



Ground penetrating radar (GPR) – The view into the hidden

Dr. Daniela Hofmann | Bremen | I-TV-N-U-R

Application for GPR at DB E&C

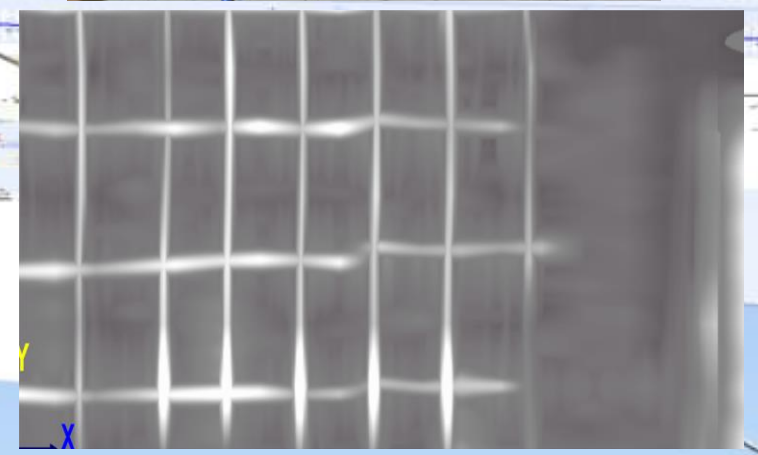
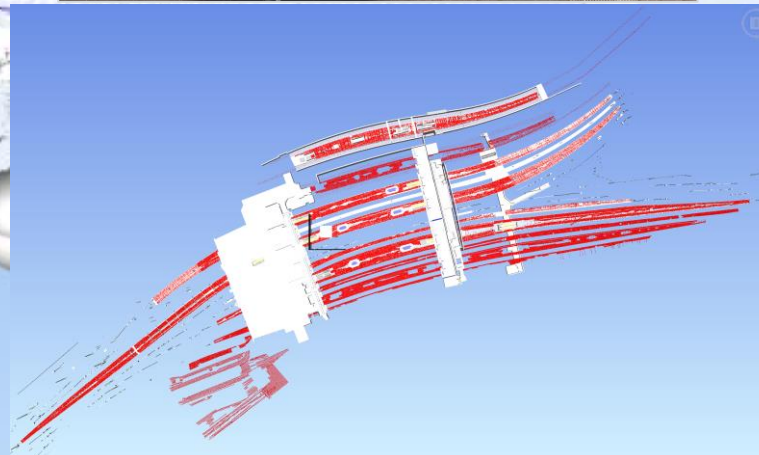
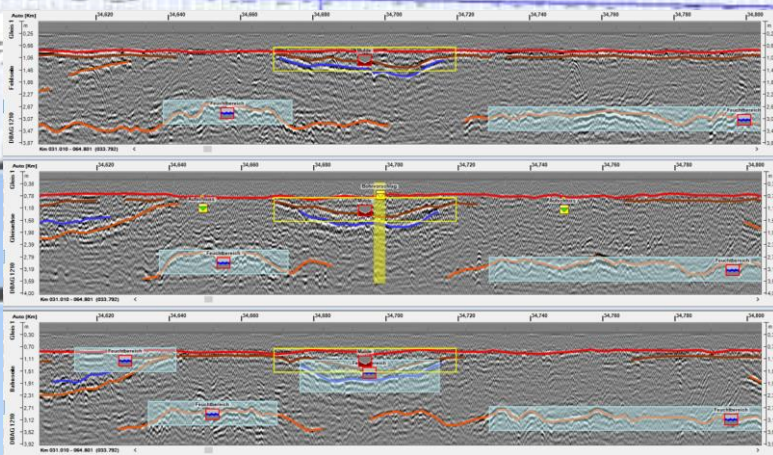
Railways



