

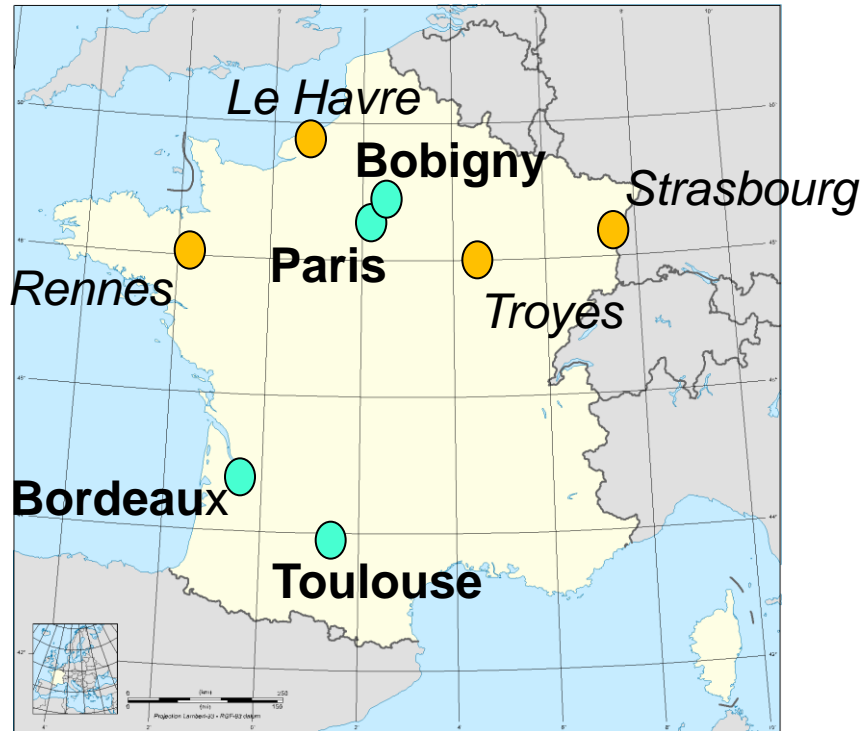
A review of urban traffic regulation centres in France

Contribution of ITS for traffic management
in urban area

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Introduction



Objectives

- Identification of innovative projects in France in the field of traffic management
- Interview with the person in charge of the regulation centres in each city
- Contribution of ITS to traffic management
- Feedback and evaluations from the regulation centres (RC)

City of Toulouse

system CLAIRE-SITI (intelligent system for intermodal transport)

The system

- 600 traffic light intersections (including 100 for the tramway)
- Manages in real time the traffic conditions
- Records the traffic data and informs users about possible traffic disruptions



Management

- Urban RC, Bus and Tramway RC, road RC => all in one campus
- Mapping of traffic levels and congestions

Plus

- Result of a research laboratory (IFSTTAR)
- Creates relation between different actors and different types of transport to improve interactions and propose solutions

City of Bobigny

system GERFAUT II (system for users information and traffic regulation)

The system

- Operates 600 traffic light intersections (2017)
- Analyses in real time the traffic conditions
- Gives the priority for the bus and for the tram in dense urban zones

Management

- Regulation department (over 10 ppl) = exploitation dept + engineering dept
- Direct links with the police to manage events
- RC moved on event sites (for Paris Air Show at the Bourget and at the Stade de France in 2017)

Plus

- Strong communication network made of optical fibers (400 kms, up to 10 Gbits)
- Living Lab since 2013 (European Union)



City of Bordeaux

system GERTRUDE (Regulation management in real time)



The system

- Coordinates traffic light intersections in order to limit the number of times the driver stops at a traffic light
- Restrains the speed of vehicles in off-peak period on high risk roads
- Facilitates the traffic of public transport and emergency vehicles

Management

- Central control to manage the traffic using algorithms

Plus

- Ensures significant time saving for tram due to the use of the absolute priority
- Operates in other cities in France (Metz, Montpellier...) and abroad (Casablanca, Porto, Wroclaw...)

City of Paris

Video system for tram regulation at traffic light intersections – T3 Marechaux

The system

- 120 traffic light intersections (53 with video analyzer)
- 102 video cameras
- 500 tram / day / intersection
- Gives the absolute priority for the tram and records traffic statistics



Management

- 2 different regulation systems working together (one for traffic regulation and the other one for tram regulation)
- A video analyzer to define occupancy area

Plus

- The regulation centre has a direct vision on traffic conditions and on how the traffic light intersections work.

To conclude

Feedback from regulation centres

- The main objective is to encourage modal shifts to decongest saturated cities

Contribution of ITS for traffic management in urban area

- To give the priority for public transport at traffic light intersections
 - *using different technologies such as radio communication, GPS ...*
- To measure traffic conditions
 - *using traditional sensors (inductive loops , traffic cameras...)*
 - *using dynamic sensors (FMD, FCD...)*
- To manage and to regulate the traffic
 - *using signal light management (time of cycle, active sequence...) and traffic light intersections synchronisation*
 - *using artificial intelligence (powerful algorithm to respond to real-time situations)*