

MODTRAIN FINAL CONFERENCE

The Modrain Model for the management of European railways
voluntary harmonisation

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High speed rail systems of the present generation have been developed in the eighties. At that time, the rolling stock design was done under direct supervision of the engineering departments of the national networks.

New generations of trains are now entirely developed by the manufacturers, under the form of modular standardised platforms that they customise for their client operators.

By taking leadership in the design, the manufacturers have also greatly improved the level of in house standardisation of sub-systems

But with the result of increasing the specificity of the solutions that they require from the sub-systems suppliers.

Two complementary objectives of Modtrain, when seen from the point of view of the manufacturers and of the operators:

- Reaching a minimum level of standardisation at the interfaces of the main train subsystems.
- Offering a higher level of interchangeability of key components for maintenance

Both of the two objectives aiming together at the reduction of life cycle cost

The term “voluntary interoperability constituents” was chosen to describe both types of deliverables of the project.

The idea was to show the link with the High Speed rolling stock TSI and to express the will to open the supply market, down to train constituents level, further to what was going to be achieved by the implementation of the TSI

Being purely voluntary, this new standardisation process would maintain fully open the possibility of technical innovation, in domains that are not critical for the interoperability strictly speaking and for which, therefore, a mandatory approach could not be justified.

On UNIFE side the four system integrators had never actually worked in such a collaborative way and never succeeded to forget for a while that they were very harsh competitors in “real life”.

The year 2004 marked a radical evolution with both the creation of the Standards and Regulation Group of the UNIFE and with the launch of the major project Modtrain, soon followed by others, also mostly focused at voluntary standardisation.

Since then, the UNIFE has been able to develop a technical management capacity of its own and is now recognised as a valuable technical interlocutor by both authorities and market actors.

This is now up to 120 experts who are members of the mirror groups of the European Rail Agency on the regulatory side and of the Topical Groups for voluntary standardisation and research.

On operators side, the most significant achievement is probably the elaboration of the ORS 612 (Operational Requirement Specification) .

This document, although still subject to possible improvement is highly symbolic of the evolution of practices in the European railways world.

- ❑ Symbolic of the new ability of the operators to agree on a common European operational specification that is not descriptive of past national solutions

- ❑ Symbolic of a new type of relations with the manufacturers, who are invited to develop consensual technical standards on the basis of this expression of common operational needs.

Also more fundamental for the future than originally expected have been the elaboration of the standard Functional Breakdown Structure (FBS) and the use of the common computerised requirement management tool.

These new tools will allow operators to issue for the future their requirement specifications in a standard way and to manage far more efficiently their new rolling stock projects together with manufacturers

UNIFE and UIC are now investigating together the possibility to continue and develop the collaboration for the creation of more of these “voluntary interoperability constituents”

This might be done under the form of common “UNIFE/UIC Technical Recommendations”, to be considered as free of use experimental standards, prior to their eventual transfer to the European standardisation bodies.

In this way the European railways supply market would be more and more open to standardised solutions, allowing for life cycle cost reduction, while fully preserving the right to innovate.

The “Modtrain model”, for the management of European voluntary standardisation, is based, in the opinion of the UNIFE on the following principles:

- a light management structure in which European market actors are directly and equally represented, without any need for intermediate national organisations.**
- a repartition of the roles between the operators and the manufacturers which is based on their actual roles as market actors.**
- working groups gathering the best possible expertise, with the needed balance between competitors, but not having to obey unnecessary formal procedures**

This management model is by far lighter than the “official” process for harmonisation of the European railways system, based on a top down system of regulations and of mandates given to the European standardisation bodies.

Pursuing the Modtrain experience would , better than the “authoritative way”, allow for identification of what can reasonably be standardised, rather than encouraging the idea that a train can be built as an addition of regulatory standardised components.

In this way the full involvement of the manufacturing industry would be granted, notwithstanding the critical limits put on available expertise by the pressure coming from projects operations

The Modtrain way is probably the only efficient one to make progress in the direction requested by the operators (more standardised constituents for lower life cycle costs) with the full agreement and commitment by the manufacturing industry

Thank you to the Modtrain partners!



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