

Robotics and Automation Society
AdCom Minutes: 5/14/90

Approved with an added amendment item 11

December 8, 1990

IEEE Robotics and Automation Society AdCom Meeting Minutes

Hyatt Regency Hotel, Cincinnati, Ohio

May 14, 1990

LIST OF ATTENDEES

A. C. Sanderson, President
N. Caplan, President-Elect 1990
G. N. Saridis, AdCom member and Founding President
R. D. Klafter, Vice-President for Finances
H. E. Stephanou, Vice-President for Member Activities
T. J. Tarn, Vice-President for Technical Affairs
C. S. G. Lee, Secretary and AdCom member
R. H. Taylor, AdCom member and Editor of Transactions
W. E. Snyder, AdCom member and Editor of Newsletter
Roz Snyder, Managing Editor of Newsletters
R. B. Kelley, Chairman, Publications Committee
T. C. Hsia, Chairman, Meetings Committee and General Chairman, 1991 Conference
L. S. Haynes, Chairman, Standards Committee
R. A. Volz, General Chairman, 1990 Conference
A. J. Koivo, AdCom member and Program Chairman, 1990 Conference
G. A. Bekey, AdCom member
A. K. Bejczy, AdCom member
A. A. Desrochers, AdCom member
T. Fukuda, AdCom member and Chairman, International Committee
G. Hirzinger, AdCom member
J. M. Hollerbach, AdCom member
J. F. Jarvis, AdCom member
J. Y. S. Luh, AdCom member
V. J. Lumelsky, AdCom member and Chairman, Robot Motion & Path Planning Tech. Comm.
G. Menga, General Chairman, 1992 Conference and Chairman, International Committee
O. Khatib, Chairman, Robot Dynamics & Control
W. Khalil, Chairman, International Committee
M. Vidyasagar, Chairman, Future Directions in R & A
P. Dario, Chairman, Micro Robots and Cellular Robots
P. Luh, Chairman, Computer-Aided Production Management
W. Gruver, guest

1. APPROVAL OF AGENDA AND MINUTES OF LAST ADCOM MEETING

The meeting was called to order by President Sanderson at 1:07pm.

The meeting agenda was modified by Sanderson and approved.

The minutes of the R&A AdCom meeting held on December 16, 1989 at Hyatt Regency Tampa Hotel, Tampa, Florida, were amended by Koivo and approved.

2. REPORT ON STATUS OF THE SOCIETY

- 2.1 President Sanderson indicated that the overall status of the Society is in good shape. He indicated that there are several latest hot topics emerging in R&A, and we can't only be moving to the latest host topics without dealing with the balanced ones. The technical development in terms of the areas that our directions will be is something where we have to continue to think about.

3. VICE-PRESIDENT FOR TECHNICAL AFFAIRS REPORT

- 3.1 Tarn, Vice-President for Technical Affairs, has organized two new additional Technical Committees. The first one is on Microrobots and Cellular Robots, chaired by Paolo Dario, and the other one is on Manufacturing and Automation, chaired by Ali Sharifnia. Tarn encourages each chairperson to form his/her working groups. Tarn has also asked chairpersons to send him their interests in working groups of their particular fields and has received some response. He will continue to work closely with the chairpersons to identify their activities/functions.
- 3.2 Questions were raised relating to the relation between Technical Committees and these working groups. Tarn indicated that the Technical Committees tried to recruit their members to form an interest group to work on bigger projects such as organized workshops, promote tutorials, etc.
- 3.3 Question were also raised that some of the Technical committees were not active (e.g. Technical Committee on Computer Vision). Tarn responded that the working group has not been formed. Tarn would like to see each Technical Committee form their working group and then propose their activities. Discussions followed that included limitations and obligations of these working groups.

4. VICE-PRESIDENT FOR MEMBER ACTIVITIES REPORT

- 4.1 Stephanou, Vice-President for Member Activities, reported that by the end of April (1990) we have 5356 active members (in the last minutes, we had 6205 active members). This number did not include the IEEE seasonal fluctuations. The peak is

usually around January and February, goes up in March, slightly down in April, then starts going up. Stephanou normalized the number at the peak and that's about 5953. We are declining at a very slight rate but our slow is negative so it is a source of no concern. Further discussions were focused on the interpretation of this membership number.

- 4.2 Stephanou indicated that at the end of this week a membership activity will be formed. The membership activity at this time is trying to put the chapters together. We have a very large number in the pipeline and officially two chapters have been formed to this date. The first one is in Princeton, NJ, and the second one is in Tokyo. Stephanou is making a special effort to try to attract membership from industry and also in the area of automation. Questions were raised about chapters in Europe. We have one in UK, an automation and robotics group in Germany, and an association of robotics in Italy. The procedure for starting a chapter is that you need a minimum of 12 signatures of members of the Society.

