
Subject: Trac Ticket #6 "geographical coordinates for track positions"

Posted by [susi](#) on Fri, 13 Mar 2009 09:10:06 GMT

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Hello,

in Trac Ticket #6 Volker (infrastructure coordinator) describes the need for geographical coordinates along some track.

I want to give a suggestion for this.

At meeting in Zurich (2009-03-11) I mentioned the EPSG-Codes. They define a wide range of local and world-wide coordinate systems (CS). All often used CS are already defined and can be used by applying the unique Code (EPSG-Code).

See <<http://www.epsg-registry.org/>> for more information.

There is a "small GML element" which assists with position data, referencing a CRS. That's "gml:pos"

railML could simply refer to this element, using already specified XMLSchema.

My proposal would be some railML element like this:

```
<mileageMapping pos="1.456">
  <gml:pos srsName="urn:ogc:def:crs:EPSG::4979"
    srsDimension="3">51.049259 13.73836 113</gml:pos>
</rail:mileageMapping>
```

"pos" attribute reflects the typical railML relative position.

"srsName" in "gml" namespace is specified with type "anyURI". It could be used with any local definition, URN, URI or even other unique srs name.

"srsDimension" gives count of following parts inside the "gml:pos" element.

"gml:pos" element is a list of "double" entries, separated by whitespace.

My example uses EPSG-Code:4979 with following specification.

Datum: WGS84

CS: Ellipsoidal 3D Coordinate System

Coordinates:

Lat: Geodetic Latitude (north degree)

Long: Geodetic Longitude (east degree)

h: Ellipsoidal Height (up metre)

If railML wants to use this gml element, I can help with a small profile of gml, that includes only parts, needed for this purpose.

Please, feel free to comment.

Kind regards,
Susanne

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