

The integration of control systems for the supply chain and transport domains

INTRANS Research Project (Norway)
WP 02 ICT and System Architecture

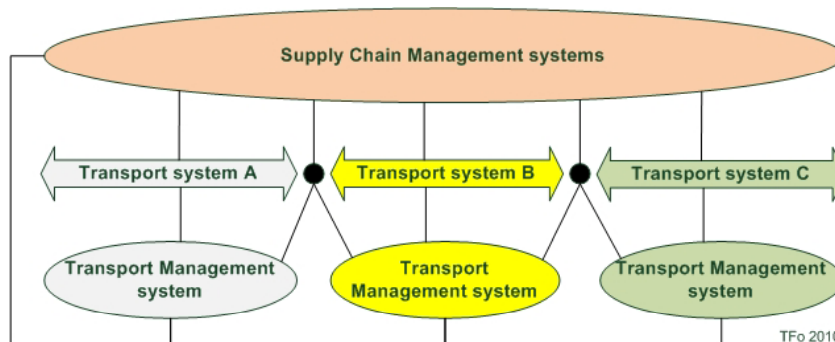
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Overview of the paper

Main objective : - *to propose a way forward to link and integrate the SC and transport domain for the benefit of the stakeholders in both domains concerning a more effective, secure and reliable transport of goods*

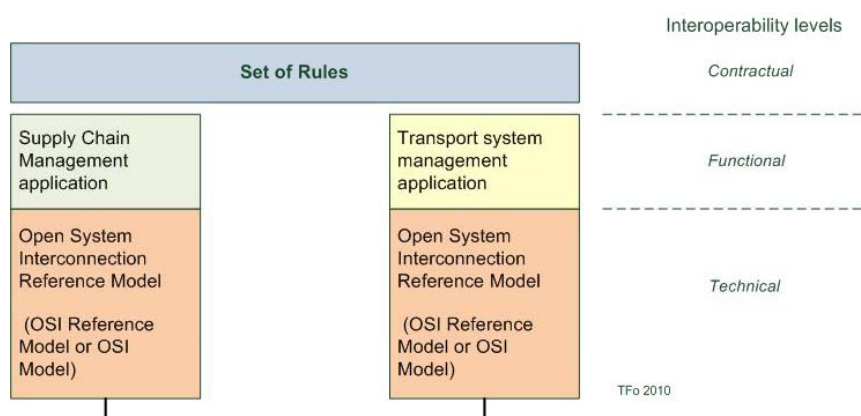
- Describes some of the results up till now of the research project INTRANS supported by the Research Council of Norway.
- Focuses on the results related to the integration of control systems in the Supply Chain domain and the transport domain.
- Looks upon the integration from an interoperability point of view and describes the three different types of interoperability, Contractual, Functional and Technical interoperability, providing complete interoperability.
- Describes how complete interoperability can be achieved by a common role model for the two domains, a common set of core functions for the two domains and a common information architecture.
- Introduces the intelligent goods as a crucial link between the two domains as well as playing an important role in the decision taking in the SC domain and the monitoring and management of transport in the transport domain.

The Challenge



How may the different actors in the SC and transport domain benefit from a better integration of the two domains by sharing the information infrastructure and the information itself?

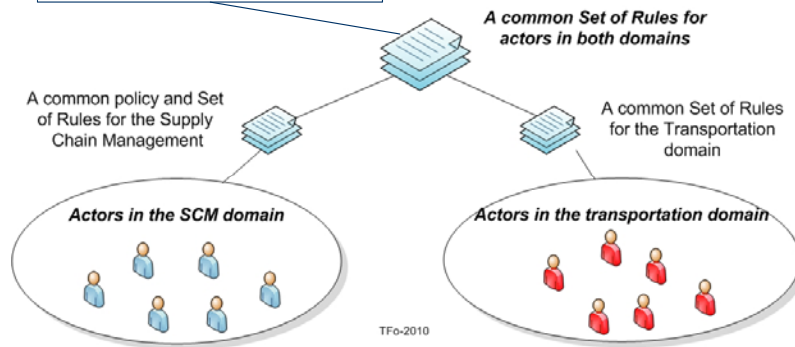
One possible answer



- through contractual, functional and technical interoperability

Contractual interoperability

- Governing rules
- Commercial rules
- Functional rules
- Technical rules



Merging two models to one common



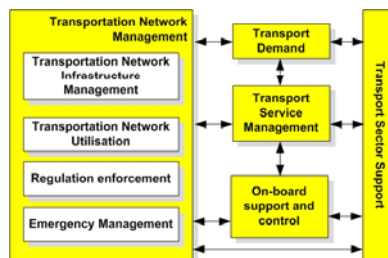
SCOR - Supply Chain Operations Reference Model

