

MINUTES OF THE  
ION COUNCIL MEETING  
(May 3, 2010)

Subject to the approval of the ION Council the following minutes are submitted. The Council Meeting was called to order on May 3, 2010 at the Renaissance Esmeralda Resort Hotel, Indian Wells, CA at 1:00 p.m. Those present were:

**VOTING COUNCIL MEMBERS:**

<u>Name</u>	<u>Of</u>	<u>Office Held</u>
Mikel Miller		President (participating by phone)
Todd Walter		Executive VP/ Strategic Planning
John Clark	W	Western VP
Chris Hegarty	Immediate	Past President
Frank Czopek		Western Council M-at-L
John Neilson	W	Western Council M-at-L
Jacob Campbell	East	Eastern Council M-at-L
Doug Taggart	Mar	Marine Rep.
Angela Dorsey	Space	Rep.
Doug Taggart	Mar	Marine Rep.
Joe Chop	M	Marine Rep.
Maarten Uijt de Haag		Finance Chair
Dorota Brzezinska		Membership Chair
Chuck Bye		Bylaws Chair/No. Star Section Chair
Jerry Knight		So. Cal. Section Chair
Caroline New	FL	Section Chair
Ron Hatch	Past	President
Larry Hothem	Past	President

**NON-VOTING MEMBERS:**

<u>Name</u>	<u>Position</u>	<u>Office Held</u>
Lisa Beaty	Exec	Executive Director

It was determined that a quorum was achieved. Mikel Miller, President, participated via telecon. Todd Walter, Executive VP, moderated the Council meeting.

**AGENDA**

Approval January 2010 Council Meeting Minutes: M. Miller

**Motion: Council approves the January 2010 Council Meeting Minutes as submitted.**  
Motion made by Frank Czopek, seconded by Jerry Knight and passed by Council.

President's Remarks: M. Miller

Dr. Mikel Miller, President, reported via telecon that the Executive Committee had conducted the following business and/or approved the following motions since the January Council Meeting:

*1) Elimination of Technical Director Position at the National Office*

As part of the Executive Committee's efforts to improve its day-to-day operations and over all management of the ION's resources, the Executive Committee reviewed the current structure of the National Office and reached the conclusion that the ION's current operational needs do not support continuing the Technical Director position in the National Office at this time. As a result, the Executive Committee opted to eliminate the Technical Director position from the National Office staff.

This change in the National Office structure coincided with Carl Andren's retirement on March 5, 2010. If at a future date it is determined that a technical person is needed in the National Office, it is likely that this job would be redefined as a junior engineering position. The ION's elected officers will continue to represent the Council as the organization's technical experts.

With the elimination of the Technical Director position there are no longer the two independent directorates at the National Office reporting independently to the President. With only a single directorate in the current structure, the Executive Committee approved a motion to change Lisa Beaty's title from Director of Operations and Business Development to Executive Director and encompass all the ION's programs and administration under her direction. She will continue to report to the President.

*2) ION's Technical Co-Sponsorship of the CPGPS 2010 Technical Forum*

The end of March the Executive Committee approved a motion for the ION to become a technical co-sponsor [CPGPS \(The International Association of Chinese Professionals in GPS\)](#) 2010 Technical Forum on Satellite Navigation and Positioning.

CPGPS 2010 meets the ION's technical co-sponsorship requirements in that it is hosted by a non-profit, the ION has no financial commitment with co-sponsorship, and Dr. Jade Morton of the ION Council, will serve as a member of the meeting's organizing committee. The ION will lend it's logo to the meeting's advertisements and put a link on the ION's web site to the conference's web site.

CPGPS 2010 will be held August 18-20, 2010 in Shanghai, China and is jointly sponsored by CPGPS, The Chinese National Remote Sensing Center/Department of the Chinese Ministry of Science and Technology, The Science and Technology Commission of Shanghai and Wuhan University.

*3) Liquidation of \$140K from ION's Reserve Fund*

In early March the ION Executive Committee approved a motion to transfer \$140,000 from the ION's reserve fund to our operating account.

