Working Progress of iGMAS

iGMAS Subgroup

July 2012

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1.1 Brif. on the Subgroup

- **In Sep 2011, a subgroup on iGMAS (international GNSS Monitoring and Assessment Service)**
  - **established in 6th meeting of ICG**
  - **co-chaired by experts from China, IGS & Japan**
  - **included in the joint statement of ICG-6**

1.2 Objective of iGMAS

- to provide services of GNSS performance monitoring
- to promote service assurance
- to improve service performance
- to ensure the interoperability of OS signals

1.3 Objective of iGMAS

iGMAS will benefit a lot for

- **not only users to get assured open services with an unified standards.**
- **but also GNSS providers to make their own GNSS system sustainable development**

1.4 Methods of iGMAS

- to setup a global tracking network through int. cooperation
- to monitor the Multi-GNSS open signal and service performance with not only Multi-GNSS geodetic receivers but also high gain omni-directional antennas, multi-beam antennas
- to collect and analysis data and available products by data centers and analysis centers
- to serve GNSS users with data, products & information in post-mission and real time

1.5 iGMAS's service

iGMAS will provide data, products & information free of charge, to anyone

- **Raw data**
- **Service performance Monitoring**
- **Constellation status monitoring**
- **Navigation signal in space monitoring**
- **navigation data monitoring**
- **Precise ephemeris, clocks**
- **Earth orientation parameters**
- **Tracking Station coordinates, velocities**

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2.1 TOR of iGMAS

TOR of iGMAS Working Group is drafted:

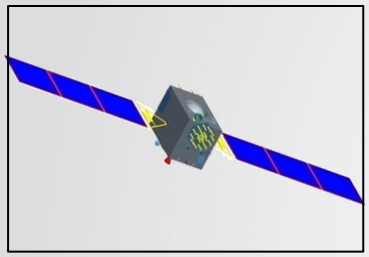
Divided into 10 chapters and 18 articles, covering background, task and purpose, principle, organization structure, operation mechanism, access and exit principles, etc;

Organization Structure and Responsibilities:

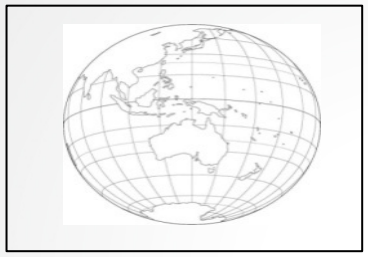
- **Scientific Committee: task**
  3 major responsibilities;
- **Secretariat: task, 8 major responsibilities, etc;**
- **Infrastructure Committee: structure**
  3 major responsibilities;
- **Application Research Committee and so on…**

2.2 Logo Design

- **Logo elements entail**



navigation satellites



global service

service sense and platform

receive and release

2.2 Logo Design

Application Combination Modes

2.3 iGMAS Website Design

To release iGMAS news and to provide civil, commercial as well as scientific research users with GNSS state, data and products, and iGMAS files;
Scheduled to come into service in Oct 2012;

2.4 iGMAS Standards Drafting

- **Part of iGMAS data format draft file finished**
  - **–iGMAS reference station and raw observation data format file**
  - **–GNSS compatible receiver independent exchange format**
    - **RINEX (including Beidou)**
  - **–GNSS precise ephemeris, clock offset and other product format file**

2.5 Infrastructure Construction

Currently, terminals that are able to track and monitor the four satellite navigation systems simultaneously have been manufactured and will be applied.

1 Signal monitoring stations, 8 Basic reference stations, 3 data center and 7 Analysis Center are under established.

2.5 Infrastructure Construction State

Center Construction State

Data Center

Monitoring and Analysis Center

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3 Cooperation on iGMAS

- **Being a long-term work, international cooperation needed**
- **carrying out full cooperation with IGS etc.**
- **joint research to tackle key technical problems**
- **joint establishing iGMAS tracking stations\data center\ analysis center**
- **jointly carrying out iGMAS demonstration**
- **iGMAS –related training**

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4 Summary

1. iGMAS is beneficial to all sides:

- **for GNSS providers improving their own system,**
- **for users, enterprises, academic organizations etc.**

2. iGMAS is a long-term work, needing international cooperation

- **All sides encouraged to take part in**

4 Summary

We sincerely welcome the participation of relevant organizations to promote iGMAS infrastructure construction as well as iGMAS technology and related theory.

All detail information will be available in the come iGMAS website.

Thanks!