Telematics Applications for Freight
TAF TSI / EDICT

UIRR - EDICT Digital Event , Munich Transport Logistic Fair

10 May 2023, Online

EUROPEAN
UNION
AGENCY
FOR RAILWAYS

European COMMISSION IMPLEMENTING REGULATION (EU) N° 2021/541 of 26 March 2021 amending Regulation (EU) No 1305/2014 as regard the simplification and improvement of data calculation and exchange and the update of the Change Control Management process*

* https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0541&from=EN

TAF TSI functions Regulation (EU) 2021/541

Reference data
for rail loctions and for companies

Railways > Infrastr. Managers communication	Railways > Railways communication	Wagon keepers	Terminals
• Path request	• Consignment order	• Rolling stock reference database	• Consignment order
• Train composition	• Wagon events		• Train composition
• Train ready	• Estiamted time of interchange		• Train ready
• Train run and forecast	• Estiamted time of arrival		• Train run and forecast
• Service disruption			• Service disruption
			• Estimated time of interchange
			• Estimated time of arrival

TAF TSI process Regulation (EU) 2021/541

Planning… Operation… After…

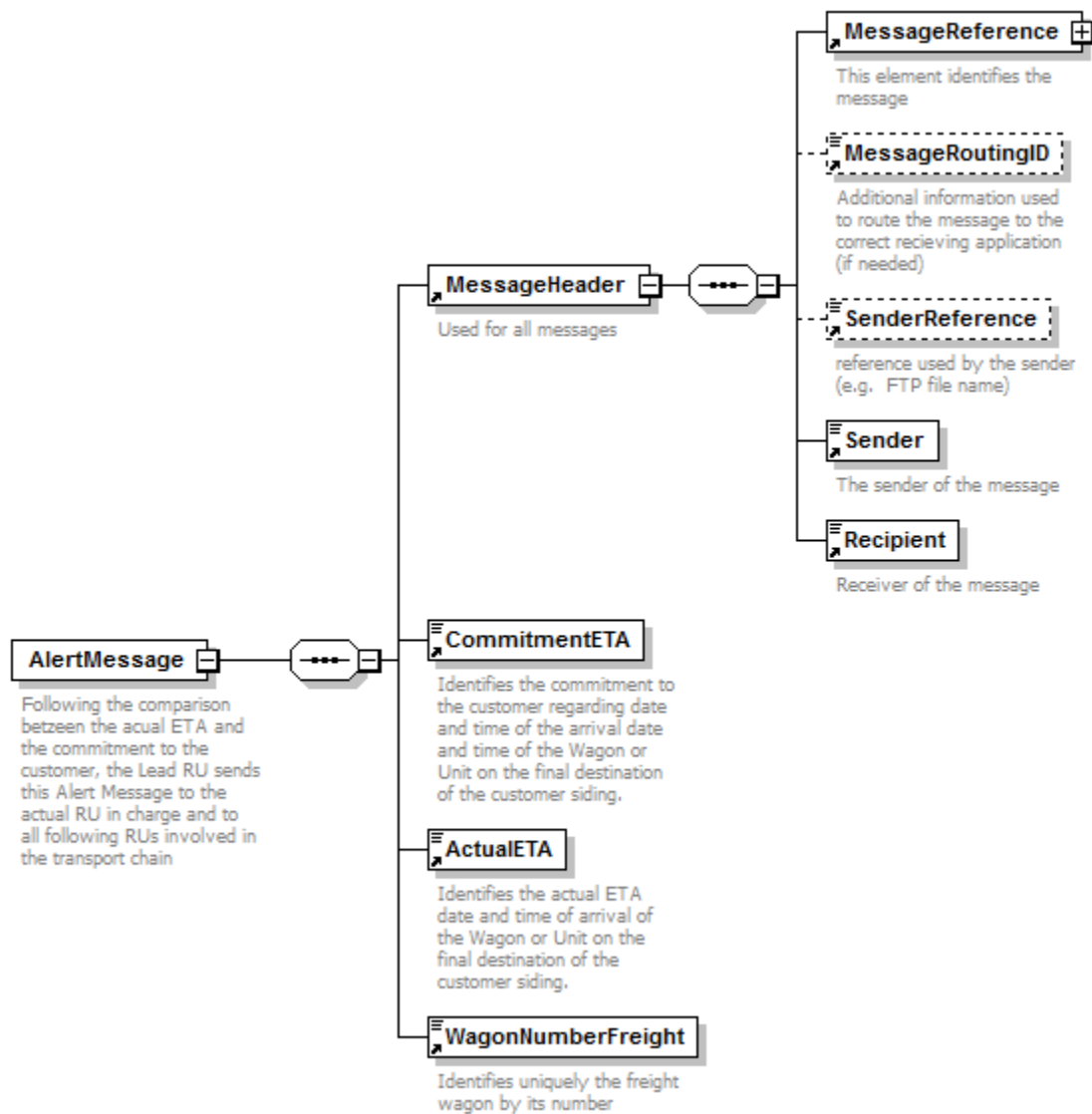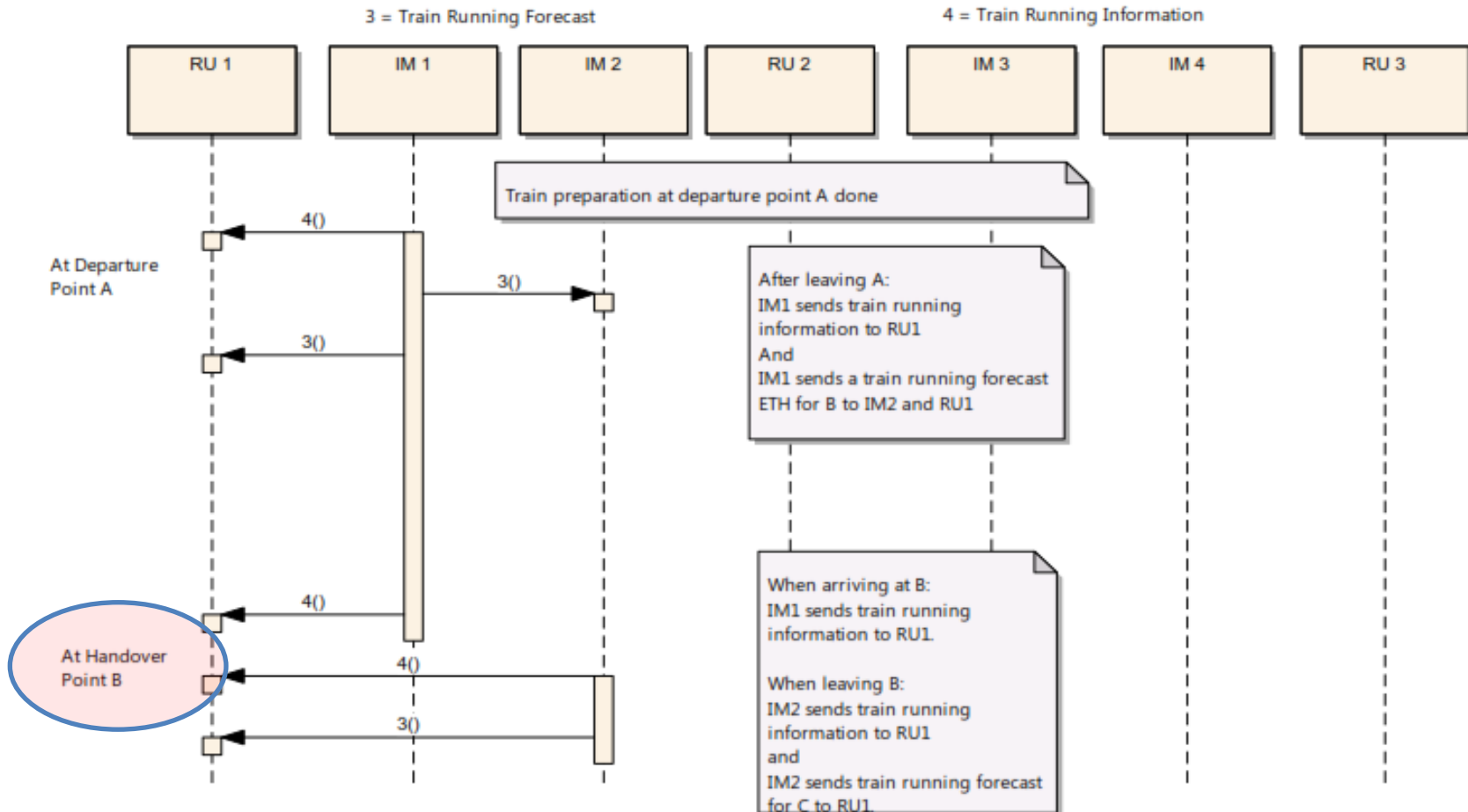| Consignment Note	Path Request	Train Preparation	Train Running Forecast	Wagon Movement	Post-Trip
- Wagon loads - Wagon release	- Open Access - One Stop Shop	- Train Composition - Train ready	- Train Running and forecast - Service Disruption	- Estimated Time of Arrival (ETA) or of Interchange (ETI) - Wagon events	- To improve the quality and productivity

MessageReference
This element identifies the message

MessageRoutingID
Additional information used to route the message to the correct recieving application (if needed)

SenderReference
reference used by the sender (e.g. FTP file name)

Sender
The sender of the message

Recipient
Receiver of the message

MessageHeader
Used for all messages

AlertMessage
Following the comparison betzeen the acual ETA and the commitment to the customer, the Lead RU sends this Alert Message to the actual RU in charge and to all following RUs involved in the transport chain

CommitmentETA
Identifies the commitment to the customer regarding date and time of the arrival date and time of the Wagon or Unit on the final destination of the customer siding.

ActualETA
Identifies the actual ETA date and time of arrival of the Wagon or Unit on the final destination of the customer siding.

