

INTERLINK

Information Management for European Roads using Linked Data

Funded under the CEDR Transnational Road Research Programme

CEDR Call 2015: Asset Information using BIM

CEDR Call 2015: Asset Information using BIM is a Transnational Road Research Programme organised by CEDR. The funding partners for this programme are Germany, Netherlands, Belgium-Flanders, Finland, Norway and Denmark.

Details

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**Conférence Européenne
des Directeurs des Routes
Conference of European
Directors of Roads**

Project Summary:

The CEDR 2015 BIM programme aims to embed the use of Building Information Management (BIM) based on open standards in Asset Management and Construction processes into the practices of European National Road Administrations (NRAs). The INTERLINK project will provide an open, scalable and future-proof European Road Object-Type Library (OTL) that meets the business needs of CEDR members and their supply chain. The INTERLINK consortium has been devised to deliver valuable output by bringing together industry leaders in the areas of research, project management, asset management, engineering consulting, BIM, IT consulting and software development.

NRAs are becoming increasingly aware that they are not only procuring and managing assets but also asset information. Timely and correct information enables well-founded decision-making and reduces risk. However, asset information is defined, procured, created, acquired and managed by different expert groups within and outside NRAs, often using inconsistent data formats. Consequently, information is not interlinked, not up-to-date, contradictory, incorrect, not transparent, incomplete, non-uniform and not semantic. This increases the risk of inappropriate decision making, high information management costs and contractual dispute.

Many initiatives have been designed to tackle this issue on international, European, national and even company levels. Examples of partial solutions include CB-NL, bSI IFC, RWS-OTL, planen-bauen 4.0, OKSTRA, UK BIM Task Group, BIM Alliance Sweden, BSAB 2.0, Smart Build Environment, OGC and CityGML. However, all these examples have different degrees of maturity, technology choices and levels of openness that limit their transnational acceptance and hence their impact. INTERLINK aims to launch a new pan-European initiative to provide NRAs and their supply chain with future-proof information management standards using the cutting-edge capabilities of Linked Data for the proposed European Road OTL. This approach will result in a system that is software-vendor-neutral and open, applicable to the whole life-cycle and supply-chain of infrastructure assets, and focused on data exchange and sharing ('data-driven'). The powerful Semantic Web technology is applied to express infrastructure asset object-based information and knowledge on a European level. Being able to integrate and reuse any existing and forthcoming BIM standards in flexible ways will minimise obsolescence of earlier investments by NRAs.

The resulting European Road OTL will be thoroughly tested via three cases from NRAs with a strong interest and one case provided by a lesser experienced NRA. The data will be provided by NRAs. The testing will demonstrate data transfers which represent typical asset management processes during the asset life-cycle.

The project combines the following four topic with input from representatives from all relevant stakeholder groups:

- A. Exploration of procuring asset information for better projects and Asset Management Systems
- B. Exploration of BIM data structures
- C. Design for common principles for a European object-type library
- D. Design and test a basic European object-type library and open BIM standards.

The INTERLINK consortium builds the European Road OTL initiative on three pillars:

1. The Technical Specification of the European Road OTL and the connections with existing BIM standards;
2. The design of a Standardisation Body and a plan for its development beyond this project; and
3. Acceptance in Practice by the industry through engagement and dissemination.

During the project, these three pillars will be addressed cohesively. Underpinning these pillars will be a thorough understanding of the NRAs' common business needs for the management and use of asset information. INTERLINK will interact intensively with all stakeholders (NRAs, contractors, suppliers, consultants, academics, software developers and other standardisation initiatives), both bottom-up from the needs and lessons learnt from practical applications, and top-down, based on robust information modelling concepts.