

**MINUTES OF THE
OUTGOING COUNCIL MEETING
(January 26, 2014)**

Subject to the approval of the ION Council, the following minutes are submitted. The Council Meeting was called to order on January 26, 2014 at the Catamaran Hotel, San Diego, CA at 1:00 p.m. Those present were:

VOTING COUNCIL MEMBERS:

<u>Name</u>	<u>Outgoing Office Held</u>	<u>Incoming Office Held</u>
Patricia Doherty	President	President
Dorota Brzezinska	Executive VP	Executive VP
Frank van Graas	Treasurer, Past President	Treasurer, Past President
Jan Anszperger	Eastern Region VP	Eastern Region VP
Todd Walter	Immediate Past President	Immediate Past President
• Sherman Lo (proxy)	Western Region VP	Western Region VP
Jade Morton	Satellite Division Chair	Satellite Division Chair
Young Lee	Eastern Council M-at-L	Eastern Council M-at-L
Steve Rounds	Western Council M-at-L/Section Chr	Western Council M-at-L/Section Chr
Terry Moore	Air Representative	Air Representative
• Alan Grant (proxy)	Marine Representative	Marine Representative
John Nielson	Space Rep.	Space Rep.
Richard Hartnett	Marine Rep.	Marine Rep.
Paul Benshoof	NM Section Chair	NM Section Chair
Doug Taggart	Meetings Chair	Meetings Chair
John Clark	Finance Chair	Finance Chair
Neil Gerein	Bylaws Chair	Western M-at-L
Richard Greenspan	Past President	Past President
Chris Hegarty	Past President	Past President
Larry Hothem	Past President	Past President
Karen Van Dyke	Past President	Past President
Phil Ward	Past President	Past President

VOTING MEMBERS AT INCOMING COUNCIL:

<u>Name</u>	<u>Incoming Position</u>
Dana Goward	Marine Rep.
Michael Meurer	Air Rep.
Megan Mitchell	Space Rep.
Logan Scott	Land Rep.

NON-VOTING PARTICIPANTS:

<u>Name</u>	<u>Outgoing Position Held</u>	<u>Incoming Position Held</u>
Lisa Beaty	Executive Director	Executive Director
Frank Czopek		
Sanjeev Gunawardena		
Tim Murphy		
Mitch Narins		

It was determined that a quorum was achieved.

AGENDA

See Attached File: [Agenda – January 2014](#)

Approve September 16, 2013 Council Meeting Minutes: P. Doherty

Motion: Council ratifies the e-mail approval of the September 16, 2013 Council Meeting Minutes that were approved in October 2013. Motion made by Steve Rounds, seconded by Todd Walter and passed by Council.

President's Report: P. Doherty

See Attached File: [Presidents Report 1-26-14](#)

Motion: The ION co-locates ION's ITM and PTTI meetings in January 2016 and January 2017, in California, at an appropriate venue (TBD). Motion made by Doug Taggart, seconded Phil Ward and passed by Council.

Motion: Council approves the Satellite Division's change to the Kepler Award Guidelines that adds "the nominee's contributions to the intellectual content of the ION's meetings and/or the ION's journal *NAVIGATION*" as part of the evaluation criteria. Motion made by John Clark, seconded Todd Walter and passed by Council.

Executive VP Report: D. Brzezinska

See Attached File: [Exec VP Report ITM Program Proposal Council](#)

Dorota Brzezinska, Executive VP and Chair of the ION's Technical Committee, was given the action to review the abstract/paper review guidelines for ITM at the September 2013 Council Meeting, with the goal of improving the quality of the ION's most academically focused meeting.

The Technical Committee proposed that the ITM program require a full technical paper review for the final determination of which papers are allocated to a primary vs. an alternate presentation slot in the onsite program, and to ensure a consistent high quality in the published proceedings. The goals of the full paper review are to:

1. differentiate between primary vs. alternate papers;
2. ensure a minimal quality standard is met; and
3. ensure the papers contain new and significant information to justify publication.

The details of how this would be accomplished, additional requirements of the meeting's program chair and session chairs, and proposed changes to ITM's meeting calendar were reviewed. While the proposal suggested that academics be designated as future ITM program chairs, Council agreed that ITM program chairs need only be sufficiently technical and not necessarily an academic.

Motion: The Council endorses and authorizes the implements the Technical Committee's review of ITM technical program and their recommendation for full paper reviews for ITM 2015. Council noted that future program chairs do not need to be academics but only a qualified technical professional. Motion made by Frank van Graas, seconded by Dorota Brzezinska and passed by Council.

Eastern Region VP Report: J. Anzperger

No report.

Western Region VP Report: S. Lo

No report.

