

# Research Entitlements Standard

User Permissioning Taxonomy

Version 2.0

04<sup>th</sup> October 2006

Developed by the Research Entitlements Consortium (<http://www.researchentitlements.net>)

**Status:** Approved for release

## DOCUMENT CONTROL

Version	Date	Author	Description
1.0	10/02/2006	Richard Inman	Approved First Release
1.2	06/09/2006	Richard Inman	Updated to reflect new Tiered Permissioning details.  Replaced Request.RequestedClassificationServiceLevel through Request.RequestedUserGroup; added Reply.UserGroup.  The Request format has been enhanced to allow requests to specify the desired for access to particular user groups for an individual.  The Reply format has been enhanced to allow a response containing the groups to which a user can (and should) be assigned.  Changed the title of the "Reply" taxonomy to "Permission Instruction", as it can be used by Brokers to instruct Vendors without having an initiating Request.
1.3	19/09/2006	Richard Inman	Updated spelling & small mistakes.
1.4	02/10/06	Michael Gamber	Updated after feedback of Steering Committee
2.0	04/10/06	Michael Gamber	Final version for release 2.0

This document is only valid on the day it was released.

This document was last revised or approved by the membership of the Entitlements Consortium on the above date. Check the current location listed below for possible later revisions of this document. This document is updated periodically on no particular schedule.

Document Location: <http://www.researchentitlements.net/>

The website has full contact details for the consortium. Alternatively, the consortium chairman may be emailed [Richard.inman@paconsulting.com](mailto:Richard.inman@paconsulting.com).

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## 1. RESEARCH ENTITLEMENTS STANDARD

The Research Entitlements Standard (RES) is the global industry standard mechanism for setting research entitlements.

The standard is made up of a number of components, each with supporting document(s) as follows:

Component	Description	Supporting Documentation
Overview	Outline of the history, goals, and components of the standard	<ul style="list-style-type: none"> <li>Overview</li> </ul>
User Permissioning	<p>Describes how vendors and brokers set research permissions, at the level of individual subscribers, using business email address as the unique identifier.</p> <p>This includes the ability to permission by type of user and product, and describes the administration of the linkages between the product groups (used to classify research content) and the user groups (used to classify individuals).</p>	<ul style="list-style-type: none"> <li>User Permissioning Taxonomy.doc</li> <li>Sample-request-usergroups-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML request file showing content sought expressed using user groups</li> <li>Sample-request-rixml-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML request file showing content sought expressed using RIXML Product Classifications</li> <li>Sample-permissioninstructions-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML reply file</li> <li>RIXMLProductClassification.xsd - a sample schema demonstrating use of RIXML ProductClassifications to specify product level grouping</li> <li>Common Elements Taxonomy.doc</li> </ul>
Reports	Describes the reports vendors provide to brokers.	<ul style="list-style-type: none"> <li>Reports Taxonomy.doc</li> <li>Sample-pendingreport-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML pending request report file</li> <li>Sample-entitlementreport-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML entitlement report file</li> <li>Sample-pugroup-report-0.6.xml - a computer-generated sample RESEARCH ENTITLEMENT XML product/user group report file</li> <li>Common Elements Taxonomy.doc</li> </ul>
Transport Technology	A common technology between vendors and brokers to handle all the key permissioning use cases.	<ul style="list-style-type: none"> <li>RESEARCH ENTITLEMENT XML-0.6.xsd - the core RESEARCH ENTITLEMENT XML Schema</li> </ul>

**Table 1: Components of the Standard**

## 2. OVERVIEW

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### 2.1 PERMISSIONING APPROACH

The decision on permissioning content depends on knowing something about the individual, the digital content (including, potentially the distribution channels) and setting up links to model the desired permissions. By way of a simple example, this standard allows French users to be permissioned to European content, whilst denying them access to Asian content.

This standard approaches permissions with the concept of users, user groups and products (digital content):

- *Users* are assigned to *User Groups*.
- *Digital research content* is then linked to *User Groups*.

