



IPv6 Contest - Japan

Cisco & Renault



→ In Car Services :

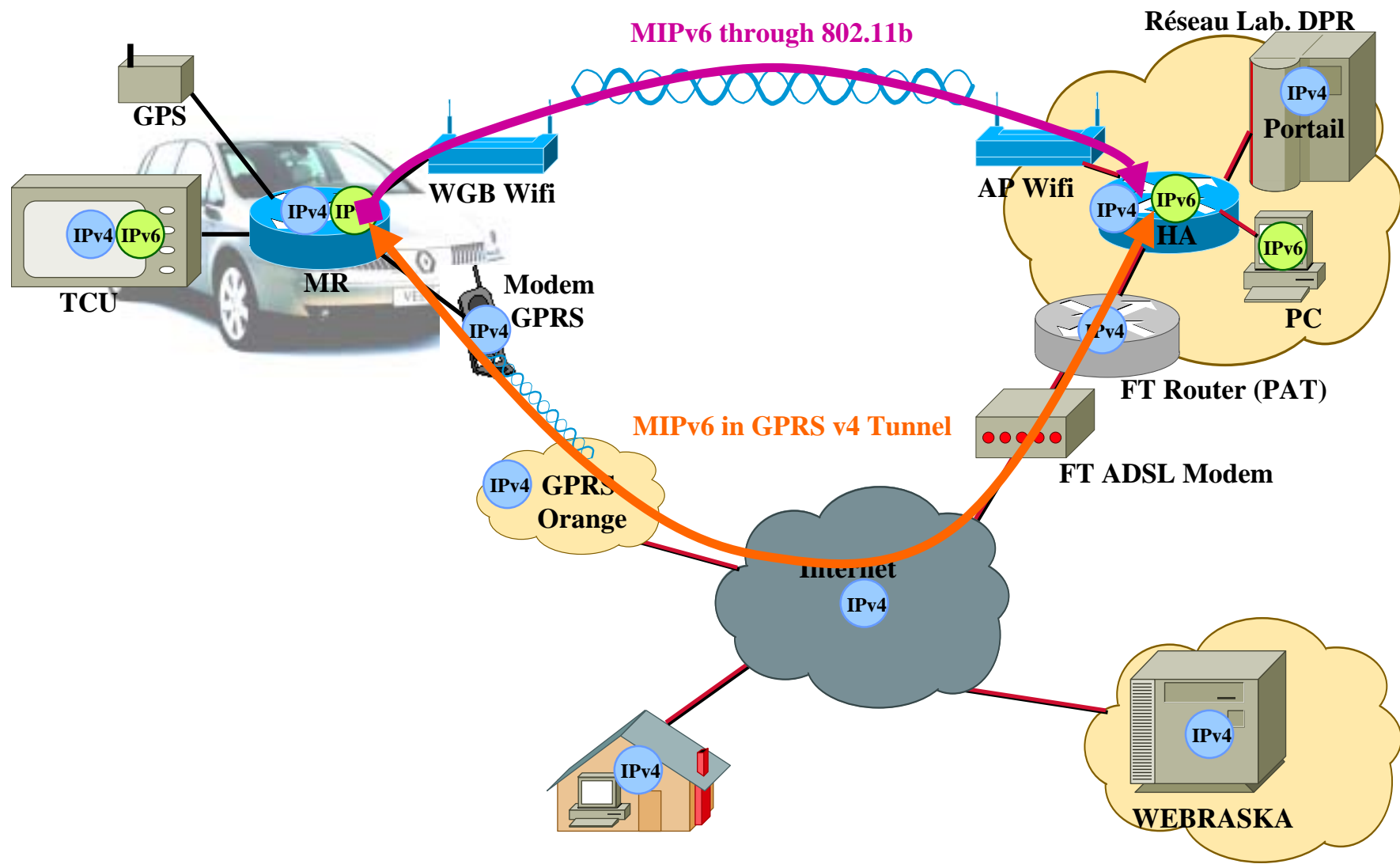
- Hybrid enhanced navigation system

- 📄 COSMECA project results
(GPRS and Wifi)

Using a web site on internet, a customer subscribe to a Hybrid enhanced navigation services. The service is installed in the car.

No data are installed in the vehicle : the route caculation is operated on a remote server.

