

**MINUTES OF THE  
SATELLITE DIVISION EXECUTIVE COMMITTEE MEETING  
(September 18, 2015)**

Subject to the approval of the ION Satellite Division Executive Committee, the following minutes are submitted. The Satellite Division Executive Committee Meeting was called to order on 18 September 2015, at the Marriott Waterside Hotel, Tampa Bay, Florida at 6:30 p.m. Those present were:

**VOTING COMMITTEE MEMBERS:**

John Betz	Satellite Division Chair
Frank van Diggelen	Vice Chair
Doug Taggart	Secretary
Grace Gao	Treasurer
Jade Morton	Immediate Past Chair
Terry Moore	European Technical Advisor
Allison Kealy	Pacific Technical Advisor
Dorota Brzezinska	ION President

**NON-VOTING PARTICIPANTS:**

Gary McGraw, ION GNSS+ 2015 Program Chair  
Jose Angel Avila Rodriguez, Technical Representative  
Neil Gerein, ION GNSS+ 2016 Program Co-Chair (Applications and Advances Tracks)  
Sherman Lo, ION GNSS+ 2016 Program Co-Chair (Research and Innovation Tracks)  
Lisa Beaty, ION Executive Director

**AGENDA**

1. Document Motions Approved by Email: J. Betz
2. Updates on Actions Taken Since Last Meeting
  - a. Change Exhibit Policy for 2016 that Permits Direct Sales from Exhibit Floor
  - b. Miami, Florida Approved as Location for ION GNSS+ 2018 and 2019
3. Lessons Learned 2015 Technical Program & Recommendations for 2016: G. McGraw
  - a. Do Peer Reviewed Papers Increase Quality? Report from Sub-Committee Looking at Peer Reviewed Sessions GNSS (van Diggelen)
  - b. How to Increase Commercial Involvement
  - c. Adding UAV Sessions/Demos
  - d. How to Identify New Exhibitors
  - e. Compensating Lost Revenue Shrinking Exhibit Hall
  - f. Celebrating 30 Years of ION GNSS+ (throwback to the 1980's party), Budget
4. Lessons Learned 2015 Tutorial Program & Recommendations for 2016: P. Doherty
5. Approval of ION GNSS+ 2016 Program Co-Chairs: J. Betz
6. Outreach Activity Status, Autonomous Snowplow Competition: S. Sheikh

- a. Division Currently Approved up to \$15,000 for the 2016 Competition
- 7. Outreach Activity Status, Africa Program: P. Doherty
  - a. Additional Funding Required for Future Years
- 8. Other/New Business

Document Motions Approved by Email since the Last Meeting

It was noted that the following motions had been approved by email since the last Satellite Division Executive Committee meeting:

**MOTION:** Dr. Richard Langley was approved as the 2015 Kepler Awards Chair and Dr. Inder Gupta was approved as the 2015 Parkinson Chair. Subsequent to these approvals, the Satellite Division Chair approved the committees' membership. (July 2015)

**MOTION:** The Satellite Division approved up to \$15,000 from Satellite Division funds to host one complimentary drink ticket per attendee during the ION GNSS+ 2015 Wednesday night reception held in the exhibit hall. (May 2015)

**MOTION:** Beginning with ION GNSS+ 2016, the Division approved appointing two technical program co-chairs, one from industry to oversee the commercial tracks, and a second from academia who would oversee the peer-reviewed tracks. The two program co-chairs would report directly to the Satellite Division Chair. The program co-chairs would serve for one year. (May 2015)

**MOTION:** Revised minutes from the January 27, 2015 meeting of the Satellite Division Executive Committee were approved. (February 2015)

Change Exhibit Policy for 2016 to Permit Direct Sales from Exhibit Floor: J. Betz

John Betz reported that the proposal was made at the September 2014 Satellite Division Executive Committee meeting to allow ION GNSS+ exhibitors to sell merchandise on the show floor. Following the September discussion, the committee discussed this again in January 2015, and followed up via telecon and email correspondence. It was reported that the discussion centered around two sets of questions regarding this action:

- 1) Is this a change that strategically made sense?
  - a. Allowing direct sales provides current exhibitors with one means to directly measure their return on the show. This could be a positive or negative, depending on the outcome, and we do not necessarily have the data to make an educated guess on which way the pendulum will swing.
  - b. Is allowing direct sales any more likely to attract new exhibitors?
  - c. There is no indication that the desire to change the current policy is pervasive within the ION's current exhibitor pool. It has been noted that booksellers have specifically lobbied for this change, while larger manufacturers and suppliers

have noted they prefer not to have to travel with inventory and equipment required to manage direct sales.

