DISCUSSION FORUM ON GNSS CORS

Outline

FIG Commission 5 working group 5.2 and 5.4

Plans for our webpage

Experiences from the forum in Munich

IAG - GGOS, IGS ...

Issues from poster presentations

Proposal for a work shop/seminar on CORS
FIG Working Group 5.2 – Reference Frame in Practice

Chaired by Mikael Lilje (Sweden)

From the work plan:

- Facilitate development of standards / guidelines—site, monumentation, hardware, fundamental (IGS) vs CORs sites and then other, density, how many stations to be IGS
- Provide best practice guidelines, surveying methodologies, field operations for RTK CORs users and providers
- Educate and promote to surveyors RTK CORs through information exchange forums, technical sessions, workshops and internet.
- Facilitate representation for RTK CORs providers / users to ‘voice’ or lobby their wants / needs to GNSS owners, telecommunication agencies, GNSS equipment and software manufacturers / suppliers, IGS

FIG Working Group 5.4 - GNSS

Chaired by Volker Schwieger (Germany)

From the work plan

*Study Group 5.4.2 – GNSS networks* (together with WG 5.2)

- Analysis and review of GNSS network technologies for practitioners
- Analysis of the importance of site calibrations of permanent networks
- Analyse and compare different commercial and non-commercial GNSS networks
- Organise Workshops on GNSS networks
Discussion Forum on GNSS CORS - FWW Stockholm, TS 7F, Wednesday, 18th June, 2008

On the FIG Commission 5 web

Idea:

• Publish description on national/regional/local CORS on the FIG Commission 5 web (Template for the format available and spread)

• Presentations from Stockholm as well as others. Please send in your contribution to Mikael Lilje or Rob Sarib.

• Guidelines, links, technical papers and so on

www.fig.net/commission5/

Forum at the FIG Congress in Munich, 2006

Something similar as in Stockholm

Presentations from

-Sweden - Serbia
-UK - Brazil
-Turkey - Israel
-Ireland - Poland
Issues raised during the Munich-Forum

Facilitate
- development of standards/guidelines
- the compilation of the why and how to connect RTK CORs networks to ITRF

Facilitate forums on various issues as technical and business models

Facilitate representation for RTK CORs providers/users to ‘voice’ or lobby their wants/needs to GNSS owners, telecommunication agencies, GNSS equipment and software manufacturers/suppliers, IGS

Provide best practice guidelines, surveying methodologies, field operations for RTK CORs users and providers

Global Geodetic Observing System

GGOS integrates different geodetic techniques, different models, different approaches in order to achieve the required long-term consistency, reliability and understanding of the geodetic, geodynamic and global change processes of "System Earth".
**International GNSS Service**

IGS product summary
Precise and predicted GNSS orbits
GNSS clock corrections
Earth orientation parameters
Ground positioning (sub-cm)
Consolidated input to ITRF
Ionospheric mapping (> “near real time”)
Tropospheric corrections

*These products are used by a wide range of users in the scientific & professional disciplines.*

**IGS...**

IAG service, global CORS network, freely available data & products to all users...
Supports: **ITRF, regional densification, GGOS**...
The IGS CORS network is mostly provided by FIG-relevant national agencies.
The IGS needs an upgraded CORS infrastructure, that is true GNSS-capable, with real-time data streaming...
Complements (non-IGS) geoscientific networks in U.S., Japan, China...
New applications need more dense CORS networks, with receiver spacing also suitable for surveying/mapping apps... **GNSS geodesy and GNSS surveying side-by-side**
Where does the FIG come in?...

GNSS CORS infrastructure to support surveying, mapping, precise navigation applications...

This is a responsibility of government agencies...

Geodesy needs more (not less) GNSS stations, *globally distributed, but also locally with high density*...

The FIG through its links to national geodetic/survey agencies is an important ally of the IAG... particularly in ensuring the upgrade and densification of GNSS CORS infrastructure...

Issues from today’s presentations

Presentations from
- Australia (several) - Portugal
- Canada - Sweden
- Korea - USA
- New Zealand
Issues from today’s presentations

• What is the role of FIG concerning the following issues
  • standards/guidelines for station infrastructure and co-ord integrity?
  • standards, models and protocols for base station data management and distribution?
  • Data exchange format - e.g. compatibility between RTK systems
  • various service and data management model that could be used?
  • the role, function and responsibility of stake holders.
  • finding and justifying financial resources for the expansion/densification/maintenance of CORS? Business cases?
  • Finding skilled human resources to manage the network.

• How can FIG encourage the development and provide best practice guidelines, surveying methodologies, field operations for RTK CORs users and providers.

• Facilitate representation for RTK CORS providers/users to lobby their wants/needs to GNSS owners, telecommunication agencies, GNSS equipment and software manufacturers / suppliers, IGS

Work Shop/Seminar on CORS


FIG-facilitate the event in co-operation with stakeholders, IAG? Compile – disseminate information via web?

WHO - CORS managers, industry, users, and others

Focusing on
- Guidelines, standards on station infrastructure
- Guidelines, standards, best practice on surveying
- Data management
- Business models
- Communication issues
- Hardware issues
- GNSS developments
- Vertical data issues