

*Abstract*

The Institute of Electronics, Information and Communication Engineers (IEICE) is praised for “helping to form a healthy communication society and helping to maintain and improve an abundant global environment, by advancing scholarship and promoting industrial prosperity and the development of human resources, in its role as an international scientific society in electronics, information, communication, and other related fields” based on its foundational principles. The IEICE continues to conduct a range of efforts toward internationalization, such as launching International Affairs Committees in charge of administering international conferences and cooperating with overseas scientific societies (1975) and publishing English language journals (1976). This paper describes the current state of the IEICE’s efforts toward internationalization, as well as future expectations and issues.

**Keywords :** Internationalization, International Affairs Committee, English language journal, overseas member

## 1. Introduction

The IEICE was founded in 1917, and welcomed its 100th year in May 2017. The authors of this paper were given the opportunity to play a role in international efforts<sup>(1)</sup> as IEICE Director, International Coordination and Publicity and International Affairs Committee Coordinator. This paper presents information on International Affairs Committees, International Sections, overseas members, and English language journals as part of undergoing efforts from the perspective of IEICE internationalization, and then describes some opinions on future issues. Details on International Sections are provided on another article in this special feature. Interested parties are advised to refer to this.

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## 2. International Affairs Committee

As the IEICE continued to increase its international exchange efforts, it established the International Affairs Committee Official Regulations in April 1975, with the goal of deliberating on international IEICE matters. The International Affairs Committee was established in June of that same year. Since then, committee members have continued to play increasingly important roles, and the Official Regulations had been revised 12 times by May 2016.

As shown in the organizational structure in Fig. 1<sup>(2)</sup>, the International Affairs Committee belongs to the Council, which consists of around 20 committees responsible for publications, conferences, and a range of member services. Major responsibilities include matters related to international conferences in which the IEICE Headquarter (HQ) participates, matters related to overseas organizations, and matters related to the IEICE’s future concept of internationalization. More specifically, two manuals<sup>(3)</sup> on procedures and paperwork were written to help keep office work procedures

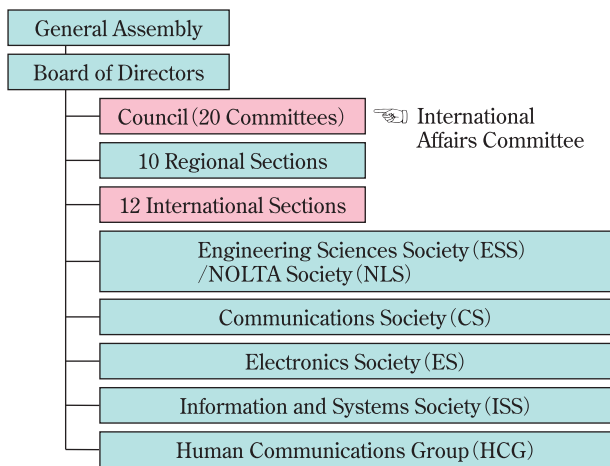


Fig. 1 Organizational structure of the IEICE

for international conferences smooth and quick. These manuals were established in April 2006 and April 2007, respectively. Note however that deliberations on plans for holding international conferences and decisions on whether to hold these conferences are made by the International Affairs Committee (HQ International Committee) or the International Affairs Committee belonging to each society/group. The organization responsible for this is determined by the nature of the conference, affiliated external organizations, and other factors. For details, refer to the manuals mentioned above.

Cooperation between the IEICE and overseas scientific societies has also gained force in recent years. As with the International Affairs Committees mentioned above, agreements are controlled by the IEICE HQ (Board of Directors) and each society in the IEICE. Some examples of the former are The Institute of Electrical and Electronics Engineers (IEEE) and The Institute of Electronics and Information Engineers (IEIE). Examples of the latter include the Asia-Pacific Signal Information Processing Association (APSIPA) (responsible for Fundamentals of Electronics, Communications and Computer Sciences Society), the IEEE Communications Society and the Korean Information and Communications Society (KICS) (responsible for the Communications Society), the IEEE Photonics Society and IEEE Microwave Theory and Techniques Society (responsible for the Electronics Society) and the IEEE Computer Society (responsible for the Information and Systems Society).

This cooperation provides a range of benefits to members, such as discounts on attending jointly

sponsored international conferences. In addition to introducing matters from the perspective of IEICE internationalization, this paper will therefore also provide the latest information on these cooperative efforts.

### 3. International Sections

The IEICE introduced the Overseas Regional Delegate System in 2003, with the goal of spreading efforts throughout the major regions of Asia. Delegates are appointed for a two-year term, and can serve a maximum of two terms.