### 2.2 USE CASES

The key use cases described by this document are outlined below:

- Vendors assign *Users* to *User Groups* following two distinct use cases:
  - Brokers instruct Vendors on changes to permissions directly using a standard *User Permission Instruction*.
  - Vendors request a user to be assigned to a user group by sending Brokers a standard *Request*. Brokers then respond using a standard *Permission Instruction*.
- Vendors link *Content* to *Product Groups* via two distinct use cases:
  - Brokers define the *Product Group* that content is part of in the *Content Metadata*
  - Brokers instruct Vendors on which *User Groups* are permitted access to which *Product Groups* using a *Product Permission Instruction*.

These are circumscribed by the grey boxes in the following diagram:

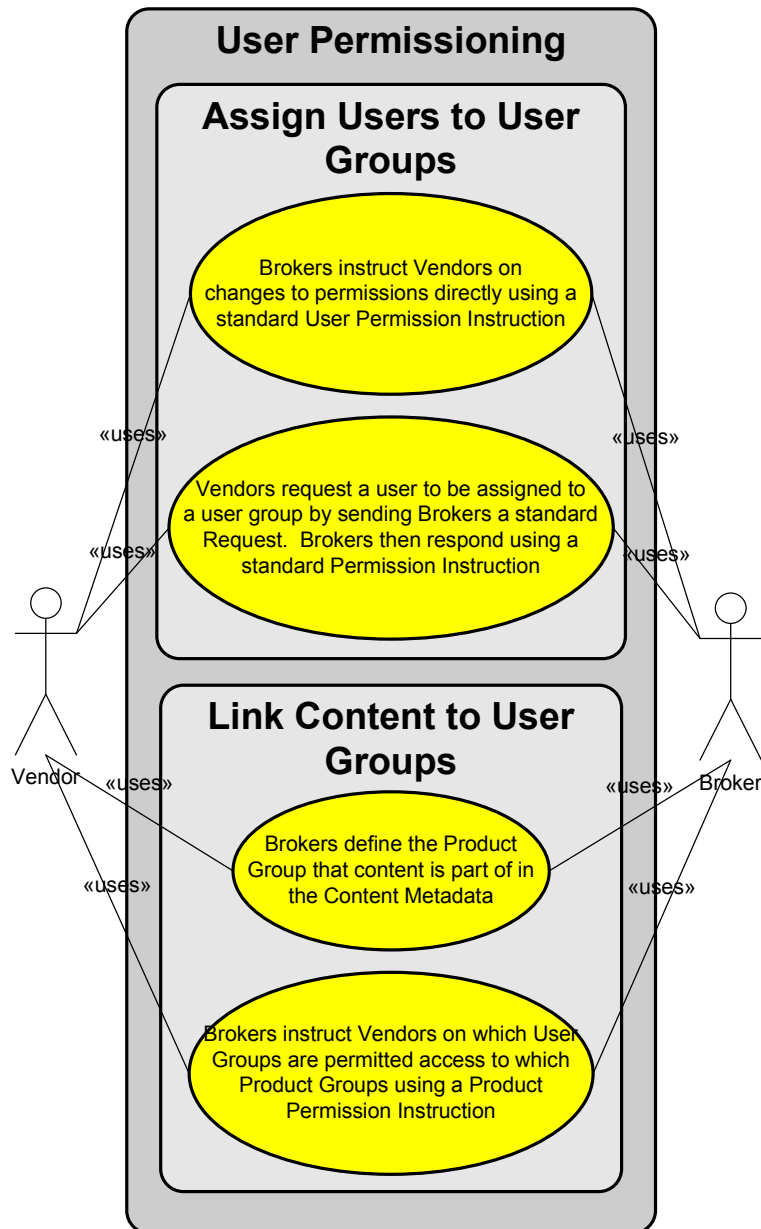


Figure 1: Use case diagram for the User Permissioning taxonomy

### 2.3 LINKING USER GROUPS TO CONTENT

The links between content and User groups can be many to many, one to many, many to one, or one to one relationships. The rules for these links are:

- An absence of a link means that the user group has no access to that product. This is an “implicit” deny, which works on the principle that by default users should get access to nothing.
- Advanced implementations allow for explicit “deny” links, which precedence over an explicit “allow” link i.e. a “deny access” overrides any other link.