See Attached File: [Presidents Report to Council May 2010](#)

Annual Awards Selection Committee Approved: M. Miller

Mikel Miller, ION President, reported that he had verified eligibility and approved proposed committee members submitted by Todd Walter, Annual Awards Committee Chair.

He also requested that all ION's past presidents, and other members of Council, identify one worthy individual for an ION annual award, or fellow nomination, and asked that they formally submit a nomination for one worthy candidate by October 15.

Fellows Selection Committee Approved: K. Van Dyke

Karen Van Dyke, ION Fellows Selection Chair, proposed that the following be approved to serve on the 2011 Fellow Selection Committee: Michael Braasch, Jim Doherty, Larry Hothem, John Lavrakas and Marvin May.

**Motion: Council approves the 2011 Fellow Selection Committee members as follows: Karen Van Dyke (Chair) Michael Braasch, Jim Doherty, Larry Hothem, John Lavrakas and Marvin May.** Motion made by John Clark, seconded by Doug Taggart and approved by Council.

Jerry Knight reported that the Southern CA Section had asked him to propose that Council create a new class of Associate Fellows for ION whose selection criteria would be broader than the current selection criteria required for Fellow and thus allow for the election of a greater number of Associate Fellows. Knight suggested using the Royal Institute as model. Larry Hothem cautioned that ION not water down the significance of ION Fellows as part of this process.

**Action: Lisa Beaty is to discuss this issue with Karen Van Dyke, Fellow Selection Chair, to determine if she is willing to investigate a possible class of Associate Fellows and make a recommendation at the January Council meeting.**

Larry Hothem proposed that the Fellow Selection Committee eliminate the secondary factors in ION's current Fellow selection criteria which consider volunteer service to the ION. He felt this unfairly handicapped international applications as international members of ION do not have as many opportunities to serve on ION Council. Discussion ensued. It was noted that international members of ION were currently allowed to hold all volunteer positions on Council except for president, vice president and the regional vice presidents or council member at large positions. In addition international members serve on the Satellite Division Executive Committee and as general/program/track/session chairs at ION meetings.

Government Fellow Committee Report: C. Cohen

Lisa Beaty reported that no government fellow applications had been received this year but the committee and the national office would continue to advertise the government fellows program.

Approval of Nominating Committee Membership: C. Hegarty

Chris Hegarty, Nominations Chair, proposed the following to serve on the 2010 Nominating Committee:

Chair:           Chris           Hegarty

Eastern Region: Jim Doherty, Karen Van Dyke & Mikel Miller  
 Western Region: Todd Walter, John Clark & A.J. Van Dierendonck

**Motion: Council approves Chris Hegarty (Chair), Jim Doherty, Karen Van Dyke, Mikel Miller, John Clark, Phil Ward and A.J. Van Dierendonck as members of the 2010 Nominating Committee.** Motion made by Chris Hegarty, seconded by Doug Taggart and passed by Council.

Status of Red Book on Integrated Navigation Systems: M. Uijt de Haag

In January Maarten Uijt de Haag, editor of the red book volume *Integrated Systems* reported that volume seven of the red book series was organized and he accepted an action to collect copyright release forms from authors and that this was in progress.

It was reported that electronic versions of many of the papers had been forwarded to Fiona Walter for technical editing and it was anticipated that the volume would be completed and in distribution before the end of the year.

Post Event Report on Sustainable Development in Navigation, Science & Technology in Africa: P. Doherty

Mikel Miller reported that this continued to be an exceptional international outreach program. It was reported that 18 universities had been represented and the group had been more international than originally anticipated. It was reported that the 2011 seminars were scheduled to be held in Nigeria.

International Council Member-at-Large Proposal: L. Hothem

Larry Hothem reported that during the January 2010 Council meeting he had accepted an action to form a committee and make a proposal as to whether or not the ION should incorporate an International Council Member-at-Large on the ION Council. This action was initiated from a discussion as to the secondary selection criteria, which evaluates service on ION Council, currently required for an ION member to be elected to a Fellow grade of membership.

