12:40pm – Meeting open and welcome – Mark Reedenauer, Executive Director and President of NMEA

Announcements – please be sure to order your Orioles tickets by 2pm – see Debbie or Cindy at the Conference Registration Desk

Schedule change – Coast Guard will be hosting their presentation in the Severn III room at 1:30pm

Be sure to vote for the Product Awards – voting will be open until midnight tonight; Manufacturer Members get one vote per company; All other members can vote as one vote per employee

Johnny Lindstrom, BOD President of NMEA – Introduction of the Lifetime Achievement Award to Ralph Sponar. Mr. Sponar has spent countless hours working with in conjunction with the FCC/RTCM and US Coast Guard to promote the work of the NMEA. Mike Spyros and Hugh Lupo presented award with words and accolades by Hugh and Ghassan Khalek.

Mr. Lindstrom then thanked the Board of Directors and Staff of the National Marine Electronics Association for all of their hard work and encouraged all members to get involved. In addition, Mr. Lindstrom thanked all of the Conference Sponsors for their contribution to the conference and their efforts in contribution to its success.

Lastly Mr. Lindstrom asked all of the committee members to stand for a round of applause and thanks.

Jules Rutstein, BOD of Secretary, mentioned that his report will be published in the MEJ and on the NMEA website. The 2014 Minutes were presented and Mr. Ken Unger made a motion to pass the Minutes as presented. Steve Katz seconded the motion – All were in favor and the motion was made to approve the 2014 minutes as presented.

Marilyn Quarders, BOD Treasurer, gave her treasurer’s report. Ms. Quarders reviewed the 2014 financial statements. She showed the 2014 profit and loss summary which indicated a $70,000 increase over 2013. 2014 there was $158,000 revenue this increase was due to the
fact that there was only 4 staff as opposed to the previous 5 staff. Ms. Quarders also pointed out that the trend lines have been going up since 2003.

Ms. Quarders pointed out the NMEA revenue sources are Annual Conference, Membership, Standards and Training. Year-to-date Net Income is $300,000 with the conference funds not yet being paid.

2014 Profit and Loss Financial were presented. A motion was made by Hugh Lupo to approve the 2014 Profit and Loss Financials as presented. Judy Rutstein seconded the motion. All were in favor and therefore the 2014 Profit and Loss Financials were approved as presented.

Steve Spitzer, NMEA Director of Standards, gave his Technical Department update:
NMEA2000 v. 3.10 – language has been clarified for the 10 documents in the suite; 13 messages have been added and 156 application notes. 2016 anticipates more messages to be added

0183 v. 4.10 was revised – the world’s largest interface standard, now color coded label standard.

OneNet – draft of .71 was revised – provides NMEA2000 a standardized method broken into many modules (base, core, physical – gateway, security, network, advanced).

Steve then thanked all of the OneNet working group members.

Bruce Cole, McNabb Marketing Resources, spoke on behalf of the MEJ to give the Marketing report

Bruce mentioned that the NMEA and consumer need to gravitate towards dealers and manufacturers. The current marketing campaign is “Only the Best will do for your Boat” which they are working with five Bonnier magazines. There is discussion of posting the location of dealers on a map in the future on the MEJ website.

The Buyers Guide is currently available with numerous copies being sent to dealers for distribution as well as various trade shows (Lauderdale, METS, Miami).

Cindy Ensley, Secretary of MEJ spoke and reported a dividend of $25,000 given to the NMEA the last two years to be used for member benefits.

Advertising comparisons were made with the actual dollar amount going down in the difficult market we are currently in. From 1993-2014 nearly $892,000 in dividends has been paid to the NMEA.

In 2016 the MEJ anticipates to advertise in the approx. 5,500 print copies to members and boating enthusiasts, 9000 distributed at shows as well as the web and digital outlets.
At 1:21pm, the Business meeting was closed. PowerPoint slides from the meeting are below.