“Overseas Sections” were first established in four regions within Asia (Taipei, Singapore, Beijing, and Bangkok). Delegates were also selected at that time. Next, Overseas Sections were planned throughout Asia in Indonesia (2004), Hong Kong (2005), South Korea (2005; there is one Delegate each for information, communication, and electronics), Shanghai (2007), Vietnam (2013), and Malaysia (2015). The Europe Section was also established in 2012. Overseas Sections were renamed as “International Sections” in 2013.

As shown in Fig.1, International Sections are positioned at the same level as Branches. As of 2017, 12 International Sections are in operation. Section Delegates form the core of such operations, which involve planning Lecture Meetings and other events around twice per year in the relevant region (local Japanese members are also included) and actively sharing and transmitting information on IEICE efforts. In 2013, the IEICE Information and Communication Technology Forum (IEICE ICTF) was held by the Europe Section in Sarajevo, Bosnia and Herzegovina. Since then, the ICTF has been held in Poland (2014), England (2015), and Greece (2016).

Each Section Delegate travels to Japan during the IEICE General Conference (held in March each year) to hold International Section Delegate Meetings with International Affairs Committee members, with the goal of exchanging ideas to stimulate further activity. This Delegate Meeting was renamed as the All Sections Meeting during the 2014 General Conference, and now the meeting is attended by directors, the president, and vice-presidents. Further, in an effort to spread information on International Section efforts, IEICE Global Plaza was published continuously in English 80 times from 2009 to 2015 in academic journals.

#### 4. Overseas Members

Fig. 2 provides a breakdown of members as of March 2015. Out of 30,462 total members, roughly 10% (3,041) are overseas members. This is approximately the same ratio as student members within Japan.

As shown in Table 1, members from Asia account for 86% of overseas members. It is clear that the ratio is closely related to the locations of International Sections.

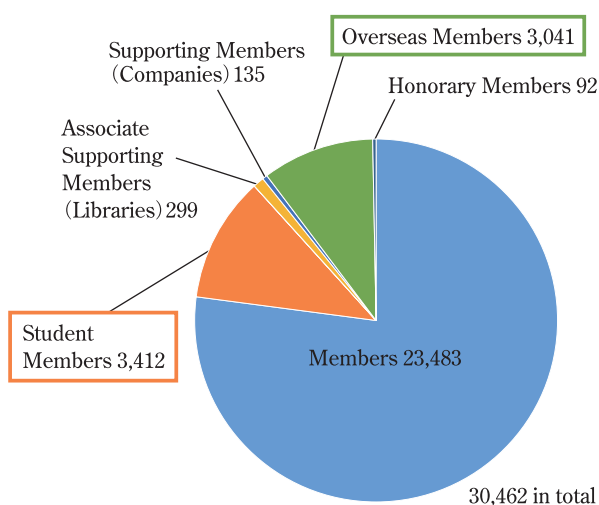


Fig. 2 Member breakdown (March 2015)

Table 1 Number of overseas members by country (March 2016)

China	1,192	Indonesia	16
Korea	828	Singapore	12
Taiwan	306	HongKong	5
India	152	Philippine	3
Thailand	107	Bangladesh	2
Malaysia	102	Macao	1
Vietnam	29	Mongolia	1
Pakistan	23	Myanmar	1

Europe 114, US 39, Canada 15

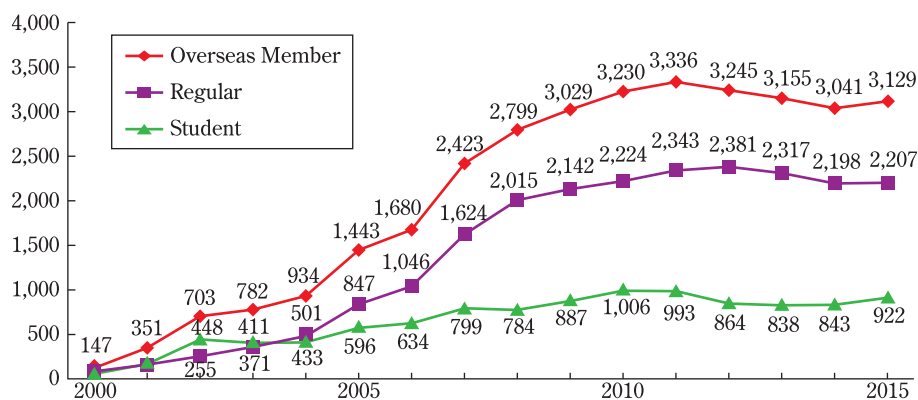


Fig. 3 Transitions in overseas members

As shown in Fig. 3, the number of overseas members seems to have increased with the establishment of International Sections. However, roughly 70% of overseas members are enrolled for only one to five years. Services must therefore be improved to retain overseas members longer. The IEICE should work toward increasing the number of overseas corporate members, urge overseas members to participate actively in planning the administration of scientific societies, and promote an award system for such efforts.

