EuroAfrica-ICT Awareness Workshop:

AFSAGA FP6 Project

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CSIR Satellite Application Centre

our future through science

African Satellite communications and Galileo applications

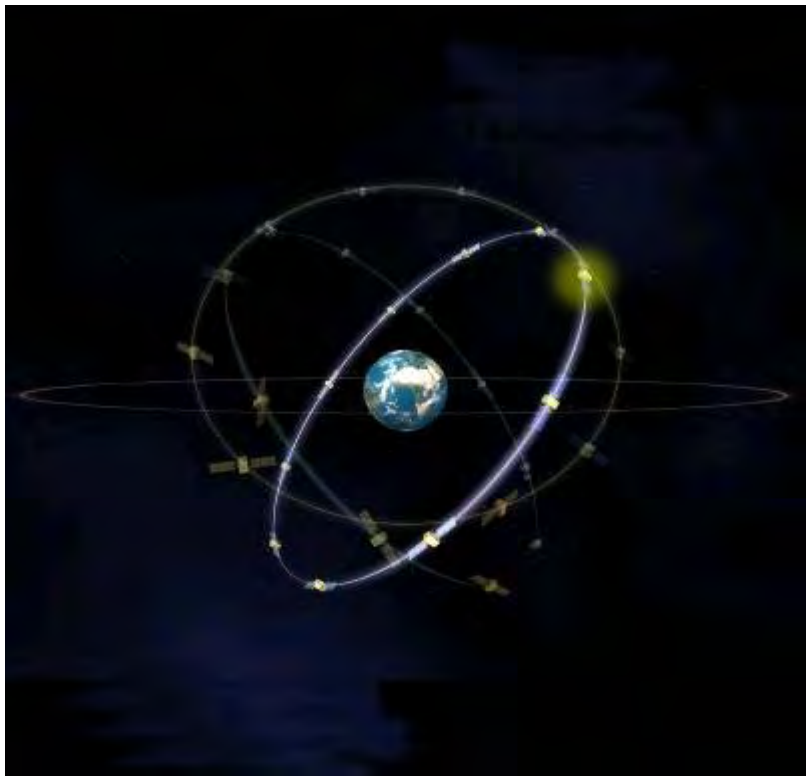
Objectives

- **Strategic objectives addressed:** FP6-2005-Space-1, 2.3.3 Satellite Telecommunications, International co-operation, Combined Galileo satellite telecommunication services
- The objectives of the project are to develop the use of combined EGNOS/Galileo and Satcom applications from both a short term and a longer term perspective in the Southern African Development Community
- Consortium:
  1. **ALCATEL (ALCATEL ALENIA SPACE FRANCE)**
  2. **CSIR, SAC (Satellite Application Centre)**

Expected results

- To increase the awareness of the potential of applications which can take advantage of EGNOS/ Galileo and in particular those related to combined satellite telecommunication with satellite navigation throughout Southern African Development Community.
- To obtain a structured view of the applications in the specific context of the Southern African development Community
- To identify barriers to the development of such applications setup and have develop a corresponding action plan
- To make the above findings known not only to the user community representatives but also to the regional stakeholders.

What is Galileo ?