### 2.3.1 Mandatory Items

The following aspects of this approach are **mandated** by this standard:

- Grouping of Users into User Groups
- Linking User Groups to content or to product groups

### 2.3.2 Optional Items

The following aspects are desirable, but **optional**:

- Grouping of content into Product Groups
- Using links that express an explicit “deny” between User Groups and content/product groups

The following diagram outlines a sophisticated solution, using both the optional product groups and the optional deny permissions:

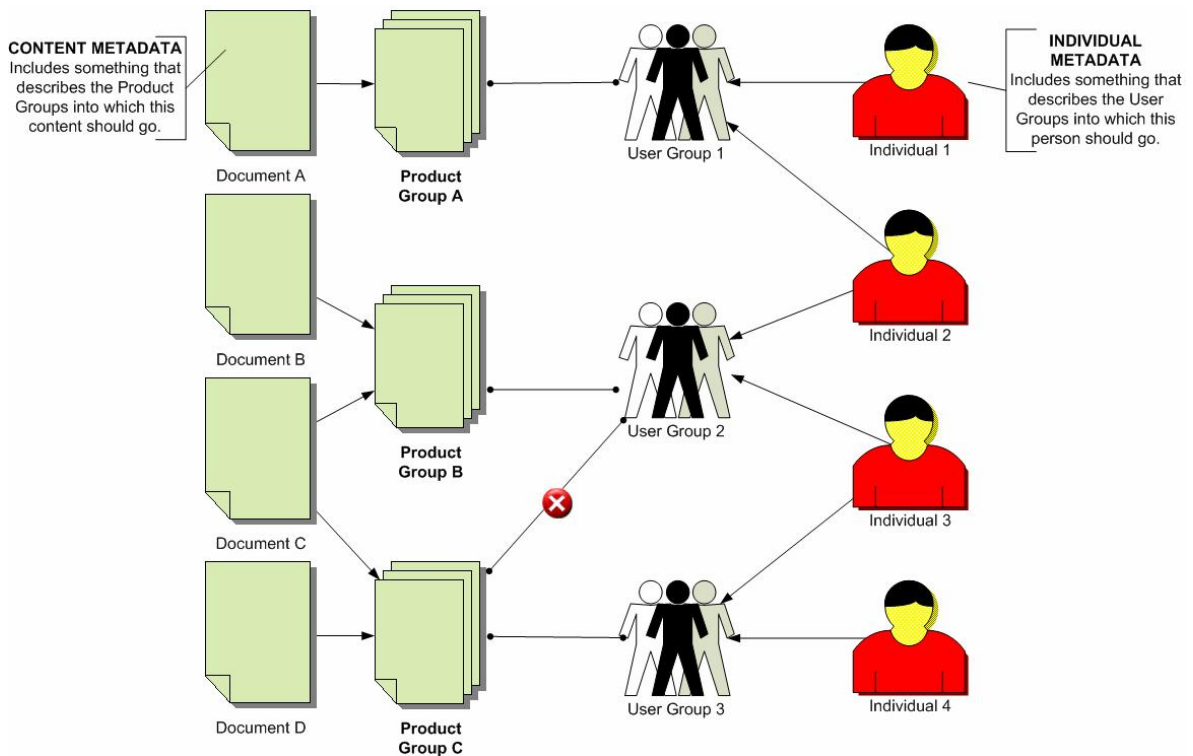


Figure 2: Outline of tiered permissioning, use of groups to link individuals to content

For the individuals in figure 2 the effective permissions would be as follows:

	Individual 1	Individual 2	Individual 3	Individual 4
Product Group A	●	●		
Product Group B		●	●	
Product Group C				●

**Figure 3: effective product group permissions matrix for individuals shown in Figure 2**

This translates into the following document-level permissions:

	Individual 1	Individual 2	Individual 3	Individual 4
Document A	●			
Document B	●	●	●	
Document C		●		●
Document D				●

**Figure 4: effective document permissions matrix for individuals shown in Figure 2**

### **3. REQUEST TAXONOMY**

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The following section describes the information required for permissioning requests. The primary matching element is Request/Individual/BusinessEmailAddress.

