Simplified rail vehicle authorization in EU through x-acceptance of requirements

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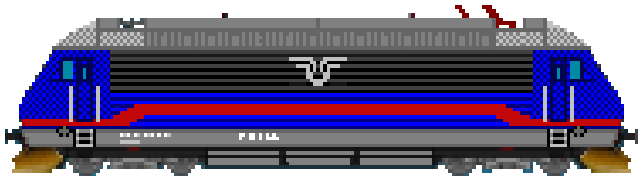
(National Safety Authority)



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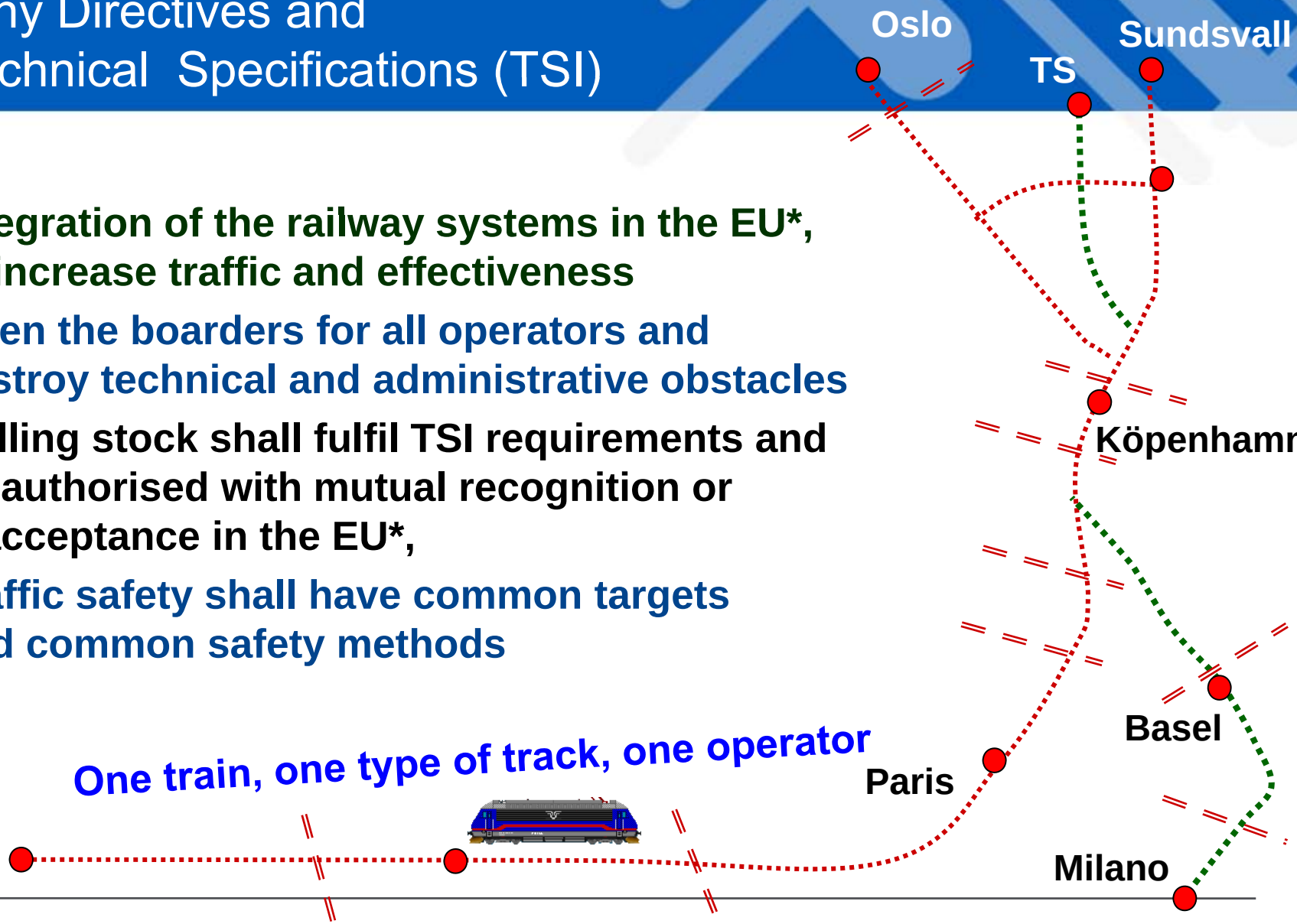
Why Directives and Technical Specifications (TSI)

Integration of the railway systems in the EU*, to increase traffic and effectiveness

Open the boarders for all operators and destroy technical and administrative obstacles

Rolling stock shall fulfil TSI requirements and be authorised with mutual recognition or x-acceptance in the EU*,

Traffic safety shall have common targets and common safety methods



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Authorisation requirements for rail vehicles

New vehicles shall comply with TSIs (EU regulation)

- Nobo(s) assess that the vehicle fulfils the TSIs
- Applicant draw up a EC-declaration of verification
- Safety authority assess open points and other national rules
- The vehicle is authorised by one NSA (National Safety Authority)

• X-acceptance of non-TSI-vehicles (imported vehicles)

- A vehicle authorized in one country shall have a simplified process for authorisation in the second EU*-country
- The authority shall only assess the imported vehicle according to interoperability with the infrastructure incl. climate and non equivalent safety requirements } **C- and B-points**
- Other points from first authorisation shall be accepted for the imported vehicle

A-points

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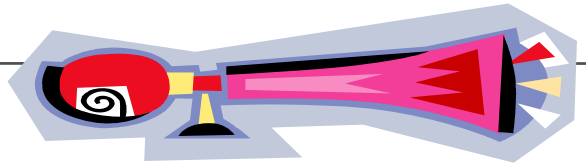
Reference documents for X-acceptance

X-acceptance is valid for vehicles with first autorisation in first EU*-country according to the national rules in this country.
In this first authorisation the National safety authority assesses all points.

