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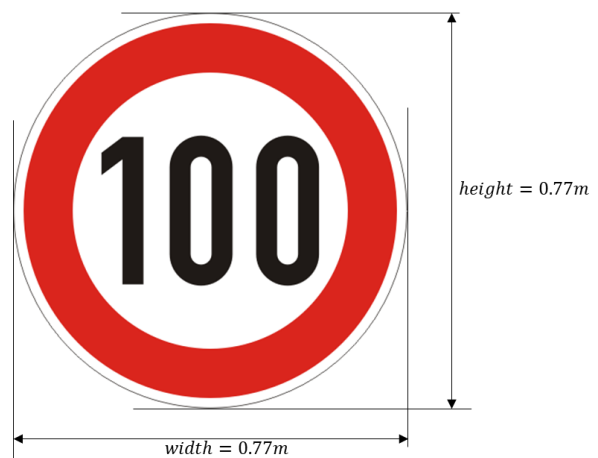
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# 1 Intro OpenDRIVE Signal Catalog

In OpenDRIVE Signals have the attribute @country to differentiate between the signals and signs from different countries. As a default set of signals the country OpenDRIVE is available. How to use and define signals is defined in the ASAM OpenDRIVE Version 1.6 Chapter 12.

Example:

```
<signals>
  <signal
    s="3981.4158159146"
    t="-14.0503"
    id="5000162"
    name="Vorschriftzeichen"
    dynamic="no"
    orientation="+"
    zOffset="3.8835"
    country="Germany"
    type="274"
    subtype="100"
    countryRevision = "2017"
    value="100"
    unit="km/h"
    width="0.77"
    height="0.77"
    hOffset="0.0" />
</signals>
```




**Figure 1: Example Signal definition**

In OpenDRIVE 1.5 the attribute @countryRevision was introduced. This is due to the fact that, with a new revision of the signal definition, done by the legal authorities, some types and subtypes of signals may change. For example, in the country revision from 2017 the speed limit sign has the following values for @type and @subtype:

type = 274  
subtype = 50


**Table 1: Speed limit signal example with country revision 2017**

| countryRevision | sign  | country | type | subtype | unit | value | text |
|-----------------|---|---------|------|---------|------|-------|------|
| 2017            |  | DE      | 274  | 50      | km/h | 50    |      |

In the former revision from 2013 the following values for @type and @subtype were set:

type = 274  
subtype = 55

**Table 2: Speed limit signal example with country revision 2013**


| countryRevision | sign  | country | type | subtype | unit | value | text |
|-----------------|---|---------|------|---------|------|-------|------|
| 2013            |  | DE      | 274  | 55      | km/h | 50    |      |

The most recent German sign definition can be found here: <http://www.vzkat.de/2017/VzKat.htm>. Additional Information regarding the German traffic signs can be found in this book: *HAV. Hinweise für das Anbringen von Verkehrszeichen und Verkehrseinrichtungen* (ISBN 978-3-7812-1700-3)

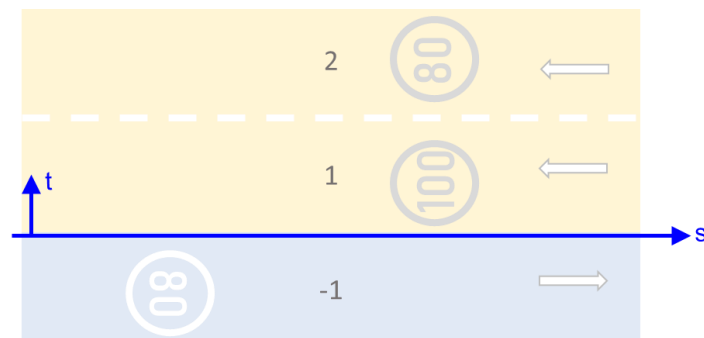
The United States traffic signs can be found here:  
<https://mutcd.fhwa.dot.gov/services/publications/fhwaop02084/index.htm>

In the United states the speed signals do not have unique type and subtypes, the speed value is given in the @value attribute and in the @unit attribute.

**Table 3: United States speed limit signal example with country revision 2014**

| countryRevision | sign  | country | type | subtype | unit | value | text |
|-----------------|---|---------|------|---------|------|-------|------|
| 2014            |  | US      | R2   | 1       | mph  | 50    |      |

Please be aware that speed limits drawn on the road, as road marks, are not necessarily signals. In many countries these road marks are not binding and must be accompanied by additional signs.