#### **3.1 SUMMARY VIEW**

Figure 5 shows the elements of the Entitlement Request entity. Absolute mandatory items are in **bold outline**, optional elements are in dotted outline; however there are a number of other elements that are mandatory under most circumstances, which the detailed taxonomy will reveal as “Mandatory where Applicable (MA)”.

In addition, Figure 5 shows common elements inside a yellow box. These are the elements in the Research Entitlements Standard XML Schema that are used repeatedly. For brevity and clarity, these elements are described separately in the “Common Elements Taxonomy” document, and are not described in detail in this document.

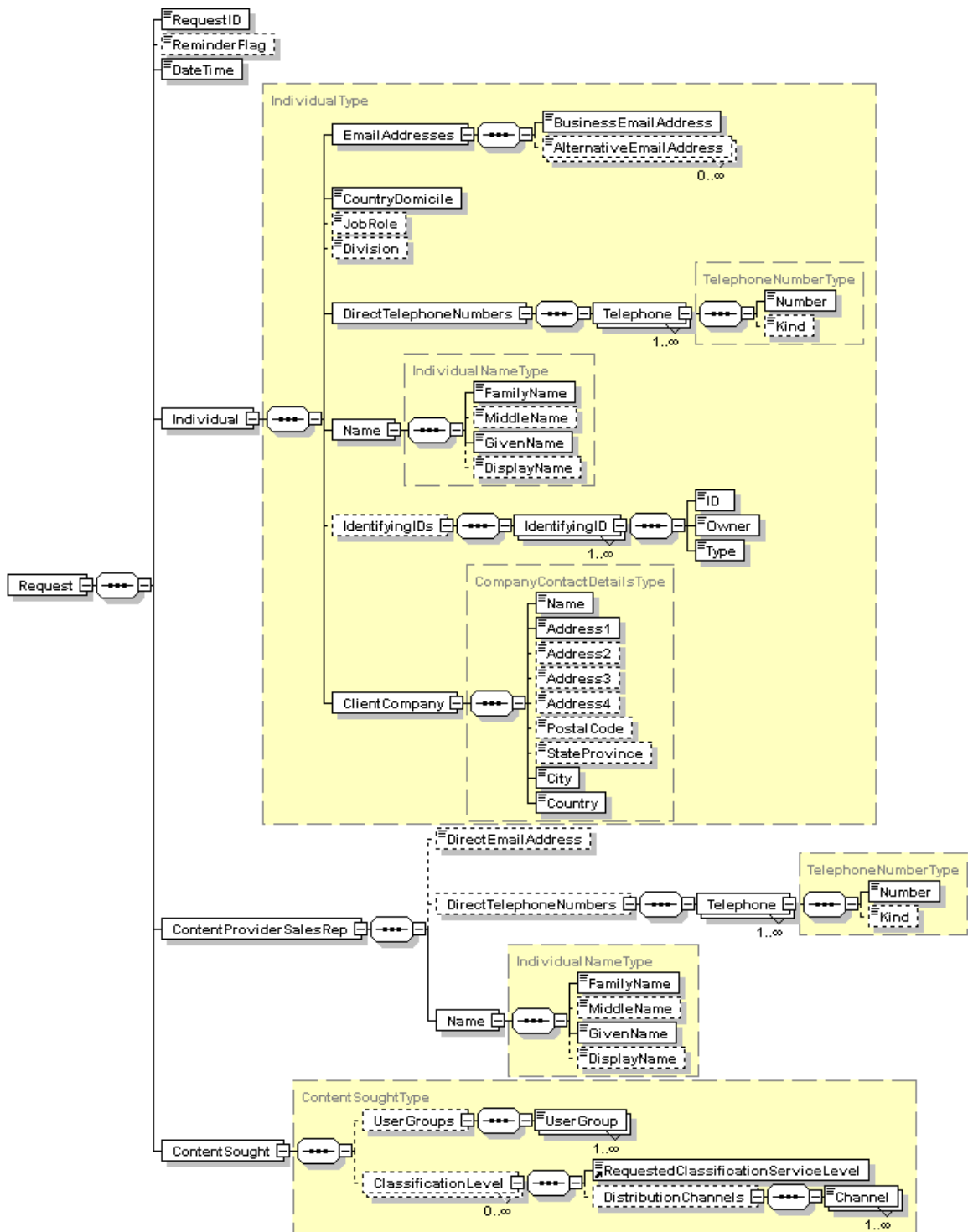


Figure 5: Request Entity Overview

## 3.2 ELEMENT DETAILS

### 3.2.3 Request/RequestID

<b>Definition</b>	<i>A unique identifier for each request.</i>
<b>Type</b>	Validated RequestID String
<b>Required</b>	M

<b>Repeatable</b>	N
<b>Values (Examples)</b>	<p>VendorID_uniqueid</p> <p>e.g. HBC_588f202ac-22cf-11d1-b12d-002035b29092</p> <p>RTRSY.OQ_588f202ac-22cf-11d1-b12d-002035b29092</p> <p><u>VendorID</u>: the Vendor's stock symbol or name. Where a Vendor has multiple regions, subdivisions, or individuals that might duplicate RequestIDs, the VendorID should also uniquely identify that region, subdivision, etc.</p> <p><u>Uniqueid</u>: any numeric unique identifier as agreed between institutions. One recommendation is a Universal Unique Identifier (UUID) – a 128-bit (16 byte) integer that is virtually guaranteed to be unique. The Open Software Foundation (OSF) created UUIDs as part of its Distributed Computing Environment (DCE)  <a href="http://www.opengroup.org/onlinepubs/9629399/apdxa.htm">http://www.opengroup.org/onlinepubs/9629399/apdxa.htm</a>.</p>
