The Cross Product

Automated Reverse Engineering

AI AND 3D LIDAR FOR INFRASTRUCTURES

Why choose *The Cross Product?*

PRECISE TOOLS

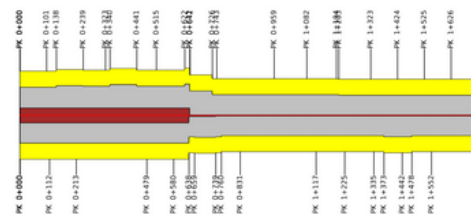High precision, an advantage over manual solutions

SPEED OF EXECUTION

Automation representing costs reduction and time saving

CLOUD PLATFORM

Integration into processing chains. Calculations performed on the cloud

PROPOSITION PREPARED BY

THE CROSS PRODUCT

A SOLUTION ADAPTED TO YOUR BUSINESS

Responding to your needs

- A Reverse engineering process to compute vertical and horizontal alignements from road geometry.
- The identification of risks due to an extensive analysis of infrastructure geometry.
- The automation of measurements such as radius of curvature, lanes tilt, lanes width, safety barriers height,...

We propose an algorithm combining **optimization techniques** and **professional knowledge** to accurately compute horizontal and vertical alignments of the highway.

Our software allows a **complete** and **precise analysis** of **the road geometry** and its **design parameters**.

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

An algorithm adapted to the **linear networks**, capable of processing multiple sections in parallel and concatenating the results to obtain a **global view**.

Our software allows the automation of measurements such as **radius of curvature, lanes tilt, lanes width** and **safety barriers height**.

Input data
- Vectorised lanes and safety barriers (SHP/DXF)

Output data
- Vertical alignments: line, parabola (LandXML)
- Horizontal alignments: line, spiral, curve (LandXML)
- Lane measurements (CSV)
- Reverse engineering report (PDF)
- Graphical summary report (CSV, PDF)

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 highway network

Pricing by kilometer or by subscription

Accessible on:

Scaleway aws Azure

e-cassini Alteia setec

Contact us

contact@thecrossproduct.com

Products	Railway	Highway	Industrial Site
Classification	Semantic & Panoptic	Semantic & Panoptic	Semantic & Panoptic
Vectoriszation	Rails and Track Axis	Ground markings, safety barriers	Overhead wires and equipment
Professional Application	Clash Detection Reverse Engineering	Reverse Engineering Clash Detection Compliance of safety barriers	Safety distance verification

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www.thecrossproduct.xyz