

Review of the OMA DRM V2 ODRL Profile



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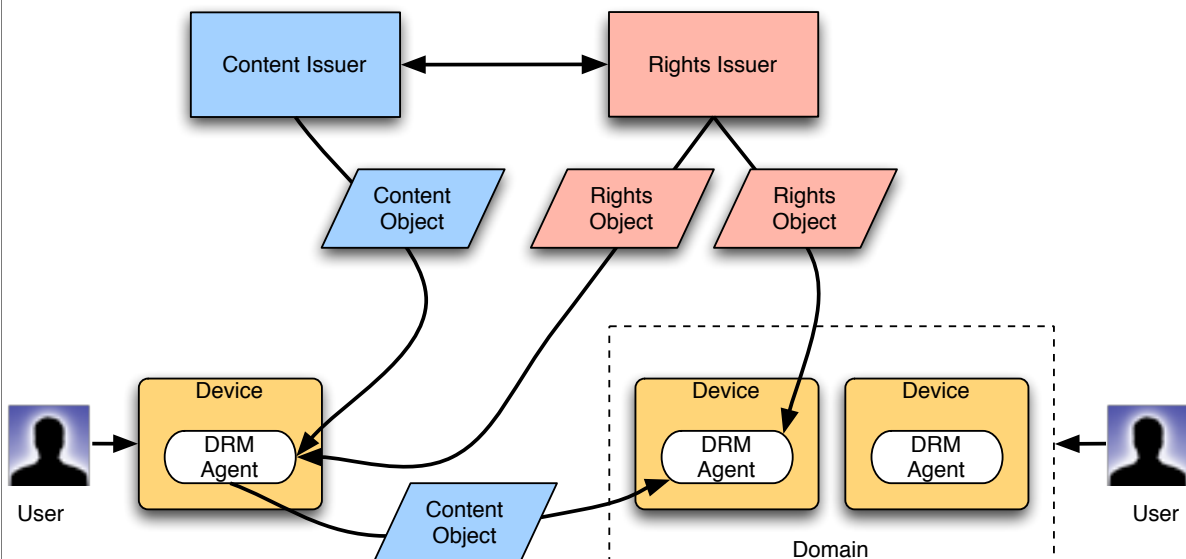
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OMA 2.0 Architecture



OMA DRM Profile



	Permissions	Constraints
Version 1.0	Play	Count
	Display	Datetime
	Execute	Interval
	Print	
Version 2.0	Export (ext)	Timed-count (ext)
		Accumulated
		Individual
		System (ext)

Count Element



- Required a “time delay” before decrementing count
- Created a new element <timed-count>
- Other options
 - create a new attribute “timer”
 - use inbuilt “type” attribute
- What is the best option?
- Also limited new constraint to a number of permissions (time-based media)
 - But can use it with “Display” ?
- Lesson: Explicit limits of Constraints to set of Permissions

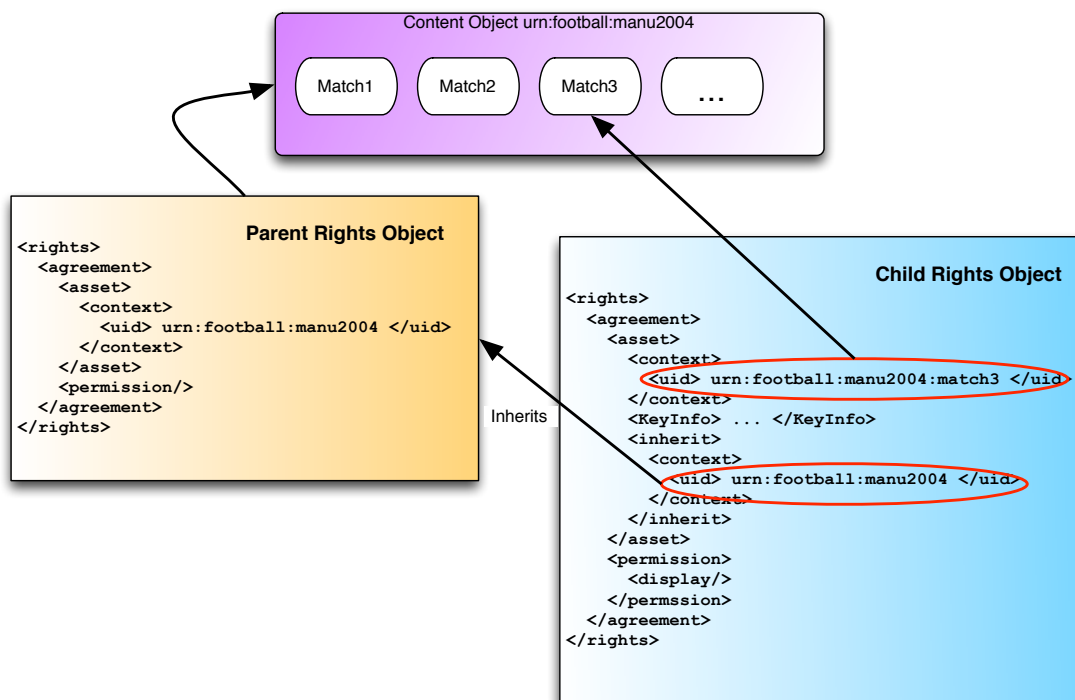
Export Element

- Allow content to be exported to other DRM systems
- Two modes supported: move, copy
- Must specify the <system> constraint
- Created new element <export>
- Other options:
 - reuse inbuilt <move> and <duplicate> elements
 - same semantics
- What is the best option?

