UNITED NATION/ UNITED STATES OF AMERICA

INTERNATIONAL MEETING OF EXPERTS ON THE USE AND APPLICATIONS OF GLOBAL NAVIGATIONS SATELLITE SYSTEMS.

8TH-12TH December 2003.

Co-sponsored by European Space Agency

GNSS application to transportation and Timing. Chair: Engr. T.Ahmed Rufai (NARSDA)

Recommendation of Transportation Working Group

1. Preamble.

The working group on transportation having reviewed the survey report and the recommendations of the previous regional workshops and the expert meeting, recommends the following proposals aimed at promoting the appreciation of the potential social-economic benefits of GNSS technology application in the area of transportation and timing.

The recommendations in the various segments of the transport industry are as follows:

1.1 Aviation.

The working group noted the activities of international civil aviation organisation such as ICAO, IATA, FAA, US-DOT, APEC, and ASECNA which has tremendously accelerated the adoption of GNSS (RNAV) technology in the Industry. A close collaborative relationship with this organisation is recommended in other to exploit and optimise resources for skills and capacity building particularly for Air Traffic Controllers and Air Traffic Managers.

In line with the need to facilitate the concept of one Africa sky initiative, OOSA in collaboration with ICAO and IATA should convene a conference all chief executives of the aviation Industry in Africa to deliberate and strategize on the implementation modalities and requirements.

1.2 Road/Rail Transport.

Vehicle tracking and Fleet management system was identified as an application area where practical benefit of GNSS technology can easily be demonstrated and appreciated particularly in the developing countries were road transport systems has remained the backbone of the mass movement and the haulage industry. The potential large market for the GNSS industry in this segment justifies the need to put an enabling insfractructure both as an awareness tool, but most importantly as a marketing tool for the would-be service providers.

The need to develop the rail systems for sustainable transport has remained a key issue in the developing countries. Consequently the road and rail Corridor Digital Mapping of the proposed pan African High Way and Intelligent transport system for the Eastern Europe is hereby recommended as key pilot project for considerations as outlined bellow.

1.3 Marine Transport.

It was observed that relatively lower GNSS application related activity was reported in this sector even though it remains one of the early adopter of the technology. The enhancement

of Night voyage enable GNSS technology constitute a major contribution of the Technology to the marine industry.

The need and Importance of developing Inland waterways and the international marine industry, both for goods and human transport cannot be over-emphasised. Consequently a pilot project on these was proposed for Latin America and Asia for consideration.

2. Project Recommendations

Project #1:
Promote the awareness potential benefits with respect to GNSS application for all modes of transportation to administrations and decision-makers.

2.1 Objectives:

- Helping the decision-makers of organisation to fully understand the many benefits and advantages of early implementation of this technology which could help to realise the many benefits of satellite navigation.

2.2 Potential Impacts:

- Increase in the level of awareness of GNSS benefits at the policy-level, and hence would attract member states for further investments in the area of GNSS and related areas.

2.3 Strategies:

	Implementation Plan		Responsible Party	Time Frame
	1. Introduction document for the decision makers		UN, Member States, Service Providers	2004
		Nature of the materials: ▪ Multimedia products in official language of UN	UN, Member States, Service Providers	
		Sources of materials	Members of the TWG Service Providers	
		Preparation of materials	Producers/Publisher. Members of the	
		Distributions of the materials	UNOOSA, National GCUBs group below	
		▪ Four Regional Workshops, conferences, seminars. ▪ Latin America (*) ▪ Africa ▪ Asia-Pacific ▪ Eastern Europe	UN, Member States, Service Providers	2004-2005

	2. Initiate the establishment of National GCUB groups and support their activities		Member States	2004
		▪ Define terms of reference	Member States	
		▪ Identify team leader	Member States	
	3. Initiate the establishment of Regional GCUB groups and support their activities		Member States / UN	2005
		▪ Define terms of reference	Member States / UN	
		▪ Identify team leader	Member States / UN	

(*)

i. In the frame of IV CEA (Americas Space Conference) to develop a Workshop in Colombia in 2004.
ii. National Space Research and Development Agency of Nigeria (NASRDA) in collaboration with other UN regional centres could oversee the organisation on the implementation of the work shop activities
iii. ISRO has indicated their readiness to host the seminar for the Asian region

2.4 Possible funding sources and Budget:

UN, Service Providers, Manufacturers, US - TDA, European Commission, ESA, Member States, World Bank, Regional Development Bank, CIDA and JICA and others.

Informational Brochure/Package:	$30,000
Multi-media:10 minute video:	$40,000
Technical Exhibit:	$30,000
Seed fund for establishing the National/Regional groups	$100,000
Total	$200,000

3.0 Project #2:

3.1 **Pilot Projects** (4 regions):

The following pilot projects are recommended for funding assistance. The scope of assistance required first have to do with feasibility study which becomes a requisite tool to access key financial institutions for pilot project financing. The two projects recommended are:

1. Intelligent Transportation System – for African and Eastern Europe Region
    i. Africa: Digital Mapping of the Pan Africa High Way (road and Rail)
    ii. Vehicle tracking and management system.
2. Inland Waterway/Marine Transportation System – for Americas and Asia-Pacific Region

3.2 Objectives:

- Cost-benefit analysis data concerning the benefits of GNSS for increasing safety, developing economy or improving generally the transport infrastructure should be provided.
- Demonstrate the real/potential benefits of the application of the GNSS in the transportation sector.
- Support member states to establish enabling-infrastructure for GNSS application in the transportation sector.
- Support member states to access funding assistance for project implementation.

3.3 Potential Impacts:

- Fleet management system would provide a very big market-based for the haulage industry and common transport establishment.
- Establishment of enabling-infrastructure for GNSS application in the transportation sector would be in place.
- Motivate service manufacturers and enlarge user communities

Strategies:

	Implementation Plan	Responsible Party	Time Frame
	1. Project feasibility study	UN, International Institutions, Service Providers, Industries	2004
	2. Pilot project implementation	Member states	2006

3.4 Possible funding sources and Budget:

UN, Service Providers, Manufacturers, US - TDA, European Commission, ESA, Member States, World Bank, Regional Development Bank, others.

3.5 Cost estimate

Feasibility study ($20,000x4 regions):	$80,000.00
Pilot project implementation ($250,000x4 regions):	$1,000,000
	$1,080,000.00

4.0 Commitments

- Mr T. Ahmed and Mustafa Din Subaru to follow up on the preparation of Multimedia materials for awareness
- Mr.Riveros to organise Awareness seminar in Latin America
- Mr Matomoros to oversee to proposal on intelligent transport system in the Americas region.
- Mr.T Ahmed to oversee to Pan African High way mapping
- Mr Ahmed to oversee the awareness seminar in Africa
- Mr Lucas to provide materials for awareness
- Mr Fagan to provide materials for awareness

5.0 Transportation Working Group Implementation Committee

1.	T. Ahmed Rufai	Africa
2.	T. Hlasny	Central Europe
3.	Surendral Pal	Asia Pacific
4	H.J. Matamoros	Latin America
5.	Carey Fagan	F.A.A (U.S.A)
6.	Rafeal Lucas	ESA
7.	J. Riveros	Latin America
8.	Mustafa Din Subari	Asia-Pacific
. 9.	Larisa.	