

Network Systems Workshop

IGS Agenda

Annapolis, MD
November 2-5, 1998

As of 29-Oct-98

Monday November 02, Afternoon Session

11:30 – 1:00 p.m.

On-Site Registration

1:00 – 1:20 p.m.

Welcome and Announcements

Welcome from NASA HQ, Program Scientist for Geodynamics and Geopotential Fields

R. Neilan, C. Noll
C. Wilson

Welcome from NASA GSFC, Director of Earth Sciences

V. Salmonson

1:20 – 2:20 p.m.

1.0 State of the IGS

Status of the IGS highlighting the network importance and aspects, core products, importance and impact of the network, etc.

G. Beutler, +

1.1 Current Network Performance

Status of the network with respect to core products. Some current results and relationships with network; some important discrepancies to illustrate impact on products, e.g., Madrid "motion"; AC recommendations; identify network "holes"; importance of network performance for analysis processes and quality; Y2K, GPS 1024, detailed metrics, latency, discrepancies; importance of network performance for analysis processes and quality; detailed metrics, latency, discrepancies, etc.

J. Zumberg,
J. Kouba,
[T. Springer]

2:20 – 2:45 p.m. Break

2:45 – 5:30 p.m.

2.0 What's on the Horizon for the GPS Satellite System?

D. Minkel, NOAA

2.1 Future Requirements

Applications Panel Discussion on Emerging Initiatives and New Directives
This session speaks for the needs from the network systems for the various projects within the IGS. Panel Members:

R. Serafin,
Moderator

- Troposphere Applications for short and long period monitoring, including sea level applications – Mike Bevis, IGS Governing Board Member, IGS Troposphere Project, [Gerd Gendt, Chair]
- Ionosphere Applications – Carlos Garcia, IGS Ionosphere Project [Joachim Feltens, Chair]
- Network Implications for Global Change Monitoring – Hans-Peter Plag, Norwegian Mapping Authority, Head Geodetic Division 1, Global Geophysics
- Precise Time Transfer – Jim Ray, Co-Chair IGS/BIPM Pilot Project on Precise Time Transfer
- GLONASS and IGEX Update – Jim Slater, IGEX Steering Committee, Office of the Secretary of Defense
- Scientific User Perspective – Seth Stein, UNAVCO Scientific Director
- LEO Network, IGS role (including GLONASS for occultations) – Mike Watkins, Chair IGS LEO Working Group, Deputy Manager, JPL Tracking Systems and Applications Section
- Regional Networks and the IGS Global Network, Specialized Applications, and the International Infrastructure – Frank Webb, Chair SCIGN Executive Committee
- Real Time Applications – Mike Whitehead, SATLOC Corporation

6:00 – 8:00 p.m. Icebreaker Reception

Tuesday November 03, Morning Session

9:00 – 9:30 a.m.

3.0 Physical Site Specifications

Guidelines as a basis for network specifications; collocations with other techniques; antennas, radomes, errors, etc.; matrix of station characteristics, etc.; future needs (GLONASS, LEO, etc.)

W. Gurtner, +

9:30 – 11:00 a.m.

Physical Site Specifications – Panel Discussion

Panel Members:

- Ludwig Combrinck, South Africa
- Martin Hendy, Australia
- Yuki Hatanaka, Japan
- [Jan Johansson, Sweden]
- Gerry Mader, USA
- Mike Schmidt, Canada

W. Gurtner,
Moderator

11:00 – 11:30 a.m. Break

11:30 a.m. – 12:30 p.m.

3.1 Communications and Data Links

“Benchmarking” the IGS Network

Current data flow paths and communication links, presentation on the overview of the IGS network

[S. Fisher], A. Moore,
[L. Estey], D. Stowers,
F. Boler

12:30 – 2:00 p.m. Lunch

Tuesday November 03, Afternoon Session

2:00 – 3:00 p.m.

4.0 IGS Information Systems Demonstrations – CBIS Review and Recommendations

Resources and information for internal and external IGS needs; user needs, outreach, and education; on-line demo, feedback.

R. Liu,
[K. Gowey],
R. Neilan

3:00 – 5:30 p.m.

4.1 Poster Overview and Viewing

Posters of stations, networks, data centers, computer demonstrations, etc.

R. Neilan

4.2 RINEX Splinter Meeting

Forum for discussion of RINEX format issues

W. Gurtner

5:30 – 7:30 p.m. Social Reception, sponsored by Ashtech Products

Wednesday November 04, Morning Session

9:00 – 9:30 a.m.