System Element

- A constraint used by the Export element to specify the targeted system
- Created a new element <system>
- Other options (existing elements)
 - <cpu> <hardware> <software>
- But there are many aspects to an export
 - the device AND the platform
- For example
 - export to an iPod (both)
 - export to Real Helix (platform)

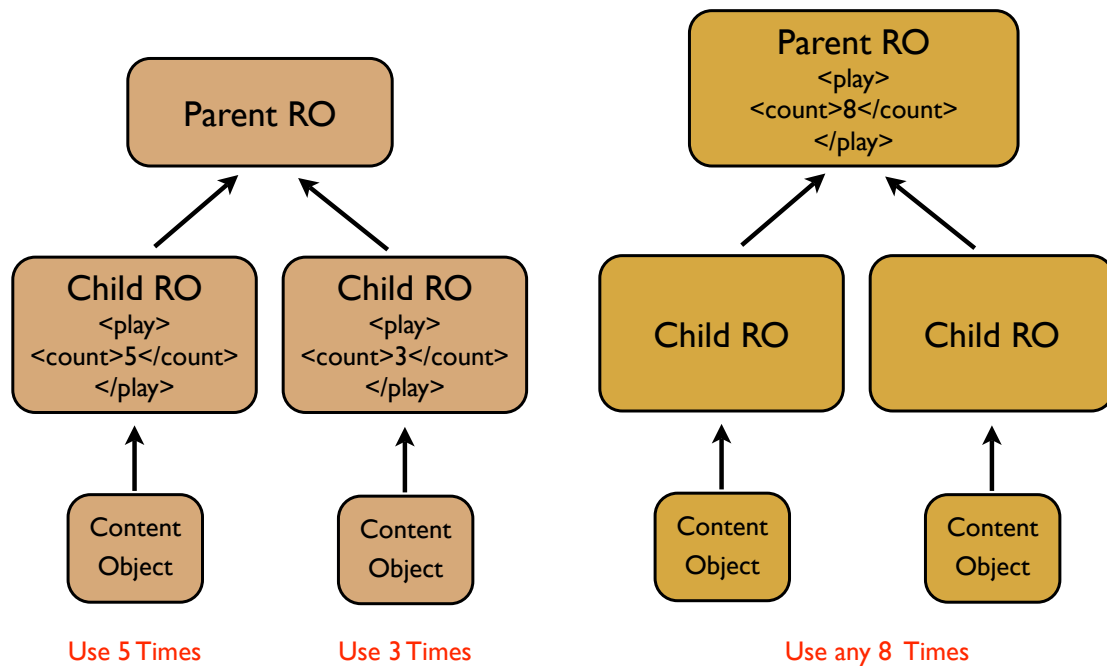
Inheritance Model



Inheritance Model

- Used for “subscription” services
- Original requirement was to support generic Object-Oriented style inheritance
- Overloads the UID element
 - Parent RO will not have any KeyInfo element
- Issues
 - Where should actual rights be (in parent/child)?
 - What happens to the current state of the rights?
 - ODRL 1.1 is silent on inheriting the state

Inheritance Model



Overriding Semantics

- Count constraint applies in TOTAL to all UID of Systems in an Export
 - Normally, the count would apply to each
 - Can express the former by using the Container model and specify a “or” relationship
 - <container type="ex-or">
 - Extra processing required to support container model
 - What is the best option?

Grace Period

- Accumulated and Interval both should be stopped 'as soon as possible' after the value has elapsed
- Some potential to allow a "grace period"
- Can this be generalised for other elements?
 - timed-count
- A general "grace" timer

Privacy Issue

- OMA DRM Content can be forwarded to others
 - superdistribution
- This is tracked at the system level not the REL
- Hence is not part of the Agreement with the end user
- Can lead to abuse and not optimal given all the public issues with privacy
- Should use the <tracked> Requirement

Missing

- Rights Holder information
- Payment information
- For interoperable DRM, need to capture more of the “transaction space”
 - capture all the ecommerce and rights info
- Domain “sharing”
 - Should be in the REL

Broadcast

- Current discussions to support Broadcast content in OMA DRM
- Defining a “Broadcast Rights Object”
- Additions to the REL Profile
 - <token-based> constraint
 - Device receives tokens (from multiple RI) and uses them to consume content
- Three sub elements required
 - token-constraint-type (eg count, accumulated)
 - token-unit - unit of the specified constraint
 - tokens-consumed - tokens consumed per token unit

Broadcast Example

```
<permission>
  <play>
    <constraint>
      <oma:token-based>
        <oma:token-constraint>count</>
        <oma:token-unit>1</>
        <oma:tokens-consumed>2</>
      </>
    </>
  </>
</>
```

Broadcast

- Is “token-based” consumption a **Constraint** or a **Requirement**?

- (Duty in V2)

```
<play>
  <requirement>
    <peruse>
      <oma...metering...>
    </peruse>
  </requirement>
</play>
```

Upcoming...

- Import
 - mirror of export
 - REL mapping?
- Gifting content
 - via “gift certificates”
 - odrl <give> permission?
- Derived Rights Objects
 - user selects subset of RO (to move it)

Summary

- OMA DRM V2 Profile is a great learning experience for ODRL Initiative
- Real-world requirements
- Use as input into V2.0
- OMA REL Profile should include all “terms and conditions” of the agreement in the REL (not system)
 - be clear and explicit
 - enables interoperability across platforms
- Need greater input and communications between the two organisations
 - Formal Liaison