A SPECIAL vision for enabling privacy through Linked Data

Piero Bonatti, Sabrina Kirrane, Axel Polleres, Simon Steyskal and Rigo Wenning

W3C Workshop on Privacy and Linked Data
17/04/2018
SPECIAL Overview

Aims
SPECIAL Overview

Objectives

• Policy management framework
  ❖ Gives users control of their personal data
  ❖ Represents access/usage policies and legislative requirements in a machine readable format

• Transparency and compliance framework
  ❖ Provides information on how data is processed and with whom it is shared
  ❖ Allows data subjects to take corrective action

• Scalable policy-aware Linked Data architecture
  ❖ Build on top of the Big Data Europe (BDE) platform scalability and elasticity mechanisms
  ❖ Extended BDE with robust policy, transparency and compliance protocols
The SPECIAL Policy Language
Starting Points

- Collected data
- Purpose of data collection and processing
- How is data processed
- Where are collected data and profiles stored
- For how long are the data stored
- Disclosure to third parties

Transparency & Compliance

Who
When
Why
How
What
Where

Logos of various companies like Oracle, Symantec, VMWare, Amazon, Microsoft, SAP, and Salesforce.com.
The SPECIAL Policy Language
Existing Vocabularies

- **FOAF, vCard** and **schema.org** offer vocabularies for modeling static personal data to describe persons, agents
- **DICOM** for healthcare metadata has dynamic attributes relevant to fitness and health, such as heart rate
- **NeoGeo** vocabulary, the **GeoSPARQL** vocabulary or the **WGS84 Geo Positioning** vocabulary can be used for location data
- **P3P** working group published an RDF vocabulary for expressing the concepts of **P3P** including a categorization of personal data and purposes
- **ODRL** provides means to model actions, prohibitions, and obligation to describe policies and consent
- **OWL Time** provides means to describe the time and duration of processing, duration of consent, logging events
- **PROV** provides an excellent starting point for modeling the provenance of consent and data processing actions
The SPECIAL Policy Language

More Details