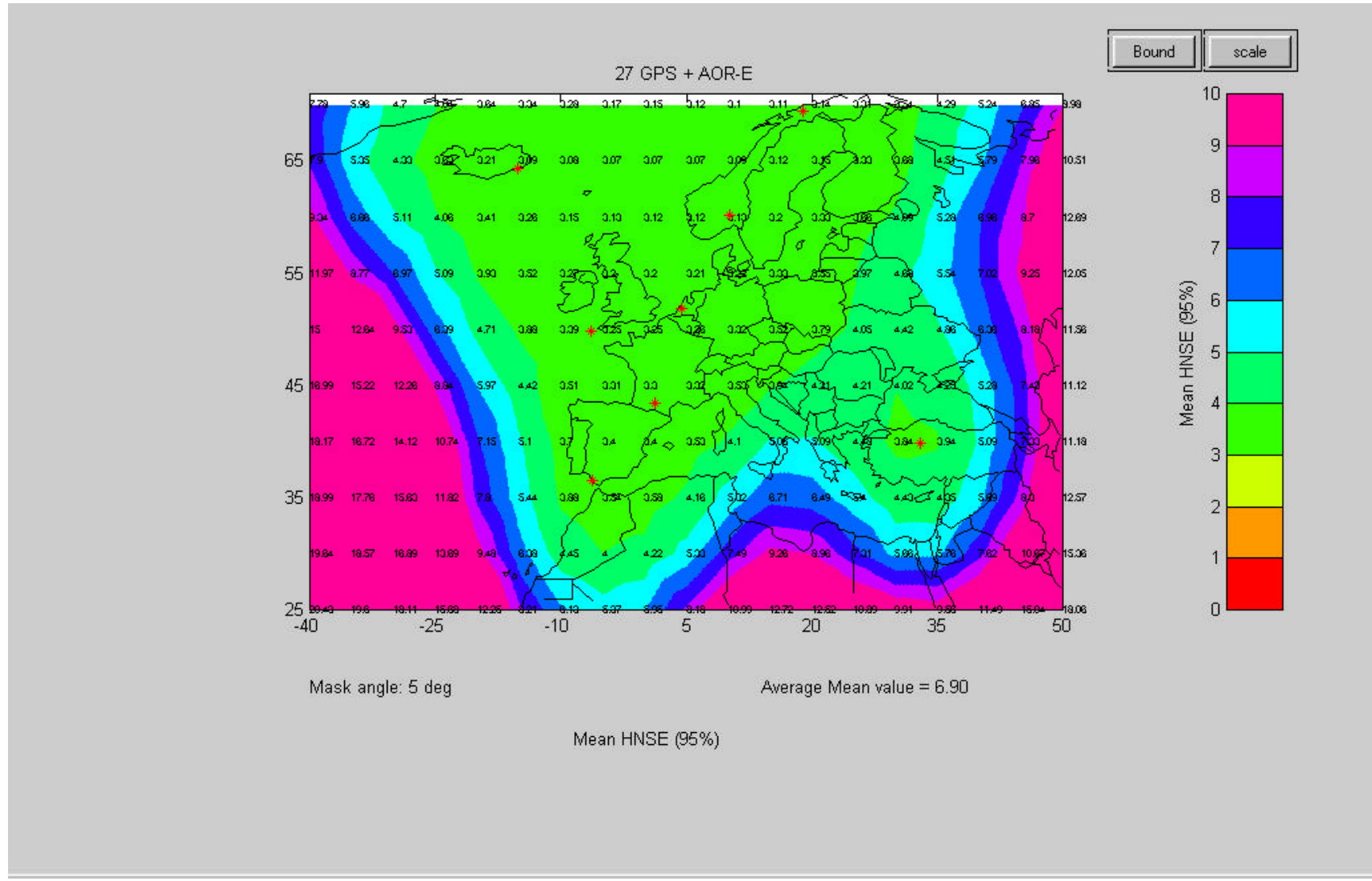


# EGNOS System Test Bed



European Commission



# *Galileo vs. other location technologies*

- Terrestrial network-based and GNSS location/ positioning systems have complementary strengths: Galileo has to be carefully positioned in technological and market aspects, in relation to GPS, to capture the location and location-based services market
- Space systems offer **one important part** of the global infrastructure, and their development should not be decoupled from the work done on terrestrial technologies and applications: e.g. GSM, UMTS, Loran-C



