



# IPoint2

# Maintenance of a vehicle fleet

SUCCESS STORY N°1

## ⇒ ISSUES:

- ◆ **Local:** site optimization
- ◆ **National:**
- ◆ Staff training
- ◆ Harmonization of methods and quality procedures
- ◆ Optimal use of equipments and labor.

## ⇒ SOLUTIONS:

- Simulation of all maintenance sites with ExtendSim.
- Development by IPoint2 and its 20 years of experience in flux simulation.

## ⇒ BENEFITS:

- **Local :** simulate the evolution of needs in order to rapidly adapt the site.
- **National :**
- ◆ Over 50 sites have embraced this approach.
- ◆ New sites envisage integrating the project.

Overview of a maintenance site developed from the SimTEC library

The SNCF (French railway company) has chosen IPoint2 and the partnership LGM-ExtendSim to develop an original and evolutionary model for its maintenance sites.

This model can also be applied to all kinds of vehicles: buses, trains, planes, military vehicles...

However, often managers do not consider vehicle maintenance to be at the core of their activity. BUT if there IS a malfunction, the passengers bear the consequences of either badly-maintained vehicles and/or delays!

Site managers often have to deal with crucial issues :

- ◆ Use of crews
- ◆ Change of rolling stock, implying a complete redistribution of maintenance operations
- ◆ Optimization of the sequencing of existing maintenance operation
- ◆ Circulation of vehicles on the site

All these questions have an answer with a simulation model.

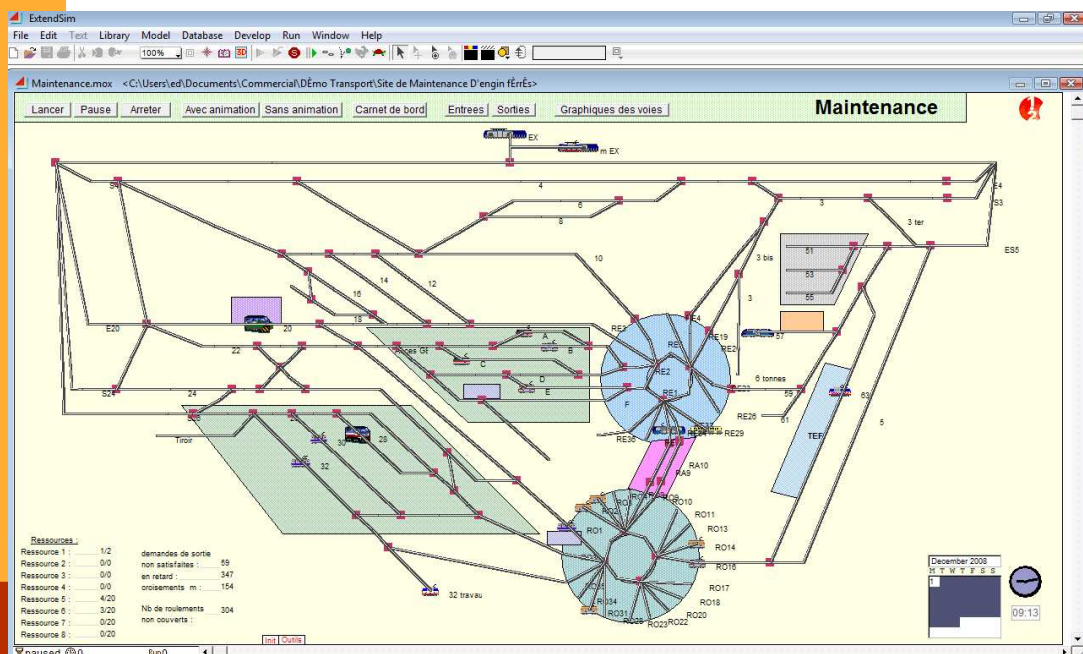
## They trust us:

- Transpole,
- SNCF,
- Air France CDG Airport

With simulation, we can study the initial operation of the site, revealing the blocking points..

Then, it is possible to test various configurations without any physical constraints, and thus assess the real profitability of the envisaged changes, without spending astronomical amounts of time and money.

The easy use of the models, associated with fast calculation, allows many scenarios to be considered, and quickly leads to an improved maintenance site.





12 bis rue des Pies  
38360 Sassenage  
France

Std: +33 4 76 27 77 85  
Fax: +33 4 76 27 24 67  
infos@1point2.com

**For more information, visit our  
website:  
<http://www.1point2.eu/>**

**We support industry managers with simulation to assist their decision making process.**

**Trained in industrial simulation in the United States and in France, the 1Point2 team provides since 1987 services, quality software, development, studies and training in the field of simulation.**

**1Point2 is the exclusive distributor of ExtendSim in France, Belgium, Italy, Spain, Portugal, and Greece.**

Contact Guillaume Lagaille.  
glagaille@1point2.com

## The project:

Several steps lasted over a year:

- ◆ Development of a model for three pilot sites
- ◆ Rolling out on a national scale:
  - ◇ Model tuning, to take into account all the basic parameters found in step 1
  - ◇ Building of all models
  - ◇ Upgrade to finest and final version for all models at the end of project

In addition, this model would allow each site to anticipate, by flow simulation, developments expected to cope with future needs (see box).

For it, the following indicators have been implemented :

- ◆ 2D animation of the model in order to see the vehicles moving about and to know in real time the use of resources and the number of vehicles off-delay
- ◆ Graphics for the number and utilization rate of resources
- ◆ Graphics for the number of vehicles on each track
- ◆ Different tables with all the traffic information for each vehicle entering the site.



is developed by:



Imagine That Inc.  
[www.extendsim.com](http://www.extendsim.com)

« The mission of a maintenance site is to refuel, clean, maintain and repair a fleet of thermal vehicles.

The fleet of vehicles managed by the site having to decrease, the optimization of the flows and logistics officers is required in order to control as precisely as possible the flow of vehicles, which have just been modified with the new timing »

Technical Specification.