5. VICE-PRESIDENT FOR FINANCES REPORT

- 5.1 Klafter, Vice-President for Finances, handed out a four-page financial report with two budget figures for 1989 and 1990 (see Attachment A at the end of the minutes) and reported that the Society is financially healthy. In both years, the actual surplus is bigger than the budgeted surplus. The net worth of the Society at the end of 4/30/90 was about \$396,500.
- 5.2 Klafter indicated that some accounting situation has been changed, particularly item 9d for the 1989 Conference. Item 9d shows only \$25,000, but the last page of the budget showed almost \$68,000. This is because Harry Hayman who runs the conference for us holds back that money to help pay for expenses associated with the conference until that time it starts to generate income. Harry will transfer that money to the Society and may show up in the 1990s budget.
- 5.3 Klafter indicated that since 1985 our R&A Conferences have generated about \$270,000. The page charges from the Transactions have improved, and there is a substantial interest income generated from the surplus.
- 5.4 Our annual operating expense is about \$415,000-\$460,000, and our surplus is gradually approaching the annual operating expense. This is viewed as a fairly typical healthy situation.

6. NOMINATING COMMITTEE REPORT

- 6.1 Ho, Chairman of the Nominating Committee, was not able to attend the meeting and asked Sanderson to convey the results of the AdCom member election. We have 18

AdCom members and are now on a cycle with 6 new AdCom members elected every year. This year, 8 candidates were nominated for the 6 vacant positions, and of the 6 elected members really 5 of the 6 are continuation of the people that held them and they are Tony Bejczy, Alan Desrochers, Takeo Kanade, John Luh and George Saridis who are re-elected now for a 3-year term and the other one, Larry Ho, declined to continue on the AdCom, and re-elected to that seat is Vladimir Lumelsky.

- 6.2 Sanderson indicated that a question came up whether a newly elected AdCom member is eligible to vote for president-elect whom we will vote for today. Sanderson indicated that he is in favor that the new AdCom member is eligible to vote; the difference is only one vote for today's president-elect election (whether Larry Ho or Vladimir Lumelsky can vote). The AdCom members agreed that newly elected AdCom members shall take their seats and vote in our AdCom meeting in April/May.
- 6.2 Sanderson raised an issue that in our by-laws and constitution there is a specification that says that if an AdCom member does not attend three AdCom meetings in succession, then he/she is eligible to be removed. This is our third AdCom meeting as a society so this is the first time that this rule comes into play, and there are three members of the AdCom who have not attended any of the three meetings since their election. The three members are Chuck Neuman, Takeo Kanade, and Lou Paul. After some discussions, it was agreed that Sanderson will contact them and make them aware that the AdCom is concerned about their participation. Also in the future if someone has been absent from two meetings in a row, the President of the Society should call the person up and at the third meeting, in case the issue arises, be prepared to discuss it.
- 6.3 Two candidates, T. J. Tarn and Dick Volz, were nominated by the Nominating Committee for the election of the President-elect for 1991 who will take office as President in January 1992. A written statement from each candidate of their plans or observations about the Society should have been distributed to all AdCom members by Larry Ho. The Nominating Committee also solicited from those who did not plan to attend this meeting a proxy vote. Both Sanderson and George Lee (the Secretary) have received some proxy ballots for this election. A secret ballot was conducted and the voting members of the committee are the 18 AdCom members, the President (has the option of voting), the 3 Vice-Presidents, and the Secretary. A total of 22 ballots was counted (18 AdCom members plus 5 executive officers, and George Lee is both Secretary and an AdCom member, this gives a total of 22 votes), and T. J. Tarn was elected as the President-Elect for 1991. Some discussions then followed as to whether the president-elect is a voting member of the AdCom. It wasn't clear but did not state so in the bylaws and the constitution. Sanderson solicited motion/suggestion on whether we should institute that the president-elect is a voting member of the AdCom. A motion was approved to advise/allow Sanderson to propose language or an amendment to the bylaws which would permit the president-elect to vote.

- 6.4 Norm Caplan, President-Elect of 1990, will work together with the Nominating Committee in nominating Vice Presidents and Secretary to serve with him in 1991. A formal election of Vice Presidents and Secretary will be held in the December meeting. It was suggested that it would probably be helpful to again have the Nominating Committee inform the AdCom in 30 days in advance about the nominees for Vice Presidents and Secretary.

7. PUBLICATIONS COMMITTEE REPORT

- 7.1 Kelley, Chairman of Publications Committee, indicated that Russ Taylor, Editor of the Transactions, is in the process of discussing the formulation of policies aimed at both streamlining the handling of manuscripts and decreasing the total workload on the editor, the associate editors, technical editors and the reviewers. The policies are being discussed at the editorial board meetings.
- 7.2 Kelley also indicated that Wes Snyder is stepping down as Newsletter Editor after the June 1990 issue of the Newsletter. Since Roz Snyder has done such an outstanding job as Managing Editor, he has asked her to continue in that capacity. It has been a difficult task to find someone to serve as Newsletter Editor. Kelley was looking for someone who is active in the Robotics and Automation Society, who is able to attend the meetings and who has both the time and resources to take on the role of Newsletter Editor. He found such an individual in Michael B. Leahy, Jr., Air Force Institute of Technology, and accordingly, he nominated him to the AdCom for appointment as the Newsletter Editor.
- 7.3 John Jarvis has stepped down as an Associate Editor of the Newsletter. He has been replaced by John Baillieul, Boston University. The other two Associate Editors, Avi Kak, and Tom Henderson, have agreed to continue.
- 7.4 Kelley has forwarded information relating to the IEEE Prize Paper Committee solicitation for nominations for the 1991 Prize Paper Awards to the Editor of the Transactions.
- 7.5 Taylor, Editor of Transactions, gave a presentation on the status of the Transactions. He was pleased to announce that Alan Desrochers has agreed to become a third Associate Editor of the Transactions and will generally be handling Automation and Manufacturing papers. A number of new technical editors have been recruited: Nicholas Ayache of INRIA (computer vision), Paul Besl of GMR (computer vision), Kaigham Gabriel of Univ. of Tokyo (micro mechanics), Kicha Ganapathy of AT&T (computation), Ralph Hollis of IBM (sensing), and Chun-Shin Lin of Univ. of Missouri-Columbia (path planning). Taylor indicated that he has recruited more editors in the vision area because previously our vision editor had gotten both

