Study on electronic information exchange needs for rail freight transport

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In September 2017, UNESCAP has initiated a study focused at:

- **Review of the existing situation** of the electronic information exchange between railways and with control authorities in the following areas:
  - European Union
  - Members of the Organisation for Cooperation of Railways (OSJD), and
  - Members of the Commonwealth of Independent States (CIS)

- **Key electronic messages** to be exchanged between railways and with control authorities

- **Challenges** related to electronic information exchange between railways and with customs authorities

- Development of **recommendations** in the benefit of the Asia and the Pacific Region
In the European part of the Eurasian continent, at least 3 electronic exchange systems have been developed by EU, OSJD and CIS railway organizations.
TAF SYSTEM:

Being applied in EU and COTIF railway areas, the TAF system covers exchange of data between multiple carriers and infrastructure managers concerning:

- consignment note data
- wagon trip plan
- allocation of railway infrastructure capacity (path)
- train preparation and running forecast
- movement of wagon
- post trip data (to improve transportation quality)
OSJD DEVELOPMENTS:

Apply within the geographic scope of the organization, solutions aimed at facilitation of international rail freight traffic by:

- implementing electronic railway data exchange (EDI)
- developing electronic SMGS consignment note
- contribution to development of the electronic CIM/SMGS consignment note
CIS CRT SOLUTIONS:

Products developed in the context of the CIS CRT are being applied in the territory of the Commonwealth of Independent States and in neighboring railway networks. They are dedicated to data exchange between railways to facilitate:

- global planning of international rail freight flows (MESPLAN system)
- facilitation of cross-border operations (electronic train handover sheet)
- goods/vehicles tracking (standardized dedicated messages)
Principal findings

- Each of the systems applies in its own (often overlapping) geographical area, virtually independently developed, in accordance with its own legal framework and governed by different entities.

- Lack of interface between some systems imposes use of numerous solutions for information exchange in “transit” railway networks.
Principal findings

- All 3 systems are **aimed at facilitation of international freight traffic** in its own area of application.
- **Common essential exchangeable information** has been identified for all 3 systems in question.
Principal findings

The level of electronic exchange with control authorities should be improved to enable unified electronic exchange.
Key electronic messages identified

- Analysis of the existing electronic exchange systems provides for assumption regarding the **key information** to be exchanged between railways in international traffic:
  
  a. consignment note data  
  b. train information data  
  c. data on movement of wagons

- **Harmonization of those 3 elements among the systems** could lead to a significant facilitation of data exchange in Eurasian freight traffic.
Identified challenges

• Challenges related to electronic information exchange between railways:
  - data exchange flows when crossing “digital frontier”
  - classification codes (nomenclature): NHM (COTIF), GNG (OSJD), ETSNG (CIS)
Crossing “digital frontiers” (West – East)

PAPERLESS CIM → PAPER CIM → PAPER SMGS → PAPERLESS SMGS
Identified challenges

- Challenges related to electronic information exchange **between railways and customs authorities**:  
  - **data set** to be submitted to the customs authorities is different from the information in the consignment note  
  - **procedures** implemented by customs authorities across different customs areas creates a challenge to smooth processing of the data
1. Key electronic messages in railway-to-railway communication should be identified

2. Common interfaces to link different national systems should be created and unanimously applied

3. A harmonized data format based on international standards should be used in data exchange

4. Common rules for coding should be applied
Next steps

- The review of the study is ongoing
- Final version of the study in **May 2018**
THANK YOU VERY MUCH FOR YOUR ATTENTION!