YOUR NMEA Board of Directors & Staff

Executive Committee
Chairman
Johnny Lindstrom
Vice-Chair
Mike Spyros
Treasurer
Marilyn Quadrans
Secretary
Jules Rutsein
Lou Rota

Directors
Rich Baker
John Barry
Paul Comyns
Ken Harrison
Steve Katz
Hugh Lupo
Steve Wallace
David Gratton

NMEA Staff
Debbie Compere
Cindy Love
Mark Reedenuer
Steve Spitzer

Welcome to NMEA’s 58th Anniversary

Annual Business Meeting

9/30/2015
NMEA Committees

Standards
  • Manufacturers & Government
Education
  • Board and dealers
Conference
  • Board, trade, dealers, manufacturers
Marketing
  • Board, trade, dealers, manufacturers
Strategic
  • Board and external advisors
IMEA
  • Board and external advisors

Secretary’s Report - Jules Rutstein

• Minutes of 2014 business meeting
• Motion to accept minutes
• Vote to accept minutes
Treasurer’s Report- Marilyn Quarders

Balance Sheet
Profit & Loss Statement 2014
Revenue trend
Revenue by category
Financial Report 2015 Year-to-Date

Balance Sheet

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount</td>
<td></td>
<td></td>
<td></td>
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### PROFIT & LOSS SUMMARY

<table>
<thead>
<tr>
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<th>2014 ACT</th>
<th>2014 PLAN</th>
<th>Variance</th>
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<tbody>
<tr>
<td>Income</td>
<td>903,040</td>
<td>865,225</td>
<td>37,815</td>
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<tr>
<td>COGS</td>
<td>290,640</td>
<td>267,825</td>
<td>22,815</td>
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<tr>
<td>Total Expenses</td>
<td>476,706</td>
<td>601,927</td>
<td>(125,221)</td>
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<tr>
<td>Net Income</td>
<td>158,936</td>
<td>523</td>
<td>158,413</td>
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</table>
2014 ACTUAL REVENUE

- Membership: 30%
- Standards: 28%
- Convention: 22%
- Training: 16%
- Other: 4%

PROFIT & LOSS SUMMARY - AUGUST 2015 YTD

<table>
<thead>
<tr>
<th></th>
<th>2015 Act</th>
<th>2015 Plan</th>
<th>Variance</th>
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</thead>
<tbody>
<tr>
<td>Income</td>
<td>764,790</td>
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<td>COGS</td>
<td>141,963</td>
<td>119,882</td>
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<tr>
<td>Total Expenses</td>
<td>342,303</td>
<td>344,879</td>
<td>(2,576)</td>
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<td>Net Income</td>
<td>305,201</td>
<td>194,941</td>
<td>110,260</td>
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Technical Department Update  
NMEA Annual Business Luncheon  
2015

Technical Department Update  
Director of Standards- Steve Spitzer

NMEA 2000

**New Edition 3.10**

<table>
<thead>
<tr>
<th>NMEA 2000 Main Document</th>
<th>Appendix E</th>
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<tr>
<td>Version 2.000 December 2014</td>
<td>ISO 11783-3</td>
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<table>
<thead>
<tr>
<th>NMEA 2000 Appendix A</th>
<th>Appendix F</th>
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<td>Version 2.100 February 2015</td>
<td>ISO 11783-5</td>
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<table>
<thead>
<tr>
<th>NMEA Network Message Database</th>
<th>Appendix G</th>
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<td>Version 2.100 February 2015</td>
<td>ISO 11898</td>
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<th>Appendix C - Certification Criteria and Test Methods</th>
<th>Appendix H</th>
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</table>

<table>
<thead>
<tr>
<th>Appendix D - Application Notes</th>
<th>Appendix I</th>
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</thead>
<tbody>
<tr>
<td>Version 2.100 February 2015</td>
<td>Cable &amp; Connector Specifications</td>
</tr>
</tbody>
</table>
Standard Enhancements Published

- Improved clarity to minimize ambiguity of language
- Removal certification levels of A and B
- New requirements for proprietary PGNs
  - Must provide to NMEA

Mandatory no later than June 2016

NMEA 2000

Requirement Upgrades – Main Document

<table>
<thead>
<tr>
<th>Previous</th>
<th>NEW Edition 3.10</th>
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</thead>
<tbody>
<tr>
<td>4 Mandatory Messages</td>
<td>13 Mandatory Messages</td>
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</tbody>
</table>

Mandatory no later than June 2016
Standard Enhancements Published

- Appendix D – Application Notes
  - 60 pages to 156 pages
  - Implementations:
    - Power
    - Alerts
    - Firmware informing
    - Device instance configuration
    - Device instance
    - Audio operations

2016 New Messages

<table>
<thead>
<tr>
<th>DSC</th>
<th>Navtex</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galileo</td>
<td>Safety Net</td>
</tr>
<tr>
<td>Inclinometer</td>
<td>Other new GNSS Services</td>
</tr>
</tbody>
</table>