overloaded and lost interest in computer vision; he liked to have some redundancy in the system and also to release the burden of one editor. Ram Akella's special issue which has been in the work for two years is scheduled to appear in the December issue. The review process for the Transactions papers is still very long and that is one of the reasons that Taylor would like to increase the number of editors to handle the papers. In 1989, we had 381 submissions, and of those we accepted 46, rejected 83 (really rejects). There is a total year of 80 accepted; that means most papers required additional revisions before they can be published. It's now being 1990 and some of these authors are still taking an uncommonly long time revising their papers. A major concern is that we have something like 450 papers in the "review process." Now some of them are in review for the second and *third* iterations. Taylor had discussed it in the editorial board meeting and tried to find ways of reducing the number of iterations to make the decision final. Some suggestions for reducing the time spent in the review process are (i) more technical editors to share the load, (ii) continued follow-up of the worse "cats and dogs" by technical editors, (iii) revising/modifying the review forms to make the guidelines clearer to attempt to get more finality into the review process. Taylor summarized that the quality of papers has remained very good, that there are always opportunities to further improve the quality by encouraging more terseness in the papers and more thorough reviewed, but it really is going to take more people to manage the review process.

- 7.6 In response to some questions, Taylor indicated that he will continue to pursue the joint issue with biomedical. The Transactions has published several special issues and will continue to publish special issues/sections; this year one special issue is scheduled, and next year one special section (half a special issue) is scheduled.
- 7.7 Bejczy asked for procedure for publishing a small set of papers from the Conference Workshop in the IEEE Press. The publication does not need recommendation from the Society. However, copyright issue may be difficult to solve if the papers are published by a non-IEEE press company like Springer Verlag.
- 7.8 From previous meetings the Society has approved up to \$25,000 a year for Transactions editorial assistance. Taylor would like to spend some money on purchasing copies of the IEEE member directory for the technical editors so that they can find the address of reviewers. As long as Taylor stays within the budget, there was no objection to purchase the membership directory.
- 7.9 Roz Snyder, Managing Editor of the Newsletter, briefed the AdCom on the status of the Newsletter. Currently, the Newsletter has an annual budget for publishing 4 issues per year with 16 pages per issue. 6033 copies are mailed to the Society members (3756 domestic and 1892 foreign). The newsletter publishes feature articles; for example, she has one article in medicine, one for the next issue in the

nuclear industry and is hoping to have one in mining. Roz requested (i) an increase of annual budget for publishing 24 pages per issue, (ii) use of recycled paper for publishing the Newsletter. For a 16-page newsletter, the use of recycled paper will add an additional \$375 per issue. After some discussions on the recycled paper issue, a motion was made to rethink the recycled paper and propose no change to the current use of paper. An amendment was added to the motion that Roz should investigate the possibility of alternative supplies of recycled goods that do not cause an additional expense. The motion with the amendment was approved.

The need for increasing the Newsletter pages from 16 to 24 was due to an increase in reporting chapter activities, more technical committee activities and reports, etc. Some discussions were followed on the budget items. A motion to approve the budget for 24-page Newsletter per issue for 1991 was tabled.

Roz also provided the AdCom with the Newsletter editorial policy and the advertising policy. She indicated that the articles published in the Newsletter are generally not reviewed. This year she received a book review which criticizes some work done in public and other journals (not our journal), and she sent it to George Saridis for advice. There were some discussions on whether we should revise policy of the Newsletter due to this book review. Due to the limitation of time, Sanderson advised that Roz, Kelley and the new Newsletter editor should sit down and discuss whether there should be a policy revision or restatement of the policy for the Newsletter and may be bring it to the next AdCom meeting. Finally, Roz indicated that the Newsletter has been getting an average of about \$500 in advertisement revenue per issue. The ad revenue was not considered in the budget.