Stations



Buildings



Projects – GPR in use

Rail-based measurements



Hand measurements



Measurements on surfaces



Measurements in buildings



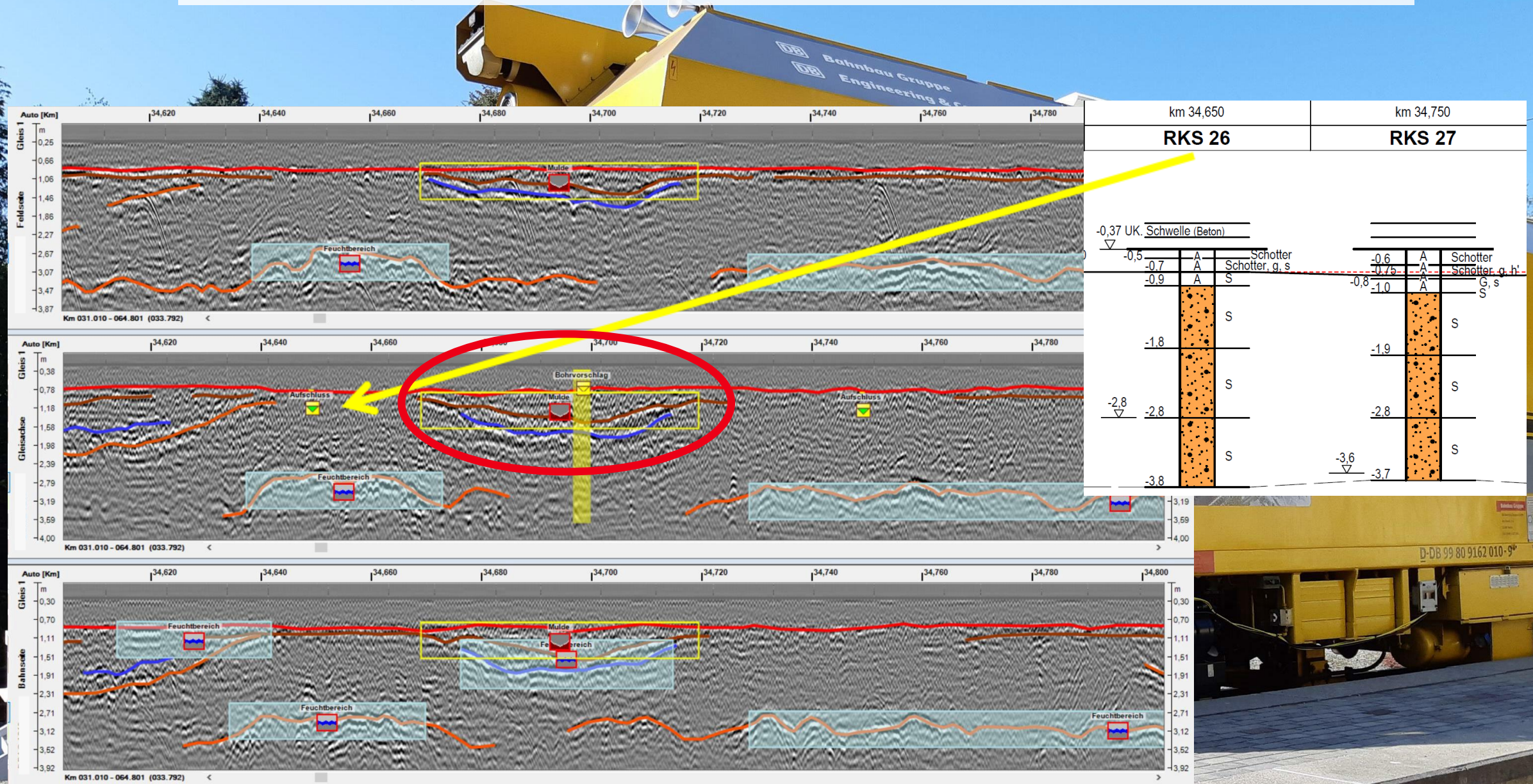
Measurements on roads ➡ from September at the railway



