ICDS 2010 Panel

Digital Society Trends: Societal Challenges from eHealth to eCommerce via eGovernment

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SOCIETAL CHALLENGES IN A DIGITAL WORLD

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What are the important issues?

- Preservation and enhancement of Human Rights
- Internet good or bad?
- Depends on how we handle:
  - Digital exclusion
  - Identity in the digital world
  - Privacy
  - Freedom of information
Digital exclusion

• We need inclusive policies
• What about those not on Internet?
• Digital divide
• This is foremost a political problem
• How to secure the rights of all?
• Regulation, not necessarily formal
Identity

• On the Internet you can be whoever you like
• What is the impact on democracy?
• Authenticity is a problem, but can be solved by technology
• But, what are the consequences?
  • Insecurity
  • This is why we need to approach the future of Internet through a multidisciplinary approach
Privacy

• Privacy is at stake.
• How can you protect yourself from defamation on the Internet?
  • When the servers are abroad?
  • When allegations are anonymous?
• Will citizens adjust?
Freedom of information

• Internet brings great opportunities
• But there are some serious problems..
  • Censorship, blocking of web sites
  • Who decides?
Conclusion

• We need to do more work on regulation
  • To combat digital exclusion
  • To protect individual from abuse
  • To secure access to information
• There is no easy solution here..
• But you, as experts need to get involved!
Future Internet and implications of the services: e-commerce, e-health, e-education

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In the Future Internet services are ubiquitous

- Software-as-Service
- Resource-as-Service
- Interoperability-as-Service
- (partial) Service-Construction-as-Service
- Unify business processes and services
- Business Applications as utilities
- Anything you want
Some data

- Skype has 400 MIO users in 2009
- 4,5 Bill of mobile phones on the earth
- There are more than 100 000 pieces of program code developed for iPhone
- Facebook has 300 MIO users
- Traffic is growing at 60% per year
- Near future (up to 2011) 50-60% per year
- User penetration in 2008 was 55%, in 2009 is 74% - where is the recession here? (Washington Post, September 200)

Important component of Non Best Effort traffic

Global Peak Utilization Rates by Route, 2005-2009

Source: TeleGeography

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What are the expectations?

- Users’ behaviour is hard to predict even in the classical services
- Like e-governement and e-health, but it is obvious:
  - They (users) will be connected any time from different devices
    - Connectivity Perceived Value increases
  - They will ask for different applications with different traffic profiles
    - The network must be able to manage all apps with guarantees
- Reliability and guarantees are required to manage some services
  (e.g. emergency calls, corporate services, e-health, etc.)
- Security and trust are required to be managed, trust becomes major issue!
- No place for walled gardens
  - None of the most popular Internet applications share the same Application protocol
In setting the management scenario for trust & services

**Internet Today**

- 1.6 billion users
- More than 30 billion pages (static)
- 30% built by companies
- Only 25,000 “true” web services
- Most of services are in-house or restricted to closed environments (Trust is more manageable)

**Future Internet**

- 2-3 billion users
- A web of “frillion” services
- A network of equals
- “Prosumers”
- **Trust is now a major issue!!!!**
Trust, can we define it and measure it?

Definition

“Trust of a party A in a party B for a service X is the measurable belief of A in B behaving dependably for a specified period within a specified context in relation to X”

Some identified properties

Trust is relativised to some business transaction.
Trust is a measurable belief.
Trust is directed.
Trust exists in time.
Trust evolves in time, even within the same service.
Trust between collectives does not necessarily distribute to trust between their members.
Trust is reflexive, yet trust in oneself is measurable.

Economic theory excludes trust – but! economic scientists have set up experimental methods to measure it!

However, it is difficult as Homo “economicus” does not trust
Social Reputation - The collective power

It is important to know how Web 2.0 technologies used in e-commerce, e-health and e-governement can support trust and reputation within and between computers and humans services.

The use of technologies like FOAF (Friend Of A Friend) in the field of services will allow SW agents, and humans, to gain information on the reliability and reputation of a service.
eHealth, eCommerce and eGovernment for Primary Health Care in Romania

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eHealth, eCommerce and eGovernment for Primary Health Care in Romania

• eHealth for primary health care
  • family doctors
  • computers, specialized software and Internet

• eCommerce
  • banking cards
  • financial transactions via Internet

• eGovernment
  • CNAS (National House for Health Assurance)
  • CJAS (Regional House for Health Assurance)
eHealth, eCommerce and eGovernment for Primary Health Care in Romania

![Diagram showing relationships between eHealth, eGovernment, and citizens]

- eHealth (family doctors)
- eGovernment (CJAS, CNAS)
- Citizens

Relationships:
- eHealth to eGovernment: reports, salaries via e-Commerce
- eGovernment to Citizens: Payment
- Citizens to Health Care

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Reports towards CJAS

1. Paper reports (traditional paper forms)
2. MEDFAM software
   • electronic reports (disquette/stick)
   • Printed reports
3. SIUI software
   • electronic reports (disquette/stick)
   • Printed reports
Incomes to Medical Unit

• Number of patients registered for assurance to medical unit.

• Health Care Services
  • Immunities (vaccines);
  • Control for pregnant and childbed health care;
  • Control for chronic patients (diabetes, heart block, high blood pressure, etc.);
  • Tracking down of tuberculosis.
Conclusions

- Too many reports with superfluous information.
- Net income should depend on number of consultations/day.
- A lot of money are redirected from health care system towards other domains, via government.
- eCommerce is very poor.
- eGovernment is inadequate.