- 7.10 Kelley nominated Mike Leahy of the Air Force Institute of Technology for the Newsletter Editor position. Leahy then discussed some direction of the Newsletter that he wants to go. He likes the Newsletter to be more of a magazine oriented but would not go to a magazine format. He would like to see more local chapter news in the Newsletter, e-mail directory, thesis titles of recent graduates and where they went, etc. Some discussions then followed such as any support from Leahy's institution, print conference announcement, calendar of other society's conferences, etc. A motion to approve Mike Leahy as the Newsletter Editor was made, seconded and approved. Sanderson then relayed two suggestions that came out of the discussion (when Leahy was asked to stay outside the meeting room). One was, in addition to the associate editors, that some international representation be included and the International Committee will make suggestions in that regard. The other was that Kelley and Wes Snyder were asked to assist the transition process.
- 7.11 Wes Snyder, former Newsletter Editor and an AdCom member, pointed out that the current annual budget of \$34,000 is actually based on 24-page newsletter per issue. It was approved before (24 pages) but was not utilized. So the budget (\$40,610) proposed by Roz Snyder for 1991 really does not represent any new policy change in

terms of the number of pages or the content, but it is an increase relative to costs based on the same basis as last year but is a maximum of 24 pages. If the content isn't there, then the managing editor will not print the pages so we don't incur that cost necessarily. After some consultation with Klafter about the budget, a motion to approve a budget of \$42,000 for the Newsletter for 1991 was made, seconded and approved.

8. MEETINGS COMMITTEE REPORT

- 8.1 Hsia, Chairman of Meetings Committee, passed out a brief abstract summary, and asked Dick Volz to summarize the 1990 Conference.
- 8.2 Dick Volz, Conference Chairman of the 1990 Conference, reported that we are going to have a very successful conference and preregistration is 515 for the conference and over 190 for the tutorials and workshops. Also this Conference has the largest number of students registered for the conference that you've had in the conference in the past. The Conference also received some help from the local student chapter/organization. The Conference got the video VHS systems and some of the projector systems at very little cost, and has gotten signs printed for free. Finally, an appreciation dinner has been planned on the riverboat for the AdCom, Program Committee and other people who helped out the Conference.
- 8.3 Koivo, Program Chairman of the 1990 Conference, reported that the Program Committee met in January in Indianapolis. A total of 722 papers were submitted and the committee selected 324 papers, acceptance rate is about 40%. The Program Committee members covered authors' name and affiliation before they sent the papers out for review so that the reviewers did not see explicitly the author's name. There were about 80 papers submitted by the Program Committee members, and Koivo asked past Program Chairmen to serve as the honorary referees for these papers. There were some discussions on how Harry Hayman handled the printing of the conference program and the distribution/mailing of the conference program. For the Workshop 2D, there were 42 advanced registrations, and Koivo counted about 65 people in the lecture room. Finally, Koivo reported that the Program Committee received 49 papers for the student paper award competition. These papers were first reviewed by standard channels, and 31 of these papers were accepted. He then divided these 31 papers into six categories and asked subcommittee members to review them and select 5 or 6 papers. The winner will be announced at the Conference banquet, and the other 5 paper authors will also receive a letter from Koivo for their achievement and recognition. Others suggested that the list of finalists should be published in the Newsletter.

- 8.4 Sanderson asked Peter Weistner from the IEEE Educational Activities Department to discuss the videotaping some of the tutorials and the pricing and profit sharing scheme. Since the IEEE shares the proceeds from marketing and selling the tapes of the tutorials of the conference with the Society, the AdCom has some options as to whether we want to share those proceeds with the presenters.

Weistner indicated that about two years ago, the IEEE Educational Activities started to video record technical presentations and tutorials, generally at the advanced undergraduate beginning graduate levels. The reason was to fill a particular niche in continuing education to provide those who don't have the opportunities to attend conferences and other students and professionals in the field with inexpensive access to what is going on in their field. The IEEE have very little resources and have to be very selective. They can't record everything in sight and they have quality control built within educational activities. Robotics was one of those areas that have been dealt as hot, relevant, and wonderful. The costs of the tapes are \$59.95 and that price includes the costs of production, hiring the video group, promotion and so on. The arrangement is that essentially it's an agreement with the Society and with the individual presenters. The RAS will get \$6 per tape royalty from the IEEE (about 10% of the costs of the tape). It is up to the Society whether we want to split some of that royalty with the presenters (note that the presenters are already being paid by the Society for doing the tutorials). This year they propose to do 3 sessions. They will not do any editing except to put title on and clean up visuals.

A motion to split 50-50 of the royalty with the presenters/authors for this year's (1990) taped tutorials was made and passed. The IEEE will send the royalty directly to the Society and the presenters. The presenter may be able to designate the royalty to be sent to the Society. A question was asked whether the IEEE can provide a royalty of 10% to the Society plus some additional to the presenters. Weistner indicated that he needs to go to the Continuing Education Committee to get an approval, and this year it is not worth pursuing.

A subcommittee was formed to study it and make a recommendation to the IEEE on how we would like to see it handled next year. The subcommittee consist of Kelley, Desrochers, Khosla and either Hsia or Tarn be responsible for coordinating it.

- 8.5 Hsia, General Chairman of the 1991 Conference, indicated that the Conference dates are April 7-12 (Sunday through Friday) at Sacramento. The conference will follow the general format as the 1990 conference with Tutorials on Sunday and Monday, the conference on Tuesday to Thursday, and Workshops on Friday. Tarn is the Program Chairman and three Vice Chairpersons are Stephanou of RPI, Randy Phillips of General Electric, and Furuta of Tokyo Institute of Technology. Hsia also submitted a revised budget for the 1991 conference. The changes in the revised budget were done by Harry Hayman who basically changes the figures to be in line with the 1990 conference. The revised budget shows \$3,000 surplus.

