Subject to the approval of the ION Council, the following minutes are submitted. The Council meeting was called to order on January 25, 2016 at the Hyatt Monterey in Monterey, California at 5:30 p.m. Those present were:

**VOTING COUNCIL MEMBERS:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Office Held</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dorota Grejner-Brzezinska</td>
<td>President</td>
</tr>
<tr>
<td>John Raquet</td>
<td>Executive VP</td>
</tr>
<tr>
<td>Frank van Graas</td>
<td>Treasurer</td>
</tr>
<tr>
<td>Mike Veth</td>
<td>Eastern Region VP</td>
</tr>
<tr>
<td>Greg Turetzky</td>
<td>Western Region VP</td>
</tr>
<tr>
<td>John Betz</td>
<td>Satellite Division Chair</td>
</tr>
<tr>
<td>Jan Anszperger</td>
<td>Military Division Chair</td>
</tr>
<tr>
<td>Jason Rife</td>
<td>Eastern Council M-at-L</td>
</tr>
<tr>
<td>John Nielson</td>
<td>Western Council M-at-L</td>
</tr>
<tr>
<td>Neil Gerein</td>
<td>Western Council M-at-L</td>
</tr>
<tr>
<td>Michael Meurer</td>
<td>Air Representative</td>
</tr>
<tr>
<td>Megan Mitchell</td>
<td>Space Representative</td>
</tr>
<tr>
<td>Zainab Syed</td>
<td>Land Representative</td>
</tr>
<tr>
<td>Logan Scott</td>
<td>Land Representative</td>
</tr>
<tr>
<td>Paul Benshoof</td>
<td>NM Section Chair</td>
</tr>
<tr>
<td>Steve Rounds</td>
<td>Southern CA Section Chair</td>
</tr>
<tr>
<td>John Clark</td>
<td>Finance Chair</td>
</tr>
<tr>
<td>Tim Murphy</td>
<td>Membership Chair</td>
</tr>
<tr>
<td>Gary McGraw</td>
<td>Bylaws Chair</td>
</tr>
<tr>
<td>Terry Moore</td>
<td>Awards Chair</td>
</tr>
<tr>
<td>Patricia Doherty</td>
<td>Past President</td>
</tr>
<tr>
<td>Chris Hegarty</td>
<td>Past President</td>
</tr>
<tr>
<td>Mikel Miller</td>
<td>Past President</td>
</tr>
</tbody>
</table>

**NON-VOTING PARTICIPANTS:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jade Morton</td>
<td>Pacific Rim Collaboration</td>
</tr>
<tr>
<td>Sanjeev Gunawardena</td>
<td>SDR Metadata Standard Working Group Chair</td>
</tr>
<tr>
<td>Lisa Beaty</td>
<td>Executive Director</td>
</tr>
</tbody>
</table>

It was determined that a quorum was achieved.

**AGENDA**

See Attached File: Agenda – January 2016
Approve September 15, 2015 Council Meeting Minutes: D. Brzezinska

Motion: Council approves the September 15, 2015 Council meeting minutes as circulated. Motion made by John Clark, seconded by Steve Rounds and passed by the Council.

President's Report: D. Brzezinska

See Attached File: Presidents Report 1-25-16

Proposed Code of Ethics:

Brzezinska reported that during September’s combined Executive Committee/Strategic Planning meeting, Chris Hegarty accepted an action to propose a concise Code of Ethics for ION Council’s consideration. Hegarty had provided an advance draft to the Executive Committee for review in December 2015 and a copy was being provided to Council at this time for review with the intent for a final code of ethics to be adopted at the September Council meeting.

See Attached File: Code of Ethics – Proposed 31Dec15

Action: Council was instructed to review the distributed code of ethics and provide any comments to Lisa Beaty prior to March 31 for distribution to Council.

Executive VP/Strategic Planning Report: J. Raquet

John Raquet, Executive VP and Strategic Planning Chair, reported that this past year he had been working primarily on the Strategic Plan; this included updating the plan itself, the Women in PNT program previously covered in the president’s report, and two new initiatives – an autonomy workshop and a senior design project.

Strategic Plan:

See Attached File: Strategic Plan Updated 12-4-15

Autonomy Workshop:

This proposed new conference, “Autonomy 2016”, will bring together autonomy researchers and developers from industry, academia, and government for a technical interchange regarding a wide spectrum of autonomy-related topics, including autonomous vehicles and robotics, human-machine interaction, multi-agent teaming, machine perception, machine reasoning, and machine learning. This conference would be unique in that it would not focus on any one particular aspect of autonomy, but instead cover all aspects of autonomy in a single venue. In addition to conference keynote speakers, the sessions will begin with keynote addresses from well-known experts in their respective fields.

