

## UIC leaflet update

Eress Forum

**Bart Van der Spiegel**  
Energy Management

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# Energy measurement on trains



Energy meter will become mandatory on all new, renewed and upgraded rolling stock.

**Loc&Pas TSI  
EN 50463**

**EN 50463-4**



Each member state shall be able to collect the measuring data on ground.

**Energy TSI  
EN 50463**

**UIC leaflet 930**



Each member state shall be able to validate the energy consumptions and to allocate them to the correct end user.

**UIC  
leaflet 930**

# Updating UIC leaflet 930

**First meeting: 23<sup>rd</sup> and 24<sup>th</sup> May, Madrid**

**Five subgroups created:**

1. Role model
2. Small improvements to UTILTS
3. Adapting XML from EN 50463-4 for on ground communications
4. Border crossing and polygons
5. Estimation and validation

**Next meetings:**

- 13<sup>th</sup> and 14<sup>th</sup> September, Brussels
- 10<sup>th</sup> and 11<sup>th</sup> October, Vienna
- 13<sup>th</sup> and 14<sup>th</sup> December, Frankfurt

## Validation of metered data

Commission Regulation (EU) No 1301/2014 of 18 November 2014 introducing the new Energy TSI states in article 9, 4<sup>th</sup> point:

... The on-ground settlement system shall be able to exchange compiled energy billing data (CEBD) with other settlement systems, **validate the CEBD** and allocate the consumption data to the correct parties. This shall be done by taking into account the relevant legislation concerning the energy market.

## Validation of metered data

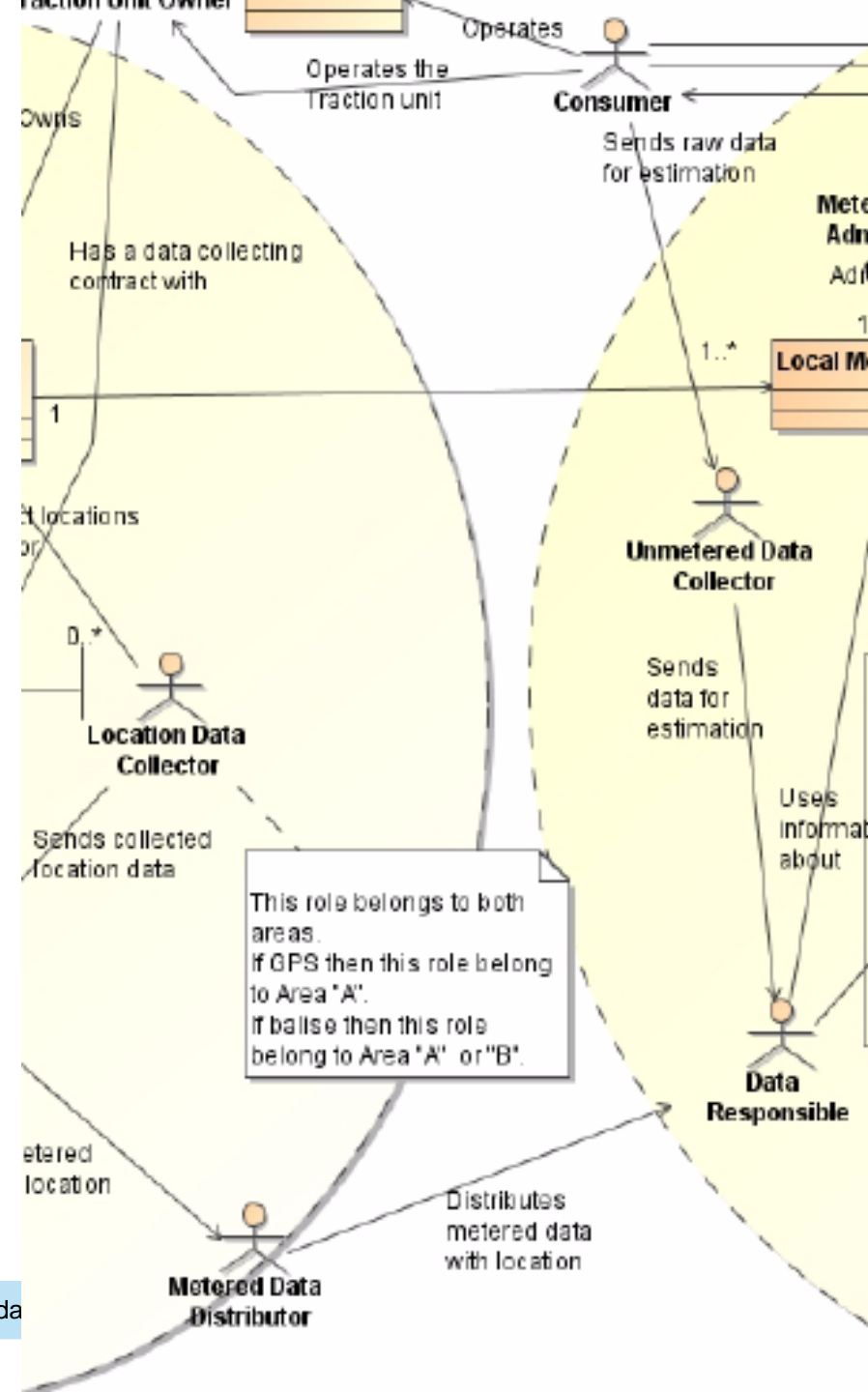
UIC leaflet considers:

- That the Consumer (Railway Undertaking) sends raw data for **estimation** to the Unmetered Data Collector.
- That this Unmetered Data Collector sends data for **estimation** to the Data Responsible.

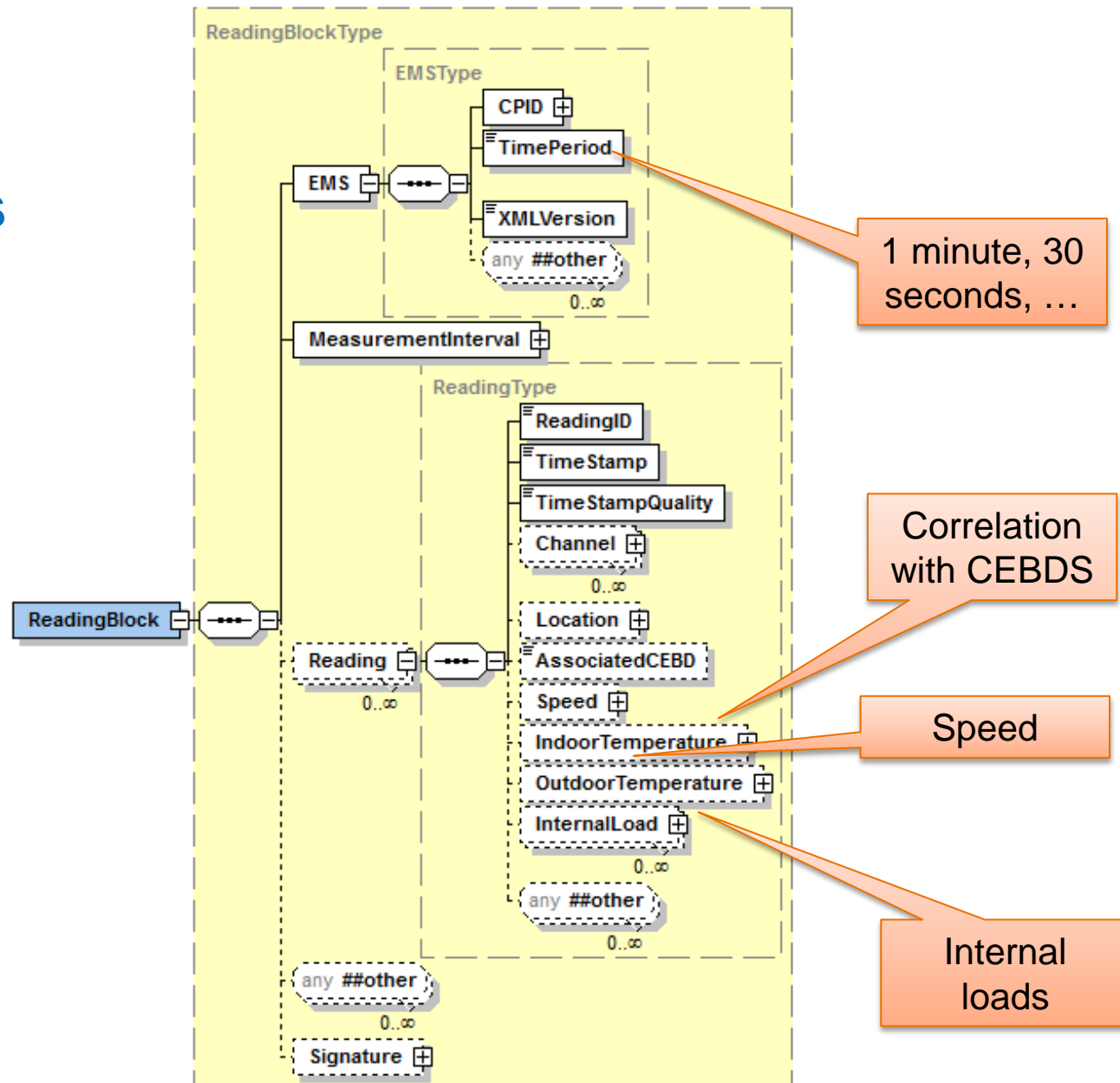
Is this data also usable for validation of metered data?