This year there are two categories for students to register: a fee of \$105 with proceedings, and a fee of \$65 without proceedings.

Hsia also indicated that he would like to reduce the program information by one; that is, after the Call for Papers, they would go directly to Advanced Program without having to have advanced announcement and then the final program. This requires that the advanced program to be on time (i.e., 3 months ahead of the Conference). This will save considerable \$6,500, and they moved the deadline for the submission of papers one month earlier to September 16. Hsia also is working to get local industry to sponsor the reception.

There were some discussions on pros and cons of "high" student registration fees and on the Conference budget as handled by Harry Hayman.

- 8.6 The 1991 Conference also proposes to run a video proceedings suggested by Sanderson and others. The idea grew from the fact that in 1989 conference, 15% of the 325 presenters had shown their video results which connected to their papers. Hsia in consultation with Tarn and Sanderson has worked out the mechanism: (i) A Call for Videos to all society members, (ii) Set up a committee separate from the Program Committee to handle and collect the tapes submitted to the Conference. Peter Luh of University of Connecticut was selected to head the "Video Committee." Luh suggested that the video be limited to 3-5 minutes long, accompanied by audio and a couple pages of write-up. The video can be directly coupled to the paper to be presented in the Conference (assuming that the paper is accepted for presentation), or some relevant demonstration of robotics or automation not necessarily connected to the papers presented.

Some questions were raised such as (i) How old can this media be? (ii) How the review process of the video should be handle? (iii) Is it a separate review? And who is doing the review? (iv) What is the video format and the quality of the video? Some long discussions then focused on the merits of having videotapes and how to do with logistic details. It was the consensus among the AdCom that the video proceedings is a worthwhile venture for the 1991 Committee if they decide to work on it. After long discussions, a motion was proposed (by Bekey) "to accept the proposal of the 1991 Committee for generating an appropriate videos, the implementation details to be left to coordination with the President of the Society and IEEE." The motion was amended to include the Chairman of Publications in the Committee. The whole motion was seconded and passed.

- 8.7 Giuseppe Menga, General Chairman of the 1992 Conference, reported that the 1992 Conference will be held in Nice, France, on May 10-15, 1992 with a sponsorship of the Chamber of Commerce of Nice. The organization of the conference was supported by the Politechnic of Turin and INRIA. Although the Chamber of Commerce of Turin and the Chamber of Commerce of Nice are helpful to provide some financial support, the budget of the Conference will be much higher than the budget that we

used to see in the United States because they will have a much higher expenses. Expenses for exhibition area will be higher because in Europe they usually don't have the combination of the big hotel with the conference room.

The Conference has a budget of income \$282,800, expenses of \$277,000, and a surplus of about \$5,125. A breakdown of income and of expenses is attached to the end of the minutes (Attachment B). Menga noted that in order to balance the budget, the Chamber of Commerce of Nice and the City of Nice have "contributed" \$64,000 for their sponsorship of the Conference and they expect an extra of about \$22,000 from the exhibitions. Some financial support may be forthcoming from the Chamber of Commerce of Turin, but an exact amount was not known. Major expenses are promotion in Europe (mailing programs and call for papers), travel costs of the Committee, room rental and exhibition expenses. Some discussions on the proposed budget then followed. It is clear that the Chamber of Commerce of Nice is willing to support \$64,000 for the local rooms and expenses but do not want to be obliged to do that in order to provide a profit to the Conference/Society. Discussions then followed on how to "hide" the surplus so that the Conference will still generate a surplus without giving back portions of \$64,000 to the Chamber of Commerce of Nice.

The proposed budget as a whole is very conservative. The Conference Committee has already anticipated some loss of American participants, and would like to compensate these American attendees from people coming from Europe.

The conference registration fee is set for \$210 for members, \$260 for non-members, and \$100 for students.

A motion to approve the 1992 conference committee to go ahead and sign the contract with the conference site given these financial matters will be worked on was made, seconded, and passed.

- 8.7 Sanderson indicated that we should be again actively soliciting proposals for the 1993 Conference for consideration at our next AdCom meeting in December. It has been suggested by many that the Conference should be moved back into the US in 1993. In terms of our schedule of east, west and midwest, it probably should be on the east coast, and again the suggestion is that it be in one of the major cities which is accessible to US participants as well as European participants. If anyone has an idea or suggestion or wants to encourage someone they can get in touch with Hsia who is the Meetings Chairman or with Sanderson.

- 8.8 Hsia, Chairman of Meetings Committee, reported several action items concerning the co-sponsorship business.

On February 12, Hsia went to Napa Valley for the MEMS 90 (Micro Electro Mechanical Systems) International Steering Committee meeting. He found out that in 1990 MEMS, they had a participation of about 260 people versus 140 the year before. So that is a tremendous growth and there are 30 contributed papers. Hsia also received a comprehensive three-page report from Roger Howe and John Wood.