Mike Veth, from ION, and Kris Kerns, from AFRL, will lead the technical program; sample sessions would include machine intelligence, deep learning and robotic systems.
Senior Design Project:
It was reported that during a recent ION Strategic Planning meeting, the feasibility of a new initiative for a volunteer committee to organize and supervise PNT-related senior design projects was discussed. It was reported that if ION were to adopt such a program, it would begin with US universities, with the potential to expand to international universities at a later date if appropriate. Raquet reported that he would be chairing an informal strategizing session with invited academics during ITM/PTTI to:

1. Determine the value of ION-sponsored senior design projects.
2. Determine the timeline/requirements for senior design projects.
3. Determine the scope of support such an initiative would require.

Eastern Region VP Report: M. Veth

Veth reported there were currently three active sections in the Eastern Region. The New England Section was holding regular meetings and had recently held officer elections; Keith McDonald of MITRE had been elected as the new section chair. The DC Section was meeting regularly and had its next meeting scheduled for February. The Dayton Section remains active and currently looking for ways to spend their budget surplus. It was suggested that the section provide team funding for local academic competitions.

Western Region VP Report: G. Turetzky

Turetzky reported that the Alberta, Southern California, Northern California and North Star sections were all active; with the North Star Section hosting the Snowplow Competition at the end of that week. It was reported that the Colorado Section was inactive and the New Mexico Section’s activities were currently limited to working on exhibits in New Mexico museums. Paul Benshoof, New Mexico Section Chair, reported to Council that the New Mexico Museum had invited his working group back to organize a GPS exhibit, specifically on GPS military receivers, and asked anyone who had access to equipment and would like to donate it to the Museum’s exhibit to please contact him.

Action: The Strategic Planning Committee add section activities to their discussions, specifically activities the ION would like to see the sections engage in.

Annual Awards Committee Report: T. Moore

See Attached File: Annual Awards Committee Report 2015

It was reported that the 2015 Awards Committee was comprised of: Prof. Terry Moore (Chair), Dr. Penina Axelrad, Pat Fenton, Glen Gibbons, Mikel Miller, Mitch Narins and Dr. Martin Unwin.

The committee selected the following as their recommendations of the proposed recipients of The Institute of Navigation’s Annual Awards.

Early Achievement: Dr. Alexander Trusov, Northrop Grumman
Superior Achievement: Captain Nicholas Ryal, USAF
P.V.H. Weems: Dr. Inder Gupta, The Ohio State University
Tycho Brahe: Dr. James Garrison, Perdue University
Norman P. Hayes: Carolyn McDonald, NavtechGPS
Thomas L. Thurlow: Tim Murphy, The Boeing Company

Burka Award: (Selected by the editor and associated editors of NAVIGATION):

It was reported that the Annual Award Selection Committee’s recommendations were approved by the ION Executive Committee, by e-mail vote, in November 2015. The Annual Award Selection Committee asked the Council to ratify the 2015 ION Annual Award selections with the following motion:

Motion: Council ratifies the recommendation of the Annual Awards Committee of the proposed recipients of the 2015 Annual Awards, as outlined above. Motion made by Terry Moore, seconded Gary McGraw and passed by the Council.

Dr. Moore reported that the following had been invited to serve on the 2016 Annual Awards Committee: Prof. Terry Moore (Chair), Pat Fenton, Glen Gibbons, Dr. Allison Kealy, Dr. Mikel Miller, Mitch Narins and Dr. Martin Unwin.

Motion: Council approves the membership of the 2016 Annual Awards Committee as follows: Prof. Terry Moore (Chair), Pat Fenton, Glen Gibbons, Dr. Allison Kealy, Dr. Mikel Miller, Mitch Narins and Dr. Martin Unwin. Motion made by Dorota Brzezinska, seconded by Greg Turetzky and passed by the Council.

Fellow Selection Committee Report: P. Misra

See Attached File: Fellow Committee Report 2016
The 2016 Fellows Selection Committee consisted of: Dr. Pratap Misra (Chair), Dr. Alan Evans, Dr. Chris Hegarty, Dr. Richard Langley, Dr. Boris Pervan, Logan Scott and Karen Van Dyke.

The Committee elected the following to become Fellows:

Dr. Anthea J. Coster: For contributions to the development of global GPS TEC database; and for utilizing GPS measurements for ionospheric and space weather studies.

Karl Kovach: For significant contributions to the development of GPS, its signals, interface specifications and performance standards.

Dr. Gary McGraw: For sustained contributions to the development of high-accuracy and high-integrity Positioning Navigation, and Timing technologies for a variety of military and civil aviation applications.
The ION National Office verified all eligibility requirements of the nominators and the candidates. All three selected 2016 Fellows received four (2/3) or more votes. The Fellow Selection Committee’s selections were approved by the ION Executive Committee by e-mail vote in November 2015. The Fellow Selection Committee respectfully asks the Council to ratify the 2016 Fellow selections with the following motion:

Motion: Council ratifies the approved 2016 Fellows as outlined above. Motion made by Dorota Brzezinska, seconded John Neilson by and passed by Council.

