

LIAISON Waste Data Collection Demo



27th September 2006 - Athens Workshop

LIA-PRE-AAS-01/00511



LIAISON Typical Used case

□ John works in TDF Department for central operation management in Metz (France)

- 14:21:11 John receives an automatic **Immobility alert** message from the Lone Worker System of a technician
- 14:21:35 By means of the **Fleet management** solution, John knows immediately that the technician is exactly located at 17th National Street and the cross with Europe Avenue
- 14:21:48 John **calls** the emergency and maintenance service and through their LBS terminals, they are **guided** to the exact location of the accident
- 14:21:58 The maintenance warehouse is also **automatically aware** To send a new technician to achieve the task
- at the accident location, the technician is **brought to the nearest** hospital, the **water is cleared** rapidly and **collection service is operational**.



□ The incident has been well coordinated in less than 15 minutes and safely managed



LIAISON Users Communities Needs

Maintenance User Needs :

- ◆ “Companies that maintains elements, widely distributed over a geographic area, like utility companies, face several challenges such as their workers are away from the office, alone and often have to answer to unexpected calls or situations.”

WDC User Needs :

- ◆ “Environmental challenges lead to an improvement of waste collection (recycling, selective disposal, city management reporting...). Europe is at the leading edge of this industry, but these improvements have a significant impact on the work process for the involved actors.”



LIAISON Key Aspects



- ◆ LIAISON is an answer to the needs of the **professional market** for **location and mobility services** (security, safety, efficiency)
- ◆ LIAISON will enhance the existing LBS technologies and applications for mass market to comply with **professional requirements**
- ◆ LIAISON federates a **European pole of excellence committed to build commercial solutions**, targeting the workers and re-usable for the mass market
- ◆ LIAISON will develop **seamless and personalised** location services across **heterogeneous** networks (GSM, WLAN, TETRA)
- ◆ LIAISON will bring consistent recommendations for **harmonisation of labour legislation** in Europe, and contributes to fulfil the **E112 directive**





- > **Tests case «Lone Worker Protection»**
 - TDF, the French broadcast service provider, to protect mobile workers



- > **Test case «Waste Data Collection»**
 - AMA/City of Rome, to enhance waste data collection



- > **Test Case «On Demand Taxi»**
 - Taxi companies in Athens, to support a "taxi on demand" service



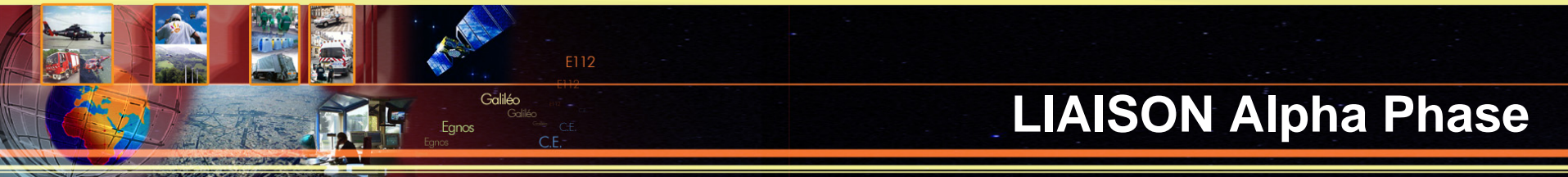
- > **Test Case « Incident Management»**
 - Association of Chief Police Officers (ACPO) in Great Britain, to coordinate On the Field Operational teams



- > **Test case « Fire Brigade Intervention»**
 - Italian Fire Brigade, to coordinate Fire Forces during disasters



- > **Tests case «E-Maintenance»**
 - Iberdrola, the Spanish electricity company, to enhance on-site workers efficiency



LIAISON Alpha Phase

LIAISON aims at providing a generic and standardized core module and at developing customized turnkey Location Based Solutions for a wide range of mobile worker communities

- ◆ 3 phases : Alpha phase, Beta phase and Pre-Operational phase
- ◆ Alpha phase : Lone Worker Protection and Waste Data Management
- ◆ Test cases and scenarios are defined following users' current requirements



Waste Data Collection Test Case

End users: AMA



- > AMA Spa, is the Italian leading company in the field of environmental services and Urban Solid Waste managing.
- > AMA provides urban hygiene services across the area of the Municipality of Rome - the largest in Italy - by ensuring the **daily** collection, haulage and disposal of about **4,000 tons of wastes**,
- > **5000 workers** on the field, **500 trucks**
- > **100.000 containers** (65% large)
- > **Selective collection** to reach **60% in 2010** => Need for more **efficient planning** and **resources optimization**
- > Higher **diversity** of activities and **personal skills**





AMA goal: achieve cost-efficient service operation.

