



Interoperability Initiative for a European e-Health Area

I2-Health Support Action for the eTEN Programme

Dr. Karl A. Stroetmann, Daniel Spichtinger,
Dr. Veli N. Stroetmann, empirica Bonn / D

The need for interoperability – Full medical record

- Alex Solomon grew up with hydrocephalus, a rare and life-threatening condition
- "Whether or not a treating doctor has Alex's full medical record available can literally mean life or death"

Cynthia Solomon, his mother

- She had to become "a walking filing cabinet of records on allergies, pituitary gland problems, brain scans and every piece of paper a doctor ever wrote about Alex's case"

Economist, April 30th 2005



- Project start: February 2005
Project duration: 24 month
Consortium:

- empirica Institute for Communications- und Technology Research, Bonn, Germany (Coordinator)
- Members to empirica:
- - Work Research Centre Ltd. (WRC), Dublin, Ireland
- - Central Research Institute of Ambulatory Health Care in the Federal Republic of Germany (ZI), Berlin, Germany
- - Technical University of Košice (TUK), Slovakia
- European Health Telematics Association (EHTEL), Brussels, Belgium
- (Informal) Steering Committee of Member State Health Authorities

Objectives

- identify interoperability and connectivity issues and priorities, barriers and gaps, and solution approaches
- focus on fundamental interoperability issues (identification of actors, organisations, adequate measures to achieve interoperability, integration tests and certification)
- analyse similarly key topics relating to e-prescription and messaging
- develop a roadmap and concrete projects involving all relevant actors - guided by an open discussion process amongst Member State Health Authorities

Workplan Elements

- **Generic elements**
 - Conceptual framework (WP1)
 - Analysis of infrastructure concepts and building blocks, services and applications (WP2)
- **Specific subjects for in-depth analysis**
 - Identification management of actors, organisations and system components - fundamental interoperability issues (WP3)
 - Workflow interoperability – e-prescribing and messaging (WP4)

Background

Interoperability of health information systems

- “Member States have expressed the need to support actions that cover the development of standards addressing the interoperability of diverse systems and services and
- to explore in particular the possibilities of open source applications to achieve this objective. ...
- The exchange of experience in the use of open standards and open source solutions among health administrations in Member States should be promoted.”

General policy drivers

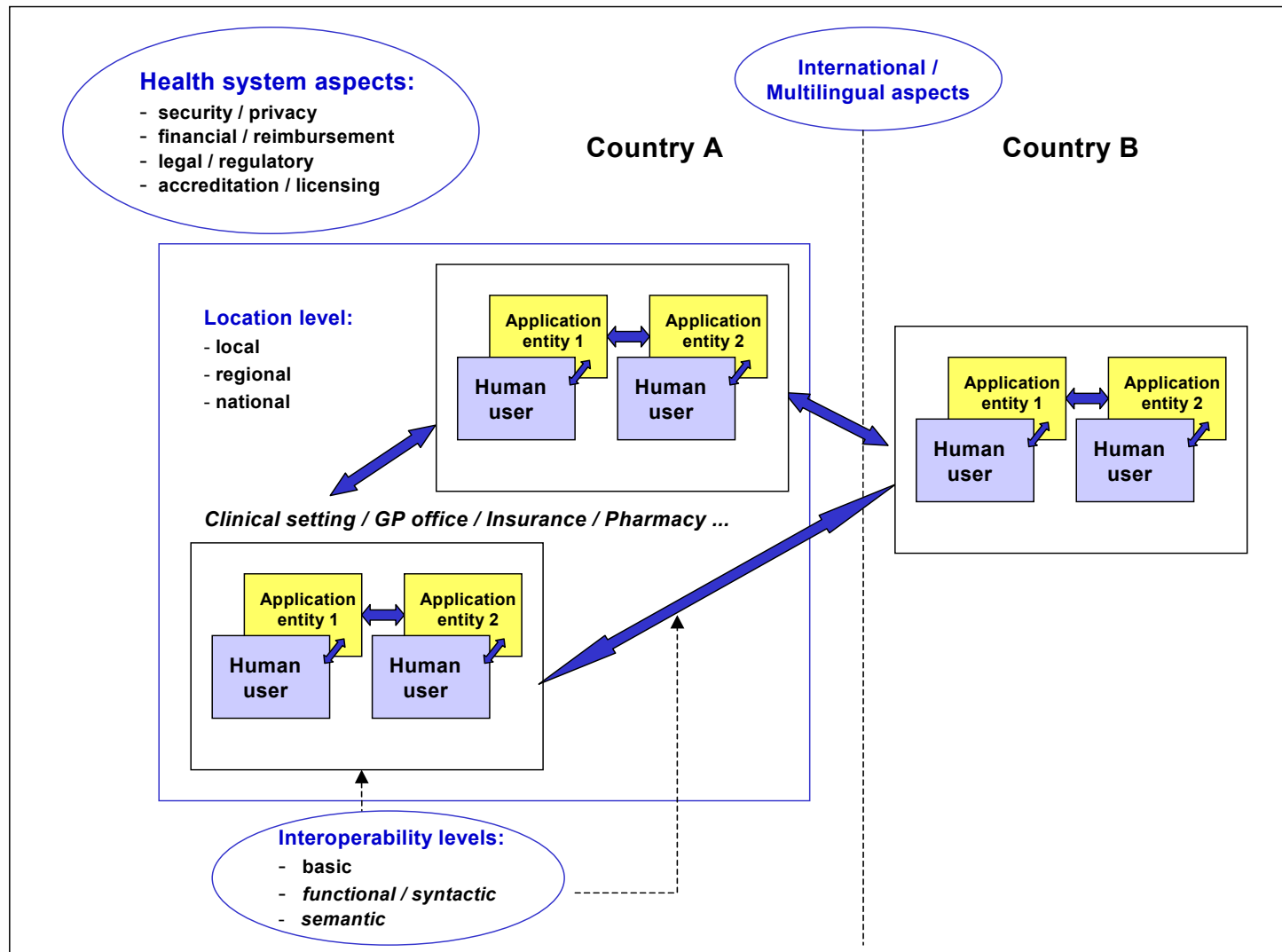
- **Mobility of citizens (demand)**
- **Single European Market (supply)**
- **Decisions of the European Court of Justice**
- **Global competition**
- **Pressure by stakeholder groups**
- **Need for improved access for all, quality of services**
- **Demographics**
- **Cost pressure on systems**