See Attached File: [Proposal Intl Council Members at Large](#)

Beaty recommended that the Council separate the issues of ION Fellow selection criteria and international representation on ION Council as it was not recommended to change the make up of Council in order to solve the problem of lack of international ION Fellows. Significant discussion ensued.

The consensus of Council was that the lack of international Fellows had more to do with lack of international nominations than it did lack of ION volunteer service on Council for the nominees. It was also noted that there were currently no restrictions for having international members of Council for technical area reps or any of the standing committee chairs. It was suggested that the lack of international representation on Council could be addressed through the nominations process.

Regarding the proposal to create an International Council Member-at-Large position, Council addressed the question as to whether or not ION wanted to remain the North American ION with

international participation or ION wanted to become a truly international organization. Lisa Beaty reminded Council of the other international ION's and also of the mission and purpose of IAIN.

It was the general consensus of the Council that Council wanted to remain the North American ION with international participation and international outreach programs.

**Action:** Beaty is to determine what percentage of elected ION officers can reside outside of the U.S. and still be compliant with laws in D.C. (state in which ION is incorporated) and the ION's 501(c)3 status.

Proposal Increase ION Corporate Membership Dues 2010: L. Beaty

See Attached File: [Corporate Member Dues Increase Porposal](#)

Lisa Beaty requested the Council's approval to increase ION's corporate membership dues as follows:

**Motion:** To increase the Corporate Membership Dues effective October 1, 2010. Corporate Class I will increase from \$700 per year (current rate) to \$800 per year (proposed rate) and Corporate Class II will increase from \$350 per year (current) to \$400 per year (proposed rate). Motion made by Jerry Knight, seconded by Doug Taggart and approved by the Council.

## **OTHER BUSINESS**

Newsletter Article Reminder for Technical Area Reps

ION's Technical Area Representatives were reminded that in January they were given the action to identify both new and expanding technologies and programs that have the potential for significant Institute involvement.

Technical Area Representatives were also given the action to write, or arrange for another to write, one article for the *ION Newsletter* per year that focused on their area of expertise that would be of general interest to the membership.

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The meeting adjourned at 5:10 p.m.

Additional Document Included with these Minutes:

[Southern California Section Report](#)



**PRESIDENT'S REPORT TO COUNCIL**  
**Dr. Mikel Miller, ION President**  
***May 3, 2010***

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As part of the Executive Committee's efforts to improve its day-to-day operations and over all management of the ION's resources, the Executive Committee reviewed the current structure of the National Office and reached the conclusion that the ION's current operational needs do not support continuing the Technical Director position in the National Office at this time. As a result, the Executive Committee opted to eliminate the Technical Director position from the National Office staff.

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3) Liquidation of \$140K from ION's Reserve Fund

In early March the ION Executive Committee approved a motion to transfer \$140,000 from the ION's reserve fund to our operating account.

Sincerely,

A handwritten signature in black ink, appearing to read "Mikel M. Miller". The signature is fluid and cursive, with the first name "Mikel" being the most prominent.

Dr. Mikel M. Miller  
ION President

## Proposed Amendment to The Institute of Navigation Bylaws Council Members-at-Large

Report to ION Council, 3 May 2009

### Introduction

Proposed is expansion of elected representatives of the ION Council to include members of the ION from outside of the US and Canada. This proposal, which requires amendment of the ION Bylaws, will permit more equitable representation of ION membership on the Council. Very importantly, serving as an elected member on the Council enhances the member's qualifications for future consideration and acceptance as an ION Fellow.

Based on data provided by the ION Headquarters, on 12 April 2010, the total number of active ION members was 2686, less 8 (no state or country identified) for a total of 2678.

Of the 2678 members, 1842 (68.8%) were from the US, 164 (6.1%) were from Canada, and 672 (25.1%) were from other countries.