- 2) What were the business/legal implications of the ION allowing merchandise sales on the show floor?
- a. Many city-owned convention center contracts require that a percentage of direct sales revenues from sales made in their facility be paid to the venue. This could potentially restrict future locations/facilities. That said, there are no shared revenue clauses in ION's contracts with the Oregon Convention Center for 2016 or 2017. Furthermore, if the Division decides to locate future meetings in large convention hotels, as has been proposed for 2018 and 2019, this issue could become moot.
  - b. The National Office has determined that ION (as a charitable organization) can still allow exhibitors to sell related merchandise on the show floor without jeopardizing ION's tax exempt status, and without needing to claim exhibit fees as unrelated business income as long as: 1) the commercial exhibit is associated with a technical meeting; and 2) the materials being sold are consistent with educating attendees and are supplied to members of the organization. Examples of permissible sales would include PNT equipment, books and consultancy services. Unrelated merchandise (such as t-shirts, concessions, etc.) would not be permitted within the scope of what is permissible.
  - c. Allowing sales on the exhibit floor does trigger sales tax requirements for the sellers (exhibitors), but we have not found any indication of liability for ION if exhibitors fail to meet sales tax law obligations.
    - i. It should be noted that the laws regarding the scope of sales/use tax liability varies with each state and local taxing jurisdiction so the ION would need to keep this in mind as the meeting moves to various locations. For 2017 and 2018 Oregon is a "zero sales tax state" so this would not be an issue at all until 2019.
    - ii. Should the Division elect to permit related sales, the ION's exhibitor contract would need to be amended with language providing that all the sales, use and other tax collection, reporting, compliance, etc. are the sole responsibility of the exhibitor; that the exhibitor is acting strictly on its own behalf and not as an agent or representative of ION in regards to any sales activity; and that ION is providing no advice, and takes no responsibility, for any tax compliance obligations applicable to any exhibitor in connection with the exhibitor's sales activities.

It was noted that ION GNSS+ 2016 would be the first year a proposed change could be executed. In order to execute the change in time to apply to the 2016 show the change would need to be approved no later than the end of June 2015 in order to be incorporated into 2016 exhibitor contracts that are created/circulated in July.

This information was provided to the Satellite Division Executive Committee in April/May, in advance of the motion to gauge the level of interest by members of the Satellite Division

Executive Committee in making the change and collect their perceptions of the strategic implications. Views, both pro and con, were circulated by e-mail. The following motion resulted and was passed by the Satellite Division Executive Committee in May 2015 by email vote:

**MOTION:** Beginning with ION GNSS+ 2016, the Satellite Division authorized ION GNSS+ exhibitors to sell directly from the exhibit floor with the goal of attract new and growing industry segments as outlined below:

- Only the sale of related PNT merchandise shall be permissible. Examples of permissible sales would include PNT equipment, publications and consultancy services. Unrelated merchandise (such as t-shirts, concessions, etc.) would not be permitted.
- The Division authorized the ION National Office to amend the exhibit contract with language providing that all the sales, use and other tax collection, reporting, compliance, etc. are the sole responsibility of the exhibitor; that the exhibitor is acting strictly on its own behalf and not as an agent or representative of ION in regards to any sales activity; and that ION is providing no advice, and takes no responsibility, for any tax compliance obligations applicable to any exhibitor in connection with the exhibitor's sales activities.

The Satellite Division requested that Frank van Diggelen take the lead, working in conjunction with the Satellite Division Executive Committee and ION GNSS+ 2016 program committee, to identify and recruit new and emerging industries for the ION GNSS+ exhibit and technical program. (Approved May 2015 by Email Vote)

Miami, Florida Approved as Location ION GNSS+ 2018 and 2019: J. Betz

It was reported that the discussion of locating ION GNSS+ in a large convention hotel with specific site recommendations transpired in May 2015.

See Attached File: [Miami Fort Worth Sites Comparison 5-28-2015](#)

Based on email discussion, the following motion was approved by the Satellite Division Executive Committee by email vote in May 2015:

**MOTION:** The Satellite Division approved: locating ION GNSS+ 2018 and 2019 in a large convention hotel; specifically approved Miami, Florida, as the 2018 and 2019 site location; and authorized the ION National Office to execute contracts. (Approved May 2015 by Email Vote)

Lessons Learned 2015 Technical Program & Recommendations for 2016: G. McGraw

Gary McGraw recapped highlights and successes of the technical program.

