

## 7 Product Data

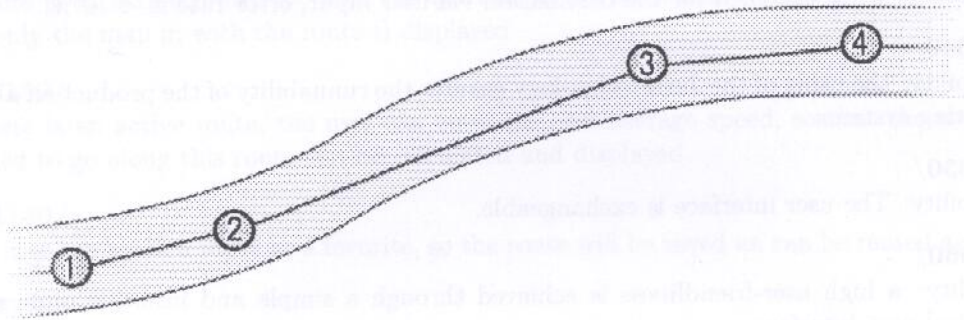
### 7.1 Essential Data

Deprecated! We are going to change the format. You can ignore /D010/.

- /D010/

The graph data in the OSM XML format. We chose this format because it's human-readable, easy to understand and easy to modify. The basic structure is as follows:

Consider the following excerpt from a map graph:



In OSM XML, the graph could be represented like this:

```
<?xml version="1.0" encoding="UTF-8"?>
<osm version="0.6">
  ...
  <node id="4" lat="54.0901712" lon="12.2482612"/>
  <node id="1" lat="54.0901453" lon="12.2482255"/>
  <node id="2" lat="54.0901233" lon="12.2482561"/>
  <node id="3" lat="54.0901546" lon="12.2482782">
    <tag k="amenity" v="bicycle_parking"/>
  </node>
  ...
  <way id="743">
    ...
    <nd ref="1"/>
    <nd ref="2"/>
    <nd ref="3"/>
    <nd ref="4"/>
    ...
    <tag k="highway" v="footway"/>
  </way>
  ...
</osm>
```

As seen in the example, key/value pairs can be assigned to nodes or ways as node-tags and way-tags, e.g. node 3 that has been defined as a bicycle stand. A different OSM XML-tag, the `<relation>`-tag, can be used to specify relations between ways and nodes that are unrelated to routes, e.g. building outlines.

For a complete documentation, see [http://wiki.openstreetmap.org/wiki/OSM\\_XML](http://wiki.openstreetmap.org/wiki/OSM_XML). However, we might need to make minor changes to the format to make it suit our needs. The details of