the needs

they fulfil, and the impact of their actions from socio-economic and digital inclusion perspectives. To address this knowledge gap and support future policy development, IPTS has launched a study (2012-2013) that will map eInclusion actors, and develop and test a practical impact assessment framework to be broadly adopted by grassroots organisations across the EU.

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### Digital Games for Empowerment and Inclusion

The objective of the exploratory study "[Digital Games for Empowerment and Inclusion \(DGEI\)](#)" launched in September 2011 and co-funded by the Information Society Unit of the JRC-IPTS and DG INFSO ICT for Inclusion Unit, is to better understand: "

- ⇒ the industrial, market, and social opportunities and limitations of Digital Games for users' empowerment and how they could be a tool for socio-economic inclusion of people at risk of exclusion (such as youth at risk, migrants, elderly, unemployed, low-educated);
- ⇒ the technological, market, implementation, adoption and policy challenges of creating this potential and if and how policy actions could address the challenges identified.

The research will include the following activities:

1. Analysis of the State of Play of Digital Games for Empowerment and Inclusion.
2. Vision Development.
3. Development of a Roadmap for Action through Stakeholders' Consultation.

More information on the [DGEI Project webpage](#).

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The "Exploring the Future of Enterprise Search" workshop was organised in Seville by IPTS in the framework of the [CHORUS+](#) Coordinated action on 13-14 October 2011. CHORUS+ aims to create the conditions for mutual information exchange in the area of multimedia search (i.e. search engines, mobile search and enterprise search).

The role of IPTS within Chorus+ is to provide techno-economic and policy analysis of the search industry in Europe. It builds upon the research carried out during the [previous Chorus project](#).

Over the last few years, IPTS has been studying the market dynamics of this important sector and in particular the techno-economic aspects of *search engines and mobile search*, in collaboration with reputable professionals in the field. In 2010, IPTS published the "[Prospects of Mobile Search](#)" report, which provides a comprehensive study of the main challenges and barriers in the field.

The main objective of the recent "Exploring the Future of Enterprise Search" workshop was to gain insights into the techno-economic and socio-economic trends in the *enterprise search market* in the EU, and how these may impact on the European economy and society.

The workshop discussed and analysed the following aspects of enterprise search:

- **Market dynamics:** including current and emerging business models of providers of enterprise search solutions and services and their respective value chains.
- **Future prospects,** emerging techno-economic trends, likely developments and the future market structure in the domain of enterprise search.
- **SWOT analysis:** exploring the strengths, weaknesses, opportunities and threats (SWOT) for the Europe Union.

The workshop was organized in three thematic sessions:

- a) **Technologies, solutions and research issues**
- b) **Services, applications and business models**
- c) **Techno-economic aspects of enterprise search**

A roundtable discussion followed the second part of the workshop, in order to foster debate on future trends and directions of enterprise search (covering techno-economic aspects).

Participants debated in particular the results of a **Delphi-like Study** and of the Report on "**Enterprise Search in the EU, A Techno-economic Analysis**", carried out by the IPTS with the collaboration of Martin White (Intranet Focus Ltd).

The following findings of the workshop are worth reporting:

- ⇒ **Immaturity of the market.** Though there is a general consensus on the strong potential of enterprise search, the related market is not mature enough.
- ⇒ **Skills gap.** Contrary to what happens in the US, there are not enough trained people in Europe in the enterprise search field, as specific academic programmes on this subject are missing or very limited.
- ⇒ **Few investments.** Though there are relevant European research projects on enterprise search, there is not enough support to fill in the transfer gap between research and industry.
- ⇒ **Lack of awareness.** More information about what an enterprise search solution is (how it differs from web search, and what are the benefits for potential clients) is needed.
- ⇒ **No missing technologies.** Though some unsolved technological challenges have been identified, technological development is not a limiting factor for the take up of enterprise search.