<b>Notes or Usage Notes</b>	<p>RequestID's are validated using the this regular expression:</p> <p>"[A-Za-z0-9\.\_]+_[a-f0-9]{9}-[a-f0-9]{4}-[a-f0-9]{4}-[a-f0-9]{4}\-[a-f0-9]{12}"</p>
<b>Use</b>	Vendor

### 3.2.4 Request/ReminderFlag

<b>Definition</b>	<i>Identifies requests that are reminders/duplicates, intended to prompt Brokers to process a previous request</i>
<b>Type</b>	Validated RequestID String (see Request/RequestID)
<b>Required</b>	O
<b>Repeatable</b>	N
<b>Values (Examples)</b>	Either blank or populated with the RequestID from the original request
<b>Notes or Usage Notes</b>	This should be used when the request is a reminder. A null entry indicates that this is a new request and is not a reminder.
<b>Use</b>	Vendor

### 3.2.5 Request/DateTime

<b>Definition</b>	<i>Identifies the date and time the request was made</i>
<b>Type</b>	w3c xs:datetime

<b>Required</b>	M
<b>Repeatable</b>	N
<b>Values (Examples)</b>	A “Zulu time” timestamp, e.g. 2006-09-11T09:30:47.0Z
<b>Use</b>	Vendor

### 3.2.6 Request/Individual

<b>Definition</b>	<i>Containing element enclosing the attributes of an Individual</i>
<b>Type</b>	IndividualType Container: See the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Definition</b>	<i>Structural element enclosing the attributes of an Individual’s email addresses. Should be used when using relational data structure in the implementation.</i>
<b>Use</b>	Vendor

### 3.2.7 Request/ContentProviderSalesRep

<b>Definition</b>	<i>Container element for the details of the sales contact at the research content provider.</i>
<b>Type</b>	Container
<b>Required</b>	R
<b>Repeatable</b>	N
<b>Notes or Usage Notes</b>	Mandatory where a sales representative can be identified.
<b>Use</b>	Vendor