The itinerary prepared at home is downloaded on a Wifi or GPRS network. **The seamless access to the internet is a result of the Mobile IPv6 implementation**





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e-Vehicle Research

→ In Car Services :

- Dynamic Remote diagnostics

 As the **Car is always reachable using its IPv6 address**, an operator install in the CAN bus interface a new « diaglet » to filter CAN data which are specific to an electronic problem.

The data collected are pertinent for a specific problem : the dynamic remote diagnostic is possible.

→ In Car Services :

- **Fleet management & Enterprise Services**

- ☞ GPRS data deployments utilizes private IPv4 addressing, i.e. the host (car) won't be reachable from central site
- ☞ with IPv6 and Cisco Mobile IPv6 Router support, the fleet management center on the internet can always send request to the vehicle
- ☞ The internal devices connected to the embedded router (employee Laptop, printer, ...) are always reachable thanks to the Mobile IPv6 tunnel.

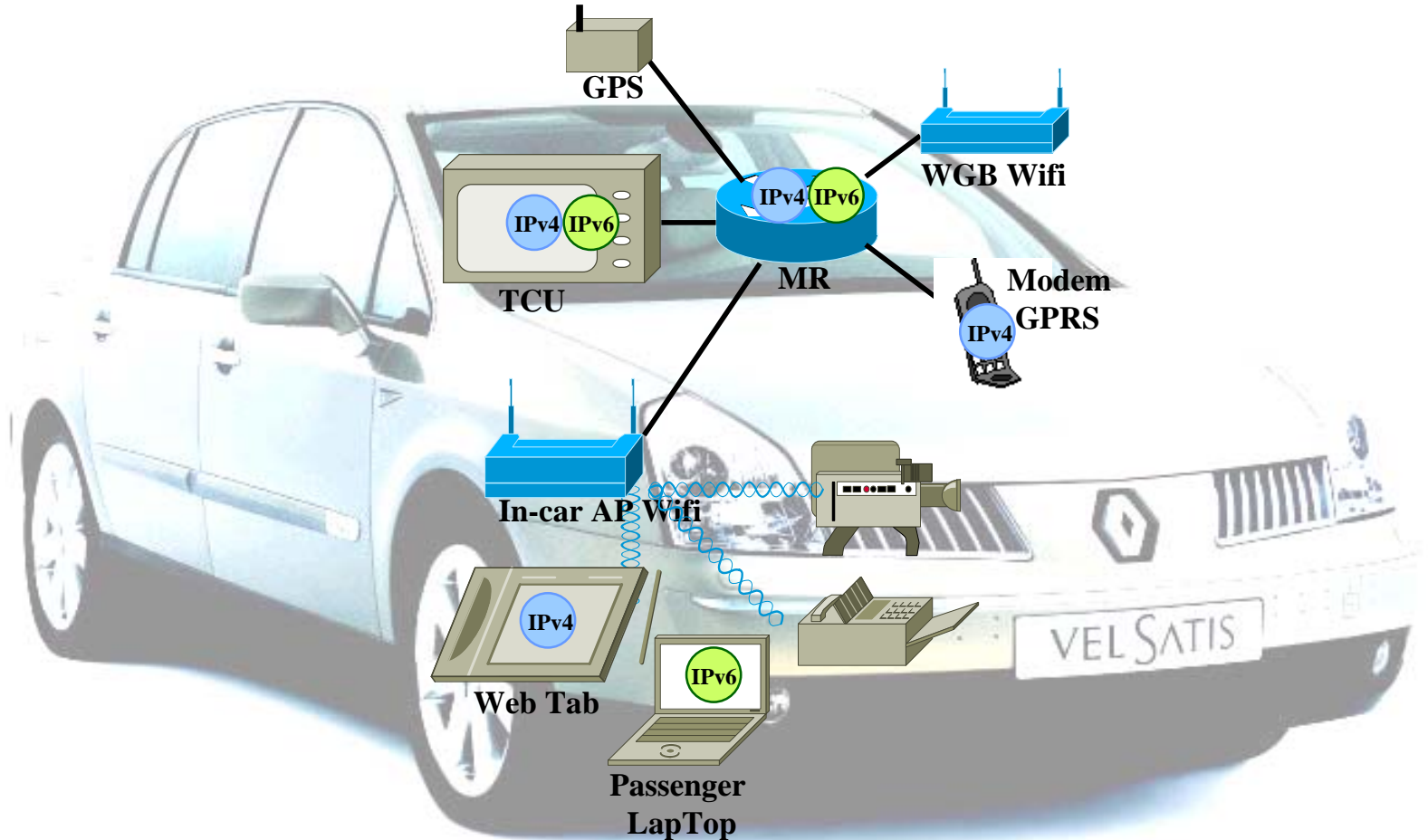


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e-Vehicle Research



In-car architecture

Car to Car communications (Wifi):

