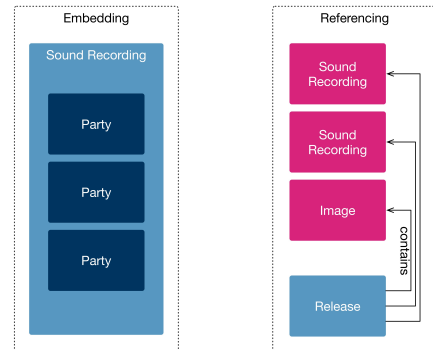


Referencing Composites using ID and IDREF

XML allows for two mechanisms that can be employed to express a relationship between two entities: embedding and referencing. The difference is shown on the right. DDEX uses both mechanisms. Referencing is used typically when a composite may need to be used multiple times. For example, because Sound Recordings are (i) usually referenced from at least two Releases in a NewReleaseMessage and, the DDEX standard uses the referencing mechanism for linking `SoundRecordings` to `Releases`. In ERN-3 parties such as writers and recording artists are not referenced; instead their information is embedded.



Using ID and IDREF

The referencing mechanism employed by DDEX – and many other XML schemas – is often called "ID/IDREF pairs". In that case, the composite that is to be referenced needs to contain an element with a datatype of `xs:ID`. In DDEX messages this element is named `XXReference` with `XXX` denoting the type of the composite. So, the relevant element for all Resources (`SoundRecordings`, `Videos`, `Images`, etc.) is called `ResourceReference` and the relevant element for a `Release` composite is called `ReleaseReference`.

These references are strings and the first letter of these strings denotes the type of composite they belong to:

- References to a `Release` start with the letter `R`;
- References to a `Resources` start with the letter `A` (because the letter `R` is already used);
- References to a `Deal` start with the letter `D`;
- References to a `Cue` start with the letter `C`;
- etc.

Referring to one of these references is achieved by elements of datatype `xs:IDREF`. The name of these referring elements is `YYYYZZReference` with `YYY` being the type of element that is referencing and `ZZZ` being the type of element that is being referenced. Therefore, the element to reference from a `Release` to a `Resource` such as a `SoundRecording` is called `ReleaseResourceReference`. The example below shows a `Release` pointing to two `SoundRecordings`: Line 17 points to the second `SoundRecording` (it's reference is provided in line 9) and the line 18 points to the first `SoundRecording` (it's reference is provided in line 4):

```
<ResourceList>
  <SoundRecording>
    <!-- ... -->
    <ResourceReference>A1</ResourceReference>
    <!-- ... -->
  </SoundRecording>
  <SoundRecording>
    <!-- ... -->
    <ResourceReference>A2</ResourceReference>
    <!-- ... -->
  </SoundRecording>
</ResourceList>

<ReleaseList>
  <Release>
    <!-- ... -->
    <ReleaseResourceReference>A2</ReleaseResourceReference>
    <ReleaseResourceReference>A1</ReleaseResourceReference>
    <!-- ... -->
  </Release>
</ReleaseList>
```

Best practices for selecting ID/IDREF values

ID/IDREF values in DDEX have to be:

- ASCII strings;
- Start with the specific letter as indicated above; and
- May not contain certain characters (:, @, \$, %, &, /, +, ,, ;, whitespace characters or different parenthesis).

The scope of the ID/IDREF pair is the message in which they are used. Therefore a `ResourceReference` used in a message is only valid in that message. When the same `SoundRecording` is communicated in a different message, it's `ResourceReference` will, in all likelihood, change.

It might therefore be best to start each message with reference number 1 and simply increase the number for each subsequent reference element.

It is specifically recommended to **not** use any of the metadata elements for the References:

Do not do this

```
<SoundRecording>
  <SoundRecordingId>

  <ISRC>USRC17607839</ISRC>
  <SoundRecordingId>
  <Title>
    <TitleText>Crazy
    Eyes</TitleText>
  </Title>

  <ResourceReference>A_CrazyEyes</ResourceReference>
</SoundRecording>
```

```
<SoundRecording>
  <SoundRecordingId>

  <ISRC>USRC17607839</ISRC>
  <SoundRecordingId>
  <Title>
    <TitleText>Crazy
    Eyes</TitleText>
  </Title>

  <ResourceReference>A_USRC17607839</ResourceReference>
</SoundRecording>
```

Instead do this

```
<SoundRecording>
  <SoundRecordingId>

  <ISRC>USRC17607839</ISRC>
  <SoundRecordingId>
  <Title>
    <TitleText>Crazy
    Eyes</TitleText>
  </Title>

  <ResourceReference>A1</ResourceReference>
</SoundRecording>
```

(Note: these samples are not valid DDEX XML as they only focus on how to use ID/IDREF links)