Healthcare Information Standards for Active Aging: State of Play for Patient Summaries

Jocelyne Fayn, INSERM, Lyon, France

MIE 2011, Oslo, « Partnerships in Innovation »
State of Play for Patient Summaries

Some Challenges ....

- Personalized information retrieval
  \((\text{Patient, Physician})\)

- Data processing

- Data integration

- Data communication

- Reusability of exchanged data
  \(\text{Recipient physician facilities}\)

- Ambient knowledge retrieval
  \(\text{Context-awareness environment facilities}\)

Information

Patient’s & Physicians’ Data Management

Time

Space
Data and model driven service oriented architecture*

Application services layer

Atomic services
- Decoding
- Filtering
- Transform
- Measures
- ...
- ...

Generic services layer

Composed services
- Features extraction
- Transform design
- Assessment descriptors
- ...
- Decision-making

Orchestration layer

Business process management
- Business rules engine
  - Ontologies
  - Rules model

Resources layer

Data acquisition modalities
- Knowledge models

* Krupaviciute A, Fayn J. Ontology Driven Approach Enhancing Business Services Orchestration. 2nd IEEE International Conference on Computational Intelligence, Communication Systems and Networks. 2010:344-8
Data processing for personalized information retrieval

Core ontology decision-making services orchestration *

* Krupaviciute A, Fayn J. Ontology driven decision support services orchestration. LNCS. 2010;6285:497-500.
Legacy data management systems are mainly based on Relational Databases.
Data integration for reusability of exchanged data

Mediation architecture *

Data communication for ambient knowledge retrieval

Knowledge-based technical architecture to support tasks and process management and execution in contextual situations

Knowledge-Meta-Model

Inferred Knowledge

Rule Base SWRL

Ontological Domain Model

Knowledge Meta-Model

Knowledge Base Layer

SPARQL Engine

Inference Engine JESS

Rule Base Manager

Query

Task Management Server

Communication Server

Interface Layer