

# Geo Rights Management

Standards supporting practice — and vice versa

*ISO/TC 211 “Standards in Action” Workshop*

**Rüdiger Gartmann, con terra GmbH, Münster**

## 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

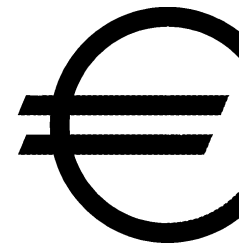
critical

### ➔ Data may be valuable

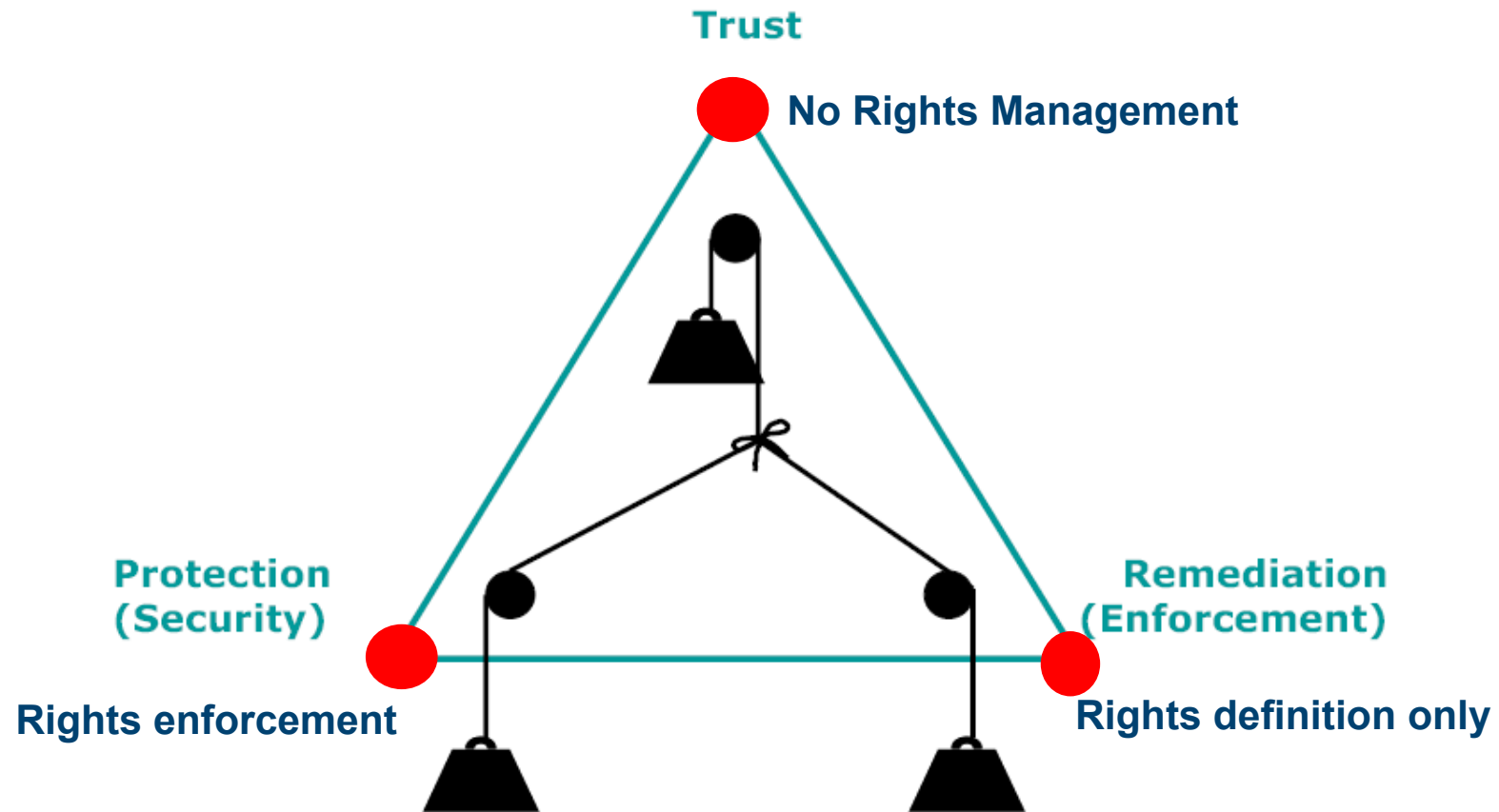
marketable

investment protection

### ➔ INSPIRE!!!



# Enforcement?



Source: OGC Document 06-004r4 Geospatial Digital Rights Management Reference Model (GeoDRM RM)

