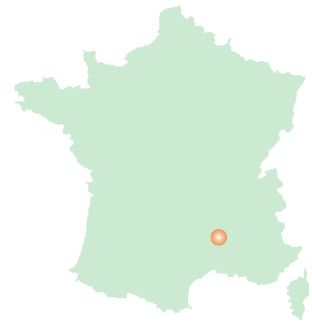




# CASE STUDY



## Priority system for parisiens tramway and crossroads controllers for the T3 expansion lane

In the context of the T3 expansion lane, CeRyX Traffic System had to achieve crossroad regulation files (integrating priority system for public transport) and, during tests, to assure deployment and adjustments of crossroads.

### PROJECT DETAILS AND BACKGROUND

Our mission concerned the T3 expansion lane from Porte d'Ivry to Porte de la Chapelle.

The project is 14,5 km long and includes 26 tram stations. This expansion connect 5 districts more and to redefine the boulevards des Maréchaux at the east of Paris.

The goal was to answer the inhabitants request to develop public transport and to find another travel solution than the private car.



### ANALYSIS AND METHODOLOGY

- **Realisation of crossroad regulation files and functioning explanation sheet:** CeRyX Traffic System created crossroad regulation files with priority algorithms for tram and that, for all crossroads concerning with the expansion lane. These files also described every particular functioning, like interfaces with rail signalling.

Each file contains:

- Functioning diagrams (describe with frequencies) and micro-regulation conditions that permit to assure the crossroad priority for all public transport
- Controller input / output descriptions





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- Description of the variables affected to the tram (included approach time limits) et the ones affected to the inter-controllers dialogues
- Description of memories and other features used for programming

	Ph Radiales	InterPH R => Tdeg				Ph Tdeg		InterPH Tdeg => M			Ph Maréchaux	InterPH M => R				
Séquences	120	121	122	123	139	140	141	142	143	159	160	161	162	163	179	Séquences
Tps Min	12	4	8	5	3	7	3	15	6	3	11	3	1	4	5	Tps Min
Tps Max	12	4	8	5	3	7	3	15	6	3	11	3	1	4	5	Tps Max
Lignes	V0									V	V	V	V			V0
P1	V	V	V	V	V	V	V	V								P1
V2									V		V	V	V			V2
P3	V	V	V	V	V	V	V	V								P3
V4	V															V4
P5			V	V	V	V	V	V	V	V	V					P5
V6	V															V6
P7			V	V	V	V	V	V	V	V	V	V				P7
T8					!!!	V	!!!									T8
P9				R	R	R	R	R	R	R						P9
T11					!!!	V	!!!									T11
P12				R	R	R	R	R	R	R						P12

- **Participation in tests for crossroads functioning:** Several kind of tests have been realised to guarantee an optimal functioning of the expansion lane: test bed before use, tests with a transmitting beacon, tests with tram on a railway section, tests on the complete lane as dry run to make corrections that permit the final deployment.

CeRyX Traffic System realized thorough optimisations on crossroads functioning in order as well to receive a high quantity of traffic as to permit a high frequency of tram circulation.

- After the tests, CeRyX Traffic System established the final implementation file of crossroads booklet and assured a course for central station traffic regulation departments of Paris. This course was about the rules of priority system deployed on the city of Paris.

### SOLUTIONS DELIVERED

The expansion lane was operational for commercial deployment in December 2012. The astute settings continued until January 2014. These settings have been done in the central station traffic regulation departments of the city, by using statistical data.