Nominating Committee Report/Election Results: T. Walter

Todd Walter, Nominating Chair, reported that the committee had consisted of: Todd Walter (Chair); James Doherty, Karen Van Dyke, and Charles Schue from the Eastern Region and Ronald Hatch, Phil Ward, and Stephen Rounds from the Western Region.

The committee had opted to follow the precedent set for the past four years and run the Executive Committee unopposed for a second term. The committee's 2014 officer nominations were as follows:

President:

Ms. Patricia Doherty, Boston College

Executive Vice President:

Dr. Dorota Grejner-Brzezinska, The Ohio State University

Treasurer:

Dr. Frank van Graas, Ohio University

Eastern Region Vice President:

Mr. Jan Anzperger, C.S. Draper Laboratory

Western Region Vice President:

Dr. Sherman Lo, Stanford University

Eastern Council Member-at-Large:

Dr. R. James Duckworth, Worcester Polytechnic Institute

Dr. Jason Rife, Tufts University

Western Council Member-at-Large:

Ms. Berni Ai-Kuo (withdrew)

Mr. Neil Gerein, NovAtel Inc., Canada

Air Representative:

Dr. Philip Mattos, STMicroelectronics, UK

Dr. Michael Meurer, German Aerospace Center, Germany

Land Representative:

Dr. David De Lorenzo, Polaris Wireless

Mr. Logan Scott, Logan Scott Consulting

Marine Representative:

Mr. Dana Goward, Resilient Navigation and Timing Foundation

Dr. Peter Swaszek, U.S. Coast Guard Academy

Space Representative:
Mr. Don Jewell, GPS World
Ms. Megan Mitchell, Draper Laboratory

The 2014 elected officers are as follows:

President:	Ms. Patricia Doherty
Executive Vice President:	Dr. Dorota Grejner-Brzezinska
Treasurer:	Dr. Frank van Graas
Eastern Region Vice President:	Mr. Jan Anszperger
Western Region Vice President:	Dr. Sherman Lo
Eastern Council Member-at-Large:	Dr. Jason Rife
Western Council Member-at-Large:	Mr. Neil Gerein
Space Representative:	Ms. Megan Mitchell
Air Representative:	Dr. Michael Meurer
Land Representative:	Mr. Logan Scott
Marine Representative:	Mr. Dana Goward

Council was asked to approve membership of the 2015 Nominating Committee as follows:

Chair:	Dr. Todd Walter
Eastern Region:	James Doherty, Karen Van Dyke, and Charles Schue
Western Region:	Ronald Hatch, Phil Ward, and Stephen Rounds

Motion: Council approves the following as the 2015 Nominating Committee membership: Todd Walter (Chair); James Doherty, Doug Taggart, and Pratap Misra from the Eastern Region and Ronald Hatch, Penny Axelrad, and Mark Petovello from the Western Region.
Motion made by Todd Walter, seconded Jan Anszperger and passed by Council.

Dr. Walter noted that, at some point, the Council should revisit a proposed modification to the bylaws to formalize the two year term for members of the Executive Committee.

Annual Awards Committee Report: P. Axlerad

It was reported that the 2013 Awards Committee consisted of: Dr. Penina Axelrad (Chair), Patrick Reddan, Mitch Narrins, Dr. Dennis Akos, Ron Hatch, Glen Lightsey and Dr. John Raquet.

The committee selected the following as the recipients of The Institute of Navigation's six annual awards.

Early Achievement Award:	Dr. Jacques Georgy
Norman P. Hays Award:	Is not being given due to lack of nominations.
Superior Achievement Award:	Capt. Alexander Dufault (USAF)
P.V.H. Weems Award:	Dr. Mikel Miller
Tycho Brahe Award:	Dr. Mark Psiaki
Thomas L. Thurlow Award:	Dr. Yu (Jade) Morton

Burka Award (selected by the editor and associated editors of *NAVIGATION*):
Dr. Young C. Lee, for his paper "New Advanced RAIM with Improved Availability

for Detecting Constellation Wide Faults, Using Two Independent Constellations” published in the Spring 2013 issue of *NAVIGATION, Journal of The Institute of Navigation*, Vol. 60, No. 1, pp. 71-83.

The Annual Award Selection Committee’s selections were approved by the ION Executive Committee by e-mail vote in November 2013.

Motion: Council ratifies the approved 2013 Annual Awards recipients as outlined above.
Motion made by Terry Moore, seconded by Todd Walter and passed by Council.

Fellow Selection Committee Report: P. Misra

It was reported that the 2014 Fellow Selection Committee consisted of: Dr. Pratap Misra (Chair), Dr. Michael Braasch, Dr. Duncan Cox, Dr. Per Enge, Patrick Fenton and Dr. Gerald Lachapelle.

The 2014 Fellow Selection Committee had recommended the following for Fellow membership:

Dr. Mark Psiaki: For contributions to GNSS signal processing, software receivers, ionospheric scintillation modeling and for satellite orbit and attitude determination.