Policy Background III

- USA
 - USA Healthcare Information and Management Systems Society (HIMSS)
 - US Department of Health and Human Services
 - Request for Information (RFI) on "the goal of interconnecting clinicians"
- Canada
 - Health Infoway
- Australia
 - HealthConnect
- WHO
 - Clinical terminologies and their interoperability

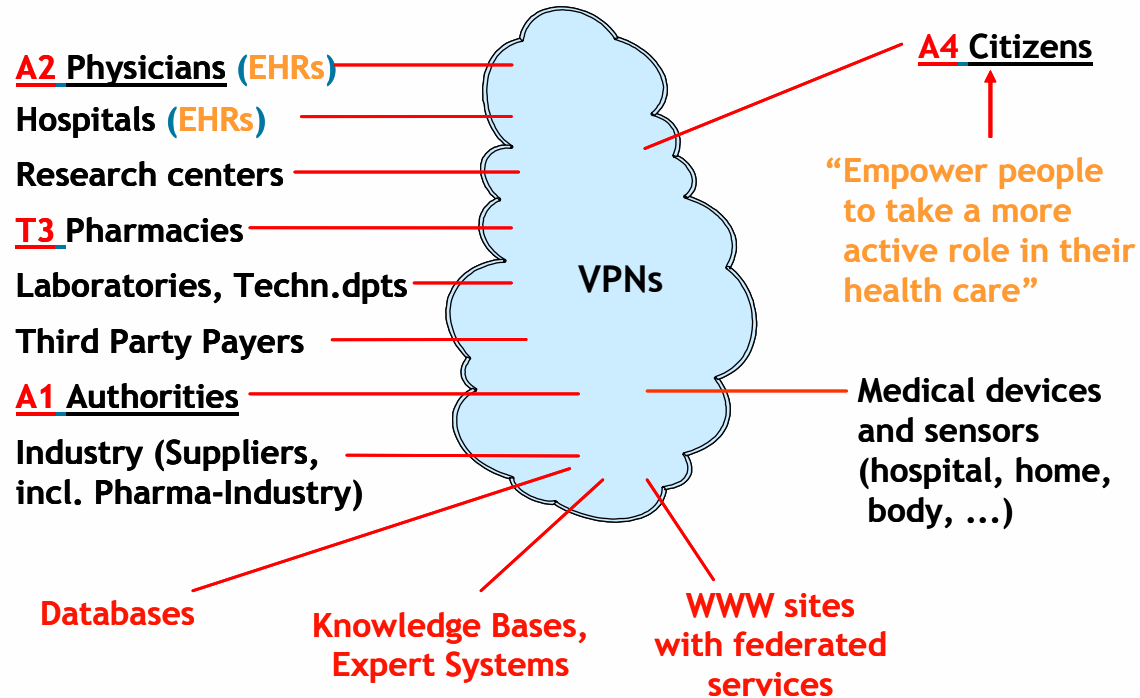


eHealth interoperability domain



Actors I: humans

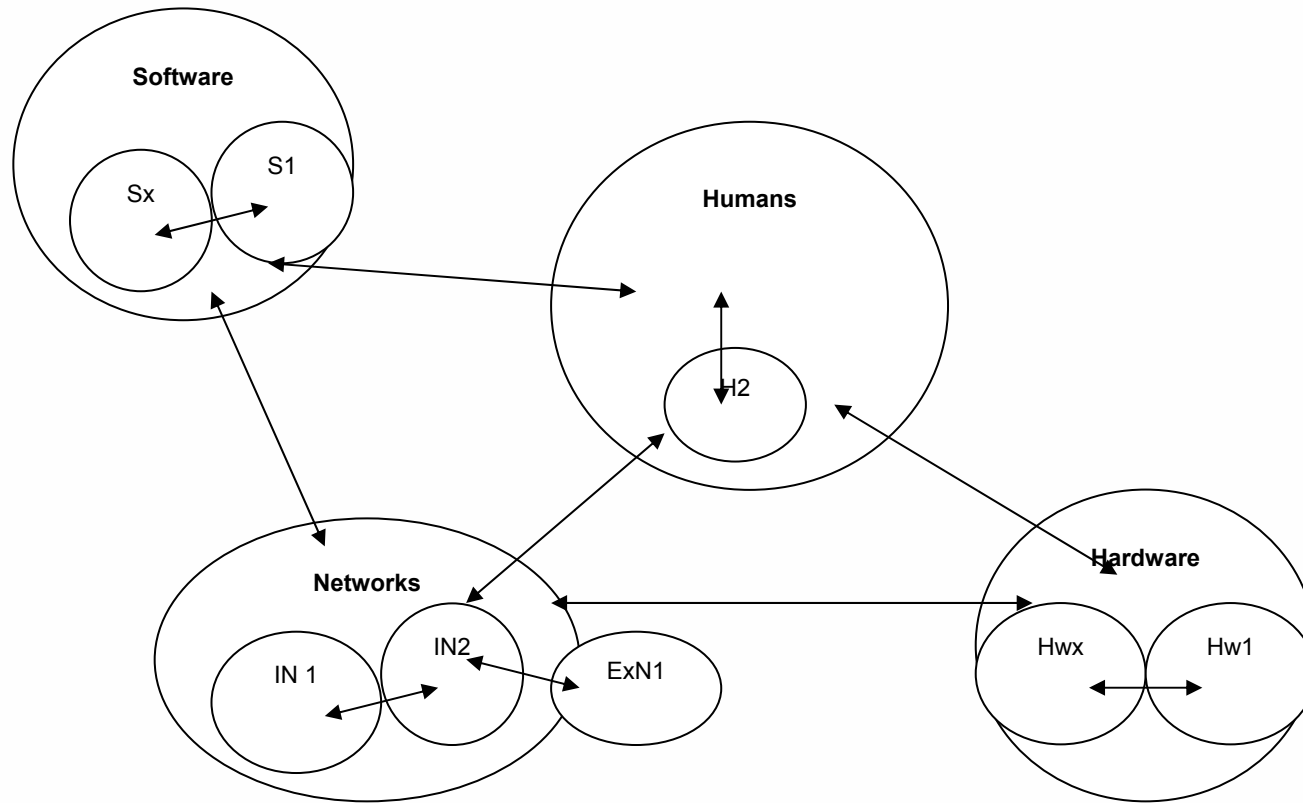
...because they need to communicate



Source: Prof. G. de Moor, Brussels, 22 May, 2003

qtd. in Denz (2005: 10), where A represents actors and T thematic areas

ActorsII: humans and machines



Intermediary Conclusions: 3 lenses through which we look at interoperability

<p>Political and policy lens</p>	<ul style="list-style-type: none">• Policy strategies• Policy processes ,• Political measures• Socio-economic and policy framework conditions• Accreditation and Certification• Legal issues (general framework)
<p>Organisational lens</p>	<ul style="list-style-type: none">• Organisational structure and culture• Work processes• Change management categories• Legal issues (as impacts individual organisations)
<p>Technical lens</p>	<ul style="list-style-type: none">• Technical standards• Hardware and software connectivity.• (Human connectivity with data)

But: a health specific fourth lens is needed as well

- Health and clinical services:
 - EHR/EPR
 - Messages/requests
 - Imaging
 - workflow
- Common infrastructure services
 - Identification (doctor/patient/institution)
 - Terminology
 - Security
- Public health
 - Citizen health info
 - Surveillance / epidemiology
 - statistics
- Administration
 - QA
 - Reimbursement
 - Supplies
 - HRM
- R&D
 - Knowledge creation, translation and management
 - Clinical guidelines
 - Clinical trials



Synthesis: matrix combining the 3+1 lenses

3 non-generic lenses	4. lens: applications areas												
	Health and clinical services				Common infrastructure services			Public health			Admin		
1. Technical issues and standardization													
2. Organisational issues													
3. Policy Issues													

Process Oriented View

- Integrating the Healthcare Enterprise (IHE)
- Open Method of Coordination (OMC)
- and others

**Thank you very much
for your attention!**

www.i2-health.org

karl.stroetmann@empirica.com