Prepared by Chuck Bye per proposed expansion of members-at-large regions from 2 to 4, and considering 50-50 split (breakdown by province not available) for Canadian members for the two existing regions, we have the following breakdown:

Region	Number of Members	% of total Membership
Atlantic	464	17.3
Eastern US and Canada	1006	37.6
Pacific	208	7.8
Western US and Canada	1000	37.3
	2678	

If the Canadian members were shifted to be represented in the Pacific region, we would have the following breakdown:

Region	Number of Members	% of total Membership
Atlantic	464	17.3
Eastern US	924	34.5
Pacific and Canada	372	13.9
Western US	918	34.3

The breakdown in % of total membership for each region suggests that for an equitable representation, the proposed expansion of the Member-at-Large elected representatives serving on the Council, it should be: One representative for the Atlantic and Pacific Regions, and two representatives for the Eastern and Western US Regions.

NOTE: The proposed amendment in *ARTICLE V, Nomination, Election, and Removal of Officers, Section 6. Term of Office*, reflects the election of two representatives for each of the four Regions. Thus, adjustment is required if elected Regional Member-at-Large serving on the Council is as suggested in the paragraph above.

## Background

Reference ION Bylaws, **Article I Membership, Section 4. Fellow Member.** “Any individual who has made outstanding contributions to the advancement of navigation may be elected a Fellow, in one of three classes...” “.. Council may set other eligibility criteria. ...”

Reference ION Bylaws, **Article IV The Council, Section 1. Membership.** “The Council shall consist of the .. elected two members-at-large from each Region ...”

Reference ION Bylaws, **Article V Nomination, Election, and Removal of Officers, Section 1. Nominations.** “The Nominating Committee shall place in the hands of the **President** not later than September its nominations for the offices of President, Executive Vice President, Regional Vice Presidents and one Council member-at-large from each Region and each area of interest. ...”

Reference ION Bylaws, **Article V Nomination, Election, and Removal of Officers, Section 3. Voting.** “.. Each member entitled to vote may indicate a preference for all elective officers except for Regional Vice President or Council Member-at-Large from any Region other than that in which the voting member resides. ...”

Reference ION Bylaws, **Article V Nomination, Election, and Removal of Officers, Section 3. Term of Office.** “The term of office for all national officers shall be one year, except for Council Members at Large representing a Region or an area of interest for which it shall be two years, one member of each Region and area of interest being elected each year. ...” “.. Any person who has served two years or more in any capacity as a Council member shall not be eligible to be elected a Council Member-at-large for at least one year after the end of the last previous term as a Council member. ...”

Reference ION Bylaws, **Article VII Regions, Section 1. Authorization.** “Two geographic Regions shall be organized ..” Comment: The two authorized regions are limited to ION members from only the US and Canada.

Reference **Fellow Procedures approved by ION Council, June 2004.** Section **6.3 Evaluation Criteria, Secondary Factors, A.** “Level of Participation on ION Council (Positions Held). Comment: Though not explicit that “positions held” are by election, whereby the individual served as a voting member of the Council, never the less, in the compilation of background information on individuals nominated for selection as a Fellow Member, in practice this is considered an “elected” position on the Council.

## Discussion and Purpose of Proposed Bylaws Amendment

In 1999, the Fellow grade of ION Membership was proposed as an amendment to the Bylaws and was adopted by the Council. In the 11 years since 1999, nominations for selection as a Fellow included several current and former members of the ION who from a country other than the US or Canada.

In the 11 year period, none of the nominees for the Fellow grade who were not from the US or Canada, were selected by the Fellows Selection Committee. Additionally, there has been only one individual who wasn't from the US or Canada who was selected as a Honorary Fellow. In 2000, Mr. Michael W. Richey, from the UK, in recognition for numerous professional contributions in institutes of navigation organizations, was selected as an Honorary fellow.

The Bylaws and the Fellow Procedures authorizes the consideration of any individual for the Fellow grade of ION membership who has made outstanding contributions to the advancement of navigation, and is a current or former ION member in good standing.

