

Government Lead User Group (GLU Gp)

7 November 2007

Overview

- Background
- ARM Objectives
- Stellenbosch workshop workplan
- Practical Priority Projects identified
- GLU Priority Requirements
- Questions

Background

- Inception of GLU Gp in Nov 2004.
- From Dec 2004 16 Depts/ State Orgs involved.
- 15 versions of documented requirements distributed
- Sept 2005 Wk Gp – Stellenbosch –International conference
- Nov 2005 Wk Gp in Nigeria –Abuja. Proposal accepted
- Dec 06 CNES & RSA workshop on Space Agency
- March 07 CONAE-Argentina meeting co-operate
- Monthly NWGSST & SumbandilaSat meetings

ARM Objectives

- This initiative provides opportunities for:
 - Collaboration in African context
 - Sharing experience, knowledge, skills & expertise
 - Developing experience, knowledge, skills & expertise
 - Countries to ascertain their readiness states to approaching “Space”
 - Address the WSSD & NEPAD requirements
 - Fly a constellation of 'African satellites'

Sept 05 Stellenbosch Workplan (4 Countries Applications workgroup deliverables)

- Define the technical baseline for the information requirements and resulting applications to be developed for the ARM system
- Generate information and application project plans
- Generate related budget requirements/cost estimate
- Review existing technologies and resources that will satisfy mission
- Identify skills requirements for HRD plan
- Give consideration to the role of Group on Earth Observations (GEO) and other similar initiatives

Priority Practical Projects identified at Stellenbosch International Workshop

(# 1 highest priority #5 lowest priority)

#	Applications	Spatial resolution	Spectral resolution	Temporal resolution	Single	Constellation	Proposed Tech Requirements for discussion and consultation by each national delegation	Proposed Instrument	Sum of priority
1	Agriculture, climate, environment	3-5m	Multi-visible	Monthly, summer/winter		4	I. Monthly (what area needs to be covered?), 3-5m, Multi-spectral, Hyperspectral? (research)	5m colour (3B), NIR, nationally	11.0
2	Environmental Impact Assessment, Farmer Settlement housing, planning and urban planning, Border Monitoring	0.6 – 1m	PAN, RGB	p.a., every 1-2 yrs	2	2	III. Once every 2 days, very high resolution, Pan and RGB, if cloud cover penetration SAR?	0.75m PAN, colour – selected areas	11.7
3	Disaster monitoring	1m - 250m	Pan, VIS, NIR, MIR, TIR	2 per day (night and day)		4	II. 0.5m-5m covered, 10m? Multi-spectral, how often? 2 per day requires 600km swath with 2x4 satellites	10m-30m GSD, in 2 plane constellation with 4 satellites each and swath of 600km each	12.0
4	Land use/cover mapping	0.5m – 5m	Pan	1 per 2 days (ad-hoc)	2	2			15.0
5	Water management, Land Use and Land Care	10m	Multi-visible	bi-annual, quarterly	1	3		20m or 25m colour, NIR, TH, IR, nationally	15.7

GLU Priority Requirements

- **(SA-1) FIXATION.** Fixation of one's position on the earth (Global Positioning System -GPS/ Global Navigation Satellite Systems (GNSS))
- **(SA-2) Land management**
- **(SA-3) *Ocean monitoring***
- **(SA-4) *Atmosphere monitoring***
- **(SA-5) *Geospace environment monitoring***
- **(SA-6) *Monitoring and management of water resources***
- **(SA-7) *Risk management***
- **(SA-8) *Observing people, trends and development***
- **(SA-9) *Space based communication***
- **(SA-10) *Military requirements:***
- **(SA-11) *Astronomy (SKA, SALT, HartRao, HMO, HESS, ...)***

Way forward

- Collaboration
- Beef up GLU requirements
- Annual “Space Workshop” - 3 days?
- Focus on 'real' (practical) issues to pay for 'nice-to-haves' (theory)?