The Fully Networked Car

Emerging opportunities for Telematics Standards

Jacques Garcin – Orange Automotive & Telematics – March 2005

Contents

- **Status of telematics market**

- **Essential conditions to success**

- **Some implementations have been made, but they do not satisfy all conditions**

- **A major issue: interoperability between in-vehicle electronics and nomadic devices**

- **Synergy between all stakeholders**

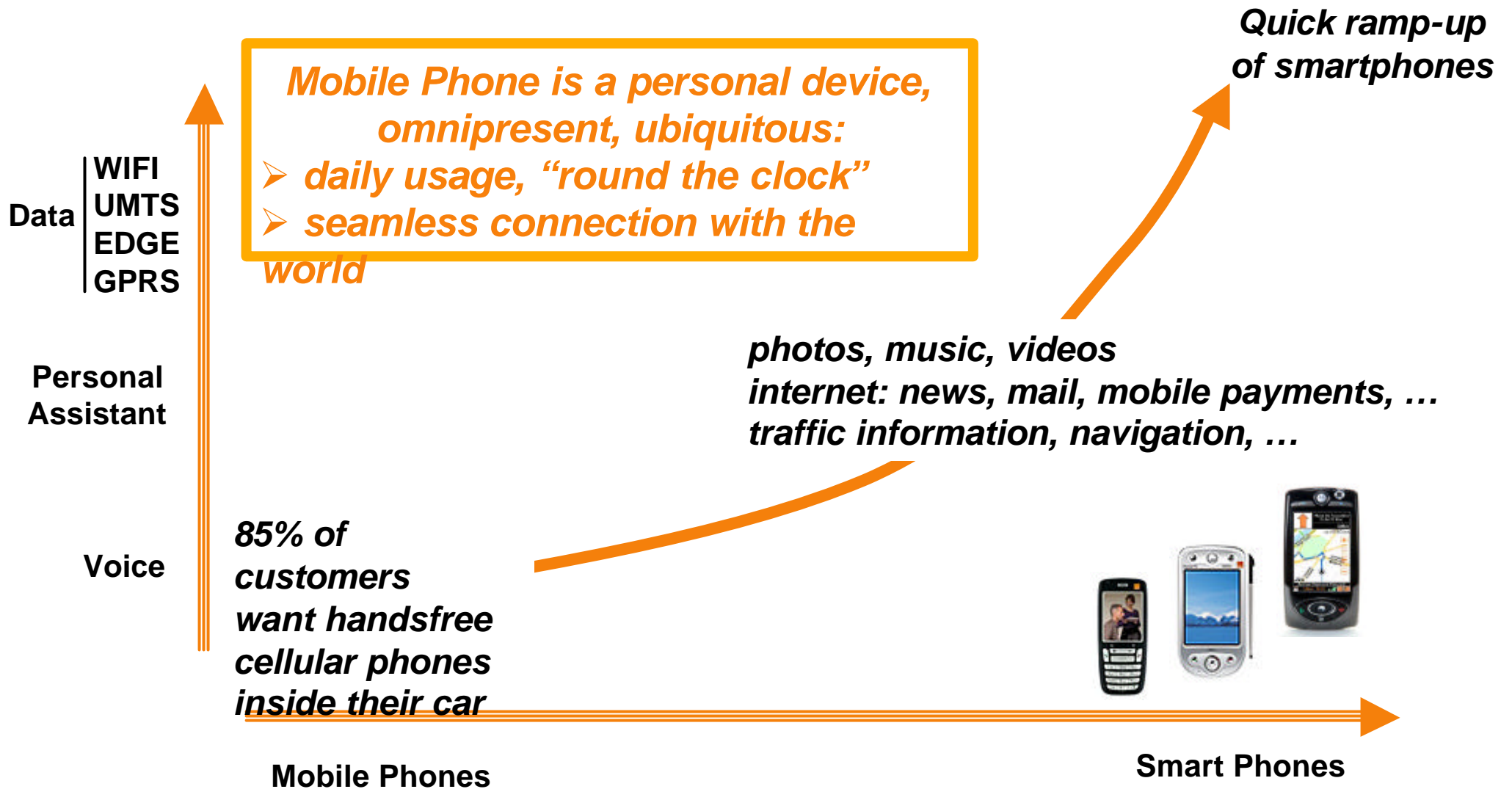- **How do we see the future ?**

Status of telematics and customer needs

- **Increasing interest in new in-vehicle services:**
  - > **real-time traffic information,**
