IEEE Thailand Section Report 2018

PART A - SECTION SUMMARY

A.1 Executive Summary

- Section Executive Committee Member List
  Chair: Jitkasame Ngarmnil
  Vice Chair: Viboon Rerksirathai
  Secretary: Amorn Jiraseree-amornkun
  Treasurer: Somying Thainimit

- Section Highlights
  - Preparing to arrange the IEEE PES GTD 2019.
  - Transformation of professional training course material into books.

- Major Events (International, National)
  - March 3 – 4, Dr. Jitkasem Ngamnil (Chairman) and Dr. Somying Thainimit (Treasurer) attended the IEEE R10 Annual General Meeting 2018, held on in Langkawi, Malaysia
  - May 15 – 16, Celebration of IDL 2018 Thailand, held on Sakon Nakhon, Thailand
  - October 11, Dinner Talk: Disruptive Technology for Thailand Grid and Energy Supplies of the Future, held on Bangkok.
  - October 11 – 13, the Engineering Expo 2018 at BITEC, Bangkok

- Major Chapter Activities
  - Technical seminars
  - Conferences
  - Workshops

- Major Student and Affinity Group Activities
  - Seminars
  - Conferences
  - Design Challenges

- Awards
  - 2018 Outstanding Section Membership Recruitment and Retention Performance
  - IEEE PES Thailand Chapter won IEEE PES High Performing Chapter Program (HPCP)

A.2 Financial Report – (Please follow the format given below)

- Summary (as per submitted L50)

<table>
<thead>
<tr>
<th>Income Statement</th>
<th>AMOUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ordinary Income/Expense</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Income</strong></td>
<td></td>
</tr>
<tr>
<td>3.10 - Rebate from IEEE HQ</td>
<td>$7,056.40</td>
</tr>
<tr>
<td>3.34 - IEEE HQ &amp; Societies</td>
<td>$7,220.00</td>
</tr>
<tr>
<td>3.70 - Other Receipts</td>
<td>$303.78</td>
</tr>
<tr>
<td><strong>Total - Income</strong></td>
<td><strong>$14,580.18</strong></td>
</tr>
<tr>
<td><strong>Gross Profit</strong></td>
<td><strong>$14,580.18</strong></td>
</tr>
<tr>
<td><strong>Expense</strong></td>
<td></td>
</tr>
<tr>
<td>6.20 - Other Expenses</td>
<td>$8.65</td>
</tr>
<tr>
<td><strong>Total - Expense</strong></td>
<td><strong>$8.65</strong></td>
</tr>
<tr>
<td><strong>Net Ordinary Income</strong></td>
<td>($14,571.53)</td>
</tr>
<tr>
<td><strong>Net Income</strong></td>
<td>($14,571.53)</td>
</tr>
</tbody>
</table>
PART B - ORGANIZATIONAL ACTIVITIES

B.1 Membership Development Activities

- Total number of active members in the past 3 years.

<table>
<thead>
<tr>
<th>Year</th>
<th>F</th>
<th>LS</th>
<th>SM</th>
<th>LM</th>
<th>M</th>
<th>AF</th>
<th>A</th>
<th>GS</th>
<th>S</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>1</td>
<td>7</td>
<td>56</td>
<td>13</td>
<td>498</td>
<td>14</td>
<td>21</td>
<td>117</td>
<td>103</td>
<td>830</td>
</tr>
<tr>
<td>2017</td>
<td>1</td>
<td>5</td>
<td>49</td>
<td>15</td>
<td>486</td>
<td>15</td>
<td>16</td>
<td>119</td>
<td>92</td>
<td>783</td>
</tr>
<tr>
<td>2016</td>
<td>1</td>
<td>6</td>
<td>51</td>
<td>16</td>
<td>483</td>
<td>8</td>
<td>36</td>
<td>76</td>
<td>102</td>
<td>779</td>
</tr>
</tbody>
</table>

- Summary and evidence of work done to improve the value of membership, which leads to retention and growth of members
  - Arrange technical seminars and meetings
  - Provide subsidy for Student Membership to selected students
  - Encourage university to found student branch chapters

