



International Committee on
Global Navigation Satellite Systems

Introduction of ICG WG-B Interim Meeting on "GNSS Service Performance Enhancement and Applications"

Xingqun ZHAN

Shanghai Jiao Tong University, China

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Briefs

- ICG WG-B "GNSS Service Performance Enhancement and Applications" interim meeting was hosted by Shanghai Jiao Tong University on May 17th, 2011 in Shanghai, China prior to 2nd Chinese Satellite Navigation Conference (CSNC) as an outreach of ICG.
- The meeting was co-chaired by Mr. Rafael Lucas RODRIGUEZ (ESA) and Prof. Xingqun Zhan (China) under the theme "GNSS Services and Applications Performance".
- About 60 participants from 8 countries and organizations attended the meeting, namely Australia, China, EU(ESA), Japan, Korea, Russian Federation, United kingdom and United States.

Meeting venue



北斗卫星导航系统
www.beidou.gov.cn

Group photo

ICG WG-B Interim Meeting Shanghai CHINA

May 17th 2011



5 sessions

- The meeting was composed of 4 technical sessions with a discussion session followed
 - Session 1: "Performance Enhancement"
 - Session 2: "Interference Detection & Mitigation"
 - Session 3: "Integrity"
 - Session 4: "Multi-GNSS Applications"
 - Session 5: "WG-B Recommendations" on ICG WG-B work plan actions, new recommendations and Preparation of planning for ICG-6
- 12 presentations and 5 recommendations were presented and discussed during the meeting.

