


Università degli Studi di Trieste

Dipartimento di Ingegneria Civile e Ambientale

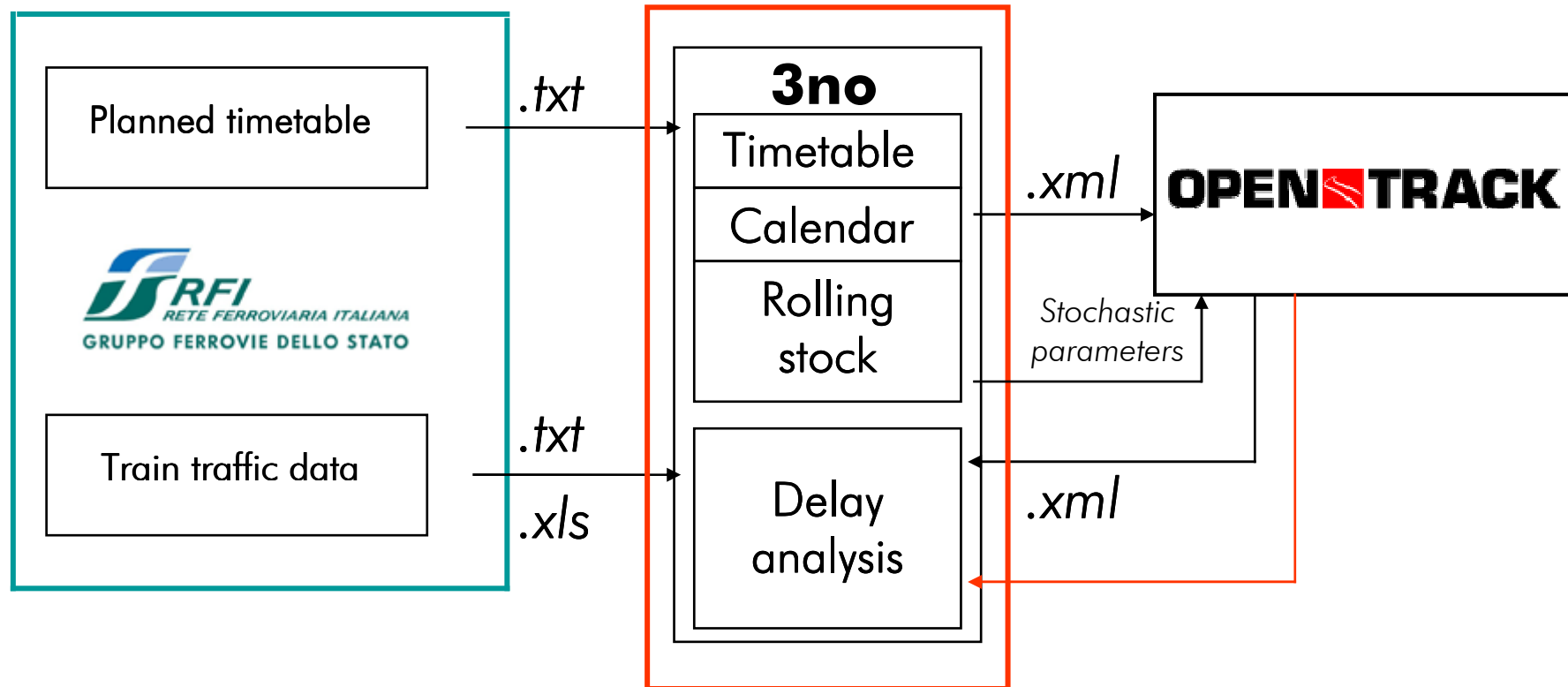


RailML in Italy:  
*Data exchange between RFI and  
Opentrack*

Bern, 6 March 2008

Dott. Ing. Stefano de Fabris

# Working - Flow

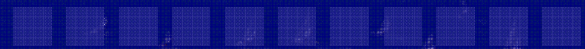




# 3no: Data management and delay analysis

## Java application, with PostgreSQL DBMS

- ✓ Data import from RFI custom file types
- ✓ Simplified infrastructure model
- ✓ Graphical timetable
- ✓ Delay analysis from train traffic data (.txt, .xls)
- ✓ RailML Timetable Export
- ✓ Import from OT\_Timetable.xml
- ✓ Analysis of OT recursive simulations