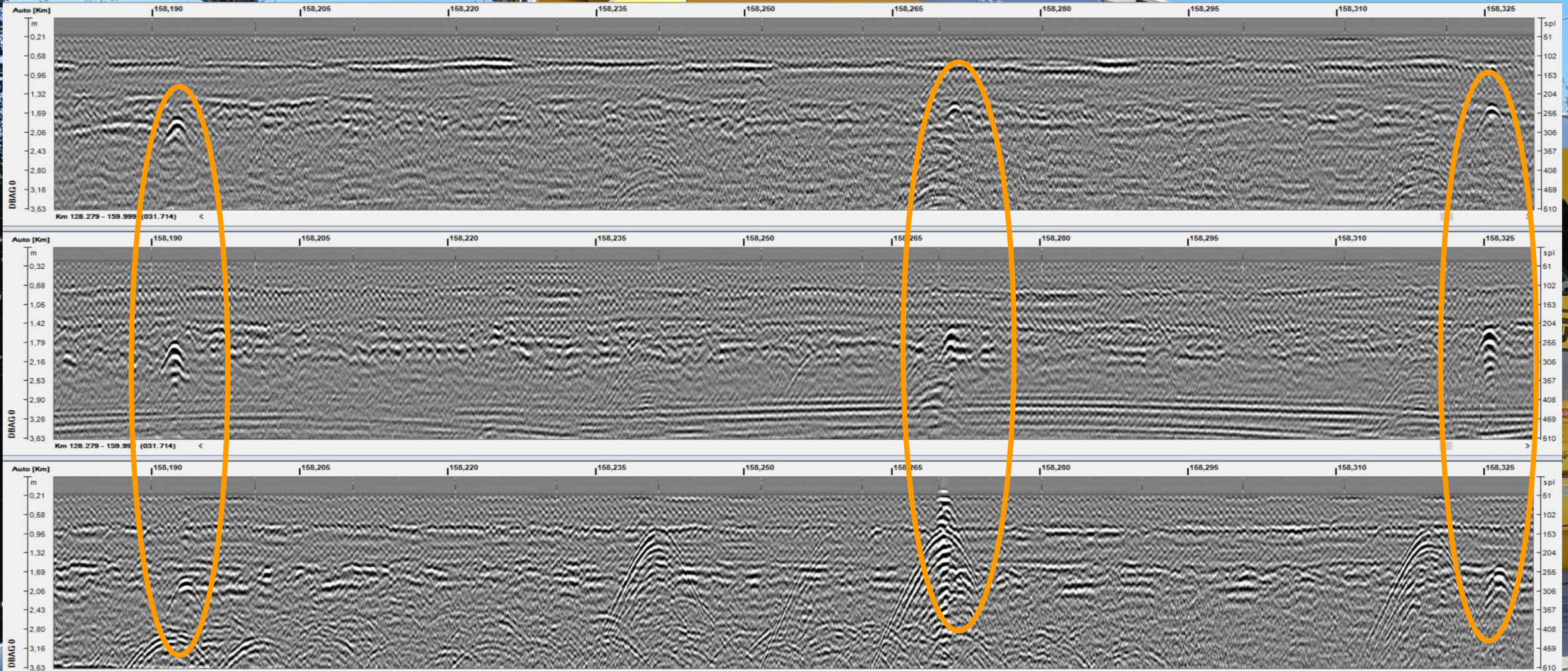
And more: <https://www.youtube.com/watch?v=2Z14LZTzW48>