#### 5. English Language Journals

The IEICE publishes four English language journals (“Transactions”) in the fields of fundamentals of electronics, communications and computer sciences; communications; electronics; and information and systems (Fig. 4 (a) through (d)). The IEICE began publishing English language journals in 1976, but split these publications into four journals with the establishment of Societies in 1991. The journals have an acceptance ratio of 30% to 50%, while a total of 10,400 pages are published each year.

Fig. 5 provides a breakdown of the number of papers published (selected) by country for the four Transactions journals (in 2015). Out of 1,200 total papers published that year, overseas members accounted for roughly 40% of that total.

In addition to compiling Special Sections, each special feature contains high quality invited papers (mostly review papers) with authority in the given field, in order to further improve the value of IEICE’s English language journals and increase readership overseas. These invited papers will be provided under open access in an attempt to get as many readers as possible. Furthermore, the

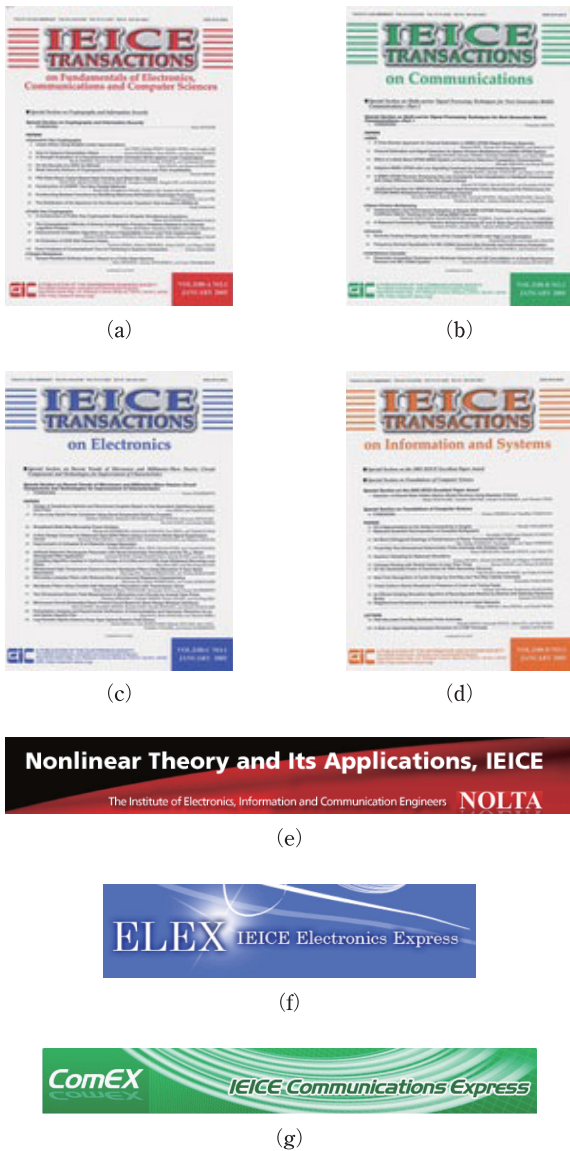


Fig. 4 English language journals published by IEICE

entire text of Information and Systems Transactions has been provided under open access since Jan. 2017, in an attempt to increase circulation dramatically.

Other English language journals (digital journals) include Nonlinear Theory and Its Applications, IEICE (NOLTA), IEICE Electronics Express (ELEX), and IEICE Communications Express (ComEX), published independently by the NOLTA, Electronics and Communications Societies. All are provided under open access. The latter two publications focus on providing the latest information quickly (Fig. 4(e) through (g)).

