



Today: Civilian Applications

ROAD TRANSPORT

Emergency and Mayday Services

Breakdown Assistance

Route Guidance and Traffic
Information

Vehicle Location

Fleet and Freight Management

Public Transport Traffic
Information Systems



And tomorrow...

**Speed management, lane control, accident management,
automatic vehicle control, road pricing and tolling...**

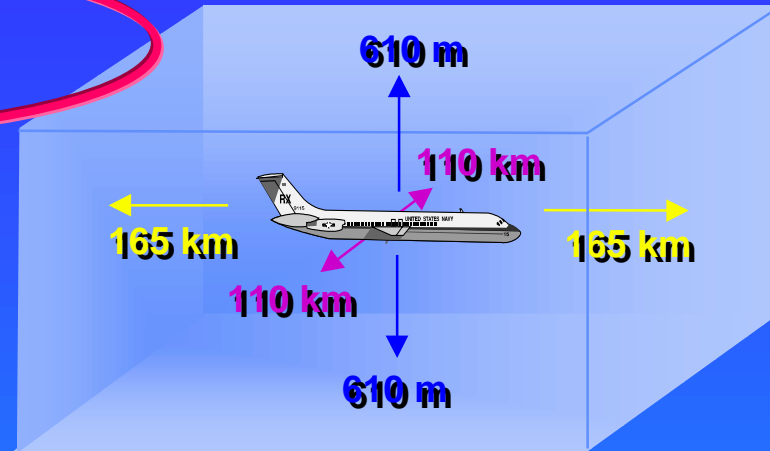
Applications

Today: Civilian Applications

AIRCRAFT NAVIGATION

Decrease minimum oceanic separations

Volume 88,572 km²;
Flight International (19-25 June 1991)



Navigating by co-ordinates instead of waypoints



And tomorrow...

High precision navigation, high precision approach and landing, airport traffic management, surveillance applications, free flight...

Applications



Today: Civilian Applications

MARITIME

Navigation

Fishing

Survey and inspection

Dredging and cable laying

Marine construction

Emergency and rescue operations

Positioning of navigation buoys



And tomorrow...

Navigation Aids, Vessel Traffic Services, Hydrographic and Oceanographic Surveys, Ship Trialing, Harbour Docking...

Applications

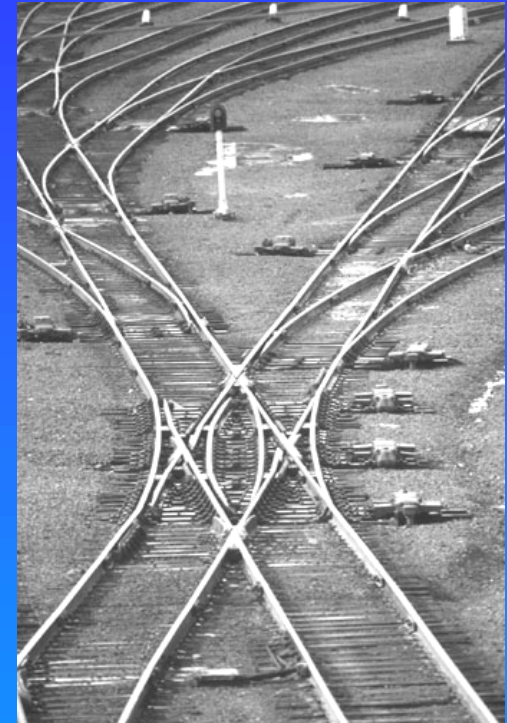


Today: Civilian Applications

RAIL

In experimental phase or only
starting to emerge

Applications



And tomorrow...

Supervision (improved safety and economy), Energy Savings, Fleet Management, Track survey, traffic information to passengers

Today: Civilian Applications

INTERMODAL

In experimental phase or only
starting to emerge



And tomorrow...

Tracking and tracing, fleet management, cargo management

Applications



Today: Civilian Applications

**NON-TRANSPORT
(PROFESSIONAL)**

Scientific and Engineering

Synchronisation of Utility Networks

Agriculture (yield mapping)

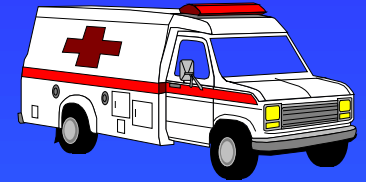
Environmental Protection



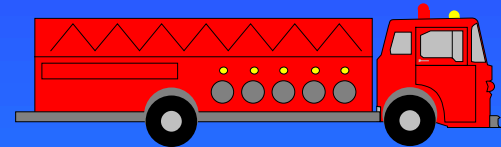
Applications

Today: Civilian Applications

**NON-TRANSPORT
EMERGENCY AND SECURITY**



Ambulances, Police, Fire Brigades,
Search and Rescue Operations



Personal protection, hazardous or
extremely valuable goods tracking



Applications



Today: Civilian Applications

**OTHER NON-TRANSPORT
(LEISURE, SPACE, ...)**

Leisure / Tracking



Space Applications (orbit and attitude determination, docking)



And tomorrow...

Limited only by human imagination, applications will exploit synergies with other technologies (Internet, WAP, UMTS, Satellite Imagery..)

Applications



WHO IS CONCERNED IN EUROPE ?

Market Sizes



26 000 **General Aviation Aircraft**

4 000 **Commercial Aircraft**



12 000 **Self propelled craft**

10 000 **Dumps and Pushed barges**

4 000 **Tugs and pushers**



25 000 **Locomotives**

78 000 **Coaches**

30 000 **Automotive train sets**

425 000 **Wagons**



WHO IS CONCERNED IN EUROPE ?

(Contd)

Market Sizes



513 000

Buses and Coaches



21 000 000

Lorries and Vans



155 000 000

Passenger Cars