# ***Relevant technical areas (1/2)***

## **Receivers**

initial development of user prototypes plus industrialisation of user equipment:  
dual mode (Galileo / GPS), multi-frequency, multi-channel  
standardisation issues

## **Operation of test beds**

Facilities required for early application and services validation and promotion  
(EGNOS and GALLILEO system test beds)

## **Local Augmentation**

differential corrections, system information broadcast,  
distribution of satellite ephemeris data and correction data through dedicated  
communication channels  
aiming to enable seamless / continuous urban mobility positioning / timing



# ***Relevant technical areas (2/2)***

## **Synergy with terrestrial mobile communications / positioning**

UMTS - Terminal Manufacturers / Telecom operators

## **Synergy with digital maps**

harmonisation / standardisation of geo-reference systems

## **Application Simulation Tools**

e.g. prediction models for improved satellite navigation signal availability in urban areas

## **Standardisation and certification support**

Galileo signal; User Equipment; Test Beds; User Fora (ICAO, IMO)



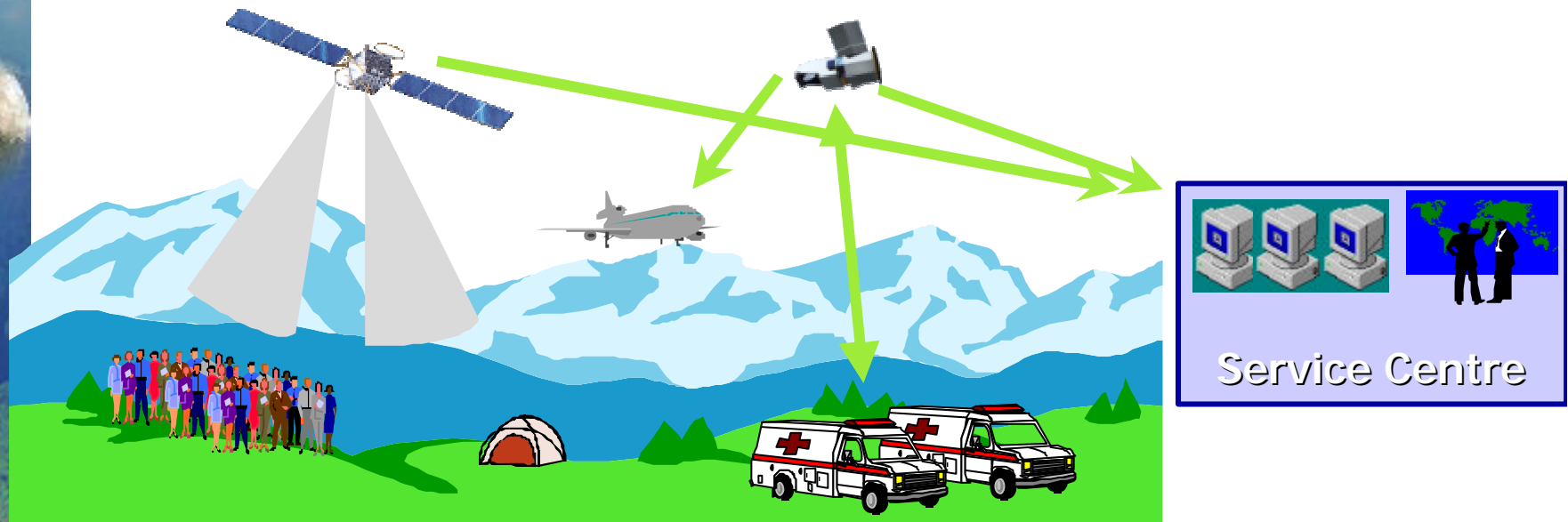
# ***Application areas***

**Including (but not be restricted to):**

- **Mobility at sea (e.g. maritime monitoring, harbour entrance)**
- **Urban mobility modes**
- **Air mobility (e.g. civil aviation, private flight air safety, etc.)**
- **Rail Mobility (e.g. train control, train supervision, etc.)**
- **Road mobility (e.g. dynamic route guidance, electronic tolling / cost recovery mechanisms, emergency and breakdown call and stolen vehicle services, travel and traffic information, road regulatory support and enforcement, etc.)**
- **Safety of Life-related transport**
- **Intermodal mobility (e.g. freight transport between all modes, inland waterways, transport of nuclear waste, etc.)**



