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Subject: Vertical track geometry  
Posted by [iruldacunha](#) on Tue, 21 Jun 2016 14:24:33 GMT  
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Hello,

Does anyone have an idea on how to represent a vertical track geometry? For example, in LandXML, there is section of tracks represented as follow:

```
<Alignment name="POINT P" length="10729.999981" staStart="9635.000000" desc="">
  <CoordGeom>
    <Line dir="118.260597" length="0.000001">
      <Start>6688142.924053 524155.814846</Start>
      <End>6688142.924053 524155.814847</End>
    </Line>
    <Spiral length="183.094296" radiusEnd="5560.000000" radiusStart="17010.382141"
rot="ccw" spiType="clothoid" theta="0.458086">
      <Start>6688142.924053 524155.814847</Start>
      <PI>6688048.650193 524105.137203</PI>
      <End>6687980.877100 524070.591900</End>
    </Spiral>
    <Curve rot="ccw" length="1222.615288" crvType="arc" radius="5560.000000">
      <Start>6687980.877100 524070.591900</Start>
      <Center>6685455.924700 529024.198200</Center>
      <End>6686839.561929 523639.112483</End>
    </Curve>
  </CoordGeom>
</Alignment>
```

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Subject: Re: Vertical track geometry  
Posted by [christian.rahmig](#) on Wed, 22 Jun 2016 12:12:33 GMT  
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Dear Illan,

Am 21.06.2016 um 16:24 schrieb Illan RUL-DA CUNHA:

> [...]  
> Does anyone have an idea on how to represent a vertical  
> track geometry?

> [...]

The track geometry can be modelled at its main points using <gradientChange> elements. Via its parameters "slope", "transitionLenght" and "transitionRadius" the basic attributes of the vertical track geometry can be defined in railML 2.x. For railML 3 we intend to have a more enhanced model. However, railML will not be that detailed like e.g. LandXML regarding the specific alignment. What do you need for your use case?

Best regards

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Christian Rahmig  
railML.infrastructure coordinator

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Subject: Re: Vertical track geometry  
Posted by [iruldacunha](#) on Fri, 24 Jun 2016 12:57:53 GMT  
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Dear Christian,

Is it planned to include the LandXML schema in railML 3, in order to have a more complete model?

More concretly, is it possible to add, in the railML standard, the attributes necessary to have a complete definition of the vertical geometry of a track (and particularly the clothoids)?

Thank you.

Best regards,

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