- **Event notification**

- ☰ Car crash or traffic jam warning

- ☰ Electronic Emergency notification : an alert is propagated to a public emergency Access Point

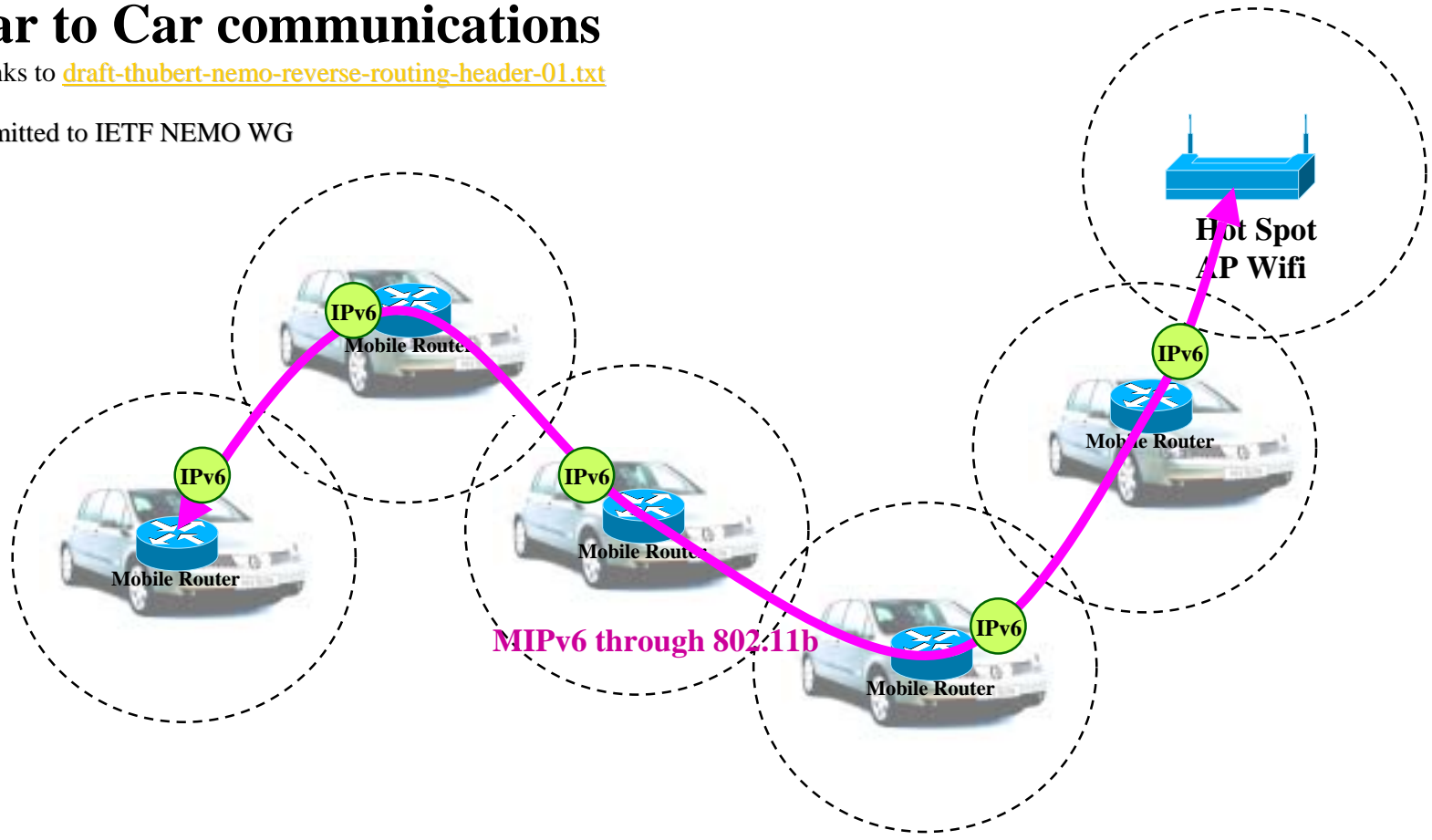
- **Global communications**

- ☰ Mobile Hot spots : for an event (F1 Grand Prix, Olympics game...), mobile HotSpot are deployed temporarily.

