

## The Formation of the IEEE: Fusion, Not Fission

A new engineering society, the Institute of Electrical and Electronics Engineers, made its appearance in January of this year. The IEEE (pronounced "I-triple-E") was formed by the merger of two well known organizations, the 78-year-old American Institute of Electrical Engineers (AIEE) and the 50-year-old Institute of Radio Engineers (IRE).

The result is the largest technical society in the world. With a membership of <sup>over</sup> 160,000, it may well be asked if the IEEE is not approaching a "critical mass" with the possibility of fission occurring, accompanied by the release of a considerable amount of undesirable energy. Such is not believed to be the case. To carry the nuclear analogy further, it is felt that the fusion of the two progenitors will produce a new and stable organization, and that the fusion energy released is of a very useful kind which will be of benefit to the field and the profession of electrical engineering. In short, <sup>what occurred</sup> ~~the action~~ was a "controlled fusion."

For <sup>did not</sup> ~~did~~ the merger come to pass without careful preliminary tests and experiments. Many of the activities of the IRE and AIEE had been fused - and with excellent results - for a number of years. The interests of the two societies had proved to be essentially parallel in most areas. The experimental results indicated that the ultimate fusion should take place - which it did - and that the outcome would be eminently successful - which most IEEE members have faith ~~it~~ will be.

Let us examine the IEEE, the <sup>product</sup> ~~output~~ of this "nuclear reaction," in some detail. Its purposes, to quote from its Constitution, are <sup>to</sup> ~~Scientific~~, literary and educational, directed toward the advancement of the theory and practice of electrical engineering, electronics, radio, allied branches of engineering or the related arts and sciences." This definition of interests shows that here is truly an organization which encompasses all of the areas and specialties of electrical science and engineering. The electrical engineer need not ponder which

4, 18, 246



society best represents his field of interest; there is only one, a unified organization which cuts through and across any ephemeral divisions within the broad field.

The IEEE is one of the few engineering or scientific societies without the name of a specific country in its name. This is because it is an international society - or more accurately, a non-national society. Members from throughout the world benefit from and contribute to the Institute. The globe is divided into nine geographical Regions. Regions 1 through 6 cover the United States, Region 7 is Canada, Region 8 is comprised of Europe and certain portions of the Near East and Northern Africa. Areas of the world not included in the above regions comprise Region 9.

Local sections are established at centers of interest throughout each region. Most of the sections of the two parent organizations have been consolidated or will be in the very near future. When this fusion is completed, they will number approximately 150. Student Branches have been established at most of the major universities and technical schools in Canada and the United States. Most of these had been joint operations of IRE and AIEE for many years. Branches at several universities in South America and Europe bring the total number of Student Branches to 260.

In a gigantic organization with such inclusive technical interests and with members spread throughout the world, one might still wonder about the possibility of a built-in "fission" tendency. If this tendency were indeed there it would serve to indicate that the IEEE had been formed on a whimsical and precipitate basis since the motivating force behind the merger was unity. What safeguards does the new Institute have to prevent this? The IEEE key to the door of unity is variety. One of its mottos might well be: "Unity through variety." This vital and difficult philosophy is realized through evolutionary developments which now constitute the system of Professional Technical Groups. Within the IEEE there are



already thirty such Groups, and several new ones are being proposed. Each member's specialized interests are covered, <sup>or</sup> or will be covered, ~~when the additional ones are formed~~ <sup>by</sup> within one or more of these Groups at the same time that his broad professional and technical needs are being met by the Institute as a whole. In addition, some seventy technical committees look after the technical concerns, including standards, of the profession.

Through 1963, the publications of IEEE will be essentially those continued from IRE and AIEE. These include the PROCEEDINGS OF THE IEEE, ELECTRICAL ENGINEERING, the TRANSACTIONS of each Professional Technical Group, and the three TRANSACTIONS (originally AIEE Bimonthly Publications) covering Communication and Electronics, Applications and Industry, and Power Apparatus and Systems. The total number of editorial pages published total<sup>s</sup> nearly 20,000 annually.

The governing body of the IEEE is the 26-man Board of Directors. The everyday operation of the Institute is in the hands of a 9-man Executive Committee, which is a committee made up of Board members. The IEEE President for 1963 is Dr. Ernst Weber, President of the Polytechnic Institute of Brooklyn.

In the history of engineering organizations, the formation of the IEEE may someday be referred to as the "merger of the century." As far as Headquarters facilities are concerned, it could be called the "merger of the centuries." Staff personnel from the AIEE were just getting used to the ultra-modern glass and stainless steel environment of the United Engineering Center in New York. The IRE staff had been located in a center of gracious living in the form of an eighteenth-century French chateau and two other mansions on the border of Central Park. The IEEE staff of 293 has been fused from the two previous staffs and is now housed in both the new and the old. The merger of the centuries is made complete by the presence of a large computer, used for accounting purposes, in the chateau.

It is early to attempt to appraise the full significance of the "fusion reaction" which produced the Institute of Electrical and Electronics Engineers. Before the



IEEE are many opportunities and challenges. Perhaps the most important is a reversal of the trend toward fission and disunity in the organized engineering profession.