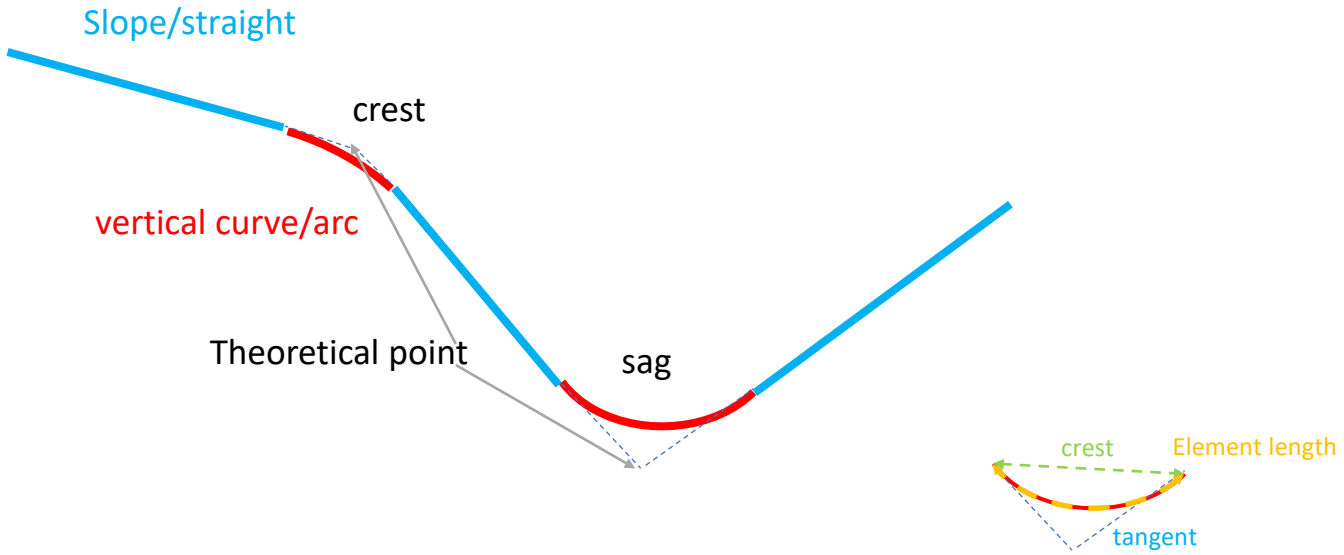
Usage of <gradientCurve>

In railML3.2/3

Terms for vertical railway alignment

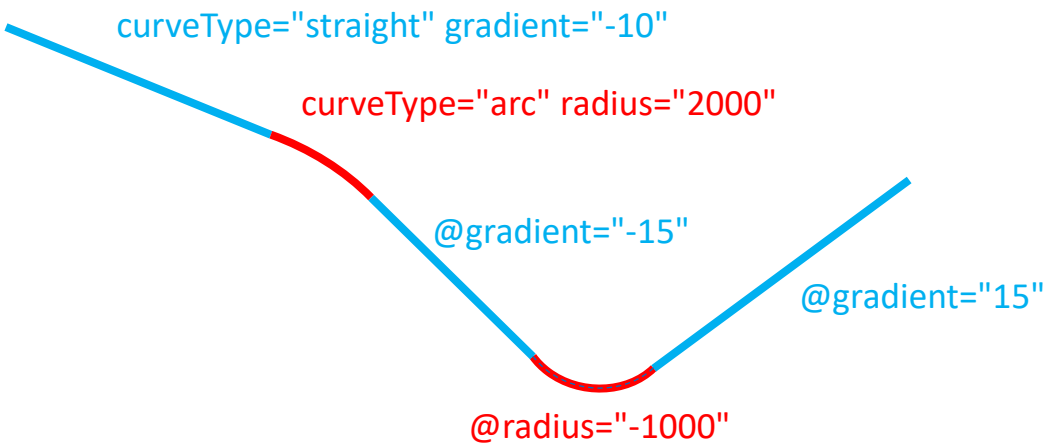
- Slope/"straight"
- Vertical curve/"arc"
- Theoretical point
- Sag/valley
- Crest/hill