### 3.2.8 Request/ContentProviderSalesRep/DirectEmailAddress

<b>Definition</b>	<i>Primary business email address of the sales contact at the research content provider, where appropriate</i>
<b>Type</b>	EmailAddressType Container: see the <a href="#">Common Element Taxonomy</a>

	for more details.
<b>Required</b>	R
<b>Repeatable</b>	N
<b>Values (Examples)</b>	<a href="#">XXXXX@YYYY.ZZZ</a> <a href="#">Baden.Powell@scoutingforboys.co.uk</a> <a href="#">J.R.Hartley@flyfishing.com</a>
<b>Notes or Usage Notes</b>	Mandatory where a sales representative can be identified.
<b>Use</b>	Vendor

### 3.2.9 Request/ContentProviderSalesRep/DirectTelephoneNumbers

<b>Definition</b>	<i>Container element grouping the telephone numbers for the individual. Should be used, but may not exist if no numbers have been captured.</i>
<b>Type</b>	Container
<b>Required</b>	MA
<b>Repeatable</b>	N
<b>Notes or Usage Notes</b>	Mandatory where a sales representative can be identified.
<b>Use</b>	Vendor

### 3.2.10 Request/ContentProviderSalesRep/DirectTelephoneNumbers/Telephone

<b>Definition</b>	<i>Container element grouping the attributes of a telephone number</i>
<b>Type</b>	PhoneNumberType Container: see the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	R
<b>Repeatable</b>	Y
<b>Notes or Usage Notes</b>	Multiple instances can be used to capture land-line, cell/mobile, etc. The stipulation is that this be used for <i>direct voice</i> lines only i.e. no fax lines, switchboard lines, etc.
<b>Use</b>	Vendor

### 3.2.11 Request/ContentProviderSalesRep/Name

<b>Definition</b>	<i>Container element containing the name details of the individual.</i>
<b>Type</b>	IndividualNameType Container: see the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	MA
<b>Repeatable</b>	N
<b>Use</b>	Vendor

### 3.2.12 Request/ContentSought

<b>Definition</b>	<i>Container element for the desired permissions in terms of the user group(s) and/or service classification levels to which the individual is requesting membership of or access to.</i>
<b>Type</b>	ContentSoughtType Container: See the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	MA
<b>Repeatable</b>	N
<b>Notes or Usage Notes</b>	<p>The Request/ContentSought attribute is added to both simplify and introduce flexibility in the way that content sought by a user is described. It specifies the content desired by the requester, which can be expressed in terms of desired user group membership (via a contained UserGroups sub-element) or one or ClassificationServiceLevel sub-elements (as agreed between broker and vendor).</p> <p>The Request/ContentSought element may be empty, but it should be used and should contain either a UserGroups element or one or more ClassificationServiceLevel elements (or both).</p>

## 4. PERMISSION INSTRUCTIONS TAXONOMY

The following section describes the information required for a permission instruction, either as a stand-alone instruction, or as a reply to a permissioning request. In order to be able to create the relationships expressed in Figure 2, describing the associations between user and product groups and the individual memberships of user groups, brokers need to be able to express these relationships to vendors.

This expression of relationships is captured using PermissionInstructions, which have 2 flavours: UserPermissionInstruction (describing individual's membership of user groups) and ProductPermissionInstruction (used to convey the relationship between product and user groups).

### 4.1 SUMMARY VIEW

Figure 6 shows the elements of the PermissionInstructions entity. Absolute mandatory items are in **bold outline**, optional elements are in dotted outline; however there are a number of other elements that are mandatory under most circumstances, which the detailed taxonomy will reveal as "Mandatory where Applicable (MA)".

In addition, Figure 6 shows common elements inside a yellow box. These are the elements in the Research Entitlements Standard XML Schema that are used repeatedly. For brevity and clarity, these elements are described separately in the "Common Elements Taxonomy" document, and are not described in detail in this document.