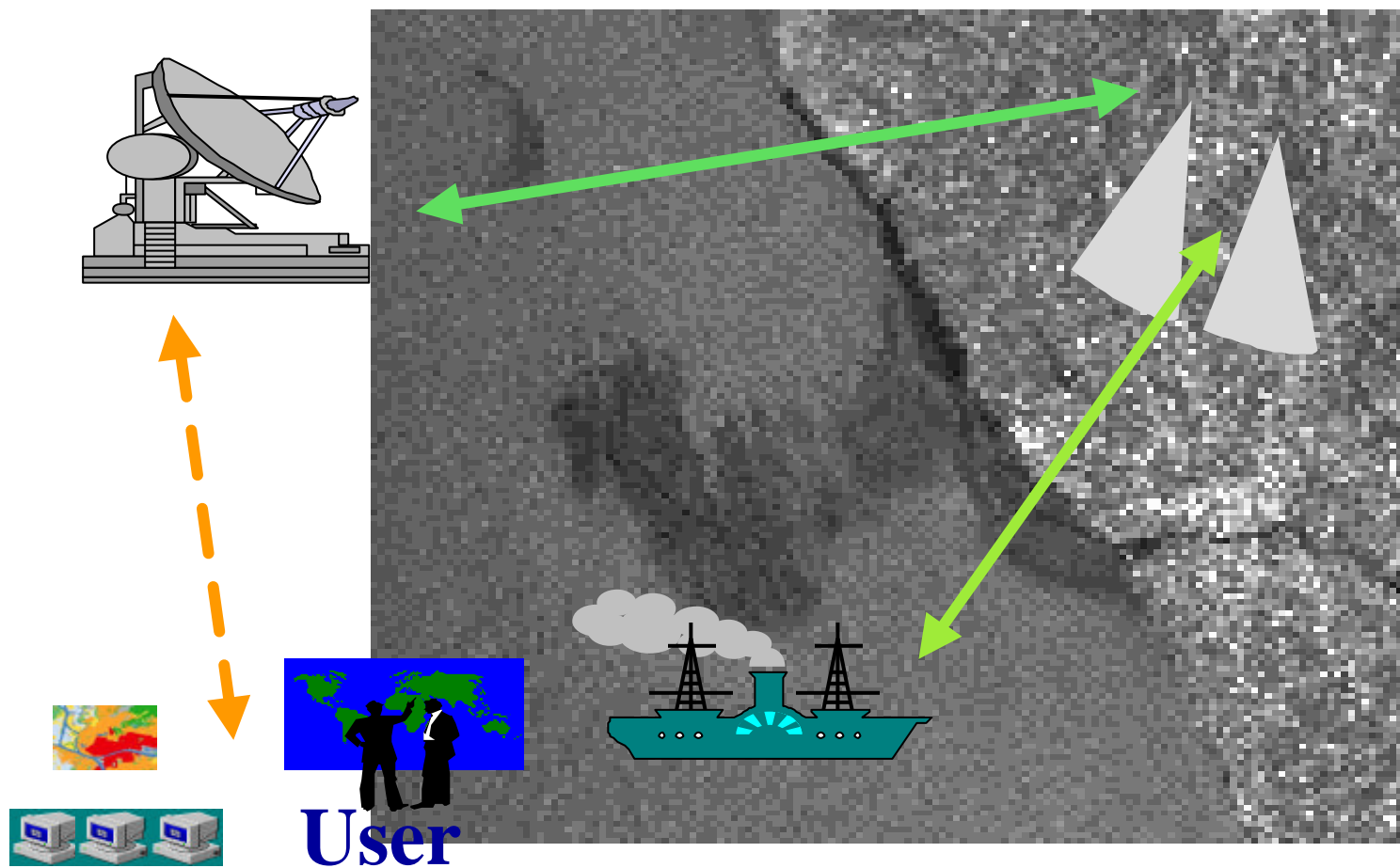
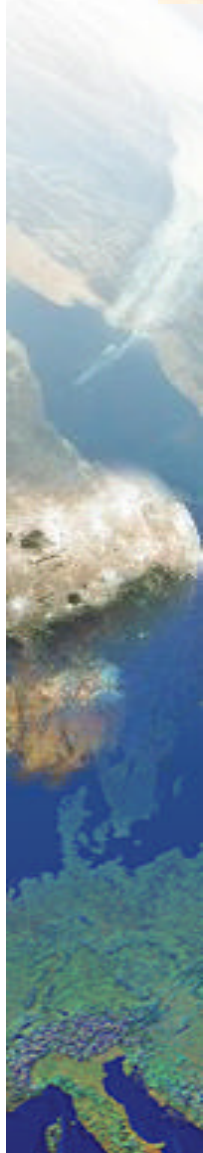
# Humanitarian Crisis Support