Fotos: DB E&C

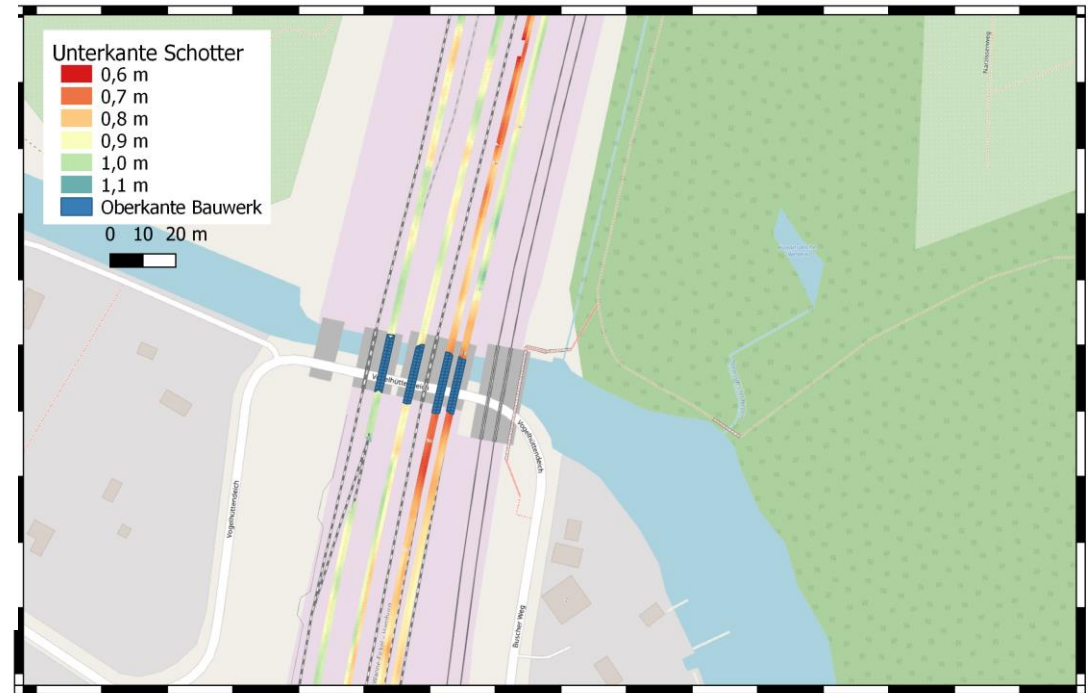
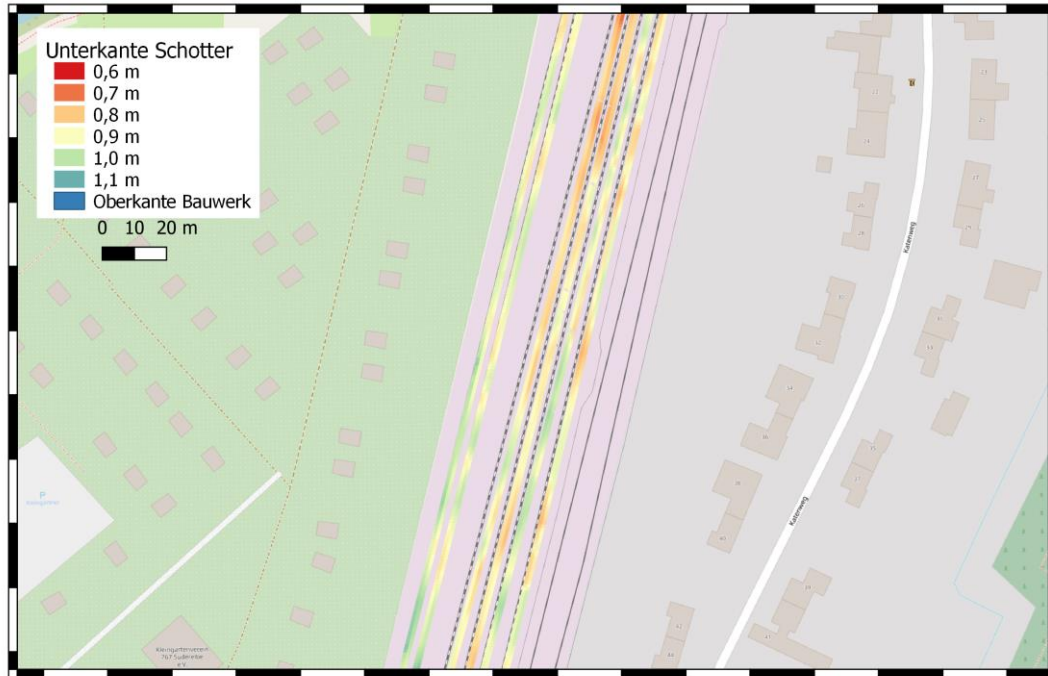
Example – GPR and geotechnical explorations – Damaged area between boreholes