Futureproofing NMEA 2000
Integration Task Force
Current Version 4.10

- 2012 Published
  - Requires RS 422
  - Shipboard and Non-Shipboard Applications
  - Interconnecting Wires (New Section) – Color Code Labels
    - Consultation with GMDSS Task Force, USCG, RTCM and Manufacturers
    - Ribbon, flat cables or coax and cable assemblies prohibited

Current Version 4.10

- GNSS sentences updated for Galileo
  - New talker ID
  - Additional requirements
- New Sentences
  - HBT – Heartbeat Supervision Sentence
  - GEN – Generic Binary Information
NMEA 0183

Current Version 4.10

- AIS updated sentences:
  - ABK, AIS Addressed and Binary Broadcast Acknowledgment
  - ABM, AIS Addressed Binary and Safety Related Message
  - ACA, AIS Regional Channel Assignment Message
  - AIR, AIS Interrogation Request
  - BBM, AIS Broadcast Binary Message
  - MEB, Message Input for Broadcast, Command

NMEA 0183-
Published as Amendment

Inmarsat SafetyNet Sentences
Five sentences convey Maritime Safety Information (MSI) from Inmarsat-C and Mini-C terminals.
- **SM1** – SafetyNet Message, All Ships/NavArea
- **SM2** – SafetyNet Message, Coastal Warning Area
- **SM3** – SafetyNet Message, Circular Area Address
- **SM4** – SafetyNet Message, Rectangular Area Address
- **SMB** – IMO SafetyNet Message Body
NMEA 0183 - Published as Amendment

**MOB** – Man Over Board
- May be used to set a MOB waypoint, or to initiate an alert process.

**HVE** – Heave
- Reports the vertical distance perpendicular to (smooth, wave-free water on) the earth’s surface

**RLM** – Return Link Message
- will be used to inform the person(s) in distress that their Distress Beacon signal has been received by SAR

**HRM** – Heel and Roll Measurements
- for ISO specified Inclinometer equipment

NMEA 0183

2016

New Version 4.20

**Integrated Navigation System (INS)**

**Bridge Alert Management (BAM)**

**ACN** – Alert Command

**ALC** – Cyclic Alert List

**ALF** – Alert Sentence

**ARC** – Alert Command Refused

**NSR** – Navigation Status Report

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AIS Updates
ABK, AGA, BCL
• for supporting new ITU messages
EPV – Equipment Property Value
• provides a method to command and report specific equipment settings for AIS Repeater and Class A Stations.
SPW – Security password sentence
• can be used for authentication
TRL – AIS transmitter non-functioning log
• specific to AIS Class A Stations. Intended to support the retrieval of the AIS non-operating periods.

Additional New Talker IDs
GB – BDS
• Beidou Navigation System (Chinese)
GQ - QXSS
• Quasi Zenith Satellite System (Japanese)
GI - IRNSS
• Indian Regional Navigation Satellite System
ND - Network device
SI – Serial to Network Gateway Function
IC - Integrated communication system (ICS)
NMEA OneNet
NMEA on IP

• Draft Standard / Not for Publication
  • NMEA 2000 (NMEA Network) Messages on IP with Ethernet being first technology link
    • Provides Common Infrastructure
    • Draft .71
  • DOES NOT REPLACE NMEA 2000
  • Committee held “Go to Meetings”
  • Committee is meeting for 5 days at Conference

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NMEA OneNet
Members

Airesense  Actisense  Hemispheric GNSS  Mercury Marine  SRT
Andy Stfferman  Cisco  Jeppesen  Microsoft  Terma NA

Airner  Digital Yacht  Johnson Outdoors  Molex  USCG (Headquarters)

Azimut  Dongseo University  Kveser  Navico  USCG (R&D Center)

BEP Marine  ETRI  KVH  Net Savvy  Veehils

Blue Seas  Filr  Larry Anderson  Offshore Limited  Victron Energy

Boeing Automationstechnologie GmbH  Fugawi  Maretron  Phoenix Contact  Whisper Power

Canadian Coast Guard  Furuno  Mastervolt  Raymarine  Yachting Standard Horizon

Cering Technologies  Garmin  Maritime University of South Korea  Rosepoint Navigation

© 2013 NMEA
- Vision and Goals
  - Transport NMEA Network Messages on standard Ethernet protocol (IEEE 802.3) in a uniform common manner
  - Utilize standard Internet Protocol (IPv6) addressing
  - Safe and secure communication and operations
  - Interoperability with the established industry standards including NMEA 2000, i.e. Gateway rules between NMEA 2000 and OneNet.

