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Subject: Extension of tElementWithIDandDesignator and additional elementNumber  
Posted by [Heidrun Jost](#) on Wed, 29 May 2019 17:08:34 GMT

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Dear all,

in the functional infrastructure a designator and an external element are defined within railML 3.

Thales need this in the same way for the interlocking: The designator is already defined. We propose to change the maxOccurs to "unbounded" and to add the designator also with an unbounded occurrence.

We are also need an elementNumber for interlocking elements defined at EntityIL. As discussed with the IL coordinator (Mr Jörg von Lingen) this should have the type nonNegativeInteger.

Is it possible to extend the data model in that way?

Best regards,

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Subject: Re: Extension of tElementWithIDandDesignator and additional elementNumber

Posted by [Joerg von Lingen](#) on Fri, 31 May 2019 03:23:52 GMT

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Dear all,

the change for <designator> (0..\*) as child of EntityIL will be in next version.

The question of <external> I see connected with the discussion in <https://www.railml.org/forum/index.php?t=msg&th=657&start=0&>

Motivated by the requests from Thales and the railML2.4nor extensions I shall extend the <TrackAsset> like this

```
<xs:complexType name="TrackAsset">
  <xs:complexContent>
    <xs:extension base="rail3:EntityIL">
      <xs:sequence>
```

```

    <xs:element name="assetName" type="rail3:Name" minOccurs="0"
maxOccurs="unbounded"/>
    <xs:element name="belongsToOcp" type="rail3:EntityILref" minOccurs="0" maxOccurs="1"/>
  </xs:sequence>
  <xs:attribute name="elementNumber" use="optional" type="xs:nonNegativeInteger"/>
</xs:extension>
</xs:complexContent>
</xs:complexType>

```

This will be the base type for <TvdSection>, <MovableElement>, <SignalIL>, <LevelCrossingIL>, <RestrictedArea>, <LogicalDevice> and <PermissionZone>

in addition there will be a new base type <RouteObjects> for <PartialRoute>, <Route>, <Overlap>, <RouteRelation>, <ConflictingRoute>, <CombinedRoute>

```

<xs:complexType name="RouteObject">
  <xs:complexContent>
    <xs:extension base="rail3:EntityIL">
      <xs:sequence>
        <xs:element name="objectName" type="rail3:Name" minOccurs="0"
maxOccurs="unbounded"/>
        <xs:element name="belongsToOcp" type="rail3:EntityILref" minOccurs="0"
maxOccurs="unbounded"/>
      </xs:sequence>
      <xs:attribute name="objectNumber" use="optional" type="xs:nonNegativeInteger"/>
    </xs:extension>
  </xs:complexContent>
</xs:complexType>

```

Similar to the extensions of asset elements there shall be an extension to <SignalBox> adding these child elements

```

  <xs:element name="hasName" type="rail3:Name" minOccurs="0" maxOccurs="unbounded"/>
  <xs:element name="belongsToOcp" type="rail3:EntityILref" minOccurs="0"
maxOccurs="unbounded"/>

```

Please give me your opinion on these extensions.

Regards,  
Jörg von Lingen - Interlocking Coordinator

Heidrun Jost wrote on 29.05.2019 19:08:

- > Dear all,
- >
- > in the functional infrastructure a designator and an external element
- > are defined within railML 3.
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- > Thales need this in the same way for the interlocking: The designator is
- > already defined. We propose to change the maxOccurs to "unbounded" and

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