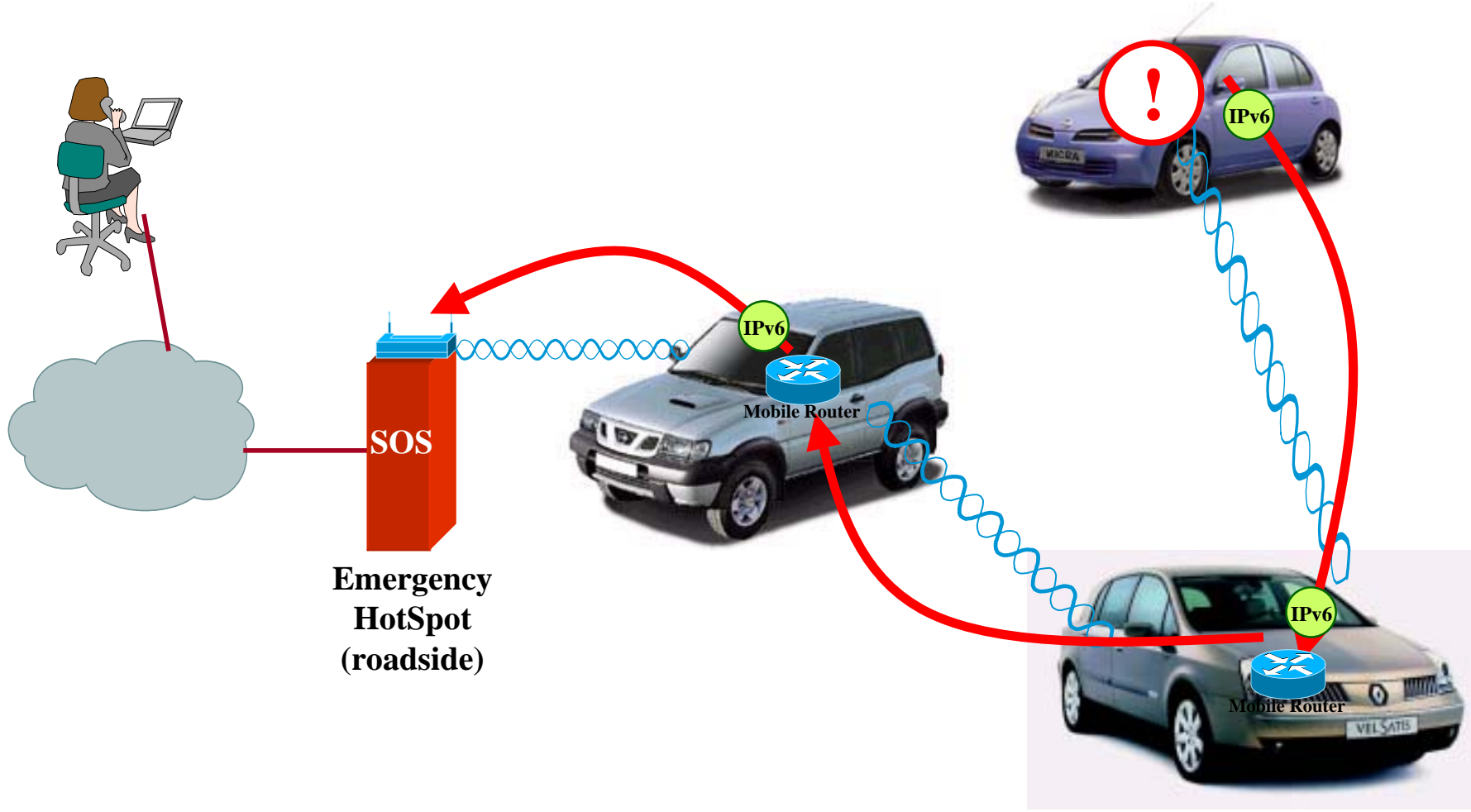
Car to Car communications

Thanks to [draft-thubert-nemo-reverse-routing-header-01.txt](#)

Submitted to IETF NEMO WG



➔ Electronic Car Crash Notification





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→ **All the previous applications and services are possible based on the following:**

- **Each car will have one or several IPv6 addresses**
- **Mobility is handled by MIPv6 and the specific RRH proposal (Reverse Routing Header).**
- **RRH allows Car to Car communications with a NEMO architecture (nested mobile routers).**