Frank van Diggelen reported on the work his committee (chaired by van Diggelen with members including Moore, Kealy and Gao) had undertaken over the past weeks to review the

effectiveness of having peer-reviewed papers at ION GNSS+ and the evaluation of the process and quality of the peer-review process itself, with the goal of providing authors with the opportunity for a peer-reviewed conference paper, in a way that enhances the standing of the conference while maintaining the desirable conference characteristics of commercial focus, with presentation of late-breaking fresh results.

To accomplish the objective above it was the recommendation of the committee that the following be implemented for the 2016 technical program be split into two tracks as follows:

***Applications and Advances Tracks***

- Presentations only, full papers are optional, peer reviews are not available in this track.
- Paper selection, and designation of primary and alternate presenters, is based in abstracts, for all sessions/papers.

***Research and Innovation Tracks***

- Peer-review option will be available. The author indicates desire for peer-review in the abstract submission. Papers requesting peer-review must be uploaded in AMP by the established deadline in order to qualify for review; papers not meeting this deadline will revert to non-peer-reviewed.
- Peer Review co-chairs will be appointed to recruit and manage reviewers and reviews. Allison Kealy and Terry Moore have been designated as the Peer Review Co-chairs for 2016.
- Authors submitting a paper for peer-review must also review a paper. They must submit their areas of expertise with their abstract to aid the peer-review. Co-chairs in assigning papers to reviewers.
- There will be two reviewers per paper. Reviews are blind (authors will not know who the reviewers are). At least one will be personally selected by the Peer-Review Co-chairs based on their knowledge and trust of the reviewer; the other could be a less known or less trusted reviewer from the authors submitting a paper for review. The Peer-Review Co-chairs can choose to use just one of these reviews.
- Only papers which met all the peer-review requirements and will be noted in the proceedings as peer-reviewed.
- Paper selection, and designation of primary and alternate presenters, is based in abstracts, for all sessions/papers.
- Peer-reviewed papers will be specially annotated in the program and proceedings.

There was a suggestion that ION offer courses on how to create business opportunities. For example, a course on How to Obtain a Certificate of Authorization for Use (COA).

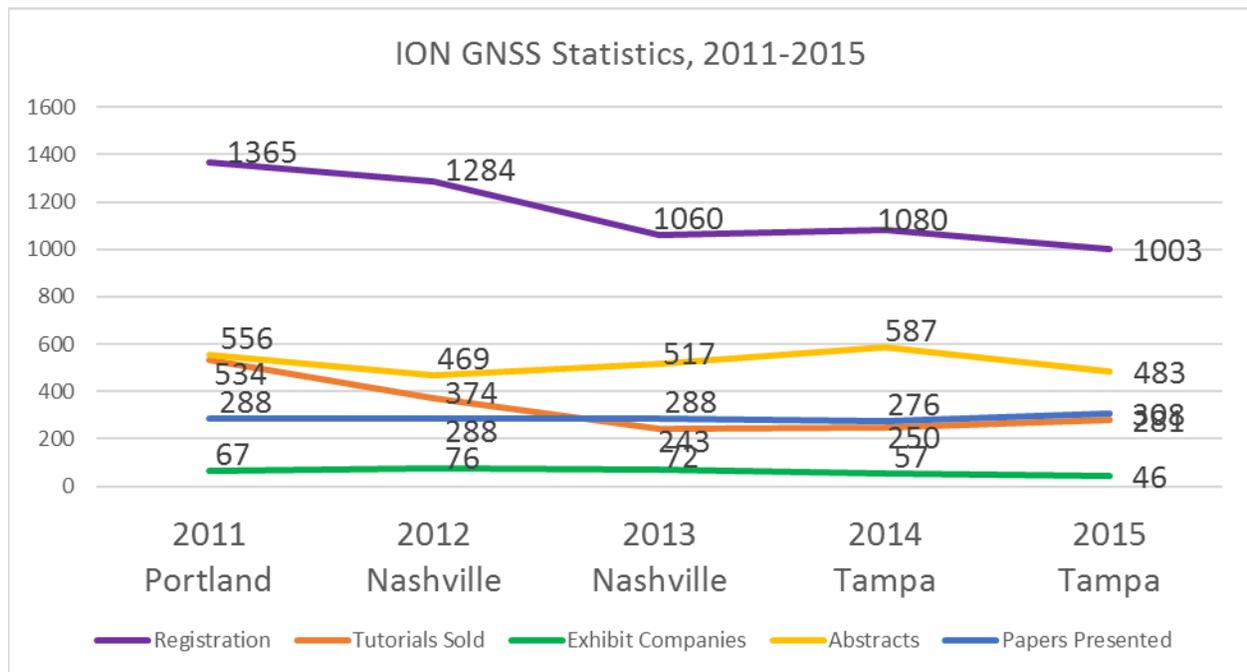
There was discussion on how to attract new exhibitors to the exhibit hall. It was suggested that ION provide complimentary exhibit space to academics to do demonstrations in the exhibit hall

of new technology that ION is trying to attract to the conference. It was suggested that ION invite panel members in emerging market panels to demonstrate technology in the exhibit hall.