Among the non-Canadian international current and former members of the ION who were considered qualified for nomination and consideration by the Selection Committee, these nominees could be fairly evaluated based on all primary and secondary factors for the evaluation criteria given in the Fellow Procedures, except for Secondary Factors “A.” “Level of Participation on ION Council (Positions Held).”

Under the current provisions in the Bylaws, non-Canadian international members are excluded from the possibility of being eligible for nomination as a candidate for election to serve in any office on the Council.

For example, among the nominees for selection of 2010 Fellows, two were from the non-Canadian international areas. Both individuals have or had been active in the ION conferences, had gained international recognition for their contributions in navigation science, but were at a significant disadvantage for selection as an IOPN Fellow since neither had had an opportunity to serve in an elected position on the Council.

A major consequence of not serving in a position on the Council is that it reduces the opportunity for these individuals to become well known to other ION members who are or have served in elected position or positions on the Council. The reason it is a disadvantage to not have had experience serving in a position on the Council is that when the Fellows Selection Committee are considering the nominees qualifications, the Committee must consider only the evaluation of critical factors that are outside of the individuals possible involvement on the Council.

Therefore, proposed is that the Bylaws be amended to establish two new geographic regions; an Atlantic and a Pacific region. Each of these regions will have two at-large members.

The Atlantic Region will contain the areas of Central and South America (including Mexico), Europe, Middle East, Russia and Africa.

The Pacific Region will contain the area of Asia, South Asia (west up to and including India), Australia, New Zealand, and the Pacific Islands.

## Proposed Bylaw Amendments

### ARTICLE III, Officers

**Section 4. Regional Vice Presidents.** There are two Regional Vice Presidents: one for the Eastern and Atlantic Regions, and one for the Western and Pacific Regions (in accordance with Article VII, Regions).

Each Regional Vice President shall be the chief executive officer of ~~their~~ his or her Regions. Under the direction of the Council, the Regional Vice Presidents shall exercise general supervision of the affairs of their Regions including the Sections within the Regions. The Regional Vice Presidents shall report annually to the outgoing Council on the activities of their Regions and its Sections during the preceding year.

### ARTICLE IV, The Council

**Section 1. Membership.** The Council shall consist of the President, Executive Vice President, Treasurer, Chairs of all standing committees, Regional Vice Presidents, the elected ~~two~~ members-at-large from each of the four Regions, the elected ~~two~~ members-at-large representing each area of interest, Division Chairs, Section Chairs, and all active (attended at least one Council meeting within the past three years) past Presidents. Other past Presidents are ex-officio (inactive) Council members.

## ARTICLE V Nomination, Election, and Removal of Officers

**Section 6. Term of Office.** The term of office for all national officers shall be one year, except for Council Members ~~at-Large~~ representing ~~each~~ Region (as specified in Article VII) or an area of interest for which it shall be two years, one member of each Region and area of interest being elected each year. The President shall not be eligible to serve more than two consecutive terms unless the President's first term is less than six months, then the President shall not be eligible to serve more than three consecutive terms. Vice Presidents shall not be eligible to serve in the same office for more than five consecutive terms. Any person who has served two years or more in any capacity as a Council member shall not be eligible to be elected a Council Member ~~at-Large~~ for at least one year after the end of the last previous term as a Council member. All other officers are eligible for reelection or reappointment without limitation, except as specified elsewhere. An officer shall serve until a successor takes office, the incumbent is removed from office or the position is abolished.