## What should be protected?

### ➔ 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

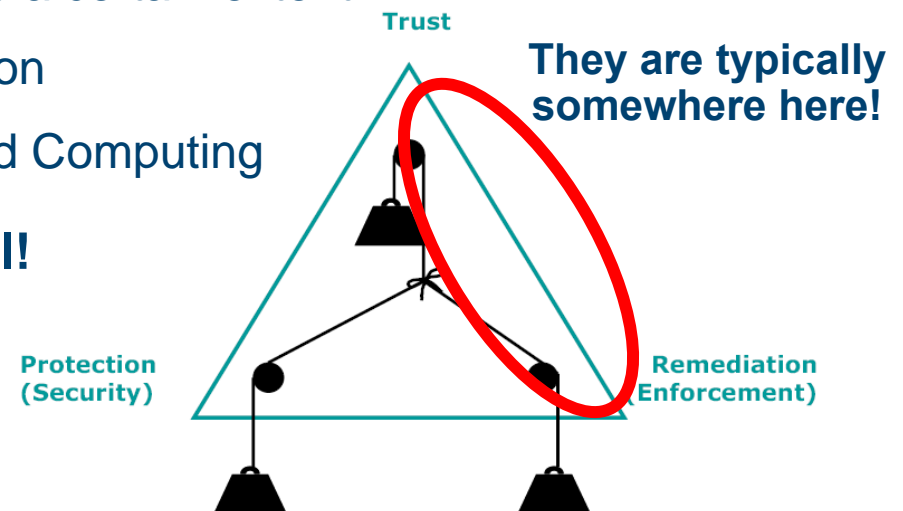
They are typically in a B2B relationship

They typically trust their customers to a certain extent

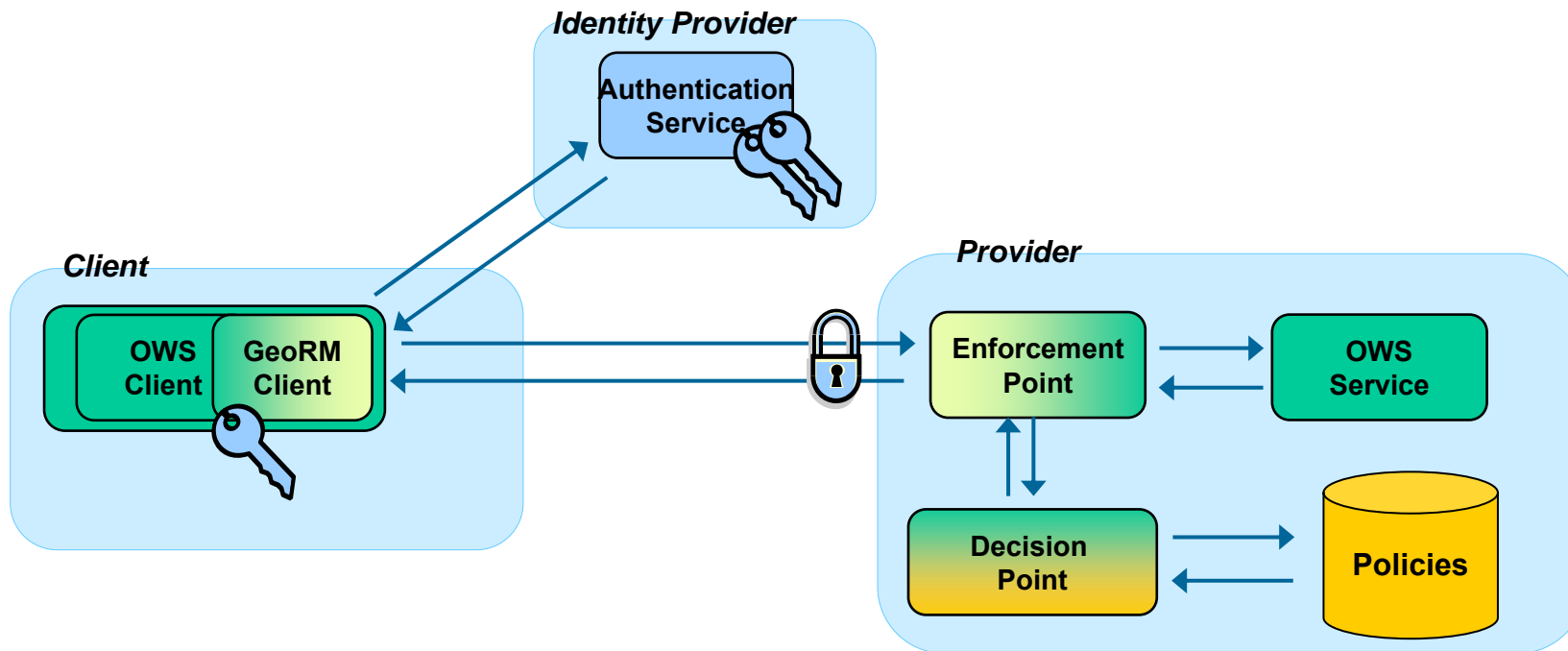
They typically rely on legal remediation