New topics that were discussed included:

- Autonomous Systems
- Autonomous Vehicles
- Unmanned Vehicles or Unmanned Systems

Beaty pointed out that the contracting exhibit hall was would impact the services the meeting was able to offer to the attendees as the meeting could not provide the same level of services for 1300 people and 70+ exhibitors as it could provide to under 1000 people with 40 exhibitors. It was noted that GNSS registration fees had been level for four years but that an increase that included both cost of living and changing dynamics of the meeting was inevitable for this next year. (Reference chart below.)



### Celebrating 30 Years of ION GNSS Budget

Lisa Beaty reported that 2016 would be the Satellite Division's 29<sup>th</sup> International Technical Meeting but 30<sup>th</sup> anniversary meeting as the first ION GNSS meeting was in 1986. Beaty reported that the average annual return on the Division's investment fund over the past five years was \$78K per year. Beaty suggested that the Division allocate one year's worth of returns on the investment fund to host a 30<sup>th</sup> anniversary party that would be held in conjunction with ION GNSS+ 2016, immediately following the Wednesday evening exhibitor hosted reception.

**MOTION:** The Satellite Division approve up to \$70K for an ION GNSS+ 2016 30 year anniversary party, tentatively scheduled after the Wednesday night exhibitor hosted reception, with a throwback to the 1980's theme. Motion made by Doug Taggart, seconded by Frank van Diggelen and passed by the Satellite Division Executive Committee.

Lessons Learned 2015 Tutorial Program & Recommendations for 2016: P. Doherty

Pat Doherty, Tutorials Chair, was unable to attend the meeting. Lisa Beaty summarized the past years' tutorial statistics with the committee, but requested that the committee defer advanced discussions, preferences and decisions until she had a chance to review results from 2015 tutorials with Doherty.

Summary provided included the following:

Meeting	People Taking Courses	# Courses Sold	Courses/Person	Meeting Attendance	% Taking Courses
GNSS11	210	534	2.54	1363	15.40%
GNSS12	160	374	2.34	1282	12.50%
GNSS13	115	243	2.11	1060	10.80%
GNSS14	106	250	2.36	1080	9.80%
GNSS15	127	281	2.21	973	13.10%

It was reported that this year's increase in tutorials came primarily from increased tutorial attendance in the more advanced Tuesday courses. Conversely there was a drop in the typical registration of the "basics" courses given on Monday; still enough students to hold the basic courses, but not as many as have frequented the course in past years.

It was reported that the following options for 2016 were all being considered:

1. **No change to current tutorial program.** The Division runs the program in 2016 the same as we have for the past number of years. Based on registration this year the program is still healthy enough to proceed. Currently about a 1/3 of the revenue collected goes to the instructors, 1/3 goes to direct tutorial expenses (room, AV, food and beverage etc.) and a 1/3 goes to ION. With a more mature marketplace, GNSS tutorials are generally on the decline, but the ION GNSS+ tutorials are still profitable and ION did not experience a decline in 2015 (in large part due to the new courses added).

It was noted that if the Division opted for this option, it was proposed that the Division keep the honorarium structure for instructors the same, but eliminate the paper note requirement. ION will advise students in advance that only electronic notes will be available and request that they download notes in advance in preparation for the course.

2. **The Division makes a “Basics of ...” series lectures free to full technical registrants on Monday and then traditional specialized/more advanced, paid, classroom-style tutorials available on Tuesday.** A concern had been expressed that some may perceive that they were paying for a day on Monday that they may not be attending. It was possible however that people coming in early for the “free Monday tutorials” may be more likely to pay for a Tuesday tutorial because they are now in town. This may drive up Tuesday tutorial sales and compensate for the loss from the Monday tutorials sales. If those attending free Monday basics lecture style courses do not attend tutorials on Tuesday there is still the free CGSIC meeting to attend.
3. **The Division designs parallel “tracks” of lecture style tutorials and registrants pay a tutorial registration fee for the entire day with the freedom to attend any tutorial provided that day.** This would allow registrants to move between lectures and also allow ION to design tracks of courses based on topics with multiple instructors. A tutorial track on a given day may have 3-5 instructors, who teach for 1-3 hours each depending on what they are asked to cover. These tutorial tracks would approximate more of a JNC/PTTI model.
4. **The Division provides lecture-style complimentary tutorials included in the registration fee based on either a) longer single instructor traditional courses; or b) based on multi-instructor topics/tracks (as cited in #3 above).**

Beaty recommended the Division first select the model that would best benefit the ION GNSS+ technical registrant community (step 1) and then figure out the best way to select, recruit or fund instructors (step 2).