Mr. Logan Scott: For contributions to GNSS signal processing, anti-jam antennas, anti-spoofing measures and crowd sourcing to locate jammers.

Prof. Peter Teunissen: For invention of the LAMBDA method, the current standard for integer ambiguity resolution in GNSS carrier phase measurements, and for reliability theory of integer estimation.

It was noted that all three selected 2014 Fellows received four (2/3) or more votes; the ION National Office verified all eligibility requirements of the nominators and the candidates; and the Fellow Committee’s selections were approved by the ION Executive Committee by e-mail vote in November 2013.

Motion: Council elects Mark Psiaki, Logan Scott and Peter Teunissen as the ION’s 2014 Fellows. Motion made by Phil Ward, seconded by Doug Taggart and passed by Council.

Publication/Editor’s Report: B. Pervan

See Attached File: [Editors Report \(pending receipt\)](#)

Meetings Report: D. Taggart

Doug Taggart, Meetings Chair, reported that he had spent the majority of the past year working with the National Office and the Industry Advisory Committee that was created last January.

See Attached File: [Meetings Report Industry Advisory Committee](#)

Membership Report: C. Bye

See Attached Files: [Membership Report Jan 2014](#)

Treasurer's Report: F. van Graas

- Budget Approval FY 2014-'15
- Status of ION's Investments/Reserve Fund Calculations
- Council Approval of Auditor for FY 2013-'14 Audit
- Distribution & Collection of 2014 Conflict of Interest Disclosures

See Attached Files: [Budget Presentation 2014-15](#)
[Budget 2014-15](#)

Frank van Graas, Treasurer, reviewed the budgeting process. It was noted that Lisa Beaty had sent a draft copy of the proposed 2014-'15 Budget to Executive Committee, Finance Chair, ION Treasurer and Satellite Division Treasurer for review in November 2013. The Executive Committee had then approved the 2014-'15 Budget for formal presentation to Council in January 2014.

It was noted that in the proposed 2014-15 Budget:

- There were no proposed increases in registration fees for ION GNSS+, JNC or ITM. PLANS registration fees were set and approved by ION and IEEE in 2013 during the PLANS budgeting process. PTTI registration fees would increase in 2014 to the same rates as the ITM meeting.
- There was no proposed increase in membership rates. (Last dues increase was in 2005.)
- Government Fellows Program would require Executive Committee action to authorize expenditure of reserve funds.
- Satellite Division and Military Division expenses include the rebates/commissions to the Divisions for Division meetings. The meeting commissions are included as expenses to the National organization as these funds are restricted for Division purposes. Satellite and Military Division expenses are for informational purposes only. Divisions retain autonomy to expend their funds separate from the national organization.

Motion: Council approves the 2014-'15 National Budget as submitted. Motion made by Pat Doherty, seconded by Doug Taggart and passed by all Council.

Motion: Council approves CliftonLarsonAllen, CPA's, to conduct ION's FY 2013-'14 audit and prepare draft 990's. Motion made by John Clark, seconded by Steve Rounds and passed by all Council.

Motion: Council approves the following cash management transfers: 1) \$300K transfer from ION's cash/operating accounts to the Long Term Investment Fund in six monthly installments of \$50K each and 2) \$300K transfer from ION's short term investment fund to the Long Term Investment Fun in six monthly installments of \$50K each. Motion made by John Clark, seconded by Steve Rounds and passed by all Council.

Conflict of Interest Disclosures for 2014: Frank van Graas reviewed the Conflict of Interest Disclosure Form and requested Council members present complete the form and submit it prior to the end of the Council meeting. See Attached File: [Conflict of Interest Disclosure Form 2014](#)

Proposal to Establish GNSS Software Radio Metadata Standards: S. Gunawardena

See Attached Files: [SDRStandardPresentation](#)
[SoftwareDefinedRadioTermsReference_012614](#)

Dr. Sanjeev Gunawardena reported that he had approached the ION's Satellite Division Chair in September with a proposal for ION to establish an Exchange of GNSS Software Radio Metadata Standard; with the goal of ensuring compatibility and interoperability of future SDR systems. Specifically Dr. Gunawardena requested that ION:

1. Endorse the proposal to establish a formal standard for the exchange of GNSS software radio metadata;
2. accept the risk to the organization; and
3. approve funds required for the legal review of all documentation related to the standard setting processes.

It was noted that while standards setting is common to technical organizations, the ION has only established one standard in the past (GPS Receiver Test Standard lead by Stewart Teasley in the late 1990's). Because an ION standard requires Council endorsement, formal review of the proposal was deferred to this Council meeting.