Summarizing the essence of the report from John Wood and Roger Howe: (i) MEMS-91 will be held in Nara, Japan, January 30 - February 2, 1991. General Co-chairs are Hiroyuki Fujita and Masayoshi Esashi. They already have printed out the Call for Papers, waiting for our approval for sponsorship. (ii) MEMS-92 will be held in Berlin, Germany, mid-January or early March, 1992. General Co-chairs are Wolfgang Benecke and Jan Fluitman. (iii) The location and time for the MEMS-93 have not yet decided (possibly in the US). General Co-chairs will be Jeffrey Lang and Albert Pisano.

The issues being raised by the MEMS Steering Committee that required the AdCom attention are:

- 1) They are concerned about travel grants to MEMS-91 and MEMS-92 from NSF because they are outside the United States.
- 2) The possibility of keeping some profit return from MEMS-90 and MEMS-91 for use in the startup of MEMS-93.
- 3) The possibility of co-sponsorship between IEEE-RAS and the ASME Dynamic Systems and Control Division for the MEMS-93.

Hsia requested an action for formally approving the sponsorship of the MEMS-91. The MEMS-91 is sponsored by IEEE-RAS and in cooperation with IEE of Japan and ASME Dynamic Systems. Hsia indicated that he had received the budget and he sent Klafter a copy for review. Klafter indicated that he had no objections to the proposed budget for the MEMS-91. A motion to approve the sponsorship of the MEMS-91 was made, seconded, and passed.

Hsia also pointed out that in the future, the International Steering Committee of MEMS will consist of 12 members made up of General Co-chairs of the previous three MEMS Workshops and the General Co-chairs of the next three MEMS Workshops.

- 8.9 John Jarvis, an AdCom member, presented the possibility of co-sponsorship with the IEEE Electron Device Society and the Division of System Dynamics in the ASME to publish a new journal, Micro Electro Mechanical Systems Journal. Jarvis moved that a committee be formed by the Publications Chairman to perform a formal study on the pros and cons of the journal co-sponsorship and present a recommendation to the AdCom for approval in December meeting. The motion was seconded and passed.

- 8.10 Due to the limitation of time, Hsia just mentioned the approval of the following "in cooperation with" conferences:

(i) International Symposium on Intelligent Robotics, January 3-5 or 7-9, 1991, Bangalore, India. General Chairman is M. Vidyasagar.

(ii) 1991 ICAR: Fifth International Conference on Advanced Robotics — "Robotics in Unstructured Environments," June 20-22, 1991, Pisa, Italy. Conference Chairman is Paolo Dario.

The third request for "in cooperation with" conference is really controversial, and

Hsia does not feel comfortable of approving it and would like to request the AdCom to decide it. The requested conference is "Simulation of Adaptive Behavior: From Animals to Animats" Conference, September 24-28, 1990, Paris, France. Conference Chairpersons are J. A. Meyer and S. Wilson.

Hsia did ask Rodney Brooks who is on the Program Committee of that conference to give him a view. Brooks feels that it is a valuable conference from his point of view and is looking forward to participating and feels that it is kind of an innovative coupling between sort of robotics technology and some of the biological issues. After some discussion about the technical content and merit of the conference, a motion to disapprove to cooperate was made, seconded, and passed.

- 8.11 Sanderson explained the special conference registration fee which was brought up in the last meeting by Vidyasagar, Chairman of Future Directions in R&A Tech. Comm. In essence, Vidyasagar requested that the Society offers lower conference registration rates to people from developing countries who have an economical justification. The request was handled by the International Committee to work with Klafter to look into this matter. Discussions then focussed on the procedure for verifying and identifying people with economic needs, and the procedure must agree with the IEEE policy. With no formal procedure for approval, a motion "to institute a policy which would allow a reduced conference registration fee for people from developing countries and they would develop a procedure by which someone requested from the conference chairman he would make a judgement and implement that and we would try to coordinate that procedure with the way IEEE institutes reduced memberships" was made and passed.

Sanderson asked Hsia to coordinate a study for producing that set of procedures.

9. BRIEF REPORTS FROM TECHNICAL COMMITTEES

- 9.1 Due to the limitation of time, the Chairman of each Technical Committee did not give a brief report. Brief reports were received either at the meeting or after the meeting, they are attached to the end of the minutes.
- 9.2 Report on the activities of Standards Committee was submitted by Haynes (see Attachment C).

10. OTHER BUSINESS

- 10.1 Sanderson indicated that there are other action items that the AdCom has to decide on. The first one is the Region 9 Symposium. Sanderson reported and recalled that last Fall the AdCom approved \$5,000 to support up to 3 participants for travel and expense for the Region 10 Symposium (which was attended by Sanderson and

Tarn). The IEEE TAB matched what we approved for the expenses.

Next September they are having a similar symposium which will be in Latin America and we will again have a major meeting and then a series of sessions associated with it. They are estimating expenses at per individual if you do the whole thing. The symposium is a two week trip at \$4,000 per individual which would be split \$2,000 by TAB and \$2,000 by the Society.

After some discussion, a motion to provide a maximum of \$5,000 for a maximum of 3 participants to participate in the symposium was made and approved. Sanderson asked anyone who is interested in the symposium to contact him. If we pay \$2,000 apiece and there are 3 participants wanted to go, then each individual may have to make up the difference.