By authorisation in second EU*-country the Safety authority shall only assess B- and C-points on the imported vehicle.
According to the directive **A-points shall not be reassessed!**
The applicant shall not do tests and analysis that was already done by the first authorisation.

The national reference documents have ≈350 points with requirements (national technical rules or acceped technical solutions)
European Rail Agency (ERA) has published the 27 reference documents
Example on Swedish accepted technical solution:
7.2.3.1 Warning horn tones: TSI LOC&PAS 4.2.7.2.1 and EN 15153-2



Classification of requirements

All points in the all national reference documents shall be classified as A- ,B- or C-points by imports from each country to each other country
ERA is developing a database with all requirements and classifications.
There will be 27*27 classifications when the databsase is full.

Geographical Groups of National safety authorities set the classifications.
Transportstyrelsen works with the authorities from DE, DK, NO and FI.
~275 points has been classified as A, B or C-points for import of vehicles between these countries, 75 remains.
ERA will publish the database by end of 2012.

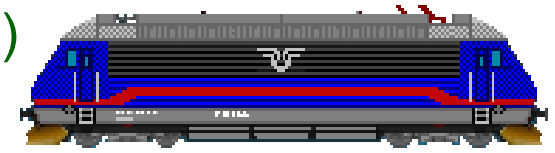
The benfit is to facilitate import and operation of existing rail vehicles.
The administrative barrier for authorisation will decrease and
many national test will be ”deleted” for the imported vehicle.
Time and costs for second authorisation will decrease by a magnitude.

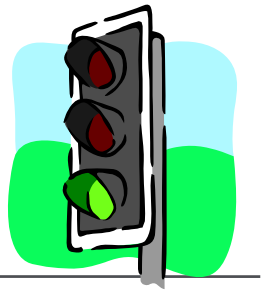
A-points for authorisation in Sweden

Transportstyrelsen will minimise number of B- and C-points!

Example of A-points for import from NO, DE, DK and FI:

2.1.1 Vehicle strength and mechanical integrity (EN 12663 for all)
2.3 Passive safety (EN 15227)
3.2.1 Running dynamic test (EN 14363)
4.4.2 Service brake command
5.1.1.2 Door traction interlocking
7.2.2.2 Marker lights (EN 15153-1)
8.2.3.2 Contact strip material
8.4.4 Electromagnetic compability (Directive 2008/104/EC)
9.1.3.1 Mechanical characteristics of windscreen (EN 15152)
10.2.4 Emergency lighting (EN 13272)





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C-points for authorisation in Sweden

Transportstyrelsen will minimise number of B- and C-points!

Example of C-points for import to Sweden:

3.3.2 Wheel sets from FI (FI has 1524 mm rail gauge))

4.4.1 Emergency brake command SE has specific requirement on safety

6.1.1.5 Operation in snow conditions (A for FI and NO)

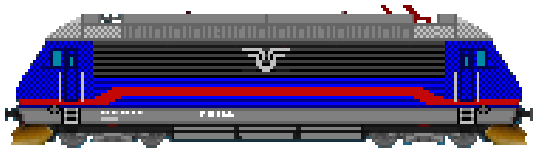
7.2.2.1 Head lights (DE doesn´t require full beam head light)

8.2.2.4 Pantograph contact force (A only for NO)

9.2.2.1 Heating and ventilation in the cab (A for FI and NO)

9.3.3. Rear and side view (DE and DK has no req. Gauge is also problem)

12.2.1 Train protection system (A for NO. DE, DK, FI has other systems)



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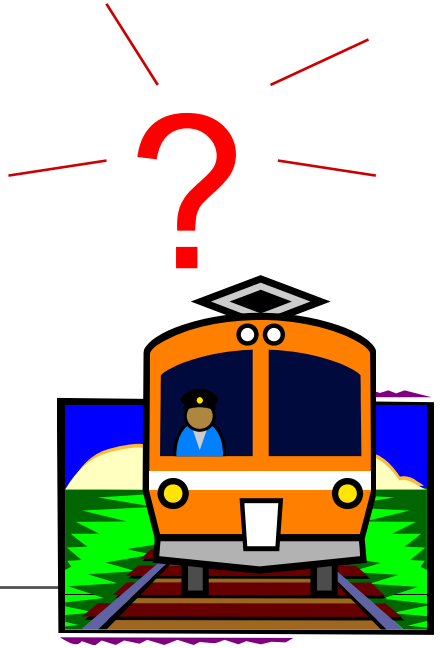
Interoperability registers

According to the x-acceptance database all technical requirements are public
By first authorisation the vehicle shall fulfil all 350 points in first country
By second authorisation the only B and C-points shall be demonstrated
The technical data will be in the European vehicle type register

The operator has to check the compability vehicle – infrastructure
Trough vehicle type and National infrastructure register
before he apply for time slot on a specific line

European Rail agency will have the vehicle type register
The national authorities will have the Infrastructure registers
These register will match
And ERA will make them public.



My vision for the European railways

- **The trains are rolling though Europe without technical and administrative obstacles**
- Rail vehicles are authorised for the European Union by TSI-compatibility or X-acceptance.
- European leasing marked for locos and MUs with ERTMS.
- ”Ryan rail” drives charter trains to the Mediterranean
- The freight operator drives all the way from manufacturer to customer with one train
- A common marked for components and vehicles gives standardised manufacturing and lower prices

I´m enjoying the sun on mount Åreskutan

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