Patrick Mc Gloin – Product manager

20. June 2019

☰ 3D Intersection in Novapoint 20.XXFP4a

◈ Trimble.

AGENDA

- Agenda
  - Summary 3D Intersection
  - DEMO

3D Intersection

Seperate TASK for 3D Intersection
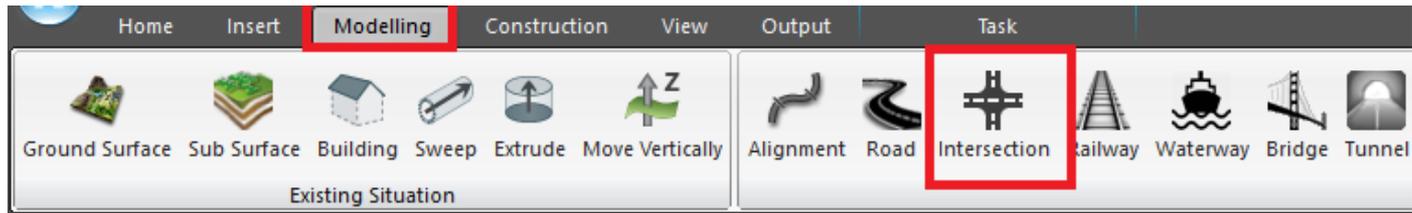
New – Now produces 3D Solids

New – Possible to pull legs along their alignment

New – Alignments contain task name

3D Intersection

Input – road alignments and ground surface (does not support sub surface layers)

3D Intersection

Select **Open** on the task:

3D Intersection

Select the Intersection type:

3D Intersection

Select the parameters you wish to edit – Add a traffic Island– select road structure:

3D Intersection

Select Road Structure:
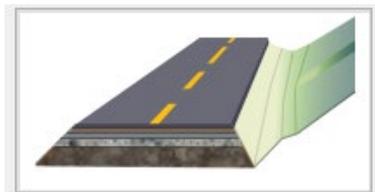
Parameter	Type	Value
1-1) Wearing course	Delta z	0.05000
2-1) Binder 1	Delta z	0.05000
2-2) Binder 2	Delta z	0.05000
3-1) Base 1	Delta z	0.10000
3-2) Base 2	Delta z	0.10000
3-3) Base 3	Delta z	0.10000
4-1) Sub-base 1	Delta z	0.20000
4-2) Sub-base 2	Delta z	0.20000
4-3) Sub-base 3	Delta z	0.20000
5-1) Filter	Delta z	0.00100
Cut slope	Gradient	1.00000
Ditch bottom width	Distance	0.50000
Ditch depth	Delta z	0.50000
Ditch slope	Gradient	-0.50000
Fill slope	Gradient	-0.50000
Inner slope	Gradient	-0.66700
Side course slope	Gradient	-0.03000

Structure parameters

3D Intersection

Select structure – Traffic area only

Parameter	Type	Value
1-1) Wearing course	Delta z	0.05000
2-1) Binder 1	Delta z	0.05000
2-2) Binder 2	Delta z	0.05000
3-1) Base 1	Delta z	0.10000
3-2) Base 2	Delta z	0.10000
3-3) Base 3	Delta z	0.10000
4-1) Sub-base 1	Delta z	0.20000
4-2) Sub-base 2	Delta z	0.20000
4-3) Sub-base 3	Delta z	0.20000
5-1) Filter	Delta z	0.00100

Structure parameters

3D Intersection – Early design

3D Intersection stored to Novapoint Base – change and **Update**

3D Intersection

Calculated against the ground surface:

3D Intersection
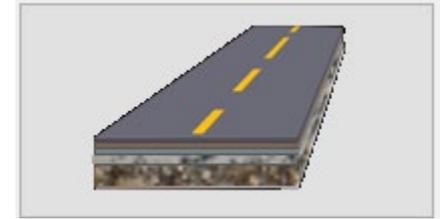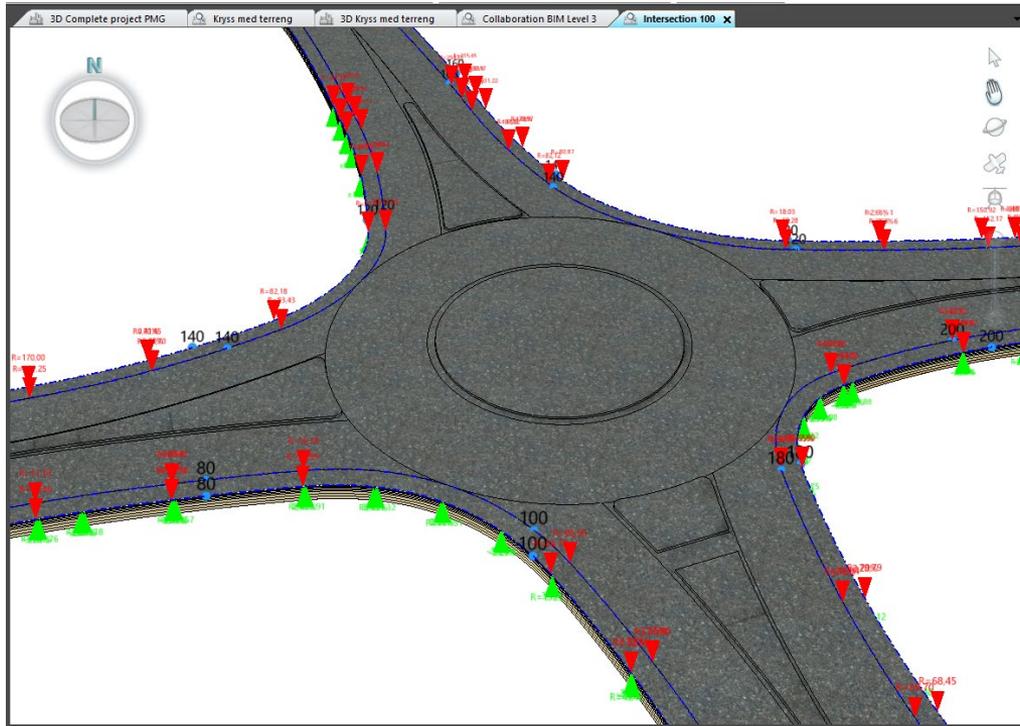
Solids:

3D Intersection

….analysis:
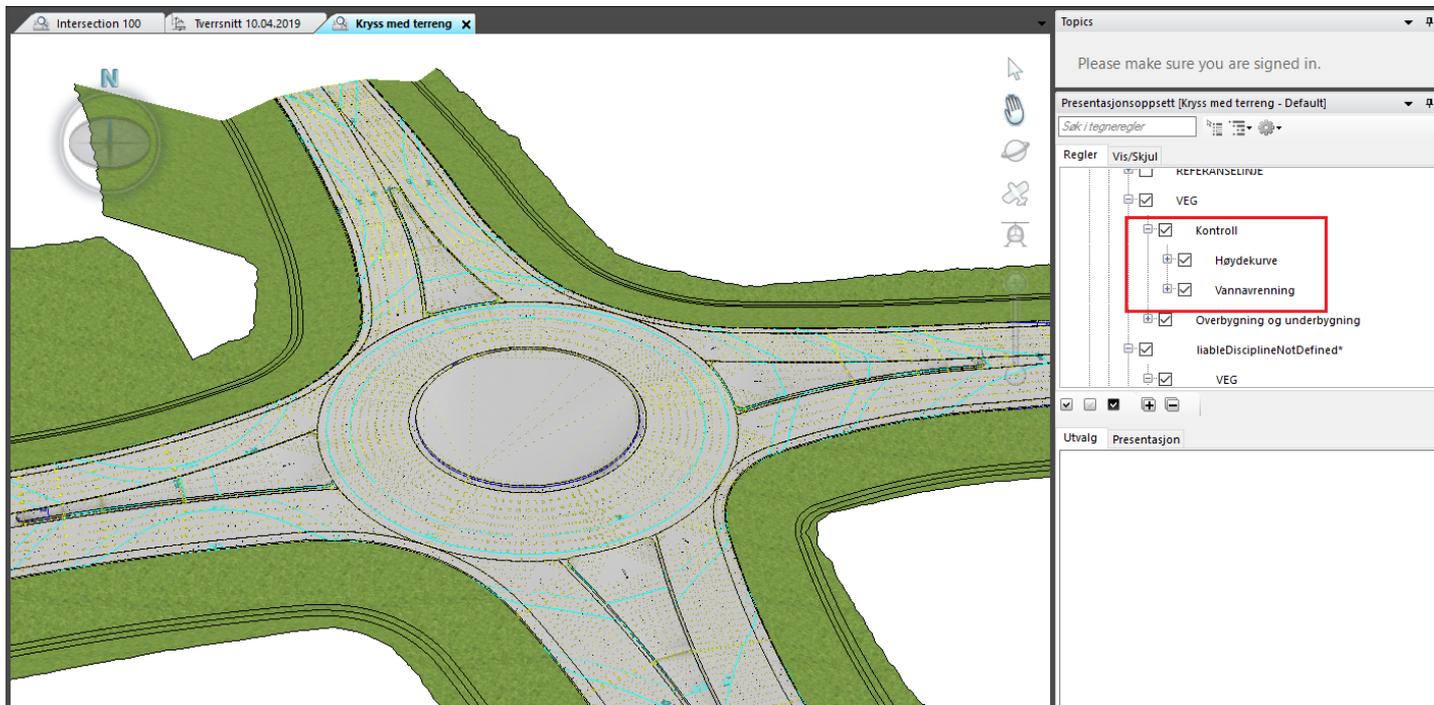
3D Intersection – Constructible model