They typically don't believe in Trusted Computing

### ➔ They typically want access control!

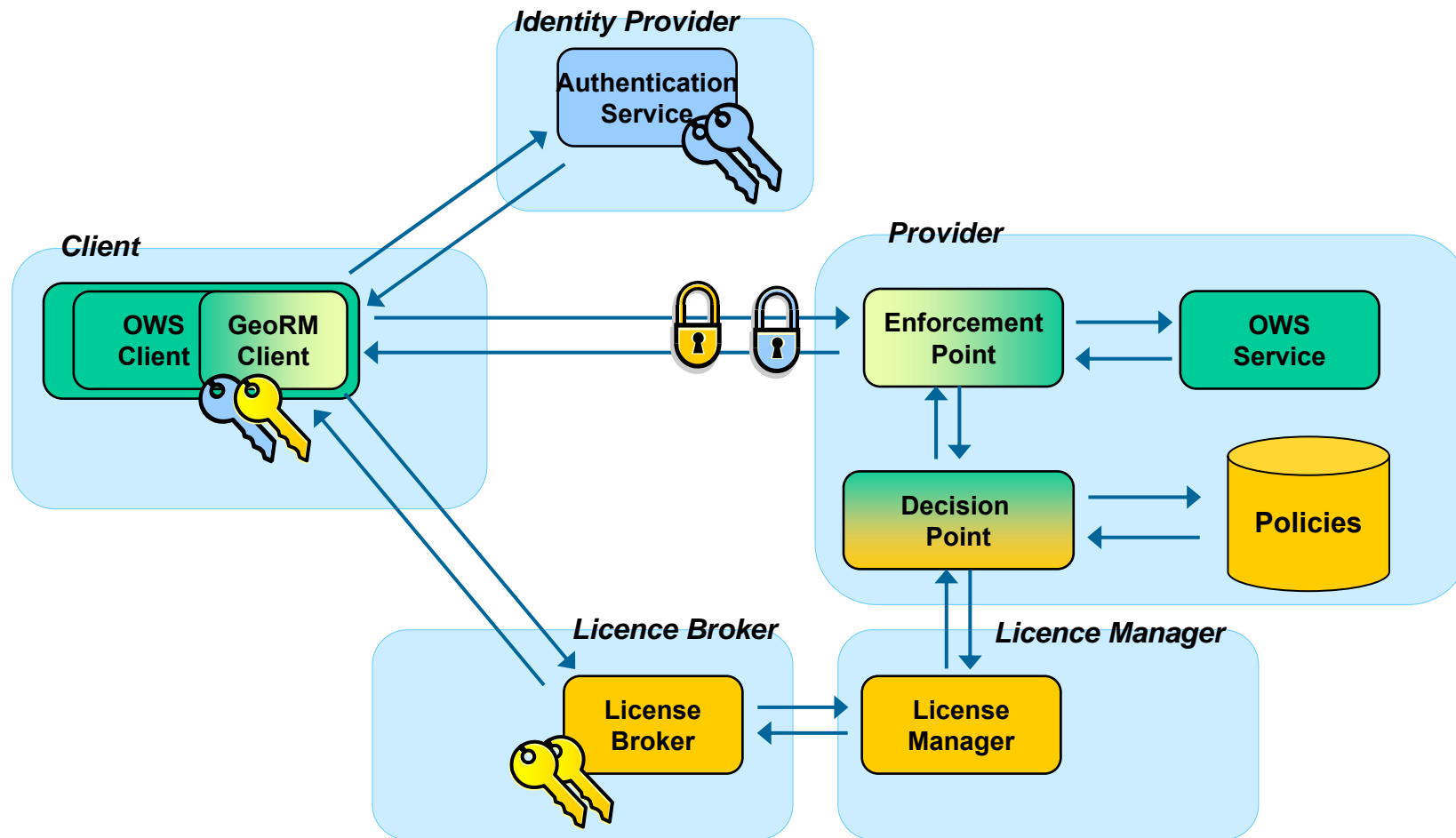


## Access Control Architecture





# Licensing Architecture



## 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)

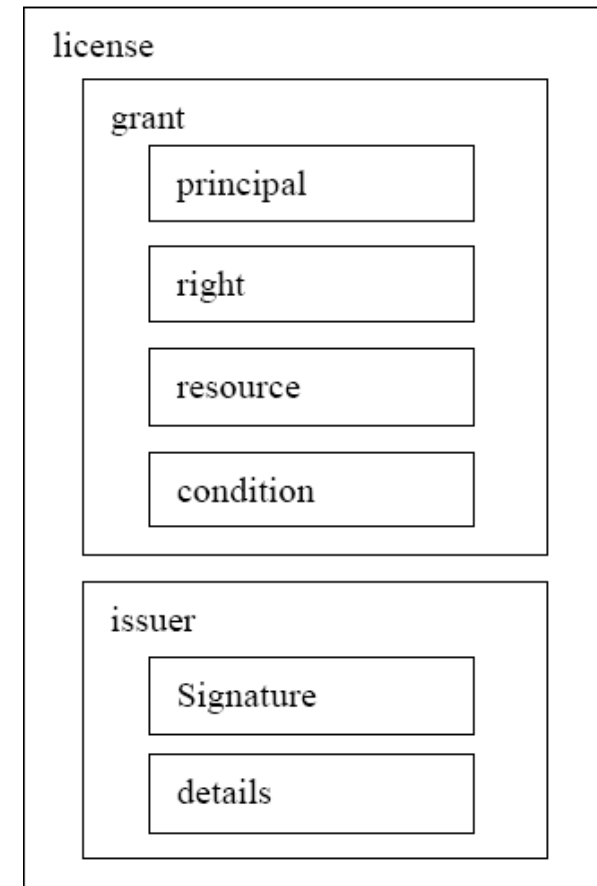
+ Licensee (explicit)

+ 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

...