**ACTION:** Lisa Beaty will provide updated information to Tutorials Chair Patricia Doherty and get her recommendation on how to proceed in 2016 with the tutorials program and report back to the Satellite Division Executive Committee.

Approval of ION GNSS+ 2016 Program Co-Chairs: J. Betz

**MOTION:** The Satellite Division approves the following ION GNSS+ 2016 Program Co-chairs: Neil Gerein to oversee the Applications and Advances tracks and Dr. Sherman Lo oversee the Research and Innovation tracks. Motion made by John Betz, seconded by Frank van Diggelen and passed by the Satellite Division Executive Committee.

Outreach Activity Status, Autonomous Snowplow Competition: S. Sheikh

Suneel Sheikh was unable to attend the meeting but John Betz reported that he had been in contact with email and had also held a telecon with Suneel on the status of the 2015 competition that had included Betz, Sheikh, Soehren and Beaty.

It was reported that there had been an overrun in 2015 snowplow competition expenses of approximately \$7,000 as the committee has believed that monies allocated for prior

competitions that had not been spent were being carry forward year to year. These expenses were submitted in October 2015 and had already been reimbursed by the National Office and Lisa Beaty asked the Satellite Division to approve the appropriation of \$7,000 to cover additional snowplow expenses charges to the 2015 event. There was significant discussion from the committee.

**MOTION:** The Satellite Division approve \$7,000 of Satellite Division funds to cover the January 2015 overrun of snowplow competition expenses. Motion made by Frank van Diggelen, seconded by Dorota Brzezinska and passed by the Satellite Division Executive Committee.

It was reported that the Snowplow Competition was requesting a potential increase in funding for the 2016 competition of up to \$20,000. The increase from the traditional \$15,000 to \$20,000 was to provide a \$5,000 buffer for the competition for unforeseen expenses, or potential loss of sponsors, as well as support any funding needed to carry over between fiscal years. The committee understands that the Satellite Division funds are available “up to” the allocated monies, and that any funds not utilized will be returned to the Satellite Division.

There was concern expressed over the increased funding being requested. There was considerable displeasure expressed by all members of the committee over the fact that the winners of the 2015 competition did not attend the ION GNSS+ 2015 meeting and present a paper on the program, especially considering the large increase in the prize money in 2015. It was noted that some members of the committee believed this was a very large portion of the Satellite Division’s resources that were benefiting a relatively small group of students and a small regional group of Satellite Division members. The history of the snowplow competition was discussed as well as the Division’s commitment to student programs. It was also noted that the snowplow competition was run completely on volunteer efforts and energy.

**MOTION:** The Satellite Divisions approves \$15,000 for the 2016 snowplow competition expenses; with an additional \$5,000 contingency fund for emergencies, loss of sponsors etc. for a maximum expenditure of no more than \$20,000 with the expectation that the additional \$5,000 should be for emergencies and unexpected loss of sponsorship only. Additionally, the Division stipulates that \$3,000 of first place prize money shall be withheld to provide travel funds for student(s) of the first place team to attend the ION GNSS+ meeting to present a paper on the winning snowplow design. Motion made by John Betz, seconded by Grace Gao and passed by the Satellite Division Executive Committee.

#### Outreach Activity Status, Africa Program: P. Doherty

It was reported that the 2014 Africa outreach program had been held in May 2014 in Rwanda, and the 2015 Africa outreach program had been held in March 2015, in Italy.

**MOTION:** The Satellite Division approves up to \$25,000 per year, in both 2016 and 2017, for reimbursed ION member instructor travel expenses for the GNSS in Developing

**Nations program.** Motion made by Frank van Diggelen, seconded by Dorota Brzezinska and passed by the Satellite Division Executive Committee.

#### **OTHER/NEW BUSINESS**

Lisa Beaty reported it had been eight years since ION had purchased new conference laptops and LCD projectors and requested funding to purchase eight new conference laptops and LCD/HDMI projectors:

**MOTION: The Satellite Division approves \$30,000 to purchase eight new conference laptops and eight new LCD/HDMI projectors.** Motion made by Frank van Diggelen, seconded by Grace Gao and passed by the Satellite Division Executive Committee.

The meeting was closed at 9:50 p.m.