Define ground surface connection with individual road models from alignments produced by the intersection:
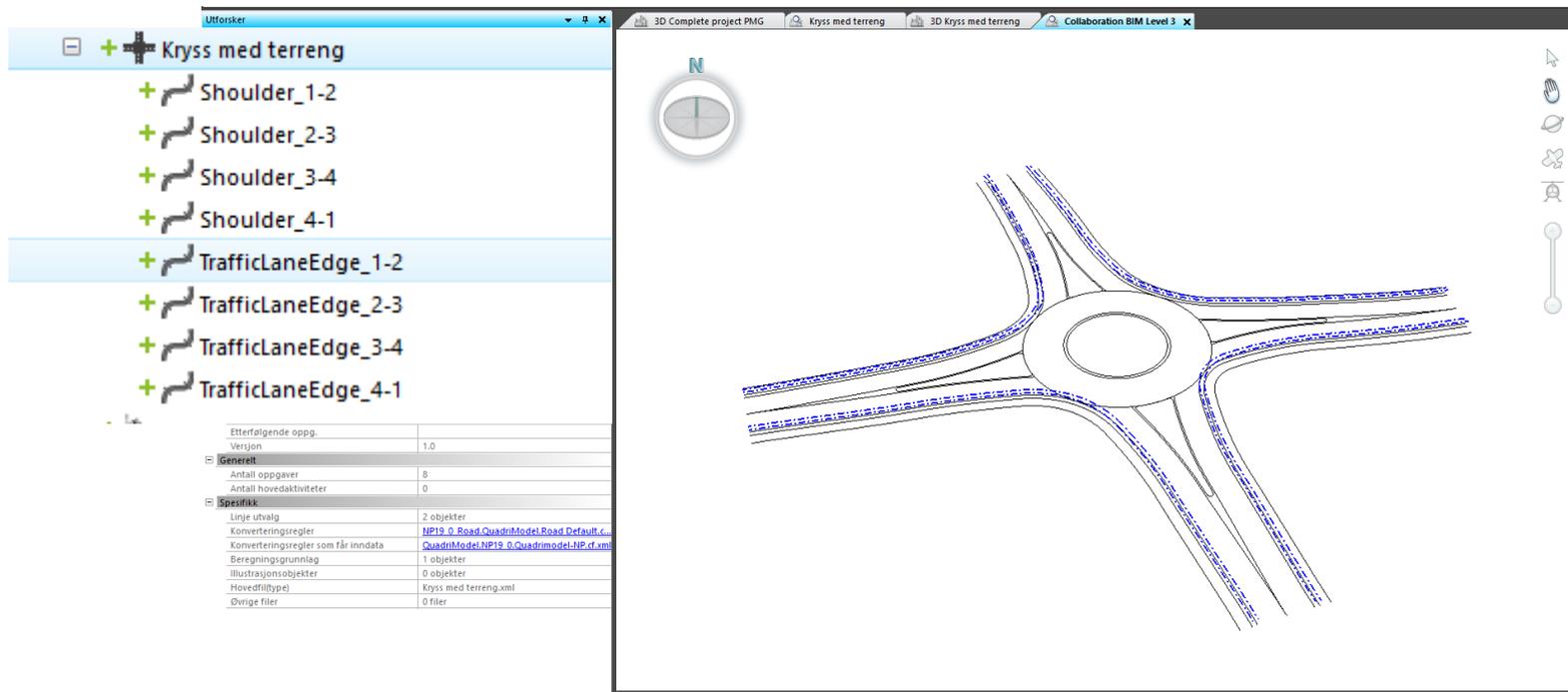
3D Intersection – Step 1 – calculate traffic area