Based on the latest statistics, ELEX requires an average of 28 days for review, and an average of 44 days until advance publication. Some papers have been

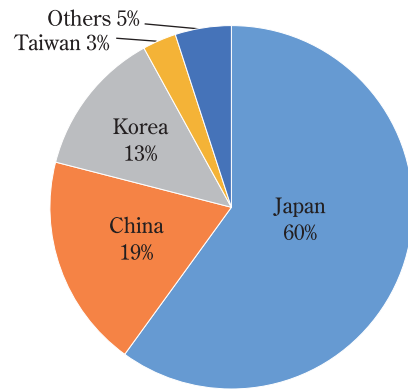


Fig. 5 Breakdown of papers published by country in four Transactions journals

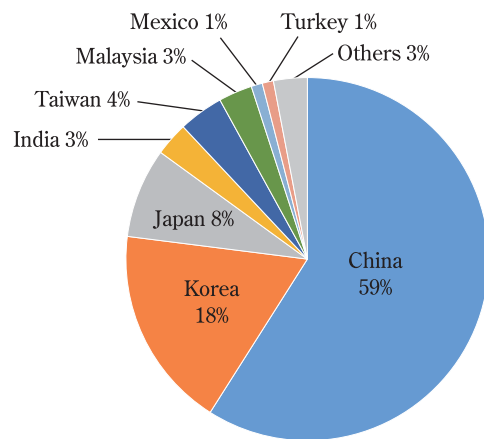


Fig. 6 Breakdown of submissions by country to ELEX

published in as little as 10 days. Fig. 6 presents a breakdown of papers submitted by country in ELEX (2015). Out of 1,123 papers submitted during this year, papers from overseas accounted for 92% of the total. Nearly all of the submissions came from countries in Asia. Note that there was an acceptance ratio of 23%, for a total of 260 papers published that year.

The Communications Society has been publishing Global Newsletter, an English language information journal, four times per year since 2002. The journal is sent to overseas members as an A4 sized booklet<sup>(4)</sup>.

Fig. 7 illustrates transitions in the number of papers published in English language journals. Although there have been no major changes in the total number of publications in the three digital journals over these few years, the number of publications in Transactions has been decreasing since its peak in 2005. Unfortunately, one likely factor behind this decrease is that even members in Japan are submitting papers to overseas journals, as none of the IEICE English language journals

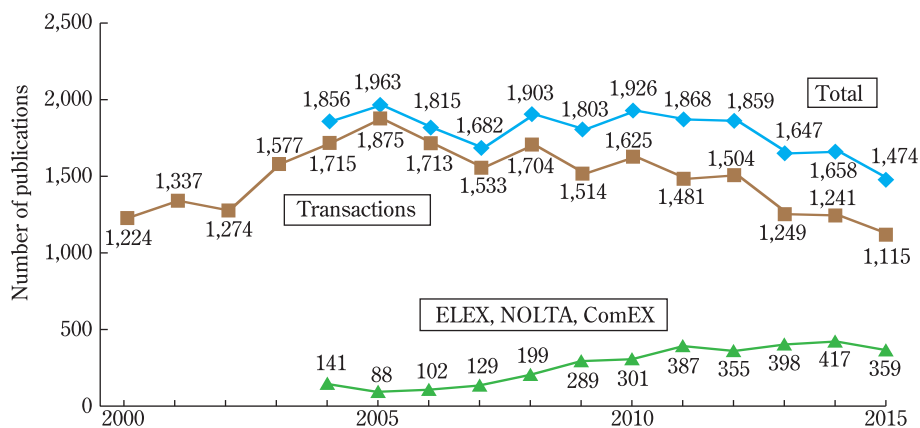


Fig. 7 Transitions in number of papers published in English language journals

has reached an impact factor of one. We hope that the IEICE will work toward increasing the circulation of each journal and that members will submit high quality and timely results to IEICE's English language journals, in order to improve the value of these journals.

## 6. Conclusion

The IEICE has had but a short history of internationalization. It has been only 42 years since the International Affairs Committees were established, and only 14 years since the first International Sections were established as overseas bases in Taipei, Singapore, Beijing, and Bangkok.

Overseas members account for roughly 10% of total membership, with Asian regions accounting for 86% of that. This is likely largely due to the fact that steady efforts to interact have continued to be made throughout Asia with International Sections serving as bases. The International Sections will likely be necessary to increase the number of overseas members and engage in true internationalization.

On the other hand, the English language journals published by the IEICE (four Transactions journals and three digital journals) tell an interesting story. Papers from overseas account for roughly 40% of the total published in Transactions, while submissions from overseas exceed 90% of the total published in the ELEX digital journal. It could thus be argued that the IEICE journals are forming international ones. The issue now is to increase the impact factor. The IEICE is currently in the process of providing open access to its digital journals and some Transactions journals on a trial basis. Taking the quality of English language journals to the

next level will be crucial in improving circulation and recognition.

A ceremony marking the 100th anniversary of the foundation of IEICE was held in September of last year. International Section Delegates from countries all over Asia were invited to attend, and an All Sections Meeting was held to focus on internationalization during the next 100 years. These Delegates expect the future enhanced internationalization of the IEICE.

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