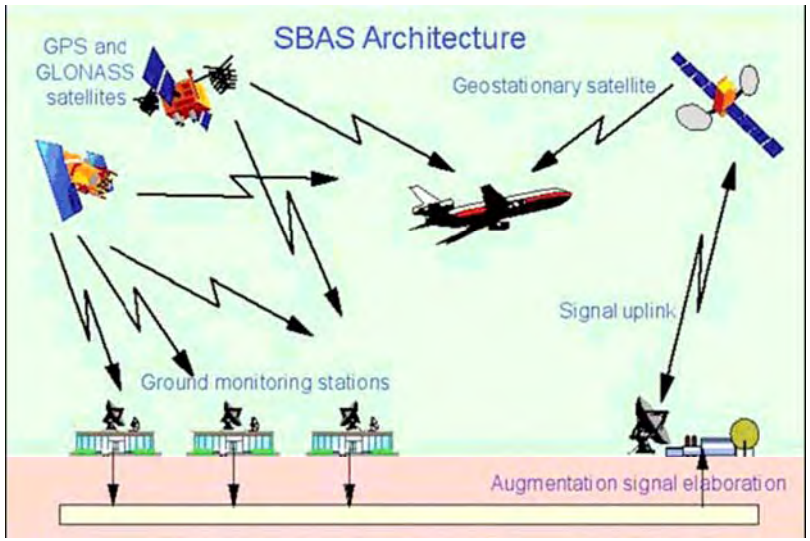


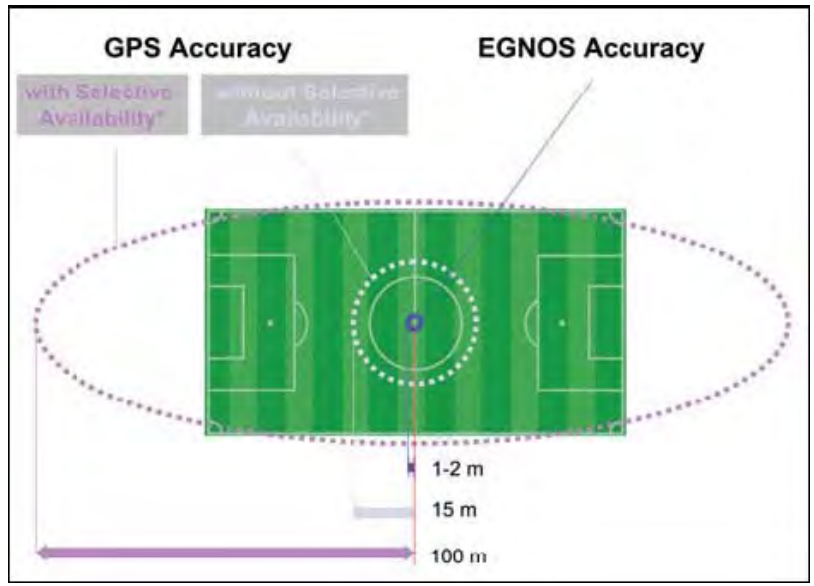
- Constellation of 30 satellites
- Altitude of 23 222 km
- European version of GPS
- Satellites have extremely accurate clocks on board
- Receivers know orbits
- Calculate position from relative time of min 4 satellites

What is EGNOS ?

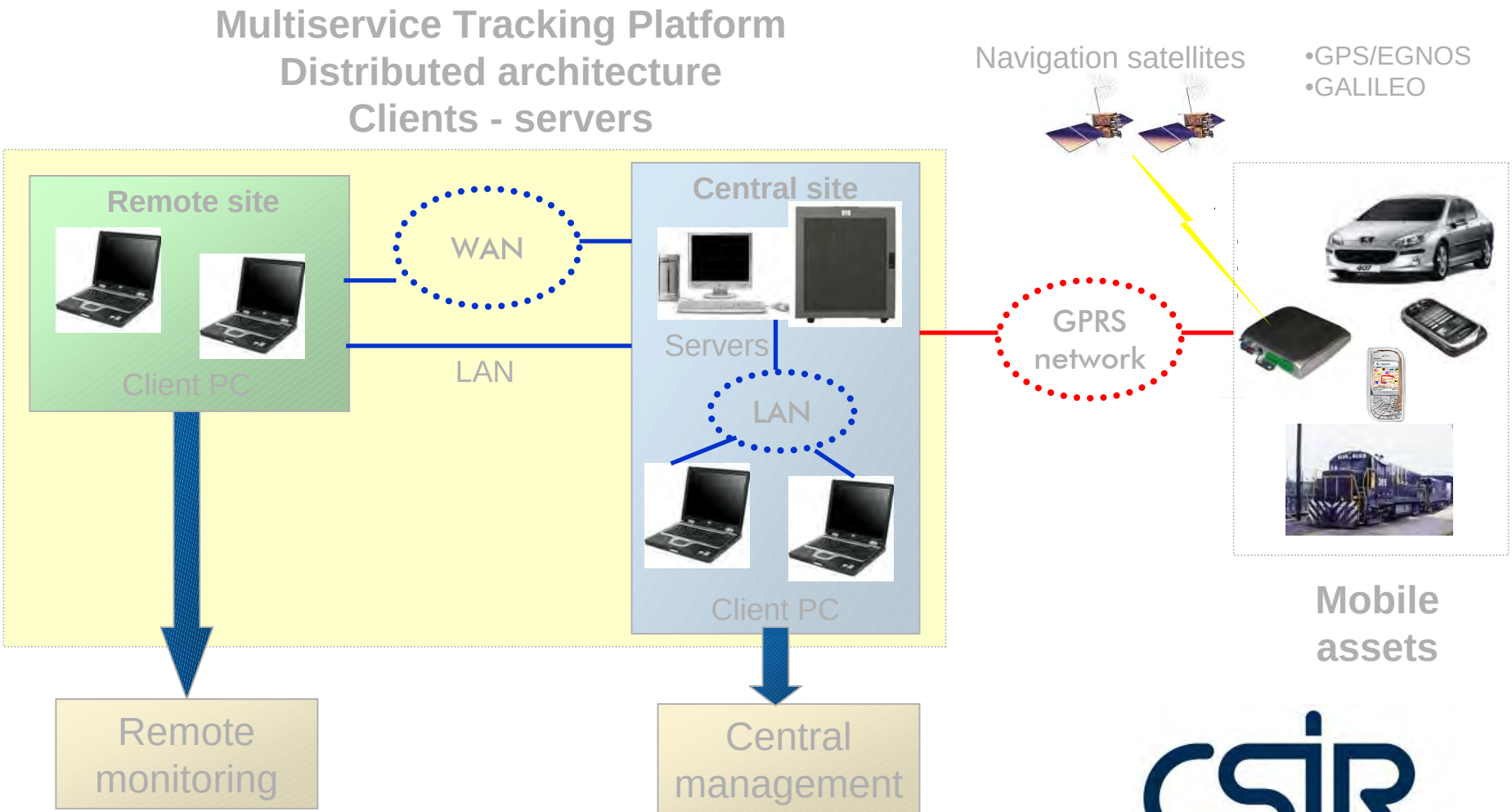
- EGNOS, the European Geostationary Navigation Overlay Service
- The EGNOS space segment is composed of three geostationary satellites: two Inmarsat-3 satellites (AOR-E and IOR-W) and ESA's Artemis satellite
- 34 reference stations are deployed to monitor the satellites used for navigation (1 at SAC)
  - • *availability is improved* by broadcasting GPS look-alike signals from up to three geostationary satellites;
  - • *accuracy is improved* to between 1 and 2 metres horizontally and between 2 and 4 metres vertically; and
  - • *integrity and safety are improved* by alerting users within 6 seconds if a malfunction occurs in EGNOS or GPS.