- 10.2 Sanderson reported that there is a congress held every few years which brings together all the regional organizational people within IEEE, and they are having one of these in October in Toronto. They would like societies to help to fund participation of particular chapter chairman to attend this meeting. The IEEE is providing \$1,000 to each society to assist chapter chairman to attend. They are asking societies to approve, and Stephanou has suggested that corresponding \$1,000 to facilitate the chapter chairman or some member of the membership to attend this meeting.

A motion was made to approve up to \$2,000 to support participation in this section congress by a chapter chairman. The motion was approved.

Later, after some discussion, an amendment was made to specify that up to \$2,000 for three people and giving Stephanou the decision as to who those three individuals should be. The amendment was approved. Stephanou will be the one to decide who should attend and presumably it will either be Stephanou or another person representing the society or the membership activities, plus at least one chapter chairman. Another suggestion is Stephanou plus one domestic chapter president and one international and let Stephanou decide which ones.

- 10.3 Sanderson would like to discuss the location of next AdCom meeting. Three possible sites are (i) with the CDC in December in Honolulu, Hawaii, (ii) with the SMC in November in Los Angeles, (iii) with the SPIE in November in Boston. A motion was made to have our next AdCom meeting to be held in Hawaii. The motion was carried (only two opposed).
- 10.4 Sanderson reported that the Industrial Electronic Society is proposing to change their field of interest. Looking at their field of interest, Sanderson feels that they are including some topics in robotics and automation. So Sanderson will represent that view at the TAB meeting.

- 10.5 Saridis, Chairman of the Awards Committee, reported that 6 candidates have been nominated for the fellow awards. Roger Brockett, Lester Gerhart and Saridis formed the Awards Committee in evaluating the candidates. Saridis invited Lester Gerhart to be a committee member because two candidates' research areas are more towards vision. Saridis then announced that our first fellow in the Society is Bob McGhee who was elected last year. The award will be presented at the banquet Wednesday.
- 10.6 Desrochers thought that Khosla, Education Chairman, should be put back in control of the tutorials and workshops. As Volz announced earlier that we have 190 attendance. That is the lowest attendance we have had in about 5 years, and Desrochers thought it really is important to have one person who is overseeing what is going on in those tutorials and workshops. Desrochers indicated that the Program Chairman and General Chairman of a conference cannot handle the details of tutorials and workshops. Desrochers liked to see that Khosla be on the Program Committee for the 1991 and 1992 conferences and coordinating the tutorials and workshops. Desrochers wanted this to be an advice to next year's chairman.
- 10.7 Snyder reported that the neural networks council is looking for proposals for a specialized workshop.
- 10.8 A motion was made to have our next AdCom meeting to be held on Saturday, December 8, 1990. The motion was passed.
- 10.9 Meeting adjourned at 7:00pm.
- 10.10 Next Meeting: Saturday, December 8, 1990, at the Hilton Hawaiian Village, Honolulu, Hawaii, 1:00 pm — 6:00 pm, at the call of President Sanderson.

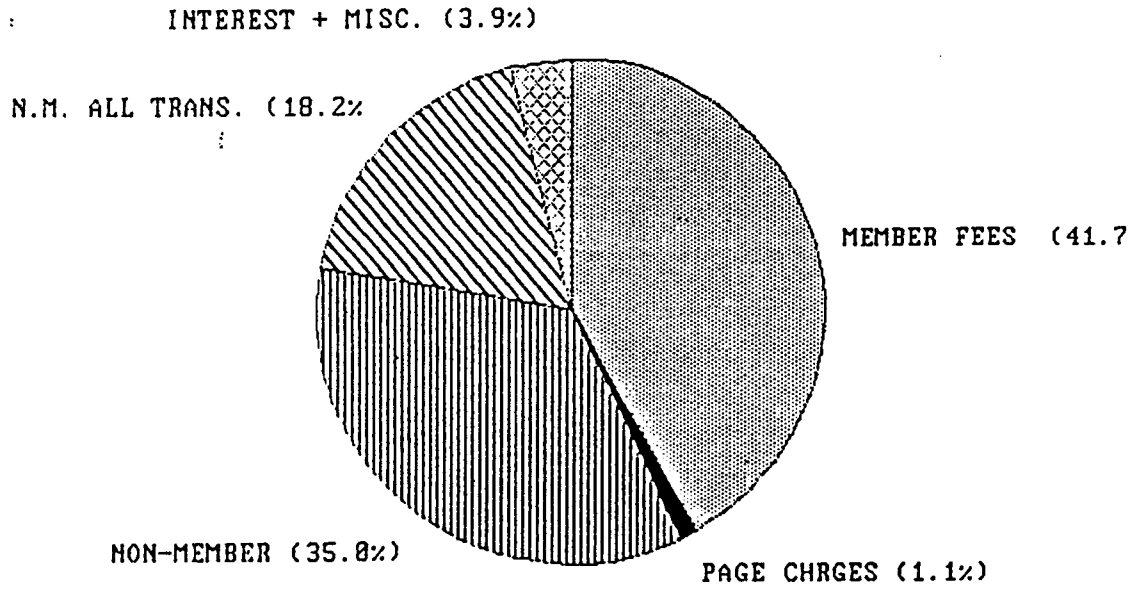
11. Added Amendment

Desrochers proposed to amend the minutes to reflect that the AdCom recommends that the president sends a letter to Wesley Snyder recognizing his service to the Society as Newsletter Editor for the past five years. The amendment was seconded and passed.