Example – GPR on railways– Detection of cables

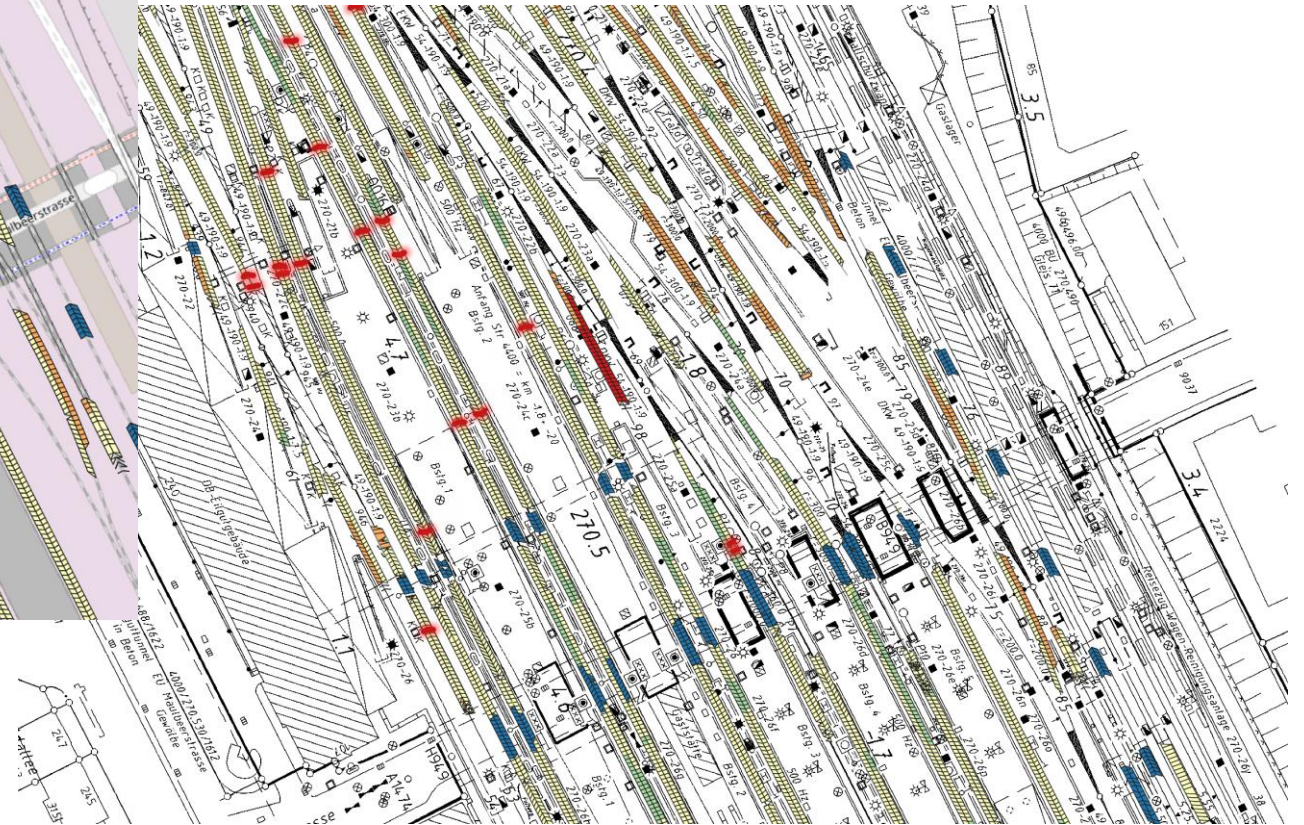
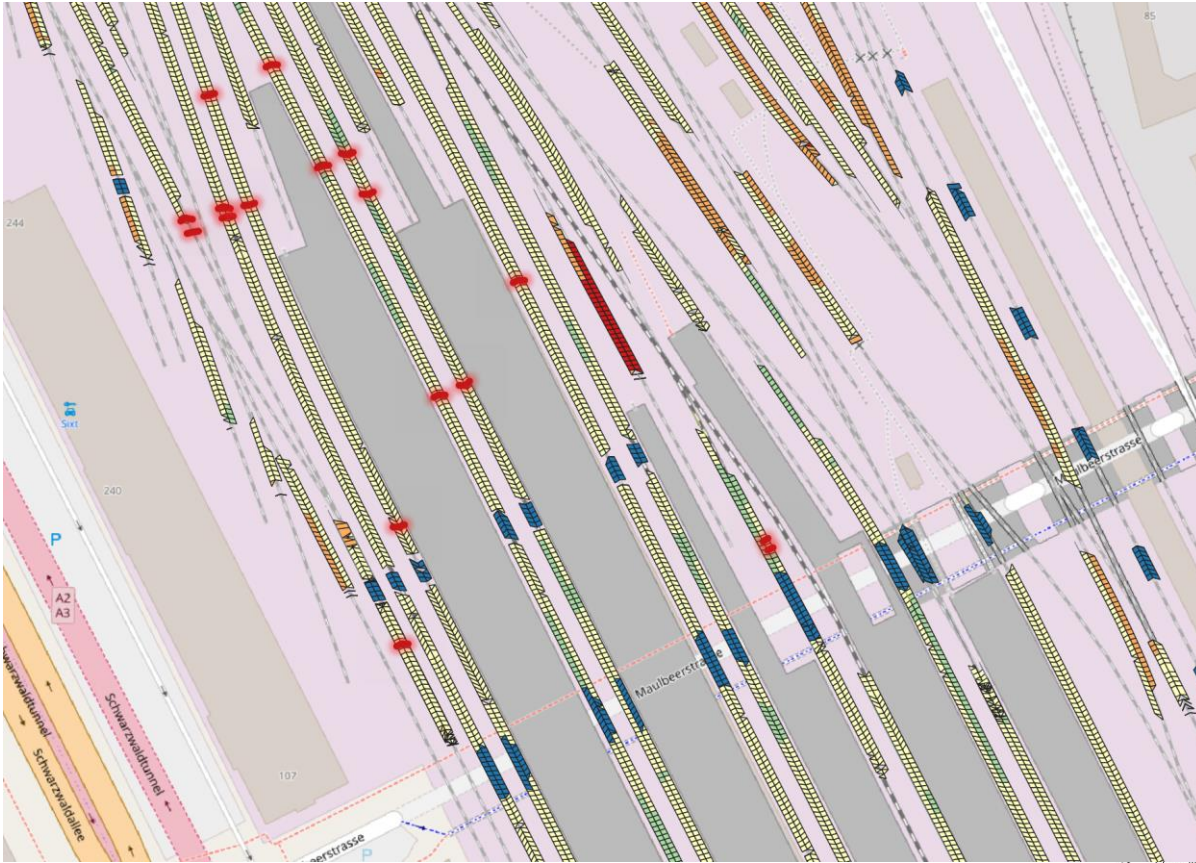