EGNOS Continued





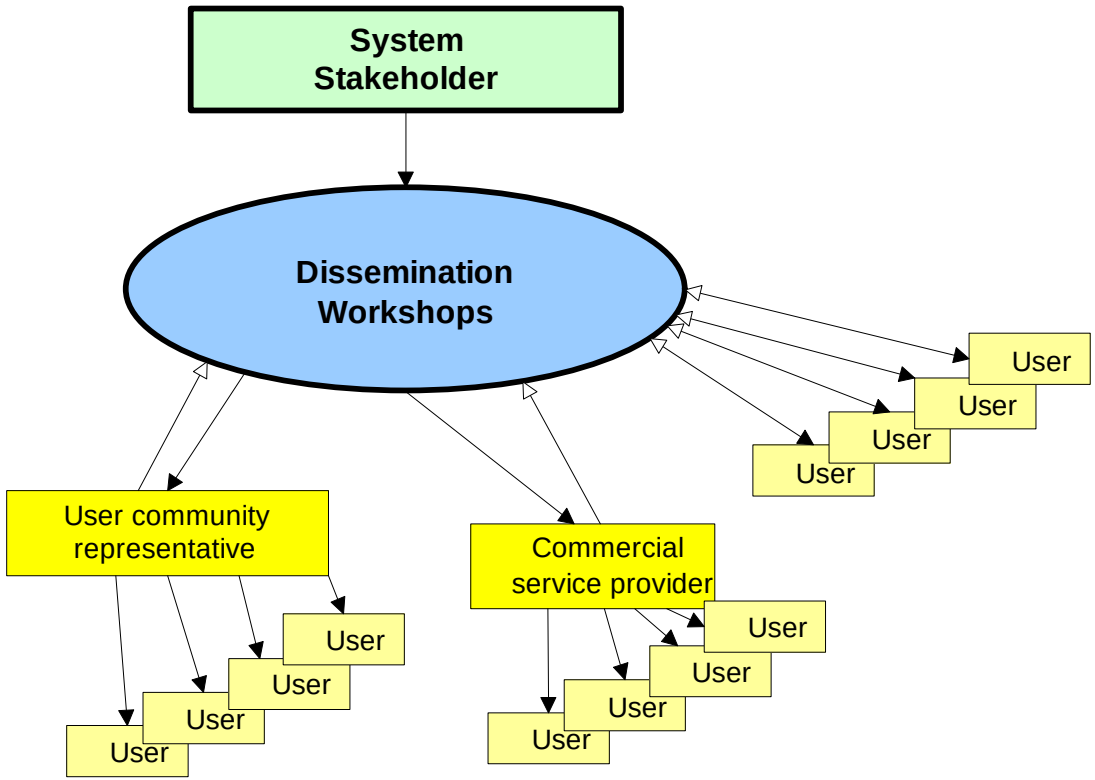
Alcatel 9910 MTP : overview



Work Description

- To disseminate to user communities
- To identify and analyse the applications from user feedback
- To disseminate strategic perspectives and action plans to stakeholders

