Mid-Term-Conference

On October 22nd, the Mid-Term-Conference of the AMSFree project was held. The conference did not take place in Copenhagen as planned, due to the Corona pandemic, but online.

The AMSFree Consortium presented the current work progress in four presentations with interesting discussions following. The topics of the presentation are shortly addressed in this newsletter.

Sensing technology

Fully automated systems have been developed and are deployed by many road owners for pavement evaluation. We provided examples of how these latter approaches could be used to provide high quality information on damage development. In ongoing work, hybrid techniques are being considered for damage detection on a typical road and bridge section.

Common asset management process model

The aim for the asset management process model is to ensure that this model process can be applied as widely as possible by the different NRAs and should be able to be scaled according to different purposes.

The main challenges of asset management systems are the procedural handover and technical transformation of data, which are incompatible with the system's technology.

Common asset management data model

The analysis has shown that all data in an IAMS can be roughly categorized into either alphanumeric, geometric and geo-location data.

Further analysis showed that the IAM process is not always homogenous across different organisations. Accordingly, this applies to the exchange data too. The inventory and inspection data, as well as the exogenous data, and the condition rating vary between different NRAs.

The establishment of a universal OTL, unifying object type classifications of different NRAs, is a cumbersome task. INTERLINK established a unique ontology, named European Road OTL, or EUROTL. The ontology includes expressions and concepts used in infrastructure asset management. Ideally, the OTL is general enough to correspond to a variety of differently defined and understand terms used by all CEDR members.
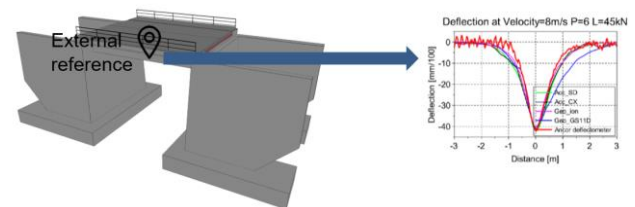
Proposed inclusion of SHM data into the IFC: external referencing of the sensor output at the pinned location.

IDM for condition assessment and its application

The analysis has shown that not all information can be exchanged using BIM models. In some cases, additional documents (inspection reports) as well as detailed measured values must be provided. For this reason, information containers for linked document delivery according to ISO 21597 need to be specified for data exchange.

Currently, a concept is being developed in which way the information from the condition assessment can be transferred to and retrieved from existing or new systems for asset management. As described in the Information Delivery Manual, the data will be exchanged using information containers. For this purpose, the information containers have to be clearly defined. This includes the structure of information container, BIM model, condition information as internal or external data and mapping rules.