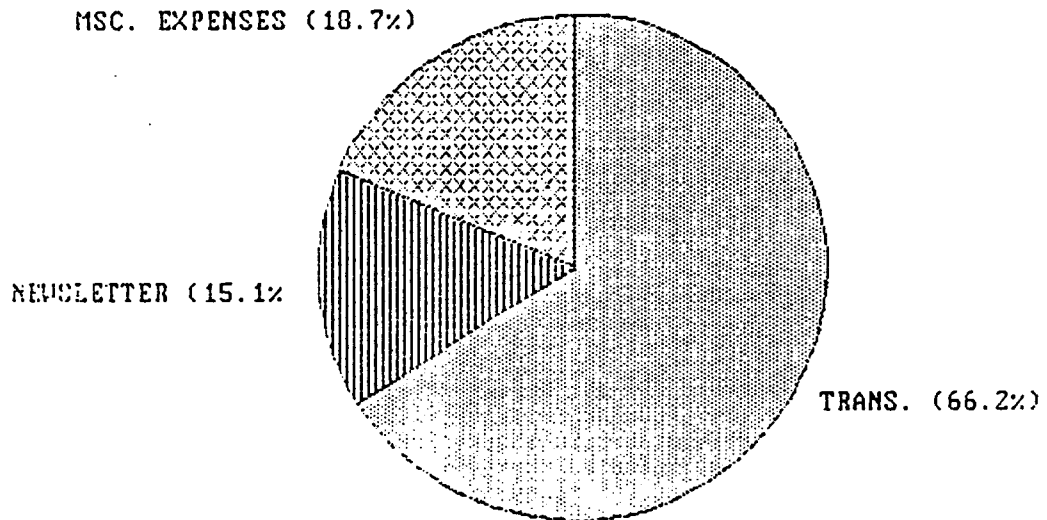
RAS - BUDGET REPORT [CINCINATTI] - MAY 14, 1990

Attachment A	ITEM	ACTUAL 2/28/90	BUDGET 1990	ACTUAL 1989	BUDGET 1989
1.	MEMBER AND AFFILIATE COPIES	3878	5334	5781	5781
2.	STUDENT MEMBER COPIES	1292	583	554	554
3.	INDIVIDUAL NON-SOCIETY COPIES	303	387	309	309
4.	IEEE NON-SOCIETY AND MEMBER	0	0	313	313
INCOME (\$1,000)					
5.	MEMBERSHIP FEES	\$59.2	\$89.0	\$78.9	\$91.1
6.	INDIVIDUAL NON-MEMBER SUBSCRIPTIONS	\$49.8	\$44.0	\$52.0	\$34.0
7.	NON-MEMBER ALL TRANSACTIONS	\$25.9	\$69.4	\$69.7	\$61.3
8.	PAGE CHARGES	\$1.6	\$27.0	\$34.6	\$23.0
8A.	VOLUNTARY PAGE CHARGES	\$0.0	\$9.0	\$11.5	
8B.	EXCESS PAPER LENGTH	\$1.6	\$18.0	\$23.1	
9.	CONFERENCES		\$190.6	\$86.5	\$158.7
9A.	87 R&A			\$0.6	
9B.	88 R&A			\$48.6	
9C.	87 uROBOTICS			\$12.3	
9D.	89 R&A			\$25.0	
10.	MISCELLANEOUS INCOME	\$1.5	\$9.7	\$5.1	\$8.4
11.	INTEREST	\$4.1	\$12.1	\$21.2	\$12.1
TOTAL INCOME		\$142.1	\$441.8	\$348.0	\$388.6
EXPENSES (\$1,000)					
12.	TRANSACTIONS	\$18.4	\$226.4	\$191.1	\$179.3
13.	NEWSLETTER	\$4.2	\$34.0	\$21.9	\$34.0
14.	MSC. PERIODICAL EXPENSE	\$0.0	\$6.1	\$6.7	\$5.0
15.	CONFERENCES		\$186.2	\$1.1	\$145.3
16.	MSC. EXPENSES	\$2.7	\$0.0	\$0.0	\$0.0
17.	MSC. IEEE EXPENSES	\$2.5	\$6.4	\$15.8	\$4.8
18.	AD COM		\$14.5	\$7.6	\$17.7
TOTAL EXPENSES		\$27.8	\$473.6	\$244.2	\$386.1
19.	SURPLUS FOR THE YEAR	\$114.3	(\$31.8)	\$103.8	\$2.5
20.	NET SURPLUS [\$271.2 AS OF 12/31/88]	\$385.5	\$343.3	\$375.1	\$273.8
ADDITIONAL INCOME - LOANS					
21.	89 MICRO ELECTRIC SIGNALS - \$10.0				
22.	90 MEMS WORKSHOP - \$21.0				
23.	TOTAL LOANS OUTSTANDING	\$31.0			
ADDITIONAL EXPENSES TO 4/30/90 [ESTIMATED]					
24.	TRANSACTIONS	\$20.0			
NET		\$396.5			