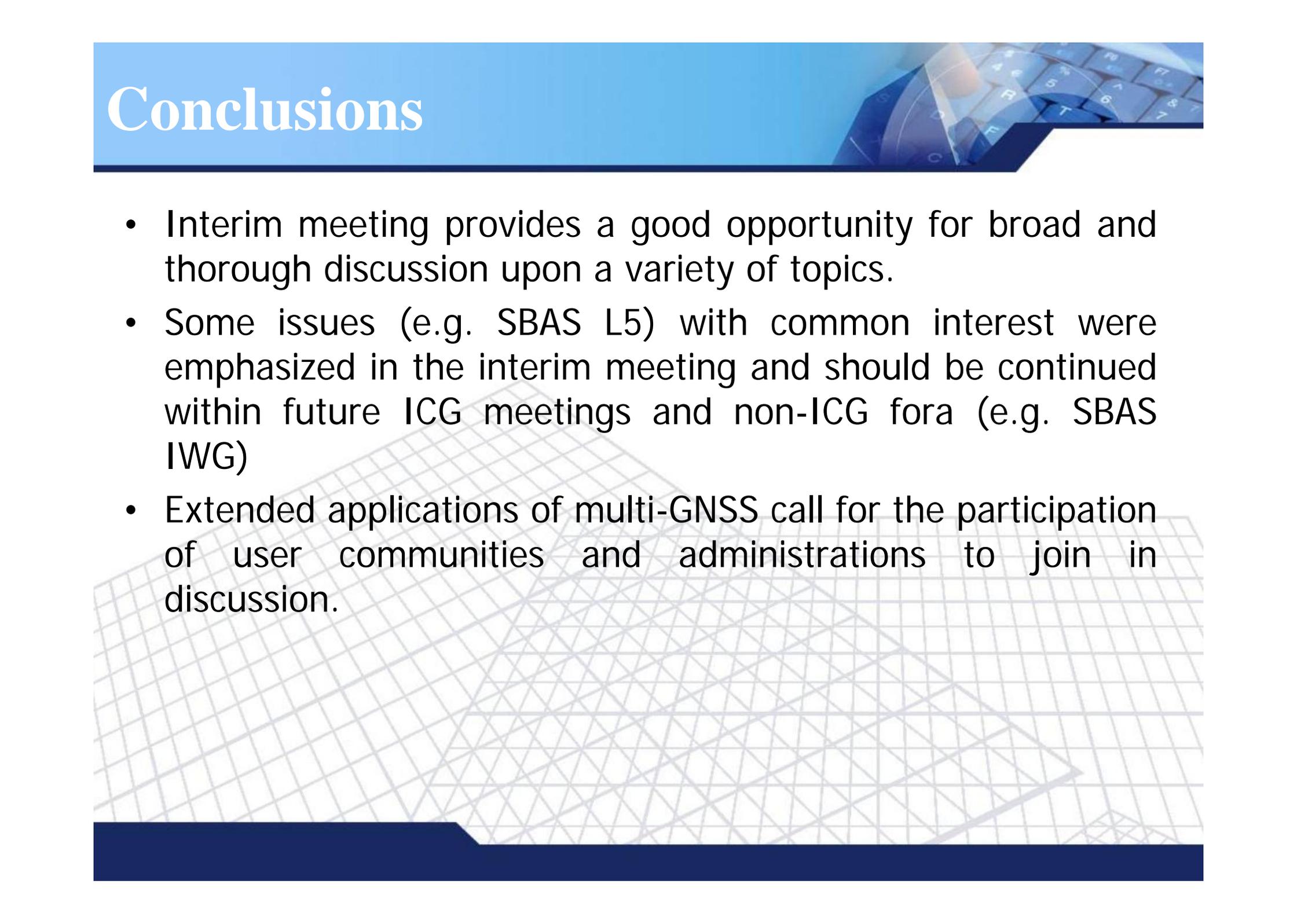
12 presentations

- 1) **Rafael LUCAS RODRIGUEZ, ESA** on "Introduction to WG-B Meeting"
- 2) **Leo V. Eldredge, FAA** on "Enabling Multi-Constellation ARAIM"
- 3) **Hongping ZHANG, Wuhan University** on "Integration Service from Ground based GNSS Application System"
- 4) **Mikio AOKI, Cabinet Secretariat Japan** on "QZSS Application and the earthquake"
- 5) **Sang Jeong LEE, National GNSS Research Center, Korea** on "GNSS interference detection"
- 6) **Per ENGE, Stanford University** on "Alternate Position Navigation and Time (APNT) for Civil Aviation"
- 7) **Hongliang XU, Shanghai Jiao Tong University** on "Vulnerability – new tool and measure for GNSS"
- 8) **Jinling WANG, University of New South Wales, Australia** on "Optimizing the Minimal Detectable Bias in GNSS Positioning Fault Detection"
- 9) **Rui LI, Beihang University, China** on "GNSS Integrity Technology Development Methodology"
- 10) **Valeriy TYUBALIN, Institute of Space Device Engineering Russia** on "Satellite GLONASS/GPS navigational device (SND) for the space tug 'Fregat'"
- 11) **Lei YANG, University of Nottingham, UK** on "Positioning Technology Improvement Enabled by the Multi-Constellation New GNSS Signals"
- 12) **Jing LI, China Transport Telecommunications & Information Center** on "Application of Precise Positioning Service Network based on GNSS in Transportation"

5 recommendations

- The meeting participants proposed 5 recommendations to promote WG-B actions.
 - Rec.1: ARAIM Parameter Development in response to Work plan action B3
 - Rec.2: Use of GNSS in case of Natural Disasters
 - Rec 3: Use of Regional Systems in Multi-GNSS ARAIM
 - Rec.4: Optimizing navigation message content in new signals to achieve the highest possible level of multi-GNSS interoperability
 - Rec.5: Use of ARAIM and Augmentations
- Three on topics of user integrity (ARAIM parameters definition, Use of regional systems and ARAIM, Use of augmentations and ARAIM), one related with the use of GNSS for natural disasters, and one on the definition of the navigation message for new signals.

Conclusions



- Interim meeting provides a good opportunity for broad and thorough discussion upon a variety of topics.
- Some issues (e.g. SBAS L5) with common interest were emphasized in the interim meeting and should be continued within future ICG meetings and non-ICG fora (e.g. SBAS IWG)
- Extended applications of multi-GNSS call for the participation of user communities and administrations to join in discussion.