Dr. Gunawardena was asked to provide plans that:

- Establish the objective for a GNSS Software Radio Metadata Standard.
- Provide terms of reference for the committee. Specify commercial or economic considerations.
- Clarify whether this will be a formal voluntary standard endorsed by ION vs. an informal voluntary standard endorsed by software radio experts.
- Provide a list of proposed members for the standards committee to include qualified representatives from academia, industry and government.
- Outline the standards setting process to include public comment and review procedure that would be taken; and outside steps taken to ensure objectivity and lack of bias. Provide a plan to document the process.
- Provide a summary of risk, liability and cost to ION.

Tim Murphy suggested that the ION look to IEEE to see if there is already an effort underway to accomplish a GNSS Software Radio Data Standard.

Chris Hegarty suggested that Gunawardena look at IEEE's policies regarding IP in their standards development activities as there had been recent problems with standards progressing for long periods of time before it was determined that one or more parties held patents that would require licensing for others to implement the standards. See: <http://standards.ieee.org/faqs/patents.pdf>.

Hegarty further reported that RTCA was moving towards instituting a similar "call for patents" in its working groups. RTCA has long had a policy that states that standards should not include proprietary material unless: (1) it is demonstrated as absolutely necessary (e.g., standards for Inmarsat SATCOM need to reference proprietary Inmarsat standards), and (2) that their inclusion doesn't involve any biased pecuniary interests.

Motion: Council provides approval for the Exchange of GNSS Software Radio Metadata Standard Committee led by Dr. Sanjeev Gunawardena who will organize a working group with the goal of establishing a formal ION standard for the exchange of GNSS software radio metadata. The Executive Committee shall review Dr. Gunawardena's proposed Exchange of GNSS Software Radio Metadata Standard Working Group membership and documented process he intends to follow prior to materials being reviewed by ION's legal counsel. Council appropriates funds for the required legal review of all documentation

related to the standards development process up to \$10,000 with further funding need to be approved by the Executive Committee. Motion made by Frank van Graas, seconded by John Clark and passed by Council.

Appointment ITM 2015 Program Chair: P. Doherty

Pat Doherty advised Council that Dr. Jason Rife had been appointed as the ITM 2015 Program Chair.

Motion: Executive Committee approves Dr. Jason Rife as the ITM 2015 Program Chair. Motion made by Pat Doherty, seconded by Frank van Graas and approved by the Council.



MINUTES OF THE
INCOMING COUNCIL
(January 26, 2014)

Appointment Standing and Ad Hoc Committee Chairs: P. Doherty

Patricia Doherty, incoming president, congratulated all incoming members of Council and presented the following committee chair names to Council for approval:

Standing Committee Chairs:

Nominating:	Todd Walter
Finance:	John Clark
Membership:	Chuck Bye
Fellow Selection:	Pratap Misra
Technical Committees:	Dorota Brzezinska
Publications:	Boris Pervan
Meetings:	Doug Taggart
Awards Selection:	Penny Axelrad
Bylaws:	Gary McGraw
Outreach:	Mikel Miller

Ad Hoc Committee Chairs:

Editor:	Boris Pervan
New Initiatives:	Todd Walter
Strategic Planning:	Dorota Brzezinska
Historian:	Marvin May
Government Fellows:	Clark Cohen

Motion: Council approves all committee chairs as listed above. Motion made by Todd Walter, seconded by Karen Van Dyke and passed by the Council.

Approval 2014 Annual Awards Chair & Committee: P. Doherty

Motion: Council approves the following as members of the 2014 Annual Awards Committee: Penny Axelrad (Chair), Patrick Reddan, John Raquet, Karen Van Dyke, Jan Anzperger, Gerard Lachapelle and Larry Hothem. Motion made By Doug Taggart, seconded by Richard Greenspan passed by Council.

Approval 2015 Fellows Committee Chair & Committee: P. Doherty

Motion: Council approves the following as members of the 2015 Fellows Committee: Dr. Pratap Misra (Chair), Dorota Grejner-Brzezinska, James Doherty, Guenter Hein, Marvin May, Chris Rizos and Tom Stansell. Motion made by Phil Ward, seconded by Doug Taggart and passed by Council.

Approval 2015 Nominating Committee Chair & Committee: P. Doherty

Motion: Council approves the following as the 2015 Nominating Committee membership: Todd Walter (Chair); James Doherty, Doug Taggart, and Pratap Misra from the Eastern Region and Ronald Hatch, Penny Axelrad, and Mark Petovello from the Western Region. Motion made by Todd Walter, seconded Jan Anzperger and passed by Council.

NEW BUSINESS

The meeting adjourned at 5:00 p.m.

Additional Documents Included with these Minutes:

[New Mexico Section Report](#)
[Council Directory 2014.doc](#) (for Contact Listing of Current Council Officers)
[Calendar 2014.pdf](#)