What data should you need to be able to validate?

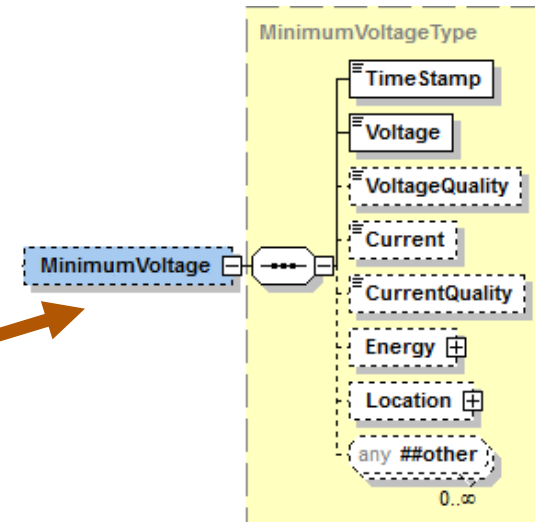
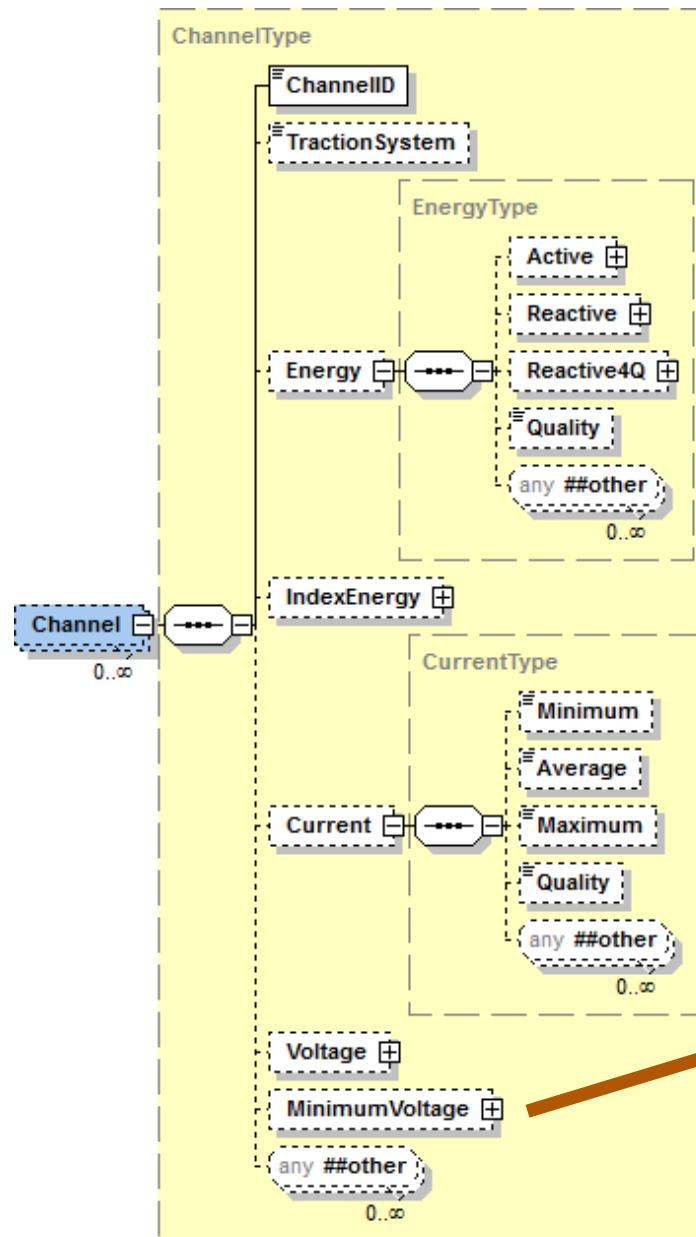
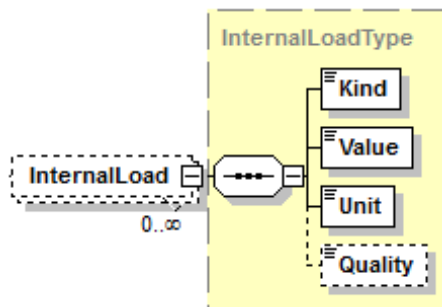
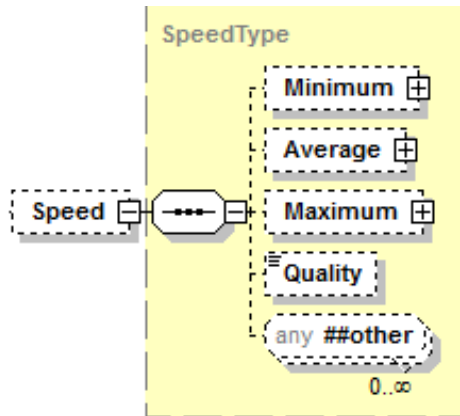
Should we standardise such data exchanges?



