

# Named graph & ATOM exercise



Compound Information Object Archive prototype  
ORE Technical Committee Meeting, NY, NY, May 29-30 2007



```

<feed>
  <id>6</id>
  <link rel="self" href="6" type="application/ore+xml"/>
  <author>
    <uri>A</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>

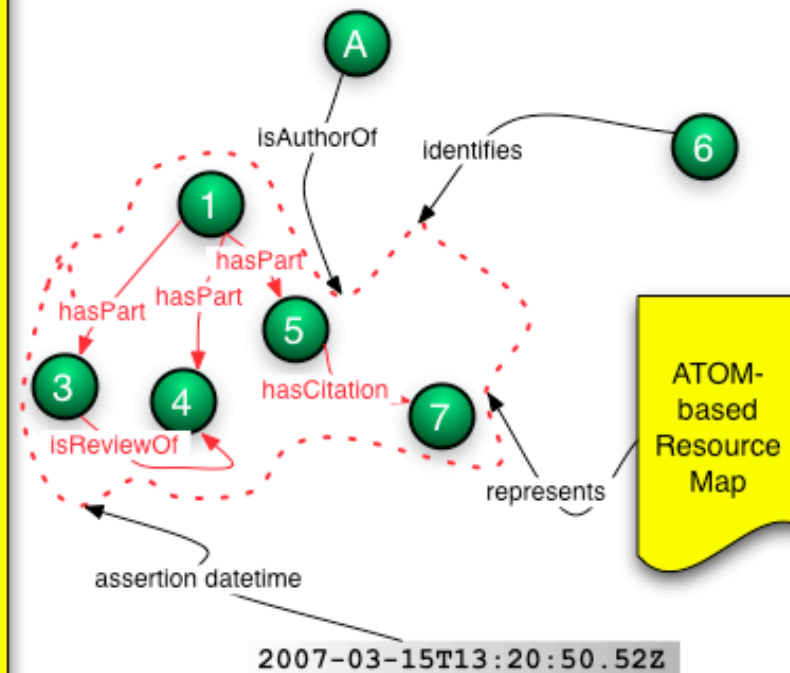
  <entry>
    <id trix:uri="6">1</id>
    <link rel="hasPart" href="3" type="text/html"/>
    <link rel="hasPart" href="4" type="application/pdf"/>
    <link rel="hasPart" href="5" type="application/pdf"/>
  </entry>

  <entry>
    <id trix:uri="6">3</id>
    <link rel="isReviewOf" href="4" type="application/pdf"/>
  </entry>

  <entry>
    <id trix:uri="6">4</id>
  </entry>

  <entry>
    <id trix:uri="6">5</id>
    <link rel="hasCitation" href="7"/>
  </entry>
</feed>

```



(7) Not considered part of the compound object

## General principles: named graph

- Named graph => <feed>
- Metadata re named graph => elements of <feed>:
  - ATOM <id> for URI(G), <author>, <update>
  - ATOM <link> for relationships and mime types of target
  - ATOM <extension> for additional metadata



# General principles: resources of named graph

- Resources of named graph => <entry>
- Metadata re resources of named graph => elements of <entry>:
  - ATOM <id> for URI(1), <author>, <update>
  - ATOM <link> for relationships and mime types of target
  - ATOM <extension> for additional metadata



## General principles: CO from repo

- Containment node of named graph ~ node that represents CO  
=> containment <entry>
- Metadata re CO => elements of containment <entry>:
  - ATOM <id> for URI(CO), <author>, <update>
  - ATOM <link> for relationships and mime types of target, especially hasPart to URI(1), URI(2), URI(3)
  - ATOM <extension> for additional metadata



# Just a bag



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# Just a bag (1)

- Named graph => <feed> element of ATOM
- Metadata at the level of the named graph: express at <feed> level of ATOM
  - HTTP URI that identifies the named graph => <id> element of ATOM <feed>
  - datetime of assertion of the named graph => <update> element of ATOM <feed>
  - author of the named graph => <author> element of ATOM <feed>
  - Other metadata => <extension> element of ATOM <feed>

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom" >
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+ore+xml" />
  ...
</feed>
```



## Just a bag (2)

- Resources of the bag => <entry> element of ATOM
- Metadata at the level of resources of the bag: express at the level of the respective <entry> of ATOM
  - URI that identifies the resource => <id> element of ATOM <entry>
  - Further relationships: <link> element of <entry>
  - Further metadata: <extension> element of <entry>

```
...
<entry>
  <id>URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
...
</entry>
<entry>
  <id>URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
...
</entry>
<entry>
  <id>URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
...
</entry>
```





# Just a bag (summary)

NG

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
      xmlns:trix="http://www.w3.org/2004/03/trix/trix-1/">
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+ore+xml" />
</feed>
```

---

1

```
<entry>
  <id trix:uri="URI (G)">URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
</entry>
```

---

2

```
<entry>
  <id trix:uri="URI (G)">URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
</entry>
```

---

3

```
<entry>
  <id trix:uri="URI (G)">URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
</entry>
```

---

```
</feed>
```



# Sequence



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# Sequence (1)

- Named graph => <feed> element of ATOM
- Metadata at the level of the named graph: express at <feed> level of ATOM
  - HTTP URI that identifies the named graph => <id> element of ATOM <feed>
  - datetime of assertion of the named graph => <update> element of ATOM <feed>
  - author of the named graph => <author> element of ATOM <feed>
  - Other metadata => <extension> element of ATOM <feed>

