Geo Rights Management

Standards supporting practice — and vice versa

ISO/TC 211 “Standards in Action” Workshop
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Outline

- Rights Management
- Licensing
- (A) GeoRM Architecture
- Standards and customer requirements
- Conclusion
What is Rights Management?

- No common definition
- Everything that deals with rights!
- Including:
  - Access rights definition
  - Usage rights definition
  - Access control
  - DRM

⇒ Without enforcement
⇒ With Enforcement
Why Rights Management?

- Data may be confidential
  - classified
  - personal data
  - critical
- Data may be valuable
  - marketable
  - investment protection
- INSPIRE!!!
Enforcement?

Source: OGC Document 06-004r4 Geospatial Digital Rights Management Reference Model (GeoDRM RM)
What should be protected?

 وعلى

Access control

Protects the service
Once the data is delivered, there is no further protection

DRM

Protects the data
Controls what a user may do with the data
Rights move around together with the data
The data is the value!

Does that lead to an easy answer?
The Data is the Value!

That’s where our customers come into play again!

- They are typically data providers
- They typically deal with known users
- They are typically in a B2B relationship
- They typically trust their customers to a certain extent
- They typically rely on legal remediation
- They typically don’t believe in Trusted Computing

They typically want access control!
Licensing Architecture

Identity Provider

Client

Provider

Authentication Service

OWS Service

Enforcement Point

Decision Point

Policies

OWS Client

GeoRM Client

License Broker

License Manager

...connecting worlds
So, are usage rights useless?

- NO!

- Rights definition and rights enforcement are separate issues!

- Awareness is the key!

- Customers have to be informed about usage rights
  
  as text
  
as Creative Commons
  
as REL document (Rights Expression Language)
  
  ...
Abstract License Structure

**ISO View (Technical Focus)**

Grant (aka right, policy, …)
Issuer details and signature (Licensor)

**Business Requirements (Legal Focus)**

+ Licensee (explicit)
+ Disclaimers
+ Bylaws (linked)
+ Price models (linked)
+ …

Source: ISO/IEC TR 21000-1
Information technology — Multimedia framework (MPEG-21) — Part 1
Why Standards?

Company’s goals

- Satisfy the customer
  (rather than implementing standards)

but:

Customer’s goals are often

- Interoperability
  - with enterprise systems
  - with customers
  - with partners

- Use mature concepts

⇒ Use of standards!
Standards, Standards, Standards…

"The good thing about standards is that there are so many to choose from" (A. Tanenbaum)

Example: Rights aka Policies aka Grants aka …

defining: Subject Resource Action (OASIS vocabulary)
Decisions

Which standards to use?

- XACML (OASIS standard) to define access rights
- SAML (OASIS standard) to wrap them in licenses
- WS-Security (OASIS standard) to submit licenses and identities
  Consistent to OGC GeoDRM Reference Model
  Broad support in mainstream IT!

What about the others?

- ISO 21000 / GeoREL:
  Focus on DRM ⇒ does not match our customer’s requirements
Our Input to Standardization

**OGC**

OGC Testbeds: Prototype implementation

GeoRM Common: Extension to support Rights Management for OGC Services (the full triangle!)

Identity management, license management for service licenses: Next steps

**INSPIRE**

DT Network Services: Choose appropriate standards for INSPIRE implementing rules, fulfilling the requirements of European data providers
Principles for Standardization in the Geo Domain

- Specify geo-related issues only
- For everything else (security, licensing, orchestration, …) reference external standards
- Extend / profile them, if necessary
- Keep them interchangeable
- Agree on common (selected) standards among communities (INSPIRE?)

Problem to solve: How to combine standards in a standardized way?
Thanks for your attention!

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