European Commission



# Oil Spills



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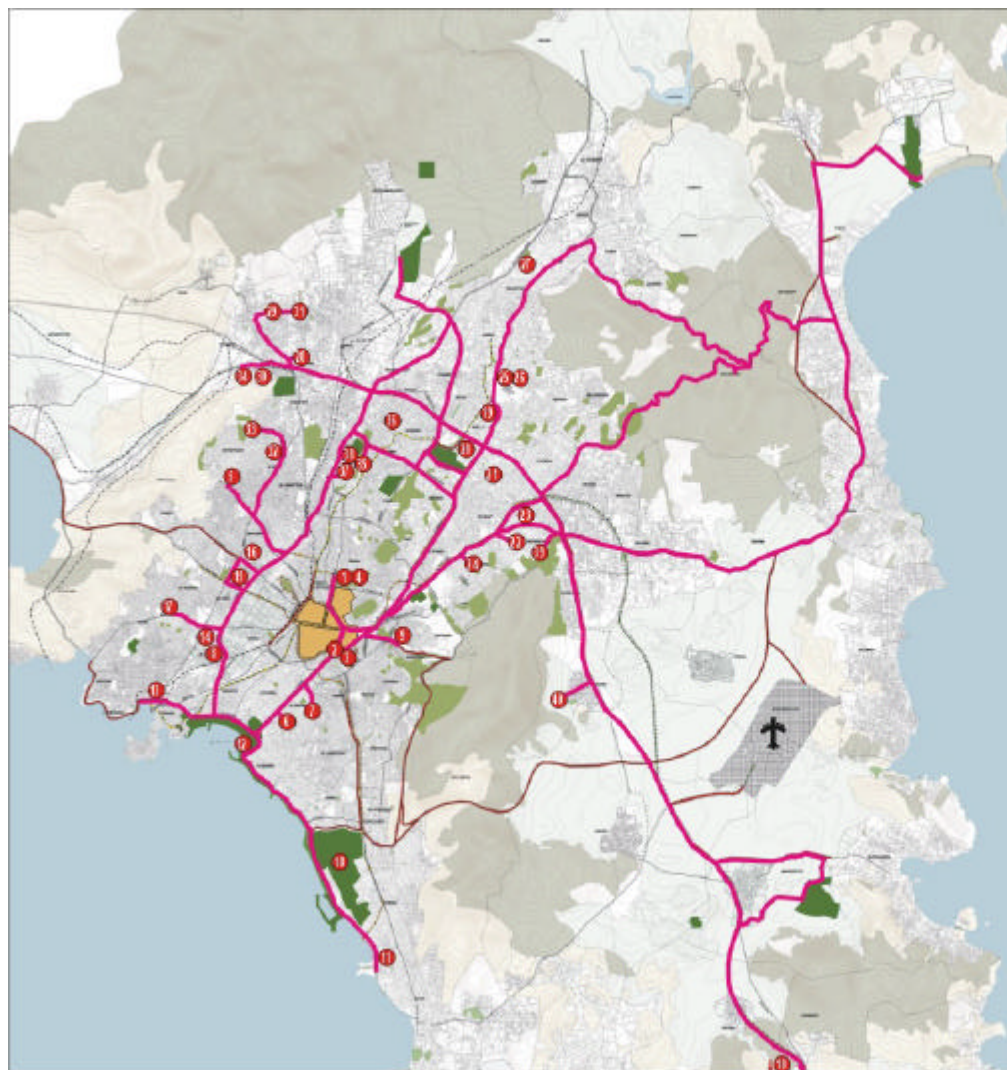


