EULYNX DATA PREP
&
RailSystemModel

dataprep.eulynx.eu

June 30th Web conference
Data Prep in a signalling workflow

Defines what work needs to be done
“Painting by Numbers”

Data are leading
• single source of truth

View follows data
• Algorithms don’t understand pictures

But what do the data mean ?
• “I know a signal when I see one”
• Data ≠ information

Uninformed data is meaningless

Source: sncf
EULYNX DP builds on RSM topo foundations

What we need to know

How things connect

- Network topology
- Location on the network

Where is my kit

- Equipment is positioned …
  - On earth
  - On a map/plan/display

Data are structured

- Query/count/delta
- Exploit graph algorithms

People read graphics,
Computers read graphs
What’s inside the RSM box?

Structure & meaning

Picture ~1000 words
So you’ve a nice new model
And now what?

**UML**
- Semantics
- Structure
- Graphic documentation

**XSD**
- Semantics
- Structure
- No graphics

**XML**
- Machine readable
- Validated to XSD
- Structured & meaningful

**C#**
- Generated dll
- Or other OO code

**App**
- E.g. AutoCAD
- Visio
- Python

**Linearise**
- json
- XML
- yaml

Batteries included: XSD and code generator exist
A tool demo

**MS Visio front for data**
- Includes a library of generated C#-code

**Signalling stencil**
- Clever master shapes
- Signals, points, tracks...

**Linearisation**
- In rail-speak: marshal the shapes into a train of information
- **Structured according to model**