## ARTICLE VII, Regions

**Section 1. Authorization.** ~~Two~~Four geographical Regions shall be organized as follows:

a. Eastern US Region shall contain the US-states of AL, CT, DE, FL, GA, IL, IN, KY, MA, MD, ME, MI, MS, NC, NH, NJ, NY, OH, PA, RI, SC, TN, VA, VT, WI, WV, and the District of Columbia, and the Canadian Provinces of New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, Ontario and Quebec; the

b. Western US Region shall contain the US-states of AK, AR, AZ, CA, CO, HI, IA, ID, KS, LA, MN, MO, MT, ND, NE, NM, NV, OK, OR, SD, TX, UT, WA, and WY and the Canadian Provinces of Alberta, British Columbia, Manitoba, Saskatchewan, Yukon and the Northwest Territories;

c. Atlantic Region shall contain the areas of Central and South America (including Mexico), Europe, Russia, Middle East, and Africa; and,

d. Pacific Region shall contain the areas of Canada (all provinces), Asia, South Asia (west to and including India), Australia, New Zealand, and the Pacific Islands.

**Section 2. Organization.** ~~The A Regional Vice President will serve as the~~ chief executive officer for two of a Regions, shall be called the Regional Vice President for that Region, one for the combined Regions of Eastern US and the Atlantic and another for the combined Regions of Western US and the Pacific (as specified in Article III, Section 4). Each ~~The~~ incumbent will be both a national and regional officer, with duties and responsibilities as specified in Article III, Section ~~5~~4. The incumbent shall be elected by members of the Regions they represent as specified in Article V. All regional officers shall be residents of the Region in which they hold office.

### Ad-hoc Committee

Larry Hothem - Ad-Hoc Committee Chair  
Charles Bye - Member and Bylaws Committee Chair  
Pratap Misra - Member and Satellite Division Chair  
John Lavrakas - Member and Past President

# Corporate Membership Dues



*Motion:*

To increase the Corporate Membership Dues effective October 1, 2010 at the following rates:

<u>Class</u>	<u>From (current)</u>	<u>To</u>
Corp Class I	\$700	\$800
Corp Class II	\$350	\$400



# Dues Comparison



Organization	Location	Individual	Associate (individual "lite")	Corporate I	Corporate II	Student
Institute of Navigation	United States of America	\$75.00		\$700.00	\$350.00	\$40.00
	Canada and other non-US	\$95.00		\$700.00	\$350.00	\$60.00
IEEE	United States of America	\$175.00				\$32.00
	Canada and other non-US	\$170.42				\$31.80
Royal Institute of Navigation		£113	£53	£920	£460	£15
	(Estimated USD price based on current exchange rate 1.329)	\$150.17	\$70.43	\$1,222.68	\$611.34	\$19.93
AIAA	All	\$85.00	\$42.50	Unavailable	Unaaailable	\$20.00
International Loran Association	All	\$50.00		\$500.00	\$250	



THE WORLD'S LEADING PROFESSIONAL ORGANIZATION FOR THE  
ADVANCEMENT OF POSITIONING, NAVIGATION AND TIMING.

# Activities of the ION Southern California Section May, 2010

## **Chapter Meetings in 2010**

Our section has hosted three talks so far in 2010. We thank NavCom Technology for providing meeting rooms.

February 18, 2010. David De Lorenzo of Stanford gave a talk titled: "Trust and Authenticity of Navigation Systems". Approximately 30 people attended.

March 24, 2010. Ron Hatch of NavCom Technology gave a talk titled "Using GPS to Refute the Equivalence Principle". Approximately 28 people attended.

April 22, 2010. Kimberly Ten Pas Bell of Honeywell gave a talk titled "Required Navigation Performance – The next generation of navigation for aviation". Approximately 25 attended.

## **Treasury**

Our checking account balance as of April 23, 2010 is \$2430.45 plus we have \$90 in cash for change at the next meeting. Expenditures in 2010 include \$100 for lunch at our February 4, 2010 board meeting and \$240 for travel expenses for Dr. De Lorenzo's talk. Other expenses were limited to purchase of food for the lunch time papers.

## **Board Members**

Dr. Ray DeEsposti resigned as Treasurer due to his relocation to China Lake Naval Air Station. Len Jacobson will assume Ray's duties.

Dr. Tae Kim has joined our board as a liaison to our student sections. He will be working closely with Kevin Rudolph. Over the last several years Tae has been working with various high school groups on projects like our mini-urban challenge and hopes to help our chapter sponsor entries in ION's Mini-Urban Challenge in 2010/2011. Tae is also working with the student group at UC Riverside to make an entry in the 2010/2011 Robotic Lawn Mower Competition.