B.2 Chapter Activities

- Total number of Chapters in the Section
  - 16 Chapters:
    1. Signal Processing (SP01)
    2. Broadcast Technology (BT02)
    3. Joint Antennas & Propagation/ Electron Devices /Microwave Theory & Techniques (AP03/ED15/MTT17)
    4. Circuits & Systems (CAS04)
    5. Computational Intelligence (CIS11)
    6. Joint Industrial Electronics/ Industry Applications/ Power Electronics (IE13/IA34/PEL35)
    7. Technology and Engineering Management (TM14)
    8. Computer (C16)
    9. Engineering in Medicine & Biology (EMB18)
   10. Communications (COM19)
   11. Control Systems (CS23)
   12. Robotics and Automation (RA24)
   13. Education (E25)
   14. Power & Energy (PE31)
   15. Photonics (PHOT36)
   16. Solid-State Circuits (SSC37)

- Number of Chapters formed in the current year
  - None

- Number of active Chapters (Chapters who have reported required number of meetings during the year)
  - 8 Chapters (SP01, CAS04, CIS11, IE13/IA34/PEL35, COM19, CS23, PE31, SSC37)

- Summary of Chapter activities (Chapter wise with attachment table/information)
  - Technical Seminar on Grounding and Equipotential Bonding system for electric power system, communication and telecommunication system, computer and data centers
  - Technical Seminar on Power Generation from Municipal Solid Waste
  - Technical Seminar on Power Electronic Application
  - Technical Seminar on Smart City and Data Center
  - Technical Seminar on Integration of Power Generation from Distributed Energy Resources in Microgrid
  - Technical Seminar on Power Generation from Biomass and Biogas Energy
  - Technical Seminar on Risk and Asset Management in Electric Power System
  - Technical Seminar on Application of Digitalization Disruptive Technologies in Power and Energy Business
  - Technical Seminar on Energy Storage System
  - Technical Seminar on Transformer Intelligence and Asset Performance Management
  - Technical Seminar on High Voltage Substation Equipment, Motor and Generator
- Technical Seminar on High-Voltage Equipment Testing in Power Generation, Transmission and Distribution Systems
- Technical Seminar on Underground Cable System
- Technical Seminar on Solar Power Generation System
- Thailand-China Joint Public Seminar on Smart Grid and Renewable Energy Forecast
- Q-Thai SEM 1: The 1st Q-Thai SEM2018 (Software) Towards Quantum Computing
- The 2nd Deep Learning and Artificial Intelligence Winter School
- The 4th – 6th Joint Seminar on Computational Intelligence
- Special lecture on Sub-Sampling Techniques for mm-Wave and Digital Phase-Locked Loops
- Technical Seminar on Integrated Circuit in Thailand 4.0
- Technical Seminar on Talk2Me and I Will Care about Your Privacy
- Technical Seminar on Visual Video Browser and Video Search
- Technical Seminar on Hydrogen Economy: Myth or Reality?
- Technical Seminar on Electrolyzers and Fuel Cell
- Technical Seminar on FTtx Technology
- Special Lecture on Nanomaterials in Biophotonics
- Special Lecture on Microduct and Air Blown Cables
- Special Lecture on Quantum Cryptography
- Special Lecture on Visible light communication: LiFi’s true story and fake news
- Special Lecture on Hierarchically Decentralized Control Synthesis by Aggregation towards Smart Cities

B.3 Professional and Continuing Education Activities

Summary of continuing Educational activities including conferences, technical activities, training courses, and distinguished lecture programs with attachment table / information
- IEEE Teacher in Service Program (TISP)
- SSCS Distinguished Lecture - Micro optoelectronic devices for measuring and controlling biological functions
- PES Distinguished Lecture - Integrated On-board Battery Chargers for Electric Vehicles
- PES Distinguished Lecture - Microgrid Power Management and Control
- SPS Distinguished Lecture - Multimodal Social Signals Analysis
- CIS Distinguished Lecture - State-of-the-Art Evolutionary Algorithms for Many Objective Optimization
- The 1st and 2nd Deep Learning and Artificial Intelligence Winter School
- The 2nd HRD for IC Design Ecosystem
- The 2nd HRD for IC Process and Fabrication
- The 2nd HRD for IC Packaging
- Joint IEICE-IEEE SPS Seminar on how to write good quality paper