To disseminate to user communities



Workshop Programme and dates

Programme

AFSAGA Workshops 1 & 2

Day 1 – 9:30

Welcome word

Presentation of AFSAGA project and participants

Keynote speaker

First technology presentation (Satellite navigation)

First technology discussion (listening to user needs)

12 :30 Lunch

Demos: e.g. Multiservice tracking platform,Various terminals, Videos

Second technology presentation (communication)

Second technology discussion

Conclusions for Day 1

18 :00 Networking Cocktail Function

Workshop programme & dates continued

Day 2 10:00 Hartebeeshoek (CSIR: Satellite Applications Center)

Third technology presentation (Applications)

Point of interests, MTP, Geofencing and Dangerous goods tracking, Livestock tracking, Medication delivery,Sensus & eradication of poverty

Third technology discussion (longer discussion)

Lunch + visit + demonstration

Next steps of AFSAGA project,

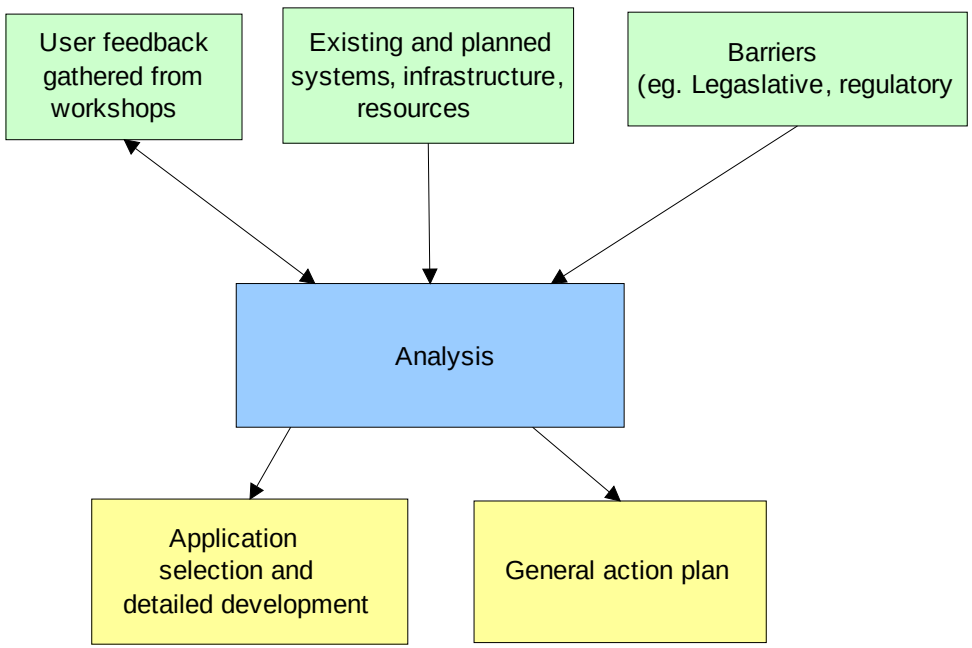
Conclusion of the workshop and final comments from participants (including assessment questionnaire).

