

I propose these semantic rules for the loadingGauge element:

1. Define at least one kinematicProfile subelement, or one staticProfile subelement, or set the @code value.
2. For the ETCS use case, define one loadingGauge element per supported loading gauge profile.
3. For the ETCS use case, set one of these @code values: "GA", "GB", "GC", "G1"

Rationale:

The code attribute may only take one value, such as "GB", but the ETCS variable M\_LINEGAUGE can specify a combination of profiles, such as 0b00000110 meaning "GA" and "GB" . Hence, one loadingGauge element is needed for each profile that is suitable for the linear extension.

Background:

This documentation exists in the schema and on the wiki

<<https://wiki3.railml.org/wiki/IS:loadingGauge>>:

code: code name of the train loading gauge; use value from the separate codelist file 'TrainClearanceGauges.xml'/trainClearanceGauge (optional; xs:string)

At least these trainClearanceGauge elements are in 'TrainClearanceGauges.xml':

```
<trainClearanceGauge code="GA">
  <description>stucture gauge GA according European standard</description>
  <validFor>interoperable</validFor>
</trainClearanceGauge>
<trainClearanceGauge code="GB">
  <description>stucture gauge GB according European standard</description>
  <validFor>interoperable</validFor>
</trainClearanceGauge>
<trainClearanceGauge code="GC">
  <description>stucture gauge GC according European standard</description>
  <validFor>interoperable</validFor>
</trainClearanceGauge>
<trainClearanceGauge code="G1">
  <description>Multilateral gauge or international gauge G1 other than GA, GB and GC as
defined in European standard.</description>
  <validFor>interoperable</validFor>
</trainClearanceGauge>
...
```

Those profile types are also the ones that are supported by ETCS and defined in SUBSET-026,

v360 (see below).

#### 7.5.1.67.1 M\_LINEGAUGE

Name Line gauge

Description Defining which loading gauge(s) are permitted on a line (refer to TSI INF)

Length of variable 8 bits

Resolution/formula Bitset

Special/Reserved Values

xxxx xxx1 G1

xxxx xx1x GA

xxxx x1xx GB

xxxx 1xxx GC

00000000 Spare

xxx1 xxxx Spare

xx1x xxxx Spare

x1xx xxxx Spare

1xxx xxxx Spare

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Subject: Re: [railML3] loadingGauge element and definition of profile

Posted by [christian.rahmig](#) on Fri, 20 Jan 2023 08:17:33 GMT

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Dear Jorgen,

thank you very much for your input on semantic rules for usage of loadingGauge element. Following your detailed reasoning, everyone understood the proposed rules and there have been no objections or requests for modification. Following the approval, the semantic rules will be incorporated in the wiki page of the loadingGauge element.

Regarding the rules 2 and 3, your focus on the ETCS use case can be also extended to other use cases, e.g. Network Statement. Dear developers of the Network Statement working group, please comment here if you have a different opinion.

Thank you very much and best regards

Christian

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Christian Rahmig - Infrastructure scheme coordinator

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Am 05.07.2022 um 00:22 schrieb Jörgen Strandberg:

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> staticProfile subelement, or set the @code value.

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- > per supported loading gauge profile.
- > 3. For the ETCS use case, set one of these @code values:
- > "GA", "GB", "GC", "G1"
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- > Rationale:
- > The code attribute may only take one value, such as "GB",
- > but the ETCS variable M\_LINEGAUGE can specify a combination
- > of profiles, such as 0b00000110 meaning "GA" and "GB" .
- > Hence, one loadingGauge element is needed for each profile
- > that is suitable for the linear extension.
- >
- >
- > Background:
- >
- > This documentation exists in the schema and on the wiki
- > <<https://wiki3.railml.org/wiki/IS:loadingGauge>>:
- > code: code name of the train loading gauge; use value from
- > the separate codelist file
- > 'TrainClearanceGauges.xml'/trainClearanceGauge (optional;
- > xs:string)
- >
- >
- > At least these trainClearanceGauge elements are in
- > 'TrainClearanceGauges.xml':
- >
- > <trainClearanceGauge code="GA">
- > <description>structure gauge GA according European
- > standard</description>
- > <validFor>interoperable</validFor>
- > </trainClearanceGauge>
- > <trainClearanceGauge code="GB">
- > <description>structure gauge GB according European
- > standard</description>
- > <validFor>interoperable</validFor>
- > </trainClearanceGauge>
- > <trainClearanceGauge code="GC">
- > <description>structure gauge GC according European
- > standard</description>
- > <validFor>interoperable</validFor>
- > </trainClearanceGauge>
- > <trainClearanceGauge code="G1">
- > <description>Multilateral gauge or international gauge
- > G1 other than GA, GB and GC as defined in European
- > standard.</description>
- > <validFor>interoperable</validFor>
- > </trainClearanceGauge>
- > ..

- >
  - >
  - > Those profile types are also the ones that are supported by
  - > ETCS and defined in SUBSET-026, v360 (see below).
  - >
  - > 7.5.1.67.1 M\_LINEGAUGE
  - > Name Line gauge
  - > Description Defining which loading gauge(s) are permitted
  - > on a line (refer to TSI INF)
  - > Length of variable 8 bits
  - > Resolution/formula Bitset
  - > Special/Reserved Values
  - > xxxx xxx1 G1
  - > xxxx xx1x GA
  - > xxxx x1xx GB
  - > xxxx 1xxx GC
  - > 00000000 Spare
  - > xxx1 xxxx Spare
  - > xx1x xxxx Spare
  - > x1xx xxxx Spare
  - > 1xxx xxxx Spare
-