- Vision and Goals
  - Co-existence of non-OneNet devices on a NMEA OneNet
  - Support high bandwidth applications such as audio/video data transport
  - Specify the basic requirements for network infrastructure equipment including OneNet switch
  - Advanced implementation such as device discovery, device web pages and other future protocols
NMEA OneNet
NMEA on IP

- Internet of Things (IoT)

NMEA OneNet
Standard
Reorganized into Modules

Security Module “S”
Core Module “C”
Physical Module “P”

Advanced Module “A/J”
Network Module “N”
Base Module “B”
Gateway Module “G”

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Key Working Group Members

- Airmar
- Electronics & Telecommunications Research Institute (ETRI) Korea
- Furuno
- Garmin
- Korean Maritime University
- Navico
- Raymarine
- Rosepoint Navigation
- Termana NA
- USCG R&D Center

© 2015 NMEA

NMEA OneNet
NMEA on IP

• What’s Next

  • End of 2015 Publish Version 1.00
    • Base, Core and Physical Modules
    • Security?

  • 2016
    • Modules
    • Beta testing
    • OneNet Certification documentation
    • OneNet Certification Tool development

© 2015 NMEA
Become the best in your field

NMEA Master Dealer credentials show your commitment to serving your customers.

- Proven expertise and dedication to excellence
- Master Dealers are required to meet a higher standard than all other dealers
- Master Dealers provide "State-of-the-art" service to their customers
- Master Dealers provide superior technical service and ongoing education to service technicians professionally

Will you be a Master Dealer in 2015?

Only the best will do for your boat

THE BEST INSTALLERS • THE BEST ELECTRONICS • THE BEST SERVICE

20 NMEA Master Dealers
173 U.S. NMEA Dealers
20 International NMEA Dealers

www.nmea.org | Click on the NMEA Dealer tab to find an NMEA Dealer or a qualified NMEA Master Dealer near you.
MEJ MISSION STATEMENT

• Produce a profit for the NMEA
• Support the mission of the NMEA
• Publish a high quality magazine that serves NMEA members & greater marine electronics industry
• Promote & support the MEJI website
MEJ BOARD OF DIRECTORS

- President
  Ken Engliert
  Maritime Communications
- Vice President
  Tim Conroy
  ComMar Sales
- Treasurer
  Paula Ross
  Seawide Distribution – FL
- Secretary
  Cindy Ensley

MEJ STAFF

- Bruce Cole
  Manager & Advertising Director
- Jim Fulllove
  Editor
- Kelly Williams
  Design Director
- Leslie Curtis
  Circulation, Database Management, Administrative Support
- Ann Cole
  Circulation & Administrative Support
- Cindy Ensley
  Accounting
FINANCIAL SUMMARY
2013 vs. 2014

<table>
<thead>
<tr>
<th>2013 Yearend</th>
<th>2014 Yearend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>Revenue</td>
</tr>
<tr>
<td>$323,328</td>
<td>$328,462</td>
</tr>
<tr>
<td>Taxable Income</td>
<td>Taxable Income</td>
</tr>
<tr>
<td>$19,937</td>
<td>$32,914</td>
</tr>
<tr>
<td>Net Profit After Taxes</td>
<td>Net Profit After Taxes</td>
</tr>
<tr>
<td>$15,042</td>
<td>$25,477</td>
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<tr>
<td>Dividend to NMEA</td>
<td>Dividend to NMEA</td>
</tr>
<tr>
<td>$25,000</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

ANNUAL ADVERTISING COMPARISONS

- $501,935 (2007)
- $435,730 (2008)
- $354,405 (2009)
- $380,624 (2010)
- $374,427 (2011)
- $347,396 (2012)
- $323,328 (2013)
- $328,462 (2014)
TOTAL DIVIDENDS TO NMEA
1995 - 2014
$891,766

ADVERTISING OPPORTUNITIES
IN 2016

• Print
  5,500+ copies each issue except annual Buyers’ Guide
  9,000+ copies for annual Buyers’ Guide (consumer edition)

• Digital
  4,500+ distributed each issue via email

• Web
  www.NMEA.org – 27,000+ unique visitors/month
  www.marineelectronicsjournal.com – 15,000+ visitors/month
THANK YOU FOR YOUR SUPPORT OF NMEA THROUGH ADVERTISING IN THE PUBLICATION AND WEBSITE OF MARINE ELECTRONICS JOURNAL