3D Intersection –

3D string lines are created automatically and edge alignments are created as separate tasks:

3D Intersection – Step 2 build road models

3D kryssfunksjon – Steg 2 bygg vegmodller

3D Intersection – Step 2 build road models

3D Intersection – Step 2 build road models

3D Intersection – Step 3 Quantities

3D Intersection – Step 3 Quantities

3D Intersection – Step 4 Setting out data as string lines or as surfaces
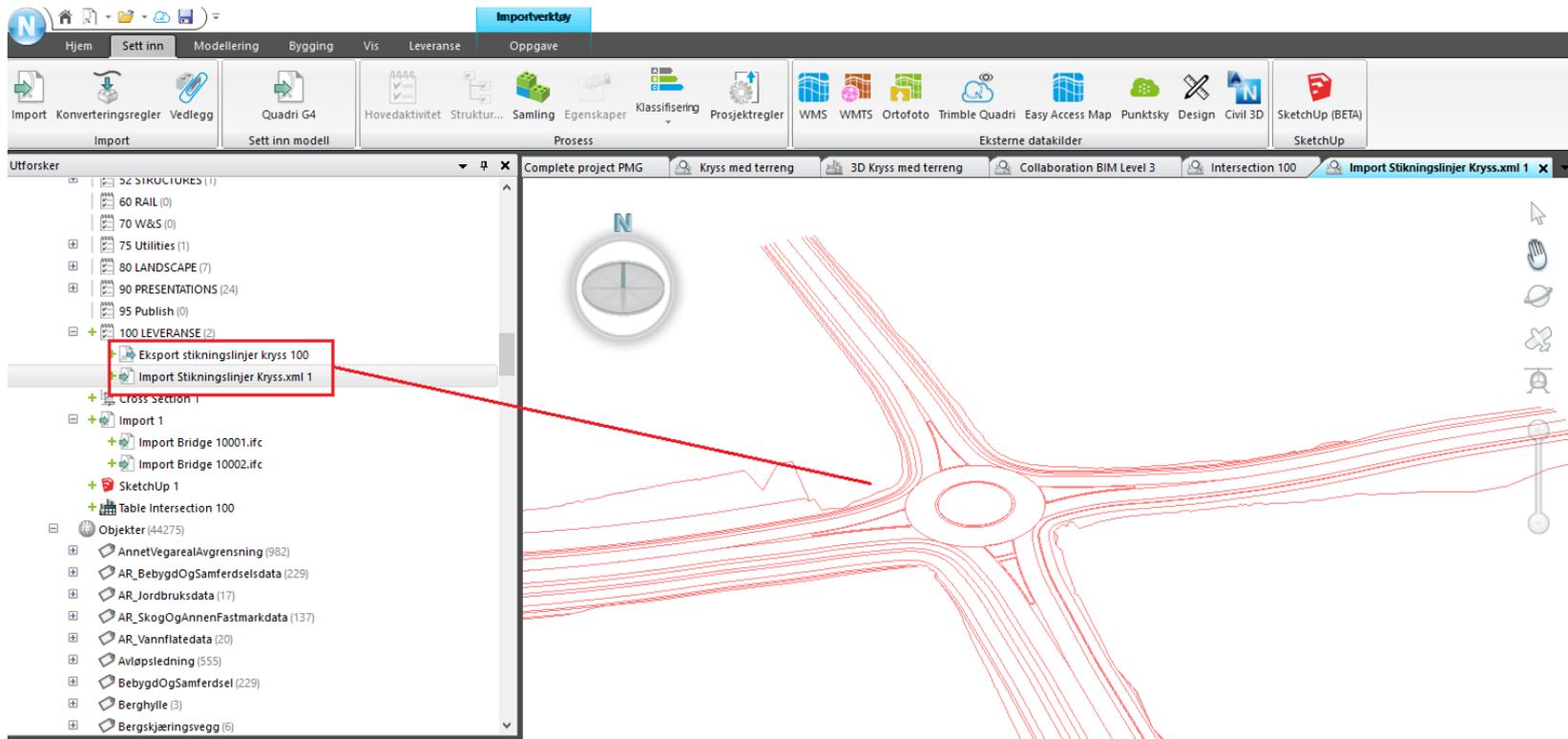
3D Intersection