# Search and Rescue





# Big Events



## ALLOCATION OF TRAINING VENUES FOR THE ATHENS 2004 OLYMPICS

- CITY CENTRE
- MAIN COMPETITION VENUES

### TRAINING VENUES

1. PANELLINIOS TRACK & FIELD
2. ETHNIKOS TRACK & FIELD
3. METS INDOOR HALL (I.H.)
4. PANELLINIOS I.H.
5. PERISTERI SWIMMING CENTRE
6. MILON I.H.
7. A.N. SMIRNI I.H.
8. AG. I. RENTIS I.H.
9. ILISSIA I.H.
10. GEITONAS HOCKEY FIELD
11. GLYFADA I.H.
12. P. FAURON SWIMMING CENTRE
13. PAPASTRATIO I.H.
14. PLATON - MIKRA I.H.
15. EGALEO SWIMMING CENTRE
16. PERISTERI I.H.
17. KORYDALLOS I.H.
18. HELLENIKON SOFTBALL FIELD
19. MAROUSI TRACK & FIELD
20. MAROUSI I.H.
21. CHALANDRI I.H.
22. AG. PARASKEVI I.H.
23. AG. PARASKEVI I.H.
24. CHOLARGOS I.H.
25. ZIRNIO I.H.
26. ZIRNIO FOOTBALL GROUND
27. N. ERYTHREA I.H.
28. ZEPHYRI I.H.
29. DRO SOUPOLI I.H.
30. ZOFRIA I.H.
31. LIOSIA I.H.
32. ILION I.H.
33. PETROUPOULIS I.H.
34. ZOFRIA SWIMMING CENTRE
35. N. IOANIA I.H.
36. N. ERAKLION I.H.
37. IONIKOS I.H.
38. AEK I.H.
39. AG. PARASKEVI COLLEGE I.H.
40. PRO TRAINING CENTRE

OLYMPIC ROUTES NETWORK



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# Space is not only satellites - Multi-Functional Platforms???



Stratospheric /  
Tropospheric  
Platform

**Accureacy** ✓  
**Continuity** ✓  
**Availabiity**

3-20 km

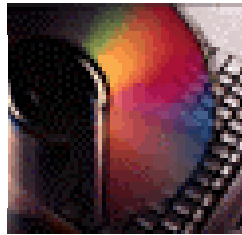


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# The Info-mobility concept

Rich multi-media content



New mobile eCommerce and eWork business models



Information access and interaction techniques



**Ubiquitous Info-Mobility Systems and Services**

Telecommunications, navigation, positioning networks



Integration with Geographical information systems



Use of geographic information for Info-Mobility



European Commission



# *The way forward*

The common European Galileo applications plan will be an evolving one. At any time, for the valid version of this presentation please contact the Internet address:

[galileo-pgm.org](http://galileo-pgm.org)

This has been elaborated between EC and ESA over the past year. It is now at a stage to be presented to the other stakeholders which includes national space agencies, research institutions and most importantly service providers and terminal manufacturers

This consultation process will start early next year and OREGIN will be invited to participate.



# *First Opportunities*

For year 2000, the GNSS related application calls from the EC are:

**call open-15 Oct 2000. Deadline 15 Jan 2001: CPA3 -  
Geoinformation and Infomobility (DG INFSO)  
[www.cordis.lu/ist/cpt/2000cpa3.htm](http://www.cordis.lu/ist/cpt/2000cpa3.htm)**

**call open - 15 Dec 2000. Deadline 15 Mar 2001 (TBC):  
Galileo Specific Call (DG TREN) [www.galileo-pgm-org](http://www.galileo-pgm-org)**