5.0 Data Center Issues

Operational, regional, global, data center processes, Hatanaka compression, seamless archive, long term access/archive, handling new data types (GLONASS, LEO), product handling

C. Noll, +

9:30 – 10:30 a.m.

Data Center Issues – Panel Discussion

Panel Members:

- Loic Daniel, France
- Jeff Dean, USA
- Robert Duval, Canada
- Heinz Habrich, Germany
- Yuki Hatanaka, Japan
- Myron McCallum, USA
- Dave Stowers, USA

C. Noll,
Moderator

10:30 – 11:00 a.m. Break

11:00 – 11:30 a.m.

6.0 Network Monitoring

Data quality, integrity, controls, monitoring (including SV), latency, feedback to stations, advisories to users, etc.

R. Neilan,
A. Moore,
R. Hanssen

11:30 a.m. – 12:30 p.m.

Network Monitoring – Panel Discussion

Panel Members:

- Carine Bruyninx, Belgium
- Herb Dragert, Canada
- Roman Galas, Germany
- Werner Gurtner, Switzerland
- Rune Hanssen, Norway
- Jan Kouba, Canada/Switzerland
- Angelyn Moore, USA
- Barb Perin, USA
- Dave Stowers, USA

R. Neilan,
Moderator

12:30 – 2:00 p.m. Lunch

Wednesday November 04, Afternoon Session

2:00 – 2:30 p.m.

6.0 Network Upgrade Issues

Current assessment and future goals, updated station logs and log file format; new receiver/antenna hardware, software, firmware, etc.

Y. Bock, +

2:30 – 3:30 p.m.

Network Upgrade Issues – Panel Discussion

Panel Members:

- Jim Davis, USA
- Roman Galas, Germany
- Simon McClusky, USA
- Chuck Meertens, USA
- Angelyn Moore, USA
- Hans Van der Marel, Netherlands

Y. Bock,
Moderator

3:30 – 3:45 p.m. Break

3:45 – 5:15 p.m.

7.1 GPS Instrumentation Overview – Future of High Precision GPS Tools

Invited Speakers (15 minutes each):

- Jacques Baser, 3S Navigation
- Michael Jackson, Trimble
- Hans Kunze, AOA
- Michael Navid, Javad
- Robert Snow, Ashtech
- James Stowell, Leica

R. Neilan,
C. Noll

5:15 – 5:45 p.m.

7.2 Questions and Discussion

R. Neilan, C. Noll,
Moderators

6:00 – 9:00 p.m. Banquet, sponsored by Leica Geosystems, Leica GPS

Thursday November 05, Morning Session

9:00 – 10:30 a.m.

8.0 New Communication Technologies

Invited talks from outside experts on future developments for data and communications, next generation Internet, STAR TAP, Teledesic, GLOBSTAR, etc.

- Steve Goldstein, International Networking Coordination, National Science Foundation
- Greg Piesinger, Private Communications Consultant, Dyco, Inc.

Invited Speakers

10:30 – 11:00 a.m. Break

11:00 a.m. – 12:30 p.m.

9.0 Working Group Discussions

Each attendee will be asked to participate in one of the following working groups generating summary recommendations in that area.

- Physical Site Specifications, Werner Gurtner
- Communications, Wayne Shiver
- Data Centers, Jeff Dean/Loic Daniel
- Network Monitoring, Angelyn Moore/Hans-Peter Plag
- Upgrade Issues, Yehuda Bock
- Future Applications Requirements for the IGS, Jim Ray

12:30 – 2:00 p.m. Lunch

Thursday November 05, Afternoon Session

2:00 – 4:00 p.m.

9.1 Summary Recommendations from each Working Group

- Physical Site Specifications, Werner Gurtner
- Communications, Wayne Shiver
- Data Centers, Jeff Dean/Loic Daniel
- Network Monitoring, Angelyn Moore/Hans-Peter Plag
- Upgrade Issues, Yehuda Bock
- Future Applications Requirements for the IGS, Jim Ray

I. Mueller,
Moderator

9.2 Future Steps and Setting Next Meeting(s)

7:00 – 9:00 p.m. Tour of Goddard Geophysical and Astronomical Observatory (GGAO)

Friday November 06, Summary Session for Program Committee

9:00 a.m. – 12:00 p.m.

Wrap up with session chairs

Assignments for “IGS Network Operations Plan” document

[] Denote a contributing author unable to attend the workshop.