

Automated Vectorization

Why choose The Cross Product?



PRECISE TOOLS

High precision an advantage over manual solutions



SPEED OF EXECUTION

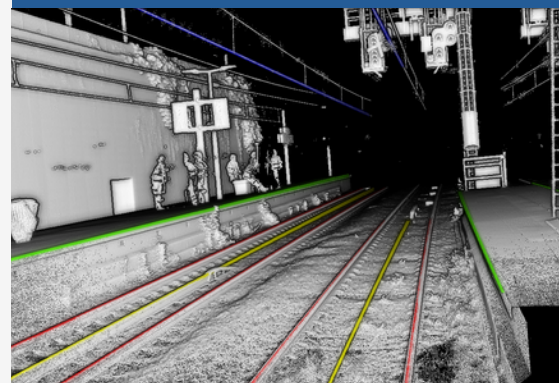
Automation representing costs reduction and time saving



CLOUD PLATFORM

Integration into processing chains. Calculations performed on the cloud

AI AND 3D LIDAR FOR INFRASTRUCTURES



PORPOSITION PREPARED BY
THE CROSS PRODUCT

A SOLUTION ADAPTED TO YOUR BUSINESS

Responding to your needs

- Provide an accurate and complete vectorization of rails, overhead wires and platform edges in a 3D point cloud
- Analyze and compare the polylines to study the evolution of the railway infrastructure
- Perform automated calculations: slope, curvature, superelevation, track gauge, wire height and stagger, distance from the platform to the running rail...

We propose an algorithm combining **artificial intelligence** and **professional knowledge** to accurately recognize rails, track axis, contact cables, and their positions in 3D space.

The vectorized rails are exported as **3D polylines** placed at the **middle-top point** and the **internal-top point** of the rail head. These 3D polylines can be used in a geographic information system (**GIS**) or to enrich a **BIM model** of the infrastructure.



Our solution is **100% automated, reliable** and **fast** to meet the needs of predictive and corrective maintenance.

An algorithm adapted to the **linear networks**, capable of processing both **main and secondary tracks** on the same 3D point cloud.



Input data

- 3D point cloud (LAS/LAZ/E57)
- 3D polyline indicating the track to be vectorized (SHP/DXF)

Output data

- 3D Polyline of each rail (SHP/DXF)
- 3D polyline of the track axis (SHP/DXF)
- Vectorization report (CSV)

Compatibility

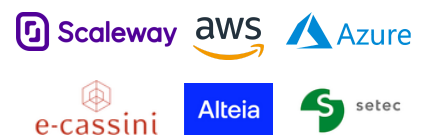
- Platforms (API)
- Any device with a web browser and an internet connection

Can be integrated into point cloud processing platforms

Large-scale use throughout railway network

Pricing by kilometer or by subscription

Accessible on:



Contact us



contact@thecrossproduct.com

Products

Railway

Highway

Industrial Site

Classification

Semantic & Panoptic

Semantic & Panoptic

Semantic & Panoptic

Vectorization

Rails and Track Axis

Ground markings, safety barriers

Overhead wires and equipment

Professional Application

Clash Detection
Reverse Engineering

Clash Detection
Reverse Engineering
Compliance

Safety distance
verification

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