> The following improvement have been requested by AMA

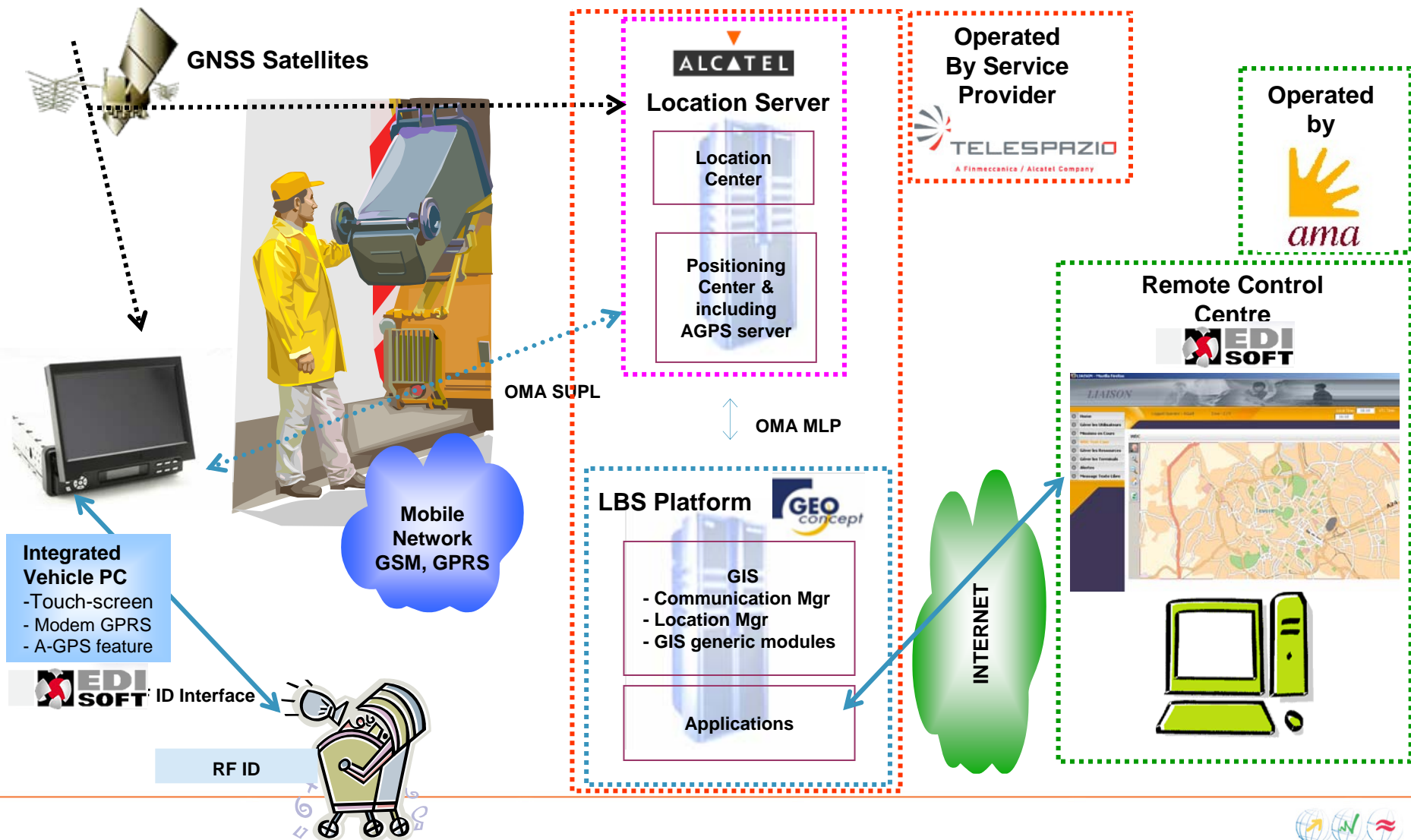
- Service Efficiency : Demand-based scheduling
- Service Economy : Labour / fuel optimization
- Quality of Service : Reduce night shifts, shorter response time
- Improved working conditions : Navigation Support, Reduction of documentation tasks, Security improvement.

> The following applications are proposed

- Vehicle and Collect scheduling and real time re-scheduling
- Vehicle tracking historical and container status
- Real time Messaging
- Voice and data services
- Navigation application bundled with missions
- Alert generation
- Remote Control Center for
 - ➔ Waste Data Management
 - ➔ Real-time vehicle monitoring



LIAISON AMA Solution Architecture



LIAISON Solution presentation

LIAISON - Mozilla Firefox

LIAISON

Logged Operator : AGuidi

Zone : 2 / 5

Local Time: 18:18
UTC Time: 16:18

- Home
- Gérer les Utilisateurs
- Missions en Cours
- WDC Test Case
- Gérer les Ressources
- Gérer les Terminals
- Alertes
- Message Texte Libre

WDC

> Material involved:

- LOCATION Server
- RCC - Remonte Control Center
- LBS Platform
- LMT - LIAISON Mobile Terminal