WagonNumberFreight
Identifies uniquely the freight wagon by its number

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!--Sample XML file generated by XMLSpy v2017 sp2 (x64) (http://www.altova.com)-->
<ns1:AlertMessage xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:ns1="
http://www.era.europa.eu/schemes/TAFTSI/2.1" xsi:schemaLocation="http://www.era.europa.eu/schemes/TAFTSI/2.1
taf_cat_complete_baseline_2.1.xmd.xsd">
    <ns1:MessageHeader>
        <ns1:MessageReference>
            <ns1:MessageType>5007</ns1:MessageType>
            <ns1:MessageTypeVersion>2.1</ns1:MessageTypeVersion>
            <ns1:MessageIdentifier>12345</ns1:MessageIdentifier>
            <ns1:MessageDateTime>2017-12-17T09:30:47Z</ns1:MessageDateTime>
        </ns1:MessageReference>
        <ns1:MessageRoutingID>01</ns1:MessageRoutingID>
        <ns1:SenderReference>ftp://eleta.com/upload/</ns1:SenderReference>
        <ns1:Sender ns1:CI_InstanceNumber="1">1088</ns1:Sender>
        <ns1:Recipient ns1:CI_InstanceNumber="1">1084</ns1:Recipient>
    </ns1:MessageHeader>
    <ns1:CommitmentETA>2017-12-17T11:35:00Z</ns1:CommitmentETA>
    <ns1:ActualETA>2017-12-17T12:45:00Z</ns1:ActualETA>
    <ns1:WagonNumberFreight>841234567890</ns1:WagonNumberFreight>
</ns1:AlertMessage>
```

TAF TSI – EU 1305/2014 -> Process (sequences) ?

3 = Train Running Forecast

4 = Train Running Information

Train preparation at departure point A done

At Departure Point A

After leaving A:
IM1 sends train running information to RU1
And
IM1 sends a train running forecast ETH for B to IM2 and RU1

When arriving at B:
IM1 sends train running information to RU1.

When leaving B:
IM2 sends train running information to RU1
and
IM2 sends train running forecast for C to RU1.

At Handover Point B

EDICT	TAF TSI	Status
The overall objective of the EDICT project is to *remove interoperability barriers for TAF TSI-related CT messages* by implementing data exchange with identifiable and eligible stakeholders.	The TSI describes the use (sequences) and message content (XSD/XML) for Consignment order, Train composition, Train ready, Train run and forecast Service disruption, Estimated time of interchange, Estimated time of arrival, share reference objects etc.	☑
	CT actors are included in Glossary and Legal text.	☑
Goal 1: Implementation of electronic data exchange between terminals and the rail sector, including the definition of harmonized timestamps, adaptations of Terminal Operating Systems (TOS), and design of a common and standardized interface for terminals.	Link real multimodal time data and train data (with new Appendix IV for ETA)	☑
	Facilitation of Combined Transport (with ILU database) with link to eFTI.	☑
	Better data access for first and last mile actors	☑

EDICT	TAF TSI	Status
Goal 1 (cont.): Implementation of electronic data exchange between terminals and the rail sector, including the definition of harmonized timestamps, adaptations of Terminal Operating Systems (TOS), and design of a common and standardized interface for terminals.	Revised milestones for implementation of amended legal text towards timetable 2027 (new TAF "Master Plan").	☑
	Adaption of the CT related TAF XML messages in the ERA Change Control Management (such as new ILU Database Set).	☑
	Use of CT specific (however TAF TSI "soft" compliant) messages such as EDIGES.	☑

EDICT	TAF TSI	Status
Goal 2: Development of a common Quality Management System for European Combined Transport, scheduled regularly running (non-ad hoc) rail freight operations (Q-ELETA), including the development of a methodology to devise milestones/time stamps of the production process, harmonized delay/irregularity codes, and a view to improving CT performance, in particular punctuality.	Link real multimodal time data and train data (with new Appendix IV for ETA). Possibility to keep available (by IM) train running information (ID, reporting location, actual vs. planned date/time, delay and delay cause) for complaint purposes of freight customers.	☑ ☑

EDICT	TAF TSI	Status
Goal 3: Initiating data exchange with new stakeholders, particularly end-customers such as shippers, Logistics Service Providers, and freight forwarders, including the integration of Estimated Time of Pick-up Time (ETP) based on train ETA, extension of the successful market solution CESAR for tracking and tracing, development of registers, and promotion of existing applications such as KV 4.0, a data hub for Combined Transport.	To be developed in future TAF revision (Implementation of geolocation tracking of vehicles, ETP etc).	☑

- https://www.era.europa.eu/activities/technical-specifications-interoperability_en
  - TAF TSI regulation
  - TAF TSI Implementation, master plan and guidance

- https://www.era.europa.eu/content/compliance-reports
  - TAF TSI documents / XSDs (in baselines !)
  - TAF TSI Compliance reports

- http://teleref.era.europa.eu/
  - TAF TSI Reference Files (Company Codes and Primary Location Codes)

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