Current example for railways– Representation of layer thicknesses



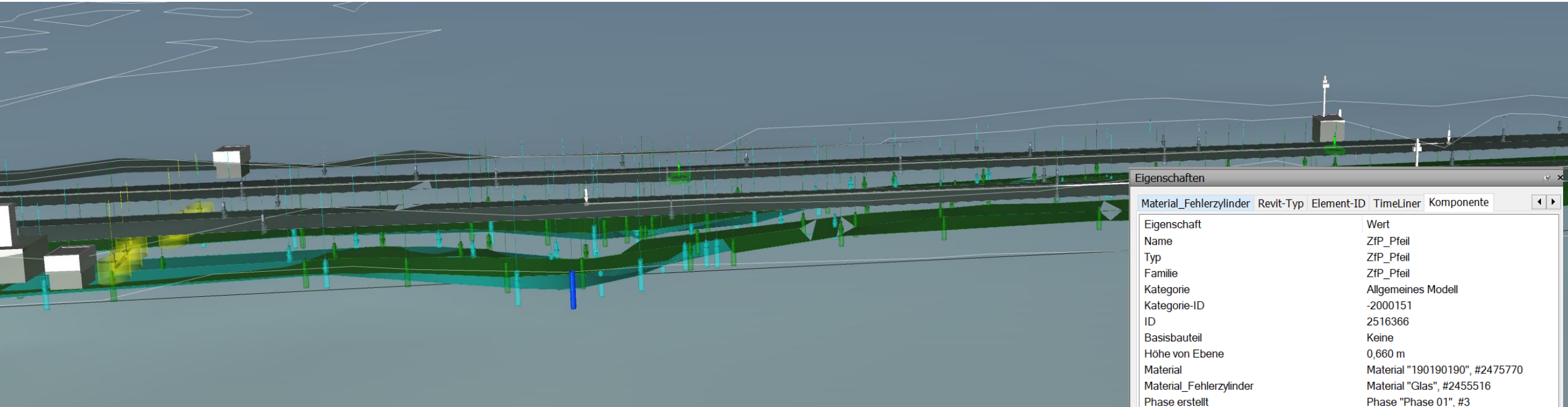
Pictures: Dr. Niklas Allroggen

Current examples for railways– Representation of layer thicknesses, cables, etc.



Pictures: Dr. Niklas Allroggen

BIM specialist model for railways – Hollow and cohesive material



Eigenschaften	
Material_Fehlerzylinder	Revit-Typ
Element-ID	TimeLiner
Komponente	
Eigenschaft	Wert
Name	ZfP_Pfeil
Typ	ZfP_Pfeil
Familie	ZfP_Pfeil
Kategorie	Allgemeines Modell
Kategorie-ID	-2000151
ID	2516366
Basisbauteil	Keine
Höhe von Ebene	0,660 m
Material	Material "190190190", #2475770
Material_Fehlerzylinder	Material "Glas", #2455516
Phase erstellt	Phase "Phase 01", #3
Tiefe-Radius	0,006 m
Versatz von Host	0,660 m
Verschieben mit umliegenden Elementen	Nein
VG_GeoRadar_Bemerkung1	_749
VG_GeoRadar_Bemerkung2	_5
VG_GeoRadar_FehlerbalkenHorizontal	0,100 m
VG_GeoRadar_FehlerbalkenVertikal	0,740 m
VG_GeoRadar_lfdMeter	230249,420
VG_GeoRadar_Objektname	Mulde
VG_GeoRadar_Objekttyp	Schichtgrenze
VG_GeoRadar_Radargrammname	STADE___GL1_CH1_F_400_228,8 P_1
VG_GeoRadar_SharePointLink	Punkt05713
VG_GeoRadar_Tiefe	3,700 m
VG_GeoRadar_Verbindungsart	Line
Volumen	0,052 m³
Winkel	0,000°

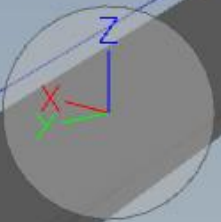
**For more information, please watch our film:
<https://www.youtube.com/watch?v=2Z14LZTzW48>**

Vielen Dank!

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