16:00 Back to Pretoria

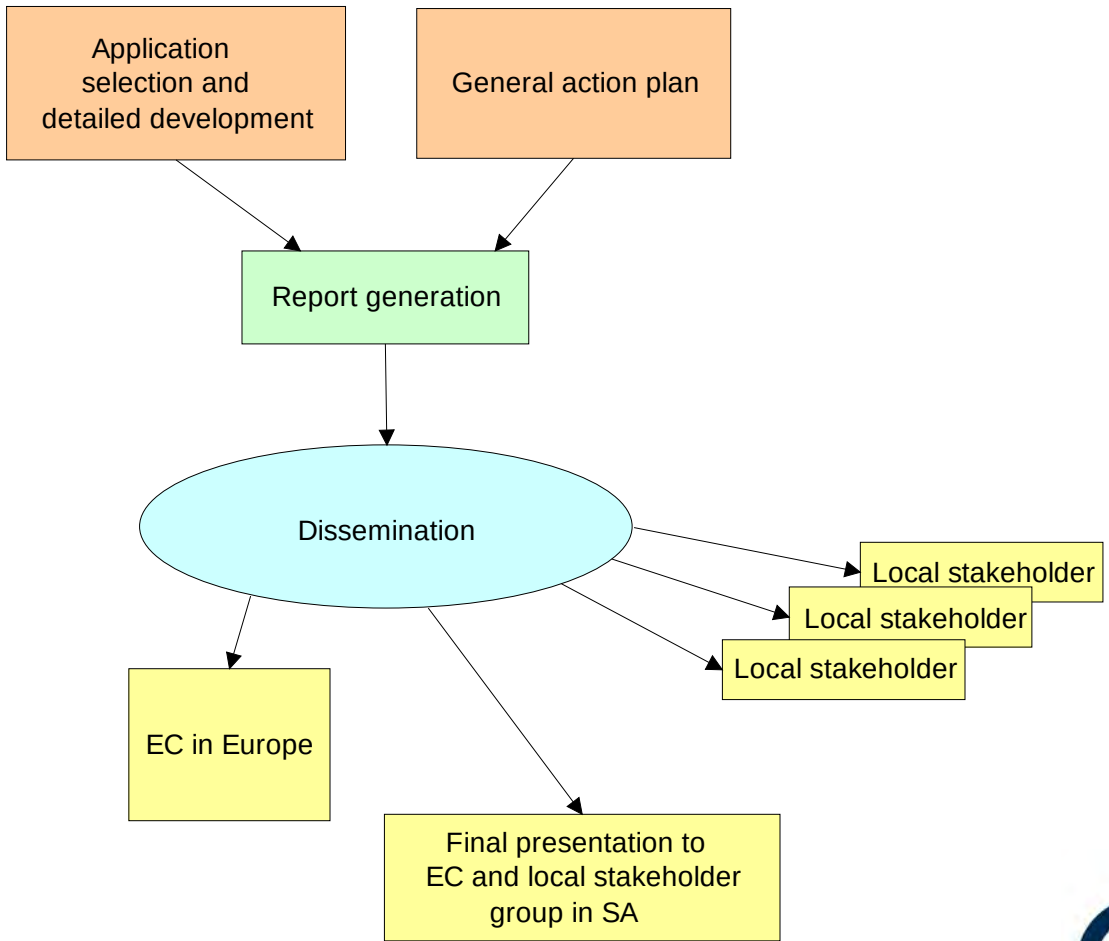
Date: Workshop 1: 23,24 May 2007
Workshop 2: 13,14 June 2007

Place: CSIR International conference centre, Pretoria, South Africa

To identify and analyse the applications from user feedback



To disseminate strategic perspectives and action plans to stakeholders



Input	Industry	Laboratory	Government Body	Professional Organisation	Education	Other
Disaster management			NDMC			
Farming	AgrImage		ARC	Meraka Institute CSIR,SAC		
Timing systems	GSM companies	HartRao, SKA NML		CSIR,SAC		
Sensorweb				Meraka Institute	JHB University	
Tracking (security)	Netstar etc. Orbcomm Sunspace				Stellenbosch University	
Marine community	Fisheries					NSRI
Mining	Open cast mining			Miningtek?		
Tourism			National Parks			4X4 Club of SA
Building	mapping applications		Dept of Housing	CSIR, Build Environment		
Surveys and mapping			Surveyor General's Office	CSIR, Build Environment CSIR,SAC	Stellenbosch University	
Civil aviation	ATNS					CAA
Earth Observation Geo correction				CSIR,SAC	US JHB Univ	

AFSAGA

- Look out for invitations
- Contact us for participation
- Look out for website
  - www.afsaga.org
  - Includes programme, registration form, more information

Thank you

Process Forward

- Contract negotiations
  - Actions: Update technical annex to take in account of comments at first telecon
  - Second and third telecons held
  - New EC contact person, expect new actions to arise
- Consortium agreement to be signed
- Work to start
  - Initial start date defined as 4 September 2006 (after European vacation)
- Contact into SADC to be established
  - SAC has attended the UN/ESA Workshop on GNSS applications in Zambia in order to establish contact into SADC

Other Galileo initiatives at SAC

- EGNOS reference station (ESA)
- In process of tendering for Galileo Ground segment following RFI issued in 2004 (GJU: Galileo Joint Undertaking EU/ESA)
  - Initially 3 3m C-band Full motion antennas upgraded to 5
  - 3 L-band downlink antennas
  - Control room
  - Security