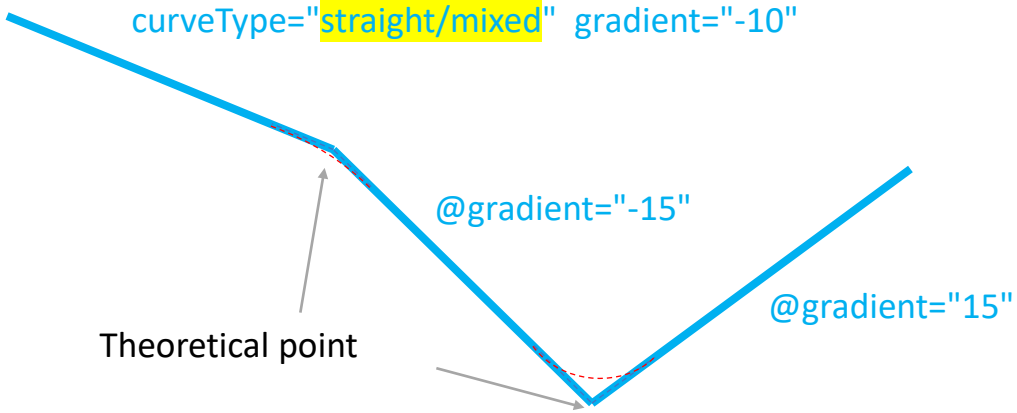
railML3 wiki: https://wiki3.railml.org/wiki/IS:gradientCurve
railML2 wiki: https://wiki2.railml.org/wiki/IS:gradientChange
Wikipedia on alignment design: https://en.wikipedia.org/wiki/Geometric_design_of_roads#Profile
Norwegian guide book: Sporets trasé/Sporgeometri – Lærebøker i jernbaneteknikk (jernbanekompetanse.no)

Different types of vertical alignment modelling

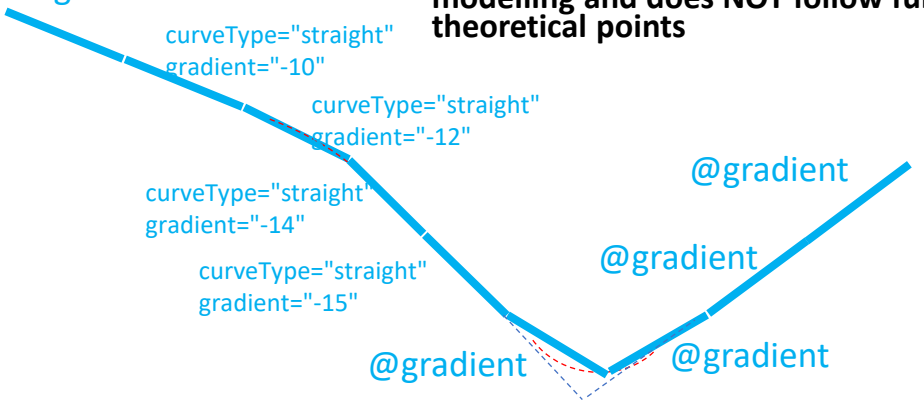
1. Full modelling



2.Simplified modelling
no vertical curves; slopes=full modelling but extended to position of their theoretical points

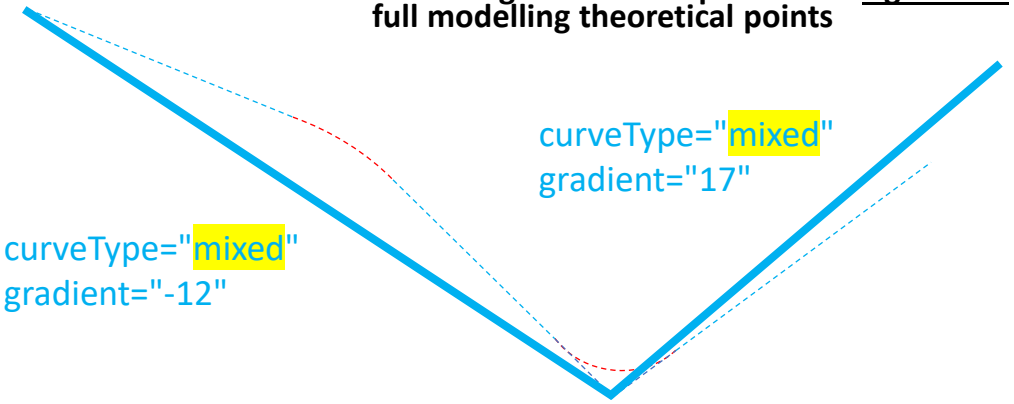


3. Short average gradients (discrete slopes)
no vertical curves; slopes shorter than full modelling and does NOT follow full modelling theoretical points



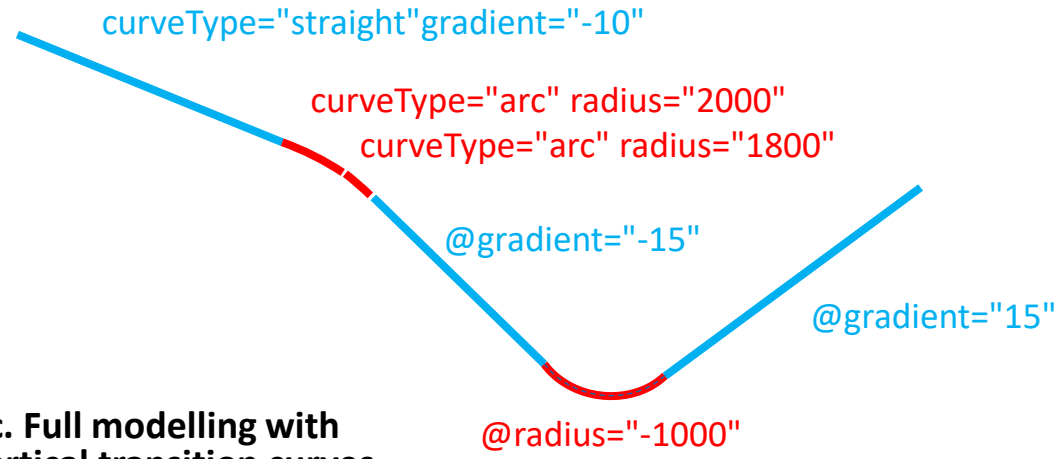
Or curveType="mixed" for all/some…?

