

Database

After the data has been acquired, it needs to be ensured that the data is delivered from the vehicle to the data centre and transformed into a readable format, stored on file systems, and made available for the analysis tools.

To make data analysis efficient, numerous computations are made in both pre- and post-processing. These processing steps include data encryption, data transformation from raw CAN signals to digitalised format, video conversion, data time synchronisation, map matching and computations of aggregated measures. Advanced processing environments are used by the partners to tackle the data size issue.

Relational databases are populated with rich meta information about the vehicles, drivers, measure definitions, subjective data and video annotations. The continuous data in itself can be visualised as a huge spreadsheet with hundreds of columns and billions of rows. Data analysis therefore depends on effective indexes and caching mechanisms to perform effective data mining and visualisation. Solutions utilising both relational databases and file systems for storing continuous data are implemented.