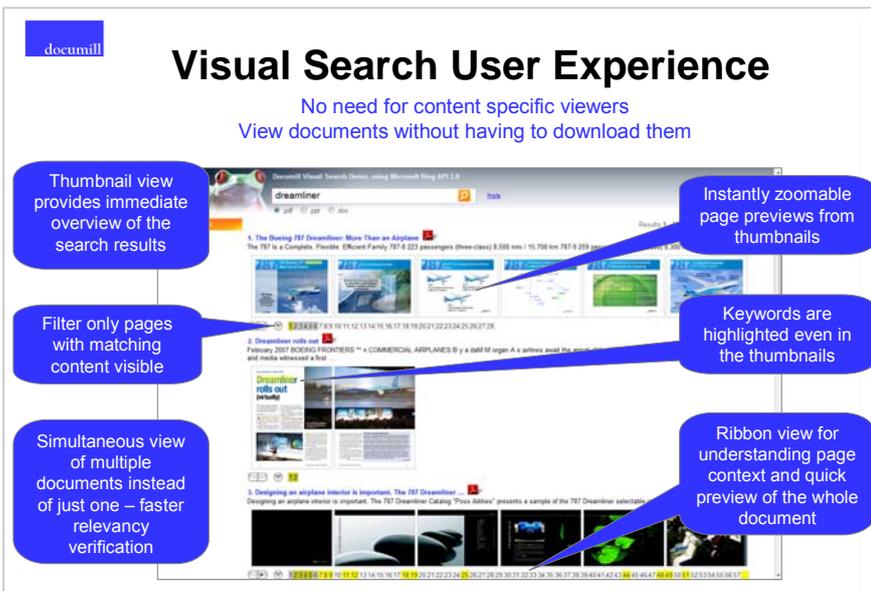
⇒ **Mobile.** Enterprise search is likely to be affected by the development towards a mobile world.

⇒ **Integrated platform and search-based applications.** One of the features of a successful enterprise search company will be the capability to provide semantic linking (combining structured and unstructured data) and semantic search (allowing intelligent analysis of query).

The presentations of the workshop are accessible on the [workshop webpage](#).

A JRC Scientific and Technical Report containing the main results of the aforementioned study and of the workshop on the current and future trends in the enterprise search domain will be available online shortly.

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Taken from the presentation "Visual Search for Enterprise Documents" by Documill given at the workshop

## ICT Industry Analysis

- ◆ Are telecom services the hidden engine of innovation in the ICT ecosystem? (2011). J.-P. Simon. Network Industries Quarterly Newsletter 13 (2); 2011. p. 11-13.
- ◆ The ICT Landscape in BRICS Countries: 1. Brazil. (2011) J.-P. Simon, Communications & Strategies 83.
- ◆ The ICT Landscape in BRICS Countries: 2. India (2011). J.-P. Simon, Communications & Strategies 84.
- ◆ Les nouvelles intermédiations techniques: L'exemple des jeux video (2011). J.-P. Simon, Concurrences n°3.

## Learning & Skills

- ◆ Mapping Digital Competence: Towards a Conceptual Understanding (2011). K. Ala-Mutka.
- ◆ Apprendre à l'heure du Web 2.0. Les innovations qui en résultent dans l'éducation en Europe (2011). C. Redecker, Y. Punie. Administration et éducation 129 (1); 2011. p. 33-42.
- ◆ Learning 2.0 - The Impact of Social Media on Learning in Europe (2011). Y. Punie, C. Redecker. NOVA APRENDIZAGEM E INOVAÇÃO EDUCACIONAL - O Papel das Tecnologias da Informação da Comunicação - p. 175-192
- ◆ Educational Change through Technology: A Challenge for Obligatory Schooling in Europe (2011). A. Ferrari, R. Cachia, Y. Punie. In: EC-TEL 2011; 20 September 2011; Palermo (Italy). LECTURE NOTES IN COMPUTER SCIENCE 6964; 2011. p. 97-110.
- ◆ Teacher Collaboration Networks in 2025. What is the role of teacher Networks for professional development in Europe? (2011). M. Bacigalupo, R. Cachia.

## Inclusion & Cultural Diversity

- ◆ ePractice Cultural Diversity Workshop on Understanding the Role of Information and Communication Technologies (ICT) in the Integration of Immigrants and Ethnic Minorities (IEM), Brussels, 23 November 2010 (2011). G. Rissola, C. Centeno, the ePractice Communication Team.
- ◆ ICT Use in L2 Education for Adult Migrants - A qualitative study in the Netherlands and Sweden (2011). M. Driessen, J. van Emmerik, K. Fuhri, L. Nygren-Junkin, M. Spotti; Editors: A. Ferrari, S. Kluzer.
- ◆ Chapter 1 - Setting the scene: Literature review regarding ICT for IEM in the European Union (2011). C. Codagnone, S. Kluzer, A. Haché. In: Alexandra Haché, Gabriel Rissola, Anaïs Le Corvec and Cilia Willem, editors. Migrants, Ethnic Minorities and ICT: Inventory of Good Practices. Bridge-IT Network; p. 11-27.
- ◆ Chapter 2 - Methodology and cross-cutting analysis of practices (2011). A. Haché, S. Kluzer, G. Rissola. In: Alexandra Haché, Gabriel Rissola, Anaïs Le Corvec and Cilia Willem, editors. Migrants, Ethnic Minorities and ICT: Inventory of Good Practices. Bridge-IT Network; p. 29-53.