www.supply-chain.org/

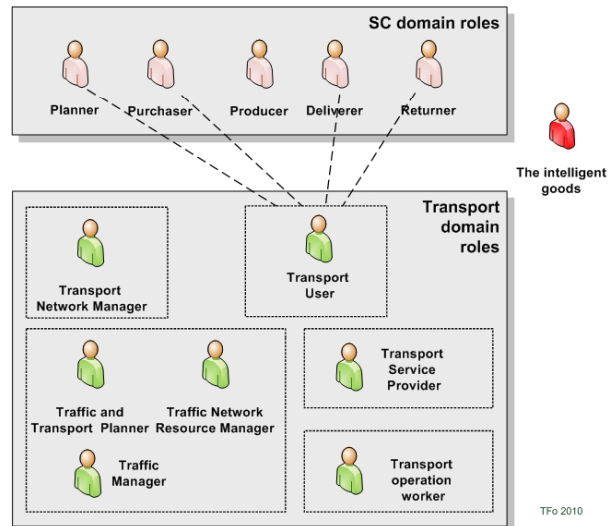


Norwegian multimodal framework for intelligent transport systems

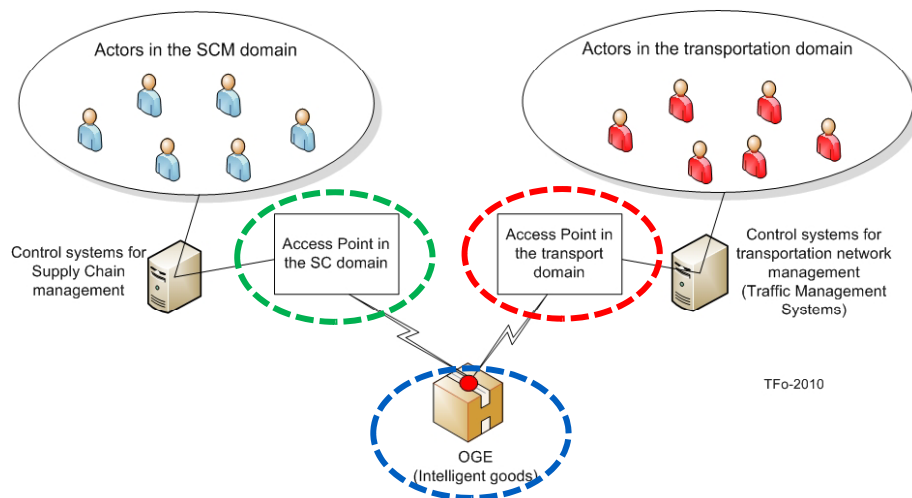
www.arktrans.no



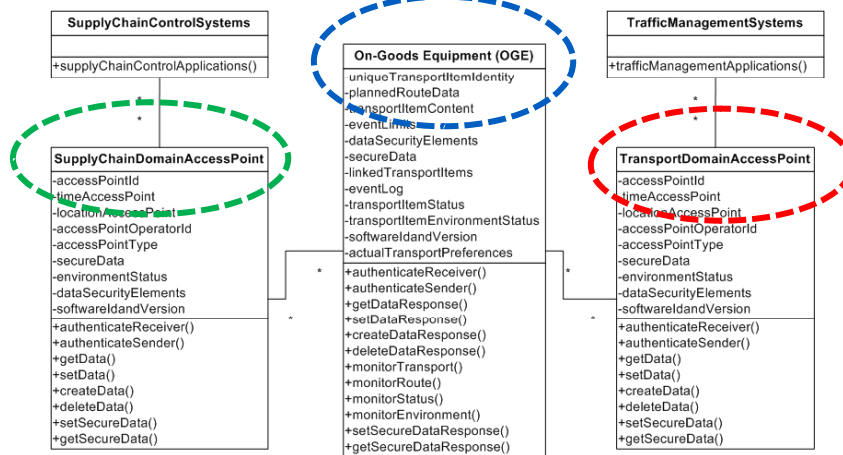
One common role model as bases for allocation of functions



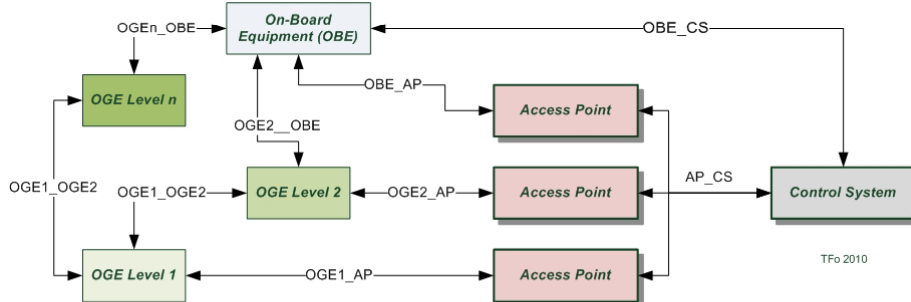
The crucial role of the Intelligent goods and the On-Goods Equipment



Functional interoperability



Technical interoperability



TfO 2010

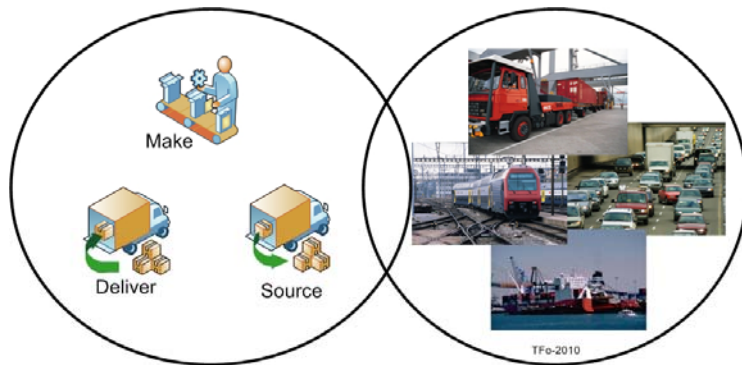
Conclusions and findings

- Transport domain
 - Improved statistics for transport of goods
 - Improved monitoring of traffic, e.g. specific types of goods
 - Improved management of traffic including incident handling
- SC domain
 - Improved statistics gives better basis for planning
 - Improved product deliveries, and product receptions
 - Improved monitoring of transport status, transport item (goods/product) and track and trace

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Thank you for your attention!



Simple On-Goods Equipment (OGE)