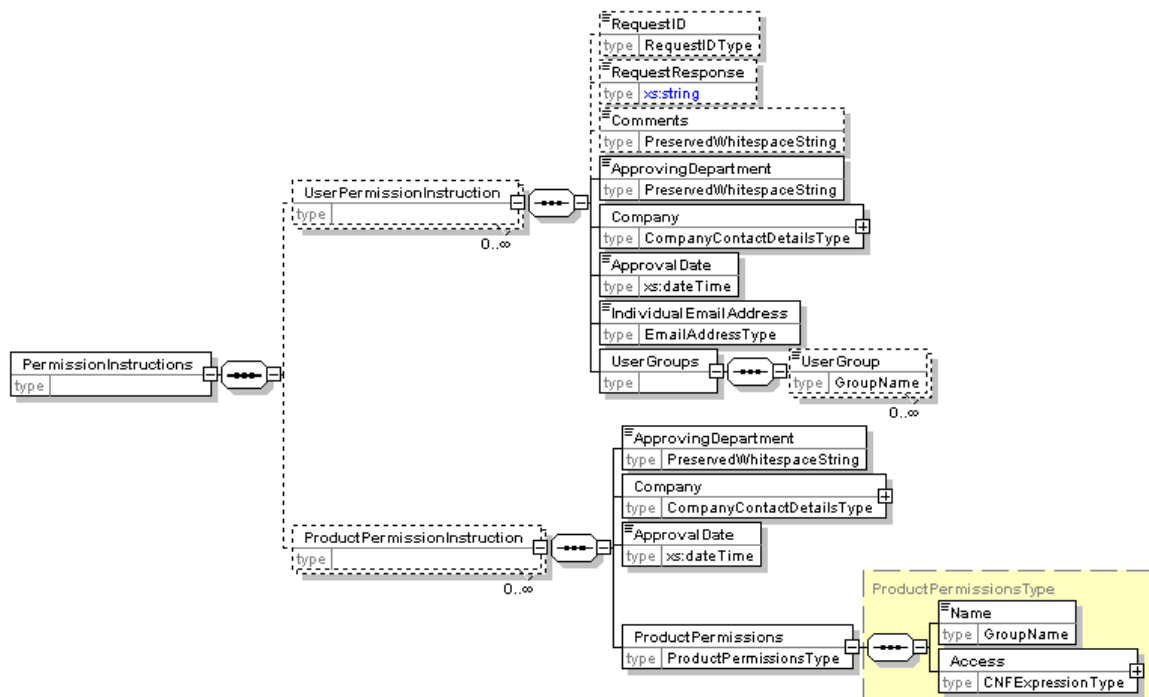


Figure 6: Permission Instructions entity overview

### 4.2 ELEMENT DETAILS

#### 4.2.13 PermissionInstructions

<b>Definition</b>	<i>This is a container for the desired permissions describing an individual's user group memberships and/or the relationship</i>
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	<i>between product and user groups.</i>
<b>Type</b>	Container
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	A PermissionInstructions entity contains zero or more UserPermissionsInstruction container elements followed by zero or more ProductPermissionsInstruction container elements (as described below).

#### 4.2.14 PermissionInstructions/UserPermissionsInstruction

<b>Definition</b>	<i>This is a container for the desired permissions describing an individual's user group memberships.</i>
<b>Type</b>	Container
<b>Required</b>	O
<b>Repeatable</b>	Y

#### 4.2.15 PermissionInstructions/UserPermissionInstruction/RequestID

<b>Definition</b>	<i>A unique identifier for each user permission request.</i>
<b>Type</b>	Validated RequestID String (see 3.2.3)
<b>Required</b>	MA
<b>Repeatable</b>	N
<b>Values (Examples)</b>	Populated with the RequestID from the initiating request.
<b>Notes or Usage Notes</b>	Mandatory when the instruction is a reply to a permissioning request.
<b>Use</b>	Broker

#### 4.2.16 PermissionInstructions/UserPermissionInstruction/RequestResponse

<b>Definition</b>	<i>The Broker's judgement of the request</i>
<b>Type</b>	Enumerated
<b>Required</b>	MA