## Digital Living & Identity

- ◆ The Lisbon Treaty and the Regulation of E-Identity in the European Union, N. Nuno Gomes de Andrade, in Law across Nations: Governance, Policy & Statutes, Sylvia Kierkegaard (Ed.), IAITL (2011)

## Economic Aspects of eHealth

- ◆ Strategic Intelligence Monitor on Personal Health Systems (SIMPHS): Structure of Available Data and New Measurement Framework with Selected Indicators (2011). C. Codagnone, F. Abadie.
- ◆ Assessing the Impact of Integrated Personal Health and Care Services: The Need for Modelling (2011). C. Codagnone, I. Maghiros, D. Broster, F. Lupiañez, M. Lluch
- ◆ Empowering patients through ICT? organisational impact on healthcare systems in England and Scotland (2011). M. Lluch. COMMUNICATIONS and STRATEGIES third quarter (83); p. 37-58.

## eGovernance

- ◆ Digital Europe 2030: designing scenarios for ICT in future governance and policy making (2011). G. Misuraca. Government Information Quarterly (2012), pp. 121-131
- ◆ Interoperability Challenges for ICT-enabled Governance: Towards a pan-European Conceptual Framework (2011). G. Misuraca, G. Alfano, G. Viscusi. Journal of Theoretical and Applied Electronic Commerce Research 6 (1); p. 95-111.
- ◆ Lifting off towards Open Government: a report from the EU Belgian Presidency Conference (2011). D. Broster, G. Misuraca, M. Bacigalupo. European Journal of ePractice (12); p. 53-65.
- ◆ Exploring Emerging ICT-enabled Governance Models in European Cities (2011). G. Misuraca, A. Reid, M. Deakin.
- ◆ Envisioning Digital Europe 2030: Scenarios for ICT in Future Governance and Policy Modelling (2011). G. Misuraca. European Foresight Platform (EFP) Brief no. 194 p. 1-4.
- ◆ Measuring and Meta-measuring: In Search of New Pathways for Modelling Impacts of ICT-Enabled Services on the Information Society (2011). G. Misuraca, P. Rossel. Electronic Government and Electronic Participation Joint Proceedings of Ongoing Research and Projects of IFIP EGOV and ePart 2011, Schriftenreihe Informatik vol. 37 p. 3-10.

⇒ **1 December: Digital Agenda for Europe Assembly Going Local (Seville, Spain)**

In autumn 2010 the European Commission carried out the so-called Going Local exercise right after the publication of the Digital Agenda. A second round of visits was launched in autumn 2011, in which events would be more adapted to the specific priorities in the Member States. The objectives are a) Reporting on progress of the Digital Agenda; b) Identifying challenges for the future; and c) Stimulate actions and commitments. The event in Seville, which was well attended both through physical and virtual presence, addressed key themes such as: 1) E-government, e-identity, re-use of public sector information, 2) Spectrum priorities and key challenges for wireless innovation in Spain and 3) Social innovation. For more information about the event and to view all related documents, see [Going Local 2011, Seville](#). Contact: [Ioannis Maghiros](#)

⇒ **24-26 November: Youth on the Move (Seville, Spain)**

[YOUTH ON THE MOVE](#) is the EU's flagship initiative to respond to the challenges young people face and to help them succeed in the knowledge economy. This initiative provides opportunities in the areas of education, training, mobility and employment by organising awareness campaigns for the general public. The European Commission set up a tent in Seville to provide information about present programs and resources that the European Union provides for young people. IPTS staff explained to young people how it is like to work for the European Union in general and the JRC in particular. More details on the event and the programme available at [YOUTH ON THE MOVE - SEVILLA](#).

