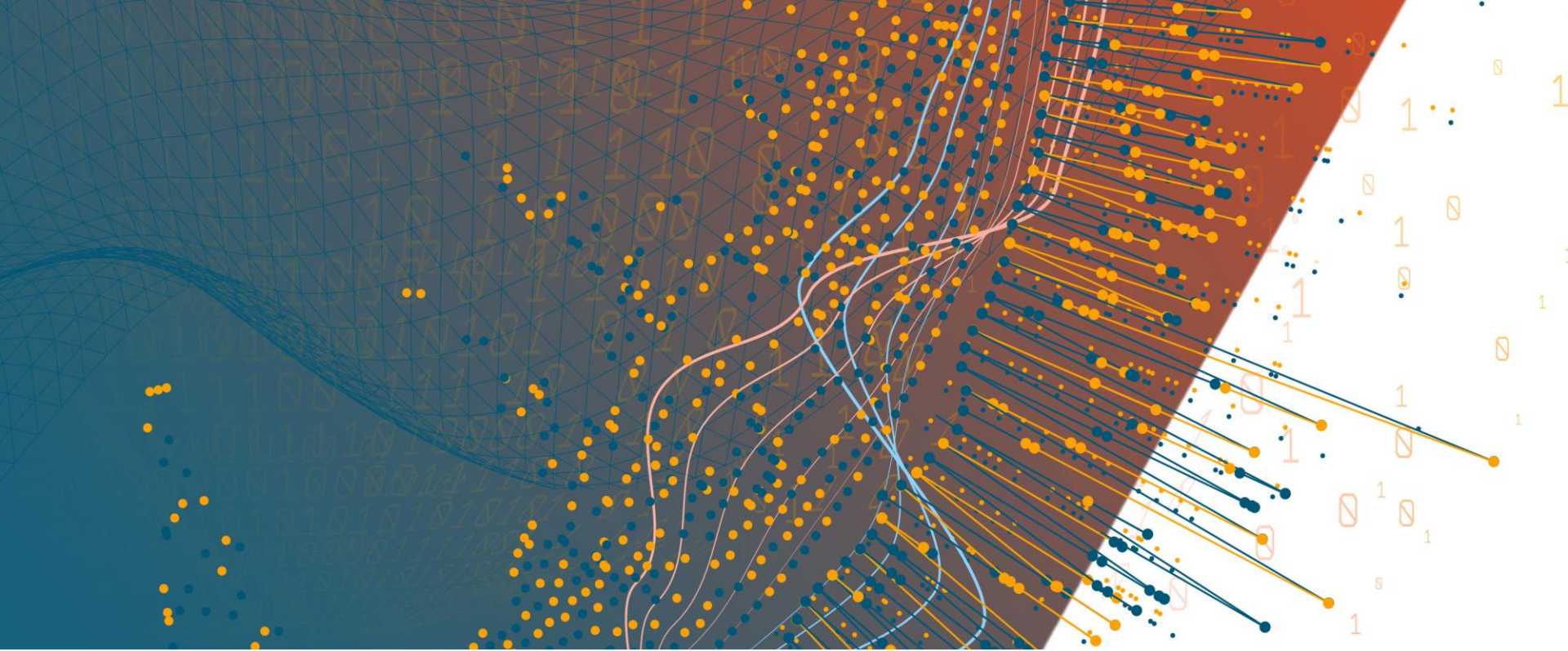


ALTAIR | XenomatiX True solid state lidar

XENOMATIX ROAD DATA TOP USE CASES

Altair Partner Alliance

Top 4 Suspension Manufacturers Use Road Profile Input for Proactive Suspension

Challenge

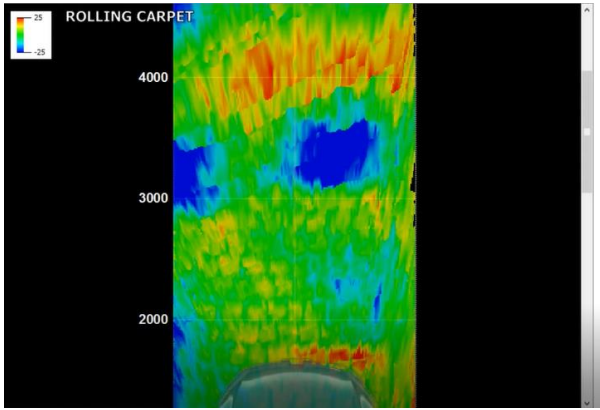
- Increase significantly the comfort inside luxury cars using preview in the virtual design phase.

Solution

- Road data is collected during test rides and used as preview for Model Predictive Control (MPC) algorithms.
- Same data is used extensively to develop the algorithms and to virtually measure the comfort behavior.

Results

- Proactive suspension can be simulated - including hardware-in-the-loop (HIL) on many different road surface profiles.



ALTAIR

Japanese OEM Uses Real Road Data for Driver Simulators

Challenge

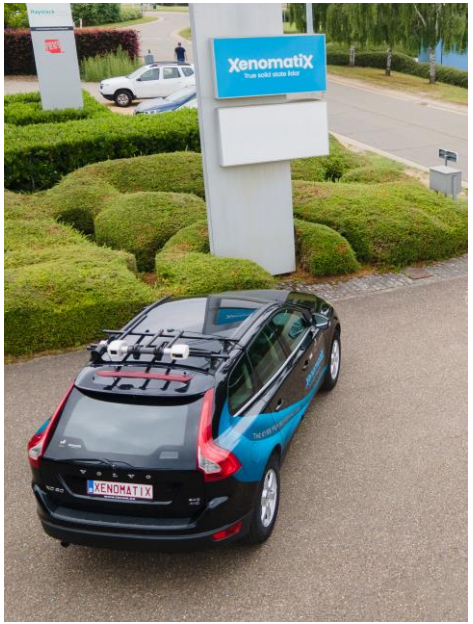
- Subjective driving scoring is important in vehicle sales. Multi-degree poster simulators provide confidential, repeatable and objectively measurable scoring systems.
- However, subjective scoring also depends on the roads, differently designed over different continents.

Solution

- Using different road profiles from over different continents, headquarters confidentially designs specifics without leaving the lab. The same profiles are used in next-model-year simulations.

Results

- Vehicle behavior can be studied in headquarters and tuning can be designed per continent or even country.



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Ford Collected Both Public Road and Proving Ground Tracks for Ride & Handling Simulations

Challenge

- During both simulation and testing of Ride & Handling, Ford wanted to correlate public roads to specific tracks on their proving ground. For this, Ford characterizes the road and track in a coherent, simple but unique way.

Solution

- Ford used XenomatiX' road LiDAR to digitize the roads, extracted the wheel tracks for different vehicle types, defined characteristics and correlated public roads and proving ground tracks.

Results

- All this data is prepared for virtual design and testing.

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