B.4 Students Activities

- Total number of Student Branches in the Section
  - 10
- Number of Student Branches formed in the current year
  - 2
- Section level student activities (student congress, paper and other contests, awards etc)
  - 2018 IC Design Challenge
  - The 3rd Thailand Microelectronics Olympiad
  - International Solar Toy Workshop 2018
  - Smart Agricultural Robot Contest 2018
  - Basic Interior Electrical Installation for High School Students
  - The 1st and 2nd STEM Education Robot Camp
  - The 9th Instrumentation, Control, and Automation Senior Project Conference
  - Light & Quantum-School Tour
  - Biomedical Engineering Alternative Movement Camp 2018
- Number of active Student Branches (Student Branches who have reported required number of meetings during the year)
  - N/A
- Summary of Student Branch activities (Student Branch wise with attachment table/information)
  - Seminar for EE Students: Engineer Career in Power and Energy Sectors
  - Seminar for EE Students: Power and Energy Trends in Thailand

B.5 Affinity Group Activities
• Young Professional (YP)
  - 2018 KMITL IC Design Contest, 22 March.
  - IEEE Membership Promoting, 7 July.
  - YP Special talk, 7 July
  - 2019 IC Design Contest Promotion, 2 Nov.
• Women In Engineering (WIE)
  - 4th IEEE WIECON-ECE, 14 – 16 Dec.
  - WIE Thailand Section member meeting, 16 Oct.
• Life Member
  - N/A

B.6 Awards & Recognition Activities

• Award constituted by the Section
  - N/A
• Please list all Awards and Recognitions received by the Section, and members in the Section, from R10 and IEEE HQ during the year 2018
  - 2018 Outstanding Section Membership Recruitment and Retention Performance

B.7 Communication Activities (Newsletter, Home Page, E-mail etc.)

• Newsletter (name and number of issues in the year)
  - N/A
• Home Page of the Section (give the URL and how often it is updated)
  - http://www.ieee-thailand.org/
• Other means of contacts with Section members including social media
  - Email

B.8 Industry Relations

• Membership growth and retention
  - N/A
• Activities for/with industrial members
  - N/A

B.9 Humanitarian Technology Activities

• Humanitarian Technology related activities supported by the Section including collaboration with other OUs.
  - N/A
• SIGHT Activities
  - N/A

B.10 Community Activities

• IEEE Social activities (Family day, IEEE day, Engineers Week)”
  - N/A

PART C   - OTHERS

C.1 Special Events

• Please briefly describe the importance of special events and the outcomes achieved
  - N/A
• Funding secured from the IEEE and external sources including sponsorships
C.2 Relationship with National and International Societies and Non-Government Organizations (NGO)

- Nature of relationship and details of any formal agreement signed
  - N/A
- Details of joint activities
  - Conferences
  - Technical Talks
  - Workshops
- Benefit to IEEE members (for example discounts, access to technical information etc.)
  - Discounts for conference registration fee
  - Participation in technical activities
- Benefit to Section (for example help in membership development, venue facilities, cost saving etc.)
  - Attracted more membership
  - Shared facilities/activities

C3. Collaboration with other IEEE Sections

- Support extended to neighboring Sections
  - N/A
- Joint activities with any other Section
  - Joint conference arrangement with Bangladesh Section

C.4 Support extended to Sub-sections & Society Chapters within the Section
  - N/A

C.5 Best Practices of your Section (which you would like to share with other Sections for the benefits of members)
  - N/A

C.6 Problems anticipated and suggestions for solutions, if any
  - N/A

PART D - GOALS AND PLANS

D.1 Continuation of project/activity in progress and their implementation plans
  - N/A

D.2 Goals and Future Plans
  - Attracting more members, esp. from industrial sectors, by arranging trendy and inspiring social/technical activities.
  - Promoting current members to higher membership levels.

D.3 Any innovative ideas to make IEEE more creative and value added for sustaining the membership retention and recruitment goals.
  - N/A

  - N/A