Dan Esslinger has joined our board to assist our Program Director, Jim Litton and myself to recruit speakers and help run our section meetings.

## **Student Chapters**

Our section's board voted to provide free lunches at our meetings to all student ION meetings. We have had 2 to 5 student members at each of our presentations in 2010.

Our Cal State Fullerton and UC Riverside sections are active. The section at Cal State, Pomona is currently inactive for lack of a faculty sponsor.

The UC Riverside section plans to enter the 2010/2011 robotic lawn mower competition. Prof. Jay Farrell will oversee the entry.

Our board awarded the 2009/2010 student scholarship to Anning Chen, a PhD candidate at UC Riverside. Anning and several of Prof. Farrell's grad students will present short talks about their work at UC Riverside at a section meeting in May or June, 2010.



全球华人定位导航协会  
International Association of Chinese Professionals  
in Global Positioning Systems

# CPGPS 2010 Technical Forum On Satellite Navigation and Positioning

Navigation and Location Services  
---- Emerging Industry and International Exchanges

The CPGPS 2010 Technical Forum on Satellite Navigation and Positioning will be held on August 18-20, 2010, in Shanghai, China. The theme of the conference is: Navigation and Location Services ---- Emerging Industry and International Exchanges. The Forum is jointly sponsored by CPGPS (International Association of Chinese Professionals in Global Positioning Systems), the Chinese National Remote Sensing Center, a department of the Chinese Ministry of Science and Technology, Shanghai Science and Technology Commission, Wuhan University National Engineering Research Center for Satellite Positioning Systems, the Institute of Navigation, and the International Association of Geodesy.

The Technical Forum aims to provide a platform for scientists and engineers in satellite navigation within China and in the international community and satellite navigation industries for exchanging ideas concerning new technologies, development trends, and practical applications. While it is critical for researchers and developers inside China to learn about the current GNSS international developments, overseas scholars and industries are also eager to gain insights into the state of China's current research and development in the field. We hope that the Forum will augment the much needed networking and interactions among the various entities. Furthermore, it will contribute to the development of a roadmap for the future technical advancement and application of China's satellite navigation system.

In recent years, CPGPS held several annual technical forums in Guangzhou, Wuhan, and Beijing. These forums attracted thousands of domestic and overseas experts, scholars, and industrial participants and gained wide support and recognition. Papers presented at the CPGPS2009 Forum were published in Proceedings of CPGPS2009' (ISTP). Other forum publications included two special issues of Wuhan University Journal- Geomatics and Information Science' (EI) (2008, 2009).

Internationally recognized scholars and industry leaders will be invited as guest speakers to give keynote presentations during the Forum. All papers presented will be published in a conference proceeding. Selected outstanding conference papers will be published in domestic journals and may be recommended for publication (in English) in well-recognized international journals.

The Forum calls for papers from specialists, scholars, students, and industrial participants in the field. The major topics to be presented in the Forum are listed in, but not limited to, the following titles:

## **Topic Area 1: COMPASS/GPS/GLONASS/GALILEO Satellite Navigation Systems**

1. COMPASS Satellite Navigation System and Applications
2. Coordinate Frame and Time Reference of Satellite Navigation Systems
3. Signal Structure of Satellite Navigation Systems
4. Information Processing Methods in Satellite Navigation Systems
5. GNSS Modernization
6. GALILEO System and Test Analysis
7. Compatibility and Interoperability of Multi-Mode Satellite Navigation Signals

**Topic Area 2: Satellite Navigation Augmentation Systems and Applications**

1. Space-Based and Ground-Based Augmentation Systems Design and Testing
2. Wide-Area Real-Time Precise Navigation and Positioning Systems and Techniques
3. Network RTK and CORS System Applications
4. New Product Integration and Applications