⇒ **16-18 Nov 2011: Effective policies for the development of competencies of youth in Europe (Warsaw, Poland)**

The conference, organised in the frame of the EU Polish Presidency, aimed to share experience of the EU Member States and fostering international cooperation in the area of improvement of youth competencies. IPTS contributed to the conference with a presentation on the development of digital competence. More info on the [conference website](#). Contact: [Anusca Ferrari](#)

⇒ **16-17 November 2011: Patent Statistics for Decision Makers 2011 (Alexandria, USA)**

The work "Global innovation network: A network analysis of international patents", has been presented in the framework of the Conference "[Patent Statistics for Decision Makers 2011](#)", which was organised by the United States Patent and Trademark Office's together with the OECD, the European Patent Office, Eurostat, the Japan Patent Office, the National Science Foundation, and the World Intellectual Property Organisation. Contact: [Daniel Nepelski](#), [Giuditta De Prato](#)

⇒ **11 November: IPTS – IT STAR International Conference on ICT Research and Innovation Challenges in Eastern European Member States (EEMS) (Budapest, Hungary)**

The organizers provided a forum to a constellation of star-speakers and to leaders in Academia, Government, Industry and the ICT-related Civil Society to address burning issues of the R&D Agenda with a major impact on research, innovation and competitiveness in the EU and beyond. For the presentation see the [conference webpage](#). Contact: [Marc Bogdanowicz](#)

⇒ **9 November 2011: DG EAC lunchtime conference on future of learning (Brussels, Belgium)**

The Directorate-General for Education and Culture holds regular "lunchtime conferences" for their staff, as a training event. IPTS provided its 3th Lunchtime conference entitled "Discussing the Future of Learning: Will Education & Training move towards more personalised, collaborative and informal learning?", outlining the findings of a major study undertaken by IPTS in 2009-11, which employed desk research and extensive stakeholder consultations, involving experts, teachers and policy-makers, to generate a descriptive and normative vision of the Future of Learning. Contact: [Christine Redecker](#) & [Yves Punie](#)

⇒ **2-3 November 2011: International Workshop: "Investigating Industrial and Innovation policies for Growth: Contrasting experts views" (Seville, Spain)**

As part of a broader research activity launched since 2010 at IPTS, which aims to improve our understanding of the nature and factors of ICT and ICT-enabled innovation in a Digital Economy, the workshop aimed at: 1) Validating the Report prepared by BRUEGEL and 2) Contrasting the views of experts active as researchers, policy makers or project managers in ICT-enabled innovation for growth in Europe and beyond. More information on the [workshop webpage](#). Contact: [Federico Biagi](#)

⇒ **28 October 2011: EAC Thematic Working Group on Assessment of key competences (Brussels, Belgium)**

The Thematic Working Group on Key Competences has been set up by the Commission in 2009 in the context of the "Education and Training 2020" to assist Member States in the implementation of the 2006 Recommendation on Key Competences for lifelong learning. The overall task of the group is to assist the Commission in the preparation of legislation or in policy definition. In this respect, the group decided in July 2010 under the Belgium presidency to work towards publishing a policy handbook on the assessment of key competences. IPTS is contributing to the work of the group by providing expert input on the use of ICT for the assessment of Key Competences. Contact: [Christine Redecker](#)

⇒ **27-28 October: MCI validation workshop of the IPTS Study: "Statistical, ecosystems and competitiveness analysis of the Media and Content industries" (Seville, Spain)**

The validation workshop was meant to assess the main output of the research commissioned by the IPTS: a quantitative statistical approach to the Media and Content Industries and three case studies on the Music industry, the News industry and the Film industry. Two additional case studies on the books industry and the broadcasting industry drafted by the IPTS team were also presented. More information on the [workshop webpage](#). Contact: [Jean-Paul Simon](#)

⇒ **24 October 2011: European Institute of Public Administration (EIPA) Workshop (Seville, Spain)**

JRC-IPTS provided a keynote presentation to the Seminar on 'La eAdministración en la Unión Europea: El auge de la Governance virtual', organised by the European Institute of Public Administration as part of the series 'Jornadas Europeas'. The seminar was attended by 130 participants mainly from Spanish regional / local governments and some European experts. JRC-IPTS presentation was on: 'Europa hacia una verdadera Sociedad del Conocimiento'. Contact: [Gianluca Misuraca](#)