Limitations:

The road and shoulder widths for the intersection legs/arms must be entered manually

Approach roads must be adjusted manually

Does not support sub surface layers

Cut and fill volumes must be calculated seperately

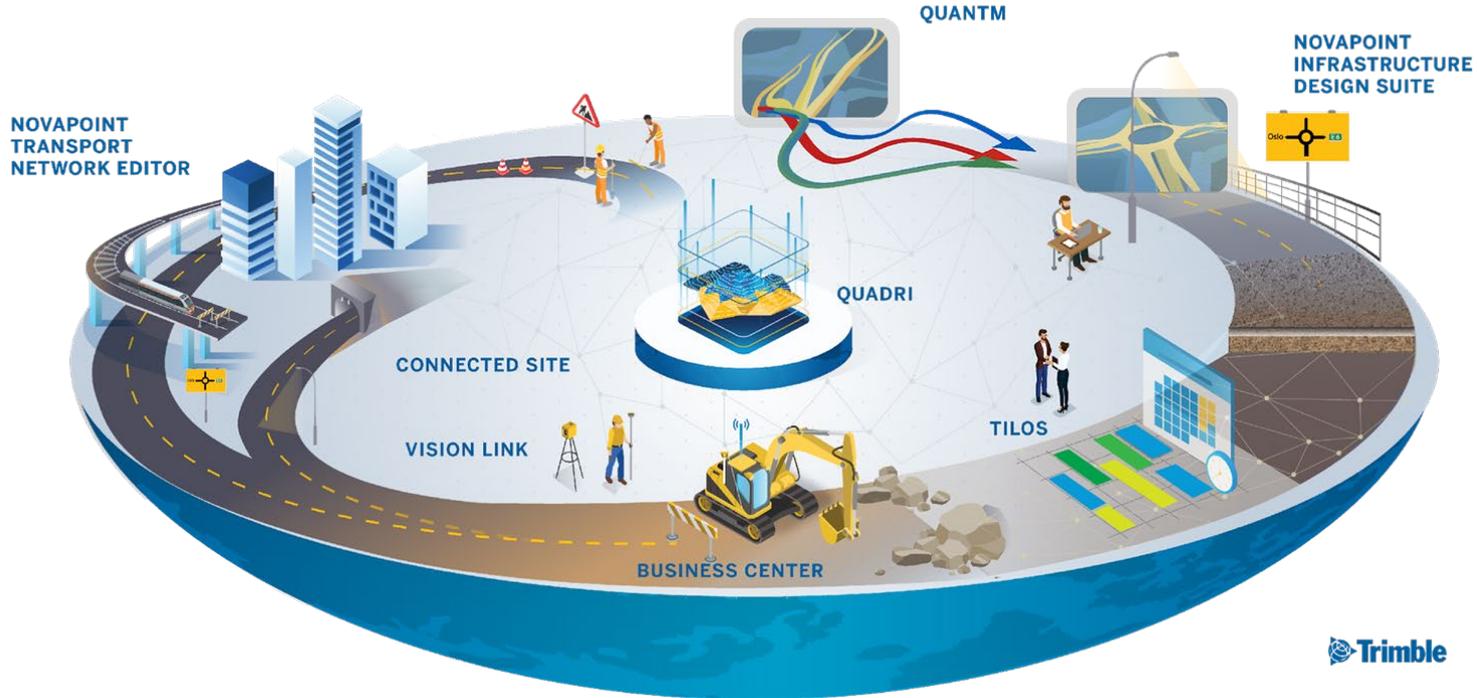# Ny kryssfunksjon - DEMO

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Novapoint & Quadri resource center: http://help.novapoint.com

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Contact information:

patrick_mcgloin@trimble.com