It was reported that members of the 2016 Fellows Committee had agreed to serve a second term and Council was asked to approve the committee as follows:

Motion: Council approves the following as members of the 2017 Fellows Committee: Pratap Misra (Chair), Alan Evans, Chris Hegarty, Richard Langley, Boris Pervan, Logan Scott and Karen Van Dyke. Motion made by Dorota Brzezinska, seconded by Jason Rife and passed by the Council.

Publication/Editor’s Report: B. Pervan

It was reported that the ION Executive Committee had passed the following motion during their September 2015 Executive Committee meeting: “The Executive Committee agrees ION should begin to assert the ION’s right of “first publication” of the paper throughout the world for conference papers published in ION proceedings and hold right of first refusal for six months from the date of conference presentation. Motion made by Frank van Graas, seconded by John Raquet and passed by the Executive Committee.”

It was noted that ION has begun to assert this right to conference papers now that NAVIGATION is ISI indexed. The associate editors of NAVIGATION have also been made aware of this, and the language on the ION’s copyright release form has been strengthened to make this clearer.

Nominating Committee Approval 2017-2018: P. Doherty

Patricia Doherty, Nominating Chair, reported that the 2017-2018 Nominating Committee consisted of Patricia Doherty (Chair), Mikel Miller, Chris Hegarty and Karen Van Dyke from the Eastern Region; and Todd Walter, John Lavrakas and John Clark from the Western Region.

Motion: Council approves the following as members of the 2017 Nominating Committee: Patricia Doherty (Chair), Mikel Miller, Chris Hegarty and Karen Van Dyke from the Eastern Region; and Todd Walter, John Lavrakas and John Clark from the Western Region. Motion made by Pat Doherty, seconded by Gary McGraw and passed by the Council.

Treasurer’s Report: F. van Graas

See Attached Files:  Treasurer’s Report Jan 2016 Council Conflict of Interest Disclosure Form 2016

Dr. Frank van Graas, Treasurer, reported on the following:
Audit:

See Attached Files:  
- Audited Financial Statements 3.31.15
- Auditor Governance Communication Letter 3.31.15
- Auditor Internal Communication and Management Letter 3.31.15

MOTION: The Council ratifies the ION Executive Committee’s action and approves the FY 2014-'15 Audited Financial Statements, Governance Communication and Management Letters as circulated. Motion made by Frank van Graas, seconded by John Clark and passed by the Council.

MOTION: Council approves CliftonLarsonAllen, CPA’s for ION’s FY 2015-'16 audit. Motion made by Frank van Graas, seconded by John Clark and passed by the Council.

Reserve Fund Formula:

It was reported that in September 2014 the Finance Chair and Treasurer were given the action to work with the Executive Director and make a recommendation to the Executive Committee on an updated Reserve Fund Formula, based on current operations and cash flow needs that would continue to provide financial stability and ensure the future vitality of ION. In September 2015, the Executive Committee approved a change to the reserve fund formula; and authorized $300K to be transferred from operating accounts to reserve funds.

See Attached File: Reserve Fund Formula Approved 9-15-15

Budget FY 2016-'17:

See Attached File: Budget 2016-17

MOTION: Council approves the 2016-'17 budget as submitted. Motion made by Frank van Graas, seconded by John Clark and passed by the Council.

SDR Metadata Standard Report: S. Gunawardena

See Attached File: SDRWG-Report-2016_01_25

Appointment ITM 2017 and PTTI 2017 Program Chairs: D. Brzezinska

Dorota Brzezinska advised Council that Dr. Andre Hauschild (German Aerospace Center) had been appointed as the ITM 2017 program chair and Michael Lombardi had been appointed as the PTTI 2017 program chair.
NEW BUSINESS

Zainab Syed noted that she had recently reviewed the ION’s Strategic Plan and noted that one of the ION’s objectives was to increase the public’s awareness. She asked Council if it was a goal to increase the public’s awareness of ION as an organization or of PNT generally and illustrated some examples of public awareness campaigns of which she had taken note of recently (for example airport advertising campaigns etc.). It was the consensus of Council that it was not the goal of ION to make the public aware of the organization generally, but rather to make those involved in the PNT industry specifically aware of ION.

There was also some discussion about whether or not ION should host a job board as a member service. Beaty reported that ION had hosted a job board in the past for members but it was very difficult to keep current/time sensitive and there had been so little demand for it as to render it ineffective.

The meeting was adjourned at 7:35 p.m.

Additional Documents Included with these Minutes:

2016 Calendar