

Basic Information # 004: **Basic Route Data**

The On-Board Units, which form the basis for automatic toll collection, contain various software components. These include the operational data and the operating system that processes the compiled data. The operational data includes the toll rates and a digital motorway map.

This digital motorway map is the sum total of all recorded basic route data.

The basic route data defines the entire motorway network including more than 24,000 km of motorway, around 2,600 junctions, 600 parking areas and service facilities along with the parallel roads in a corridor 250 m to the right and left of the motorway.

The German Federal Ministry of Transport, Building and Housing has subdivided the network into around 5,300 route segments. Toll Collect has surveyed and digitised this entire network, and simulated, modelled and checked all possible driving situations.

Toll Collect personnel regularly drive and survey the motorway network. The electronic data they collect is compiled and continuously fed into the digital motorway map. Toll Collect thus has the most up-to-date digital map of the German motorway network.

The digital map serves as the basis for detecting vehicle positions on the motorway. The On-Board Unit continuously compares the GPS signals with the map and uses this information to determine which route segment the vehicle is currently travelling on. This information is then used by the OBU to calculate the toll charge.

As well as being the core element of the On-Board Units, the basic data also provides the basis for the node-edge model in the toll-station terminals and on the Internet. This model is also used for calculating the toll with manual log-on.

Users can log-on manually via the Internet or at one of the toll station terminals.