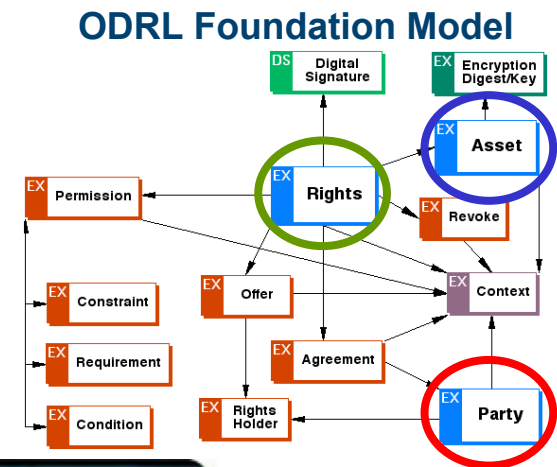
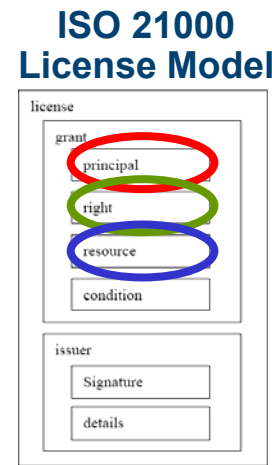
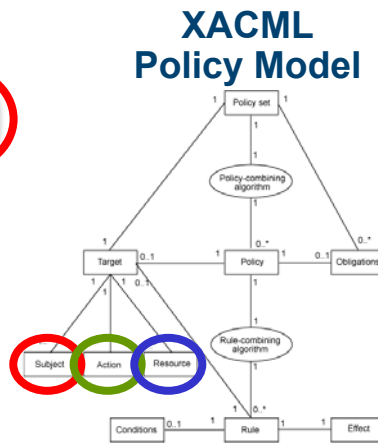
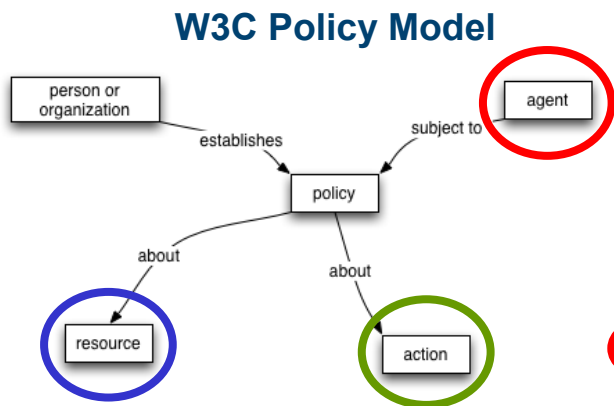
⇒ **Use of standards!**

## 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)



...connecting worlds

## 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!

Rüdiger Gartmann  
con terra GmbH, Münster

R.Gartmann@conterra.de