## Energy meter has more information



# Energy meter has more information



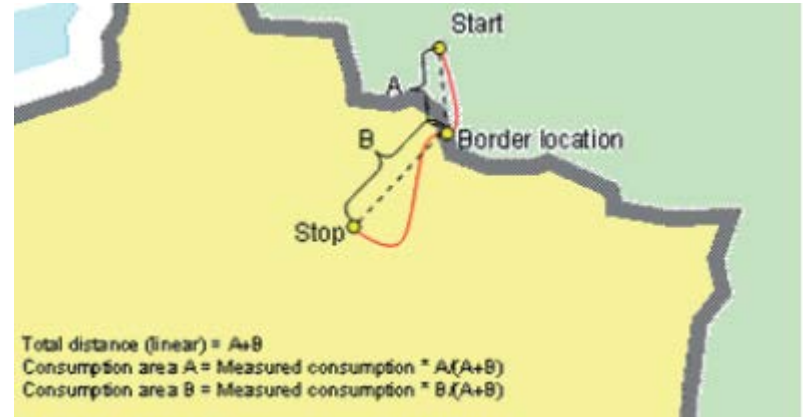
## Energy meter has more information

The energy meter can provide extra useful information to infrastructure managers and railway undertakings.

Should infrastructure manager collect all this data and provide an interface to the railway undertakings in order to improve the energy efficiency of railway sector?



## Trains near borders



- The traction energy for trains near a border might be delivered via a substation in the neighbouring country.
- Can the infrastructure manager of this substation deliver energy directly to the train in the neighbouring country?
- Is the consumption regarding to be handled through the energy market of the country where the energy is injected from the public grid into the railway grid?
- Can an infrastructure manager manage a product across the national border?

## Topics for round tables

- Validation and estimation: Standardisation needed? Ideas?
- Extra data coming from energy meters: What to do with this data on ground? Should access this data be standardised? Should Eress offer services related to this data?
- Trains near borders: Should we use country borders or electrical border? Advantages/disadvantages?