**Topic Area 3: GNSS Algorithms**

1. GNSS Data Parameter Estimation and Quality Control
2. GNSS Error Analysis, Modeling, and Model Improvements
3. Ambiguity Resolution Algorithms
4. Precise Point Positioning Algorithms
5. GNSS Reflection Signal Processing and Applications

**Topic Area 4: GNSS Atmospheric Sciences**

1. GNSS Atmospheric Inversion Algorithms
2. GNSS Atmospheric Occultation Studies
3. GNSS Ionosphere Monitoring and Analysis
4. Atmospheric Delay Models
5. GNSS Meteorological Applications

**Topic Area 5: Multi-Sensor Integration and Emerging Navigation and Location Technologies**

1. GNSS/INS Integrated Navigation Techniques
2. Attitude Estimation
3. POS Systems and Applications
4. Airborne/Vehicle Navigation Systems Technologies
5. Geomagnetic Navigation Technologies
6. Bio-navigation Technologies
7. Quantum Navigation Technologies

**Topic Area 6: GNSS Applications in Engineering Measurements, Geodetic Surveying, and Geodynamics**

1. Geodetic Reference Systems and Frames
2. Satellite Gravity Measurements
3. Precise Engineering Measurements
4. GNSS in Control Engineering and Construction Machineries
5. Deformation Monitoring
6. Vertical Datum Connection and Precise Geoid
7. Seismic Monitoring

**Topic Area 7: GNSS/INSAR Fusion**

1. INSAR Data Processing Techniques
2. GNSS/INSAR Joint Deformation Monitoring Techniques

**Topic Area 8: GNSS Receiver Technologies**

1. GNSS RF Chip Design Technologies
2. GNSS Baseband Design and Digital Signal Processing Techniques
3. Receiver Embedded Baseband Control and Navigation Positioning Algorithms
4. Receiver Performance Testing
5. Software Receiver Techniques
6. High-Performance Multi-Mode Receiver Techniques

**Topic Area 9: Location Services**

1. Mobile Communication and GNSS Fusion
2. Navigation and Location Services Software Systems
3. Indoor Positioning
4. Navigation and Positioning and the Internet Technology

## **PAPER SUBMISSIONS:**

The Forum welcomes submission of original research papers in English or in Chinese. The paper submission follows a two-stage process: an abstract between 300 and 800 words summarizing your work should be submitted first, followed by the full paper submission. Both abstract and full paper should be prepared in Microsoft Word (PC version). Please submit your electronic documents via E-mail to one of the two following correspondents:

Jin Hong: [jhong811@126.com](mailto:jhong811@126.com)  
Chen Yating : [chenyating2009@163.com](mailto:chenyating2009@163.com)

**The Deadline for abstract submission is: June 1, 2010**

**The Deadline for paper submission is: July 15, 2010**

### **Abstract Submission Details:**

- Must contain the title of the paper, the author's names (family name comes first). The name of the presenter must be underlined.
- Must include the corresponding author contact information: professional affiliation, work address, telephone, fax, and E-mail address.
- The paper has not been published in another source.
- The paper can be submitted in either Chinese or English.
- Must be between 300 and 500 words.

### **Full Paper Submission Details:**

- The paper must follow the format described by ISTP (see the attached document).
- Paper publication classification:

Papers submitted in English should follow the ISTP format and may be recommended for publication in relevant international periodicals.

Papers submitted in Chinese should conform to both ISTP and EI source journals Format.

Paper evaluations will be performed by a selected group of experts in the field. Accepted papers will be published in domestic journals for EI and ISTP proceedings. Exceptional quality papers written in English will be recommended to international periodicals in the GNSS field.

## **CONFERENCE TIME AND VENUE**

This forum will take place on August 18-20, 2010, in Shanghai (the specific venue will be announced soon).

## **CONTACT INFORMATION**

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## **IMPORTANT DATES**

Abstract Due Date	June 1, 2010
Abstract Notification Date	July 1, 2010
Full Paper Due Date	July 15, 2010
Conference Dates	August 18-20, 2010