LIAISON Solution Demonstration

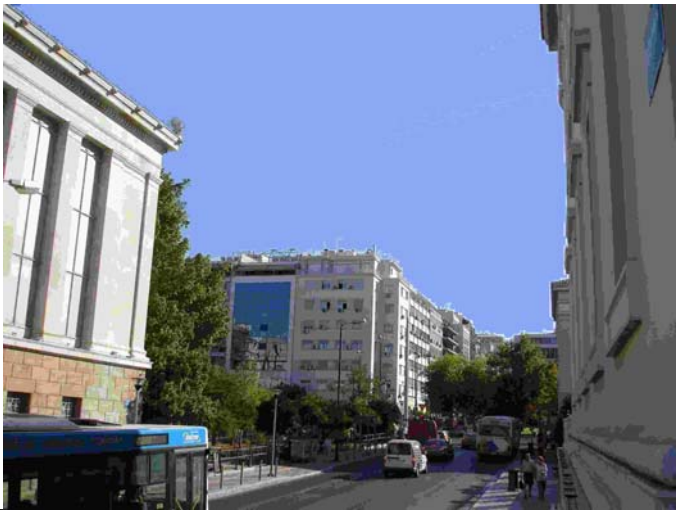
And now.....





LIAISON Solution Demonstration

The tracking places

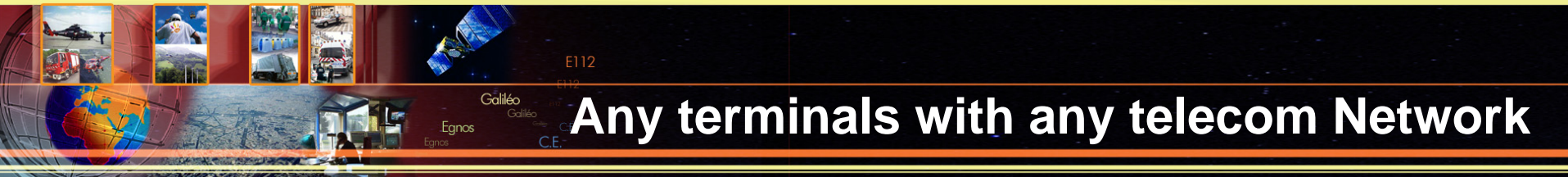




LIAISON Solution Demonstration

The scenario

- > Send Missions to Mobile Units
- > Tracking of Mobile Units
- > One unit will simulate the collection of Containers
- > A deviation alert will be generated and reported to Operation Centre
- > Selection of Candidate Missions
- > Reschedule os failed Mission to collect remaining Containers
- > Send Reschedule Mission to Mobile Unit
- > Collect remaining Containers
- > Terminate and Send Mission Report to Operation Centre



E112

E113

Galileo

Galileo

Egnos

Egnos

CE

Any terminals with any telecom Network



BENEFON

STEN



MITAC

Benq

GSM/Wifi handsets

A-GPS inside



CAR PC



A-GPS inside

Tracking modules



A-GPS inside

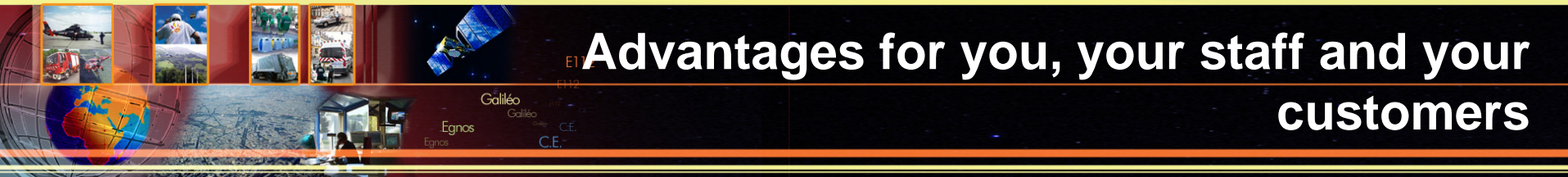


LWP modules



A-GPS inside





Advantages for you, your staff and your customers

- > Benefits in service efficiency: gain in human resources
- > Benefits in service economy: direct cost savings as result of optimised resource usage, in particular for fuel consumption and reduction of overnight and overtime working
- > Benefits in improved working conditions:
 - efficient mobile information tools supporting specific tasks
 - tools adapted to particular technical as well as personal emergency situations
- > Benefits on unplanned events management
 - shorter response time for specific on-demand collection services (call centre)
 - guidance of the mobile worker in a non-static service environment
- > Benefits on quality of service:
 - enabler for new tariff schemes (citizens benefit from efficient waste separation)
 - improved monitoring of service quality and contractual conformance
 - reduction of impact of noise pollution



4 Reasons for LIAISON

- ↗ A wide range of services portfolio
 - ❑ Management, tracking, navigation, e-dial, geo-fencing, security ...
 - ❑ **Open to additional features and services**
- ✿ A proven capability of delivering a turnkey offer
- ✿ A short return on investment for our customers
- ✿ Based on performing and reliable technology
 - ❑ Open Architecture
 - ❑ **Compatible with Service offering**
 - ❑ Enhanced-Assisted-GPS technology
 - ❑ **Providing accuracy, short information delivery, urban coverage capability**