Report from Robotics and Automation Council

Increased productivity and cost-effectiveness have forced worldwide attention to robotics and automation. Many explanations and definitions have been suggested for the words robotics and automation. Let us recall the common interpretations attached to these words. The word "robotics" represents the subject dealing with robots. The reader may know that the Robotic Institute of America suggests that a robot is "a reprogrammable, multifunctional manipulator which is designed to move materials, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks." It is considerably more difficult to find a general, acceptable explanation of "automation." "Webster's New World Dictionary" defines automation in manufacturing as "a system or method in which many or all of the processes of production, movement, and inspection of parts and materials are automatically performed or controlled by self-operating machinery, electronic devices, etc." These sentences are not by any standards, very precise. Yet, they emphasize the diversity of subjects covered by the words robotics and automation. The research on these subjects represents truly interdisciplinary areas, diffusing into many areas of engineering and science. The transfer of knowledge and developments between the different areas is of utmost importance.

Several IEEE Societies have been alert in the area of robotics and automation, which is reflected by the establishment of a Robotics and Automation Council by the following Societies: Aerospace Electronics; Circuits and Systems; Components, Hybrids, and Manufacturing Technology; Computer; Control Systems; Industrial Electronics; Industry Applications; Engineering in Medicine and Biology; and Systems, Man, and Cybernetics.

The Founding President of the Robotics and Automation Council is Professor G. Saridis; the Past President, Dr. J. Jarvis; and the current President, Professor R. Paul. The IEEE Robotics and Automation Council publishes the IEEE Journal of Robotics and Automation. Since its beginning, the Editor has been Professor G. Bekey. The Council also sponsors annual meetings such as the IEEE International Conference on Robotics and Automation.

The Robotics and Automation Council has grown quickly in terms of the financial independence, the membership, the number of subscriptions of the Journal, and the strength of the aforementioned international conference. The Council is financially on firm ground.

Approximately 9000 members subscribe to the Journal. It is in its second year, and has been published quarterly. Plans are made to increase the frequency and publish it bimonthly next year. In 1985, the income from the direct subscription was $45,100 and from other Societies $68,700, while the expenses were $68,100.

The Council sponsors the annual IEEE International Conference on Robotics and Automation. This conference was first held in 1984 in Atlanta, Georgia: then in 1985 in St. Louis, Missouri; and in 1986 in San Francisco, California. The 1987 IEEE International Conference on Robotics and Automation will be held March 30-April 3 in Raleigh, North Carolina, with Professor Y. C. Ho as the General Chairman.

The 1986 conference in San Francisco had 806 registered attendees (470 in 1985), and registration generated $125,000 ($72,000 in 1985). The gross income was $157,000, and the net profit was $37,000 ($31,850 in 1985). Among the attendees, 132 were from abroad: 27 from Canada, 27 from France, and 25 from Japan headed the list. Among the domestic attendees, 211 were from California, which included 123 from the University of California System.

Many members of the aforementioned sponsoring Societies actively participate in the research and advancement of robotics and automation. The Robotics and Automation Council provides the forum for these activities. It represents the centralized core of the diverse disciplines and helps to bridge activities on robotics and automation of the different Societies. We should emphasize that the Societies also independently continue their own activities in these areas. They also contribute to the technology transfer between the different areas as well as between the industry and universities. They keep their members abreast of the progress on robotics and automation.

The Council has discussed a possible status change from a Council to a Society. It is important that the Control Systems Society forms an opinion on the implications of such a change on the membership, conferences, Transactions, research activities, tutorials, etc. Communications on the status change with other Societies have been started.

In view of the success of the Robotics and Automation Council, the Control Systems Society should have a plan to support the Council's desire of transforming into a Society, while continuing its involvement in robotics and automation. For example, the Control Systems Society could organize or sponsor tutorials and workshops on the subject through the Technical Committee on Automation and Robotics and appoint Distinguished Lecturers in the field. We are convinced that the Control Systems Society can continue to have strong activities on robotics and automation while continuing the collaboration.

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