<b>Repeatable</b>	N
<b>Values (Examples)</b>	Approved Not Approved
<b>Notes or Usage Notes</b>	Mandatory when the instruction is a reply to a permissioning request.
<b>Use</b>	Broker

#### 4.2.17 PermissionInstructions/UserPermissionInstruction/Comments

<b>Definition</b>	<i>Useful for passing miscellaneous information to the Vendor</i>
<b>Type</b>	String
<b>Required</b>	O
<b>Repeatable</b>	N
<b>Values (Examples)</b>	Any
<b>Notes or Usage Notes</b>	Can be used to pass reason for not approving a request, for passing contact details, or for other information.
<b>Use</b>	Broker

#### 4.2.18 PermissionInstructions/UserPermissionInstruction/ApprovingDepartment

<b>Definition</b>	<i>The department that approved the user group membership request.</i>
<b>Type</b>	String
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.19 PermissionInstructions/UserPermissionInstruction/Company

<b>Definition</b>	<i>The company approving the user group membership request.</i>
<b>Type</b>	CompanyContactDetailsType Container: See the <a href="#">Common Element Taxonomy</a> for more details.

<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.20 PermissionInstructions/UserPermissionInstruction/ApprovalDate

<b>Definition</b>	<i>A timestamp capturing the approval date and time of the user group membership request.</i>
<b>Type</b>	DateTime
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.21 PermissionInstructions/UserPermissionInstruction/IndividualEmailAddress

<b>Definition</b>	<i>A business email address, uniquely identifying the individual requesting access to the user groups</i>
<b>Type</b>	EmailAddressType:: see the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	M
<b>Repeatable</b>	N

#### 4.2.22 PermissionInstructions/UserPermissionInstruction/UserGroups

<b>Definition</b>	<i>Container for elements that describe the approved permissions in terms of the user group(s) to which the individual must be assigned. If empty the individual has not been granted access to any content.</i>
<b>Type</b>	Container
<b>Required</b>	M
<b>Repeatable</b>	N

#### 4.2.23 PermissionInstructions/UserPermissionInstruction/UserGroups/UserGroup

<b>Definition</b>	<i>This describes a user group to which the individual must be</i>
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	<i>assigned.</i>
<b>Type</b>	String
<b>Required</b>	M
<b>Repeatable</b>	Y
<b>Notes or Usage Notes</b>	<p>Multiple instances of this attribute denote membership of multiple groups.</p> <p>To protect broker business strategies, user groups should be given names that mask each broker's chosen category, and vendors will not be told what category of consumers is represented by any given group.</p>

#### 4.2.24 PermissionInstructions/ProductPermissionsInstruction

<b>Definition</b>	<i>This is a container for the desired permissions describing the relationship between a product group and the user group memberships which will allow or deny an individual access to the content in the product group.</i>
<b>Type</b>	Container
<b>Required</b>	O
<b>Repeatable</b>	Y

#### 4.2.25 PermissionInstructions/ProductPermissionInstruction/ApprovingDepartment

<b>Definition</b>	<i>The department that approved the product group access request.</i>
<b>Type</b>	String
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.26 PermissionInstructions/ProductPermissionInstruction/Company

<b>Definition</b>	<i>The company approving the product group access request.</i>
<b>Type</b>	CompanyContactDetailsType Container: See the <a href="#">Common Element Taxonomy</a> for more details.

<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.27 PermissionInstructions/ProductPermissionInstruction/ApprovalDate

<b>Definition</b>	<i>A timestamp capturing the approval date and time of the product group access request.</i>
<b>Type</b>	DateTime
<b>Required</b>	M
<b>Repeatable</b>	N
<b>Use</b>	Broker

#### 4.2.28 PermissionsInstruction/ProductPermissionInstruction/ProductPermissions

<b>Definition</b>	<i>This is a container for the desired permissions in terms of the link between a user group and content.</i>
<b>Type</b>	ProductPermissionsType Container: See the <a href="#">Common Element Taxonomy</a> for more details.
<b>Required</b>	M
<b>Repeatable</b>	N