**Figure 2: Road marks defining a speed limit**

When using the official signal catalogs, provided by the authorities, please be aware to use the following type, subtype encoding:

[type]-[subtype]

If no subtype available set @subtype = -1

**Table 4: Example for subtype = -1**




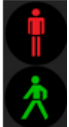
















| countryRevision | sign  | country | type | subtype | unit | value | text                      |
|-----------------|---|---------|------|---------|------|-------|---------------------------|
|                 |  | DE      | 310  | -1      |      |       | Wilster\nKreis\nSteinburg |
















## 2 Road Signals:

For country = "OpenDRIVE", the following signal types and subtypes shall be defined in addition to the identifiers given by the corresponding documentation of the country's authorities.

### 2.1 Traffic Signals for all traffic participants

Table 5: Traffic Signals for country OpenDRIVE

| signal  | type      | subtype | signal  | type      | subtype | signal  | type      | subtype |
|---|-----------|---------|---|-----------|---------|---|-----------|---------|
|    | 1.000.001 | -       |    | 1.000.009 | 10      |    | 1.000.011 | 10      |
|   | 1.000.002 | -       |   | 1.000.009 | 20      |   | 1.000.011 | 20      |
|  | 1.000.002 | 10      |  | 1.000.009 | 30      |  | 1.000.011 | 30      |
|  | 1.000.002 | 20      |  | 1.000.010 | 10      |  | 1.000.011 | 40      |
|   |           |         |  | 1.000.010 | 20      |  | 1.000.011 | 50      |
|  | 1.000.007 | -       |  | 1.000.014 | -       |  | 1.000.013 | -       |
|  | 1.000.007 | 10      |  | 1.000.015 | -       |  | 1.000.013 | 10      |

| signal  | type      | subtype | signal  | type      | subtype | signal   | type      | subtype |
|---|-----------|---------|---|-----------|---------|--|-----------|---------|
|  | 1.000.007 | 20      |  | 1.000.016 | -       |   | 1.000.013 | 20      |
|  | 1.000.007 | 30      |  | 1.000.017 | -       |   | 1.000.013 | 30      |
|   |           |         |  | 1.000.018 | -       |   | 1.000.013 | 40      |
|   |           |         |  | 1.000.019 | -       |   | 1.000.013 | 50      |
|   |           |         |   |           |         |   | 1.000.013 | 60      |
|   |           |         |   |           |         |   | 1.000.013 | 70      |
|   |           |         |   |           |         |   | 1.000.013 | 80      |
|   |           |         |   |           |         |   | 1.000.013 | 90      |
|   |           |         |   |           |         |  | 1.000.013 | 100     |

1.000.003: Pedestrian Crossing




































1.000.004: Bicycle Crossing

















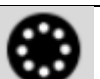


## 2.2 Single Traffic Signals with arrows

**Table 6: Single traffic signals with arrows**

| signal  | type      | subtype | signal  | type      | subtype | signal  | type      | subtype |
|---|-----------|---------|---|-----------|---------|---|-----------|---------|
|    | 1.000.020 | -       |    | 1.000.008 | -       |    | 1.000.012 | -       |
|    | 1.000.020 | 10      |    | 1.000.008 | 10      |    | 1.000.012 | 10      |
|    | 1.000.020 | 20      |    | 1.000.008 | 20      |    | 1.000.012 | 20      |
|    | 1.000.020 | 30      |    | 1.000.008 | 30      |    | 1.000.012 | 30      |
|    | 1.000.020 | 40      |    | 1.000.008 | 40      |    | 1.000.012 | 40      |
|    | 1.000.020 | 50      |    | 1.000.008 | 50      |    | 1.000.012 | 50      |
|   | 1.000.020 | 60      |   | 1.000.008 | 60      |   | 1.000.012 | 60      |
|  | 1.000.020 | 70      |  | 1.000.008 | 70      |  | 1.000.012 | 70      |
|  | 1.000.020 | 80      |  | 1.000.008 | 80      |  | 1.000.012 | 80      |
|  | 1.000.020 | 90      |  | 1.000.008 | 90      |  | 1.000.012 | 90      |
|  | 1.000.020 | 100     |  | 1.000.008 | 100     |  | 1.000.012 | 100     |

### 3 Tram Signals:

**Table 7: Tram signals**

| signal  | type | subtype | signal  | type | subtype | signal  | type | subtype |
|---|------|---------|---|------|---------|---|------|---------|
|    | F    | 0       |    | W    | 0       |  | W    | 14      |
|    | F    | 1       |    | W    | 1       |  | W    | 11      |
|    | F    | 2       |    | W    | 2       |  | W    | 12      |
|    | F    | 3       |    | W    | 3       |  | W    | 13      |
|    | F    | 4       |    | A    | 1       |  | A    | 2B      |
|  | F    | 5       |  | A    | X       |   |      |         |





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