  - > **road guidance,**
  - > **vocal access to their telephone book, ...**
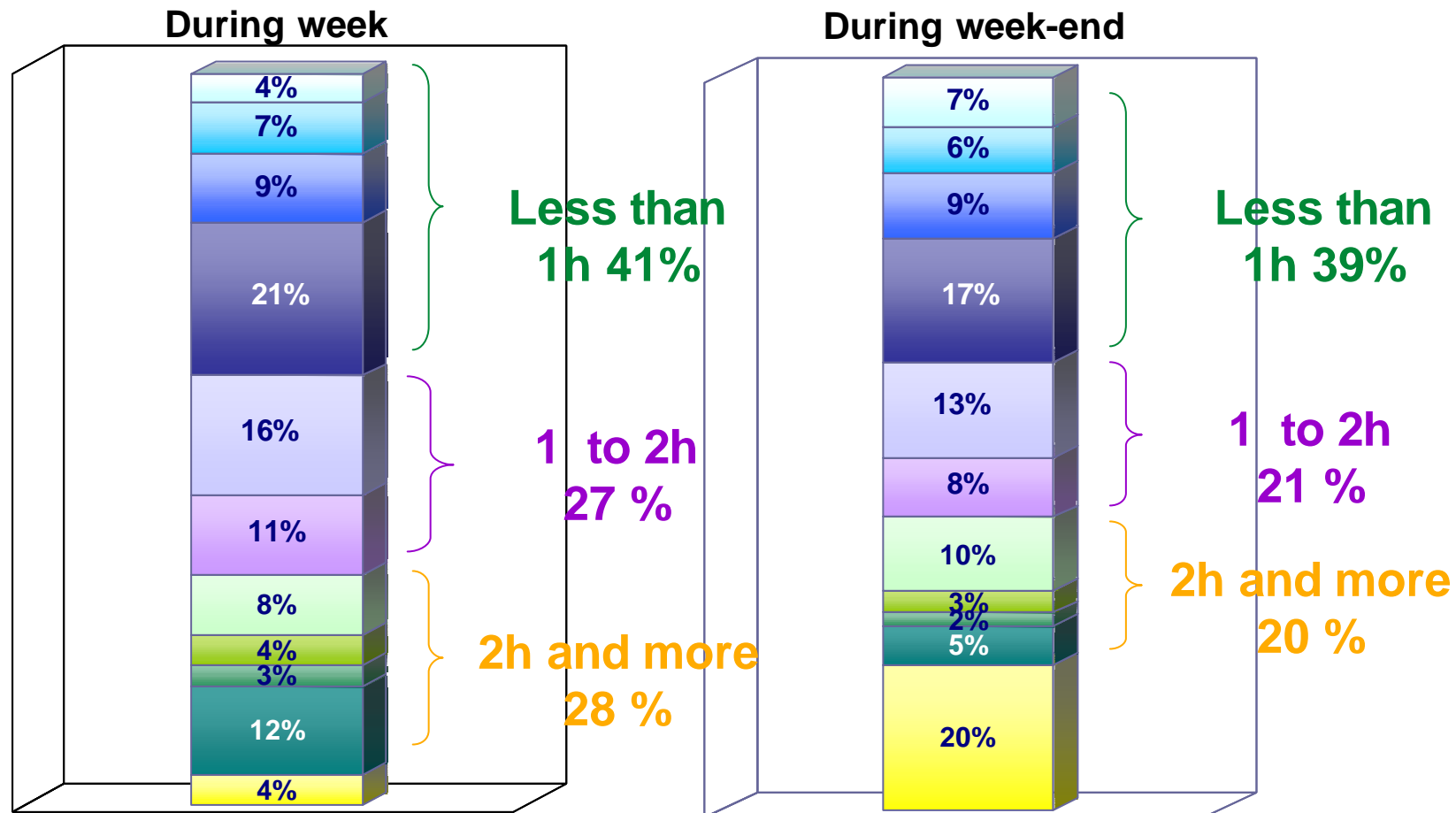- **Europe : more than 220M light vehicles and 250M mobile phones !**

➡️ **How to take the opportunity and develop usage of in-vehicle communications and services ?**

Trends of mobile devices

Quick ramp-up of smartphones

Data | WIFI
UMTS
EDGE
GPRS

Mobile Phone is a personal device, omnipresent, ubiquitous:
➢ *daily usage, "round the clock"*
➢ *seamless connection with the world*

Personal Assistant

photos, music, videos
internet: news, mail, mobile payments, …
traffic information, navigation, …