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom">
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+ore+xml" />
  ...
</feed>
```



## Sequence (2)

- Resources of the sequence => <entry> element of ATOM
- Metadata at the level of resources of the sequence: express at respective <entry> level of ATOM
  - URI that identifies the resource => <id> element of ATOM <entry>
  - Further relationships: <link> element of <entry> (see next for sequence)
  - Further metadata: <extension> element of <entry>

```
...
<entry>
  <id>URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
...
</entry>
<entry>
  <id>URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
...
</entry>
<entry>
  <id>URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
...
</entry>
```



## Sequence (3)

- Sequence relationships: <link> element of <entry>

```
...
<entry>
  <id>URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
  <link rel="hasNext" href="URI (2)" type="application/pdf" />
...
</entry>
<entry>
  <id>URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
  <link rel="hasNext" href="URI (3)" type="text/html" />
...
</entry>
<entry>
  <id>URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
...
</entry>
```



# Sequence (summary)

NG

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
      xmlns:trix="http://www.w3.org/2004/03/trix/trix-1/">
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+xml" />
</feed>

<entry>
  <id trix:uri="URI (G)">URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
  <link rel="hasNext" href="URI (2)" type="application/pdf" />
</entry>
<entry>
  <id trix:uri="URI (G)">URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
  <link rel="hasNext" href="URI (3)" type="text/html" />
</entry>
<entry>
  <id trix:uri="URI (G)">URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
</entry>
</feed>
```

1

2

3



# Compound Object from Repo



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# Compound Object from Repo (1)

- Named graph => <feed> element of ATOM
- Metadata at the level of the named graph: express at <feed> level of ATOM
  - HTTP URI that identifies the named graph => <id> element of ATOM <feed>
  - datetime of assertion of the named graph => <update> element of ATOM <feed>
  - author of the named graph => <author> element of ATOM <feed>
  - Other metadata => <extension> element of ATOM <feed>

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom">
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+ore+xml" />
  ...
</feed>
```





## Compound Object from Repo (2)

- Introduce containment node to deal with the *CO* thing-that-has-parts => "containment" <entry> element of *ATOM*
- Metadata at the level of the *CO*: express at the level of the "containment" <entry> of *ATOM*
  - URI that identifies the containment node => <id> element of *ATOM* "containment" <entry>
  - Further relationships: <link> element of "containment" <entry> (see later for hasPart)
  - Further metadata: <extension> element of <entry>

```
...  
<entry>  
  <id>URI (CO)</id>  
  <link rel="self" href="URI (CO)" type="text/html" />  
...  
</entry>  
...
```



## Compound Object from Repo (3)

- Other resources of CO => <entry> element of ATOM
- Metadata at the level of the resources of the CO: express at the level of the respective <entry> of ATOM
  - URI that identifies the resource => <id> element of ATOM <entry>
  - Further relationships: <link> element of <entry>
  - Further metadata: <extension> element of <entry>

```
...
<entry>
  <id>URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
...
</entry>
<entry>
  <id>URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
...
</entry>
<entry>
  <id>URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
...
</entry>
```



## Compound Object from Repo (4)

- hasParts relationships: <link> element of "containment" <entry>

```
...  
<entry>  
  <id>URI (CO) </id>  
  <link rel="self" href="URI (CO)" type="text/html" />  
  <link rel="hasPart" href="URI (1)" type="text/html" />  
  <link rel="hasPart" href="URI (2)" type="application/pdf" />  
  <link rel="hasPart" href="URI (3)" type="application/pdf" />  
...  
</entry>  
...
```



## Compound Object from Repo (5)

- Resources not considered part of CO => target (@href) of <link> element of <entry> corresponding to resource that is part of CO
- No further metadata at the level of these resources except for optional mime type.

```
...  
<entry>  
  <id>URI (1)</id>  
  <link rel="self" href="URI (1)" type="text/html" />  
  <link rel="cites" href="URI (external)" type="text/html" /> ...  
</entry>  
...
```



# Compound Object from Repo (summary)

NG

```
<?xml version="1.0" encoding="utf-8"?>
<feed xmlns="http://www.w3.org/2005/Atom"
xmlns:trix="http://www.w3.org/2004/03/trix/trix-1/">
  <author>
    <uri>URI (author)</uri>
  </author>
  <updated>2007-03-15T13:20:50.52Z</updated>
  <id>URI (G)</id>
  <link rel="self" href="URI (G)" type="application/atom+xml" />
```

CO

```
<entry>
  <id trix:uri="G">URI (CO)</id>
  <link rel="self" href="URI (CO)" type="text/html" />
  <link rel="hasPart" href="URI (1)" type="text/html" />
  <link rel="hasPart" href="URI (2)" type="application/pdf" />
  <link rel="hasPart" href="URI (3)" type="application/pdf" />
</entry>
```

1

```
<entry>
  <id trix:uri="URI (G)">URI (1)</id>
  <link rel="self" href="URI (1)" type="text/html" />
</entry>
```

2

```
<entry>
  <id trix:uri="URI (G)">URI (2)</id>
  <link rel="self" href="URI (2)" type="application/pdf" />
</entry>
```

3

```
<entry>
  <id trix:uri="URI (G)">URI (3)</id>
  <link rel="self" href="URI (3)" type="text/html" />
</entry>
```

```
</feed>
```



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