4. Long average gradients
no vertical curves; slopes longer than full modelling and follows position of <u>significant</u> full modelling theoretical points

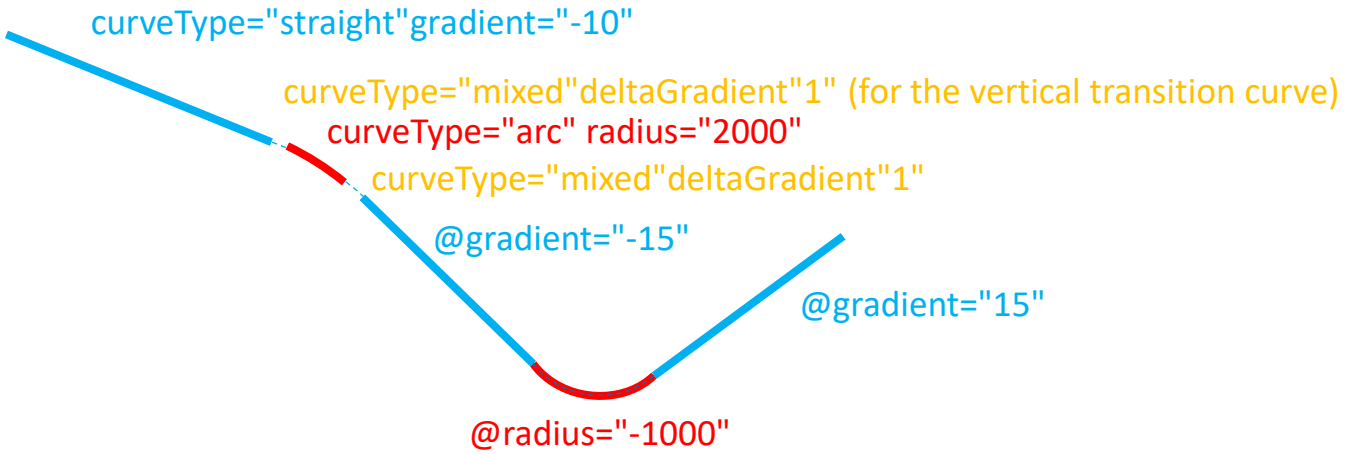


Different types of vertical alignment modelling

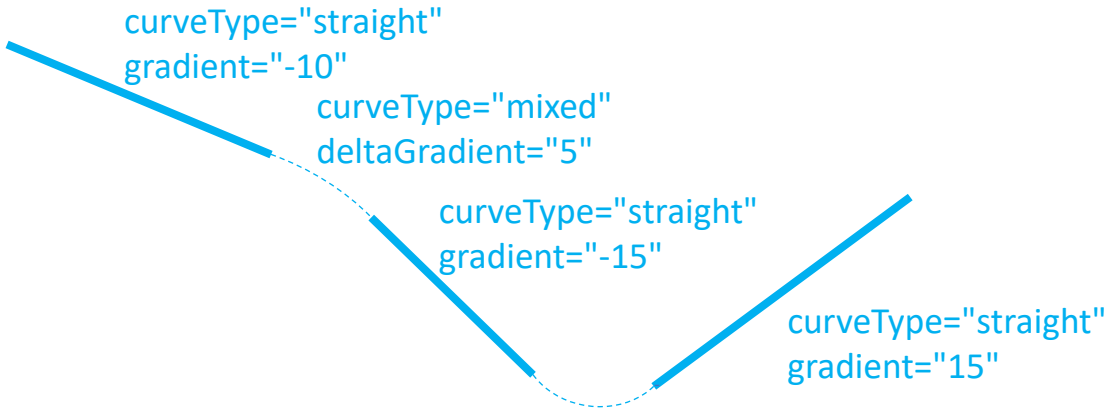
1b. Full modelling with composite curves



1c. Full modelling with vertical transition curves



2b. Simplyfied modelling with delta gradient modelling no vertical curves; slopes=full modelling, NOT extended to position of their theoretical points, gaps filled with deltagradient



curveType="mixed"
deltaGradient="**30**"
PS. DELTA is change in gradient NOT the average between slope in and out