Voice

85% of customers want handsfree cellular phones inside their car

Mobile Phones

Smart Phones

Mobile communications in car

During week

4%	
7%	
9%	**Less than 1h 41%**
21%	
16%	**1 to 2h 27 %**
11%	
8%	
4%	**2h and more 28 %**
3%	
12%	
4%	

During week-end

7%	
6%	
9%	**Less than 1h 39%**
17%	
13%	**1 to 2h 21 %**
8%	
10%	
3%	**2h and more 20 %**
2%	
5%	
20%	

Source : IPSOS - Usages mobile en voiture- july 2003

Essential conditions to success

- **In order to overtake the "nice to have situation", services must be priced according to the customers perceived value** *Success will come by minimizing price and increasing usage*

- **To improve safety, avoid driver distraction and comply with regulations, in-vehicle services must:**
  > have "<u>ergonomic</u>" interface
  > follow recommendations and statement of principles on <u>in-vehicle HMI</u>
  > <u>comply with national regulations</u> of European countries

Some implementations have been made, but they do not satisfy all conditions

- **Two types of implementation coexist, but they do not comply with the conditions for a large deployment :**

  > Embedded in-vehicle electronics :
  would require significant reduction of price

  > Portable devices:
  they need to improve HMI for in-vehicle services

- **The business models continue to elude the industry: they require a significant investment for a poor "customer pull"**

A major issue: interoperability between in-vehicle electronics and nomadic devices

- **Automotive and Telecommunication Industries already work together on Information & Communication Technologies in motor vehicles**

- **HMI of embedded nomadic devices have to be addressed : ESOP (European Statement of Principles) is a starting point**

- **Safety and security (deployment of a pan-European emergency call) could be a booster for the deployment of telematics services**

➡ **Standards harmonization is a major issue**

Integration

Docking stations

HMI

eCall
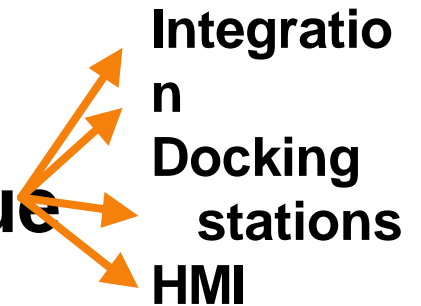
Synergy between car manufacturers, telecom operators and all actors

Smart Orange Limited edition
Car sold with Bluetooth link between mobile phone and hands free car kit

Orange twin SIM cards for connected navigation system and embedded car kit

Synergy between car manufacturers, telecom operators and all actors

Orange infotainment vehicle
Video/mp3 downloads, Infotraffic,
offboard virtual assistant,
voice recognition, personnalisation,
network gaming…

Orange 3G vehicle
3G orange video portal, video
streaming on first line video
equipment

Synergy between all stakeholders

Voice Driven :

Navigation system using voice recognition

selection of destination, using the voice recognition of an **Orange** **telematics server**

Orange off-board navigation

- **Nomadic unique device**
- **Updated information (maps and POIs)**
- **Real time traffic information**
- **Vocal and graphic interaction**
- **Evolution to voice recognition for entering destination**
- **Evolution with car kit capabilities**

Partnerships with OEMs allow to downsize navigation costs

- **Attractive price for customers**
- **1 € offers possible**
- **1 bundle :**
    - **navigation**
    - **high quality mobile device**
    - **hands free kit (bluetooth?)**
- **Less integration for OEM**
- **High quality customer service**
- **…**

Orange providing service and maintenance enhance perceived value for customers

Mobile devices evolution

- New step : GPS is embedded
- Localisation is enhanced (assisted GPS: A-GPS)
- Easier pedestrian usage
- Easier setting

➡ **A new standalone navigation solution needs an adapted cradle to be efficient**

Offboard navigation in embedded equipments prefigures new partnerships models

- All advantages of partnership offer for offboard navigation solution
- Fully integrated solution
- May be part of a wider multimedia offer (email, sms, phone, mp3, video, traffic, weather, concierge, virtual assistant, etc…)
- Reduce embedded navigation costs
- Always up to date
- Always evolutive

Separation of hardware and service providing clears partners roles and organize revenue sharing models

Orange Sequana conceptcar

Orange Sequana conceptcar

- **Offboard navigation on pda/phone**
- **Fully integrated Bluetooth carkit with voice recognition**
- **Orange 3G portal on aftermarket terminal**
- **UMTS Video streaming**
- **In car webmail**
- **Virtual keyboard**
- **Visiophony…**

How do we see the future ?

Partnerships and cooperation

Standards harmonization

Valuable and expected services

Easy to use

According to regulations

Sustainable business models

SUCCESS

Date : ?