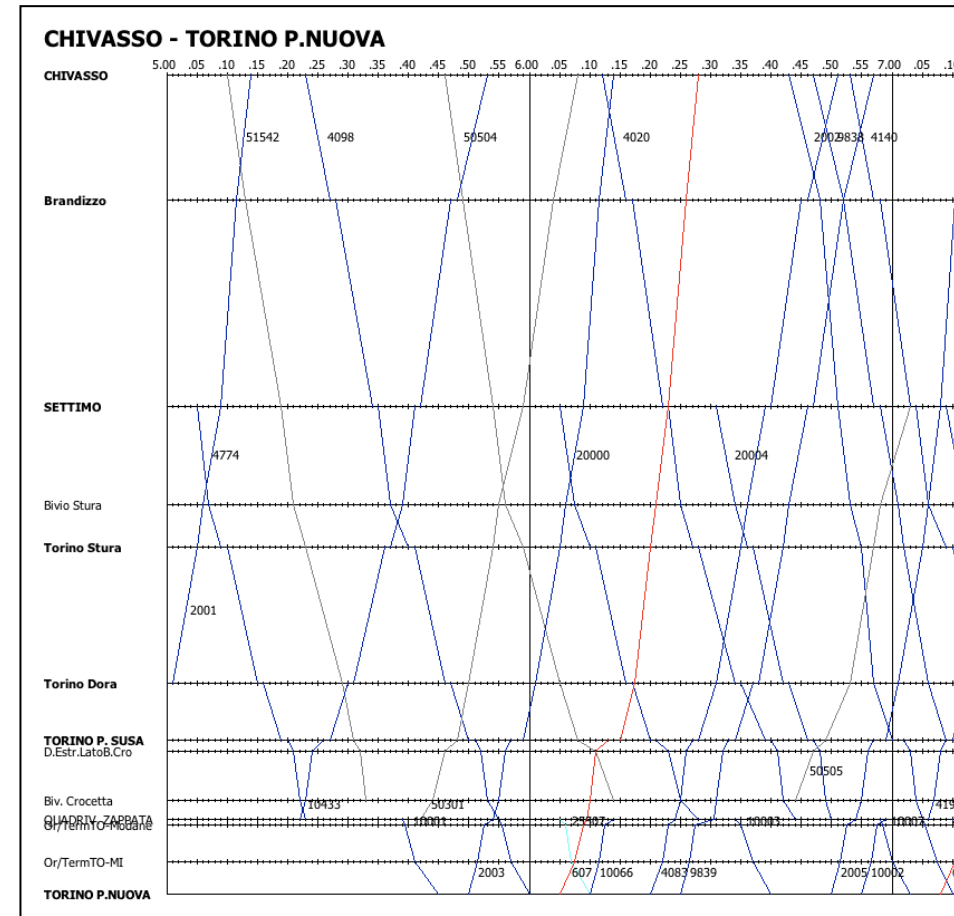




# 3no: Timetable graph

Timetable graph of a user-selectable day:

- ✓ User defined corridor
- ✓ Line colours represents train categories
- ✓ Distances proportional to real stations distances

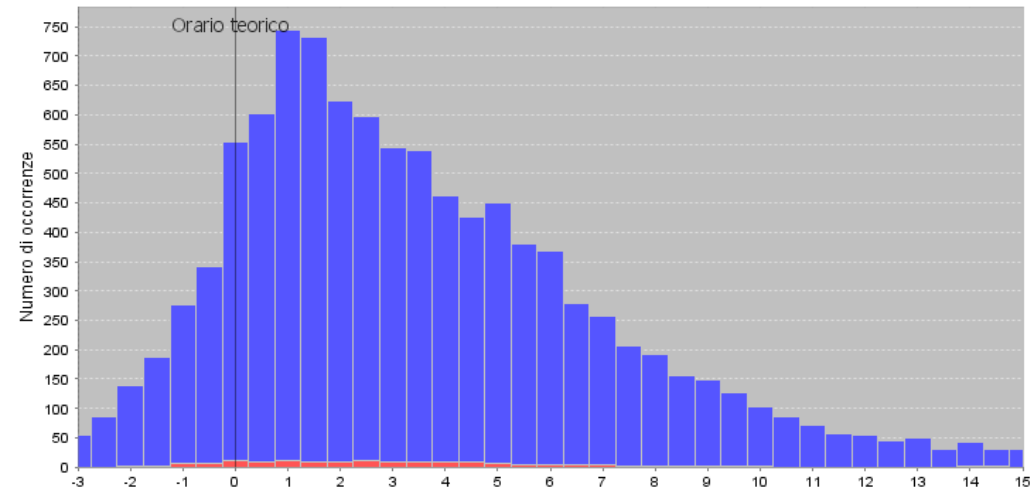


# Train data analysis: real data

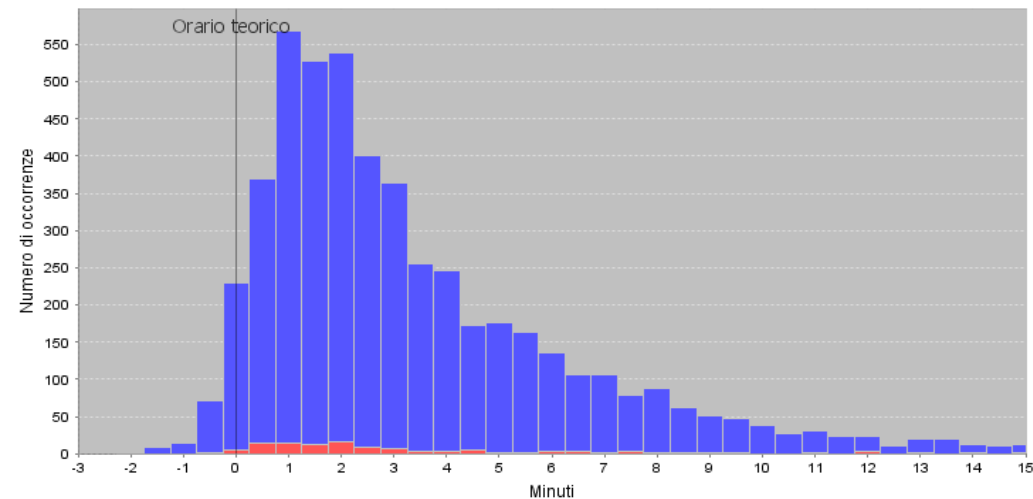
## Output data:

- ✓ Analysis of a user-selected time period
- ✓ Departure distribution
- ✓ Arrival distribution
- ✓ Delay percentage (%)

**Distribuzione dei ritardi del treno in arrivo a ROMA CASILINA**



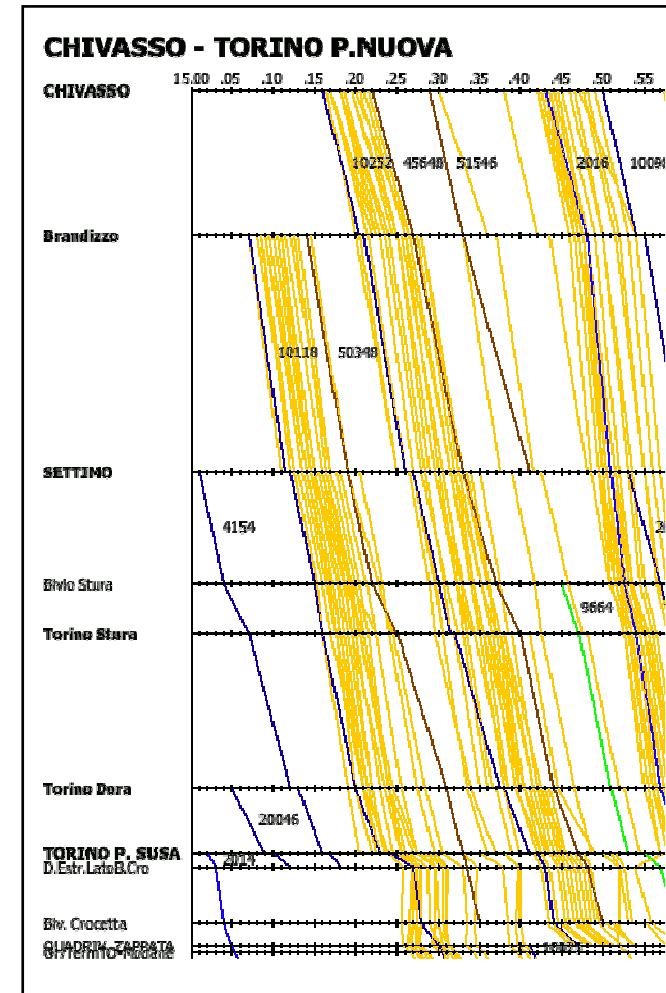
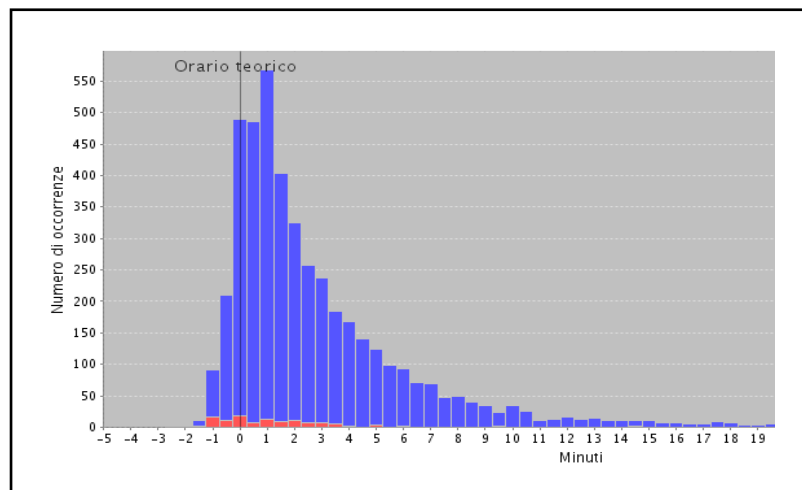
**Distribuzione dei ritardi del treno in arrivo a Torricola**



# Train data analysis: Opentrack output

## Recursive OT simulations:

- ✓ Delay model calibration
- ✓ New infrastructure performance foresight
- ✓ Secondary delay studies





# Train data analysis: future developments

## New ways to simplify data analysis:

- ✓ Conflict detection tool
- ✓ Improvement of infrastructure data (RailML Infrastructure?) for better reconstruction of railway operations.