- ⇒ **13 October 2011: EAC Thematic Working Group on ICT and Education (Brussels, Belgium)**  
 European Commission's Directorate General for Education and Culture (DG EAC A2) held its first Thematic Working Group (TWG) 'ICT and education', under the "Strategic Framework for European cooperation in education and training (ET 2020)". It consists of representatives of the Member States dealing with ICT and Education, which are usually from the Ministries of Education, and/or Science/Technology. Aims of the TWG are to identify best practices and guiding principles with respect to the embedding of ICT in lifelong learning policies and in learning and teaching practice at national level. IPTS played a central role during the meeting, as it provided two presentations to the TWG and moderated a session on creative classrooms/creative learning environments. Contact: [Yves Punie](#)
- ⇒ **7-8 October 2011: Creanova Conference 2011 - Creativity and Learning Conference (Bilbao, Spain)**  
 The [CREANOVA final project conference](#) brought together around 100 participants. Creanova is a project funded by the EACEA Lifelong Programme. The aim of the project is to undertake research on the specific conditions and factors which are present in creative learning environments, on what constitutes meaningful innovation and how it can be fostered and applied in learning. At the Conference IPTS presented results from the final report on [Creativity and Innovation in Education in Europe](#). Contact: [Yves Punie](#)
- ⇒ **6 October: CONCORD (Seville, Spain)**  
 At [Concord 2011](#), a conference on the dynamics of Europe's industrial structure and the growth of innovative firms organized by the European Commission's Directorates Joint Research Centre and Research & Innovation, the IS Unit presented two pieces of their research work: 1) The global network of R&D: Network analysis of international R&D centres and 2) The input and output side of ICT R&D internationalization, which is a result of the [PREDICT 2011 project](#). Contact: [Daniel Nepelski](#), [Giuditta De Prato](#), [Juraj Stancik](#)
- ⇒ **5 October: Innovation for Digital Inclusion Conference (Gdansk, Poland)**  
 The [Innovation for Digital Inclusion Conference](#), was organised under the Polish Presidency of the EU by "Cities on the Internet" Association, the European Commission's Directorate General for Information Society and Media and the Polish Ministry of Science and Higher Education, in the Context of the Digital Agenda. The main goal of the conference was to present, debate, prioritize and adopt a roadmap for joint actions towards digital inclusion in the EU. The adoption of the "Gdansk Roadmap for Digital Inclusion" concluded the conference. JRC-IPTS contributed to the Conference with 2 presentations on its work on Digital Competences and ICT for employability, moderated the session on Social Facilitators, acted as rapporteur of the Conference, and played a key role to the preparation and on-site edition of the Gdansk Roadmap for Digital Inclusion, adopted at the end of the Conference. Contact: [Clara Centeno](#), [Gabriel Rissola](#), [Anusca Ferrari](#)
- ⇒ **5 October: Second International Workshop, The ICT landscape in BRICS countries: lessons from emerging economies (R&D, innovation and trade) (Johannesburg, South Africa)**  
 The aim of this workshop was to take a closer look at the ICTs landscape in some emerging economies, the BRIC countries. BRICs countries are becoming major players not only as plain ICT users/ importers but as producers of ICT goods and services. BRICS countries are still a small but a growing share of global ICTs (~13%). Trade, foreign direct investment (FDI) and the off shoring of manufacturing have been highly noticeable in Asia but trade relationships between Asia and Brazil are also worth noting. The workshop provided a working tool for the IPTS continuing research on ICT, identifying the issues at stake and related research questions triggered by the entry of these countries. Contact: [Jean-Paul Simon](#)
- ⇒ **25-28 September 2011: ICEGOV2011 – 5th International Conference on Theory and Practice of Electronic Governance (Tallinn, Estonia)**  
 JRC-IPTS participated in [ICEGOV2011](#) as a member of the Program Committee of ICEGOV and as chair of the Session on Smartcities organised in collaboration with the United Nations University, in which the results of the [EXPGOV project](#), as well as an accepted paper titled "Reflexivity, Modelling and Weak Signals of Transformational Tracks to Support both micro- and macro-measuring of Information Society Services", were presented. Contact: [Gianluca Misuraca](#)
- ⇒ **21-23 September: Technology Transfer in a Global Economy conference (Augsburg, Germany)**  
 At the [Technology Transfer in a Global Economy conference](#), organized by the Technology Transfer Society, IPTS presented a paper on the Global Technological Collaboration Network, which has been recognised as one of the best presented at the conference and was invited to be published in a forthcoming special issue of the Journal of Technology Transfer, on "Technology Transfer in a Global Economy". Contact: [Daniel Nepelski](#), [Giuditta De Prato](#)
- ⇒ **21 September: 6th International Conference on Legal, Security and Privacy Issues (LSPI) - (Nicosia, Cyprus)**  
 Within the framework of the [6th International Conference on Legal, Security and Privacy Issues in IT Law](#), the IPTS organised a [workshop on Electronic Identity for Europe](#), based on work developed previously by the IPTS in this area, which aimed at raising consensus on the adoption of a broader perspective in framing the debate on the regulation of eID in Europe. In arguing that eSignatures, formal identities and public sector applications constitute only a part of a larger identity ecosystem for which there is no current regulatory framework, the workshop aimed at proposing the idea of a specific and dedicated European legal framework for eID as the central theme for discussion. The objective was to focus on a broader picture, looking at how a full-scale European legal framework could regulate a cross-border, mutual recognition system of e-identification and e-authentication in the EU. The IPTS also presented the paper "The Lisbon Treaty and the regulation of electronic identity in the European Union" (which won the award for the Best Student Paper). Contact: [Norberto Andrade](#)

Note: E-mail addresses are formed as follows: name.surname@ec.europa.eu

## More Recent Events in 2011

More on the [events section](#) of the IS website

- ⇒ **20-23 September 2011: European Conference on Technology-Enhanced Learning (Palermo, Italy)**  
The JRC-IPTS took part in the [EC-TEL 2011 conference](#), presenting the results of the [ICEAC study on Creativity and Innovation in Education and Training](#). EC-TEL is a major European Scientific Conference in the field of Technology Enhanced Learning, gathering together over a hundred participants. Contact: [Anusca Ferrari](#), Romina Cachia
- ⇒ **15 September 2011: EFQUEL Innovation Forum (Oeiras, Portugal)**  
The [6th EFQUEL forum](#) focussed on "Certifying the future: accreditation, certification and internationalisation". EFQUEL stands for European Foundation for Quality in e-learning and is an initiative from a number of key stakeholders/researchers in the area of eLearning, which has now more than 100 members from all over Europe, and beyond. Its aim is to promote quality, excellence and innovation in technology-enhanced learning in Europe. The conference was attended by circa 85 people and special attention went to OER (open educational resources). IPTS gave one of the four keynotes and presented results from its [study on the future of learning](#). Contact: [Yves Punie](#)
- ⇒ **8-9 September: 6th Annual Conference of the EPIP Association: Fine-Tuning IPR debates (Brussels, Belgium)**  
The paper entitled "Global innovation networks. A network analysis of international patents" was presented at the "[6th Annual Conference of the EPIP Association: Fine-Tuning IPR debates](#)", which was organised by the European Policy for Intellectual Property (EPIP) with the support of the European Patent Office, the Université libre de Bruxelles and Solvay Business School. The work, an application of network analysis to patent based indicators, represents part of the results of the IPTS project on [European ICT Poles of Excellence](#). Contact: [Daniel Nepelski](#), [Giuditta De Prato](#)

## Upcoming events

Date	Place	Title	Contact*
23-24 January 2012	Seville	Expert Workshop on Digital Games for Empowerment & Inclusion	<a href="#">Gianluca Misuraca</a>
27 January 2012	Brussels	Experts' Panel on Electronic Identity (eID) and Identity Management at the 5th International Conference - Computers, Privacy and Data Protection (CPDP) – "European Data Protection: Coming of Age"	<a href="#">Norberto Andrade</a>
30-31 January & 1 February 2012	Brussels	SIMPHS2 Validation Workshop & SIMPHS2 Data Repository Meeting	<a href="#">Fabienne Abadie</a>
29 February - 1 March 2012	Seville	Expert Workshop on DIGCOMP: Digital Competence descriptors	<a href="#">Anusca Ferrari</a>
Spring 2012	Seville (tbc)	Socio-economic assessment of SNS workshop	<a href="#">René van Bavel</a>
Spring 2012	Brussels	Policy Workshop on Digital Games for Empowerment & Inclusion	<a href="#">Gianluca Misuraca</a>
June 2012	Brussels	Stakeholders' Consultation Process and Workshop (in conjunction with the 2nd Digital Agenda Assembly)	<a href="#">Gianluca Misuraca</a>

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For more and updated information on our upcoming & past events, please have a look at the [Events section of the IS website](#).

IS NEWS

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