



Research of Traffic Accidents at TU Dresden



GoBook Tablet PC



Q-200

Product solution:

With the Itronix Tablet PC and the Q-200 an electronically data collection can be realised directly at the location of the accident for the first time.

Results:

- The most modern data collection system for accidents in Europe.
- The data are immediately available for detailed analysis.
- The system can be used as well for other applications

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Case Study:

Research of Traffic Accidents at TU Dresden, GERMANY

SITUATION:

The research department for traffic accidents at TU Dresden documents and analyzes traffic accidents where people were injured, on behalf of the „Bundesanstalt für Straßenwesen“ for statistical and analytical studies on behalf of the government. Since 1999 about 900 accidents in the region of Dresden, Germany have been documented each year. The basis of this analysis occurred via manual data and fact capture at the site of the accident. At this point, the interdisciplinary investigation team documented information concerning the vehicles involved, the driver, the injured persons and the circumstances of the accident on special investigations-forms. A written record of the accident was then processed at the research department on office PC's. Special input-templates based on Microsoft Access were developed, and then data was saved on a Microsoft SQL Server, for additional reporting and access.

PROBLEM:

TU Dresden wanted to avoid the extra step of doing manual data collection at the location of the accident and to enable a system to allow direct electronic data-capture in the field, right at the accident site. The mobile computers chosen would need to function in varying weather conditions, including high temperature variances and rain.

SOLUTION:

After extensive testing of a variety of devices, the Research Department at TU Dresden selected both Itronix Tablet PC and the Q-200 handheld computer. Both units have proven very tolerant of the highly variable weather and environmental conditions. Heavy rain or dust have not posed any issues, and neither have shock or vibration, as experienced when the units are transported or used in moving vehicles.

In addition to being able to use the devices in varying environmental conditions, a specific application software also contributed to the successful and efficient implementation of both platforms for data collection. UNIDATO®, a new study management software developed by Trans4mation IT GmbH, Dresden, is conveniently designed to work universally across different platform input devices. So for example the same software can be used with the Q-200 as with the Tablet PC. UNIDATO® automatically generates special input-forms, which are designed for the display-size available or as the user specifies.

The automatically generated input-forms are also designed in his structure for the corresponding tasks of each employee at the location of the accident and are constructed for an optimal data collection as well. Whereas the medical staff is using mostly the Tablet PC to interview the casualties, the technical employees are preferring the use of the Q-200 with “one-hand-input” to collect the measurement-data.

By using the USB-interfaces' external measurement-data can be buffered on the units as well.

After the gathering of raw data, the units are placed into a docking station at TU Dresden, which read the data and download them into the databank. The completion of the data sets is done at by the PC-stations of the research team. Here as well each user can setup their own input-masks individually. Even a multi-language layout of the masks is possible without any problems.

By combining the rugged data collection units from Itronix with the universal usable study management software UNIDATO® an ideal and more effective and efficient alternative solution was created for the mobile data collection for TU Dresden. The solution led to the total replacement of the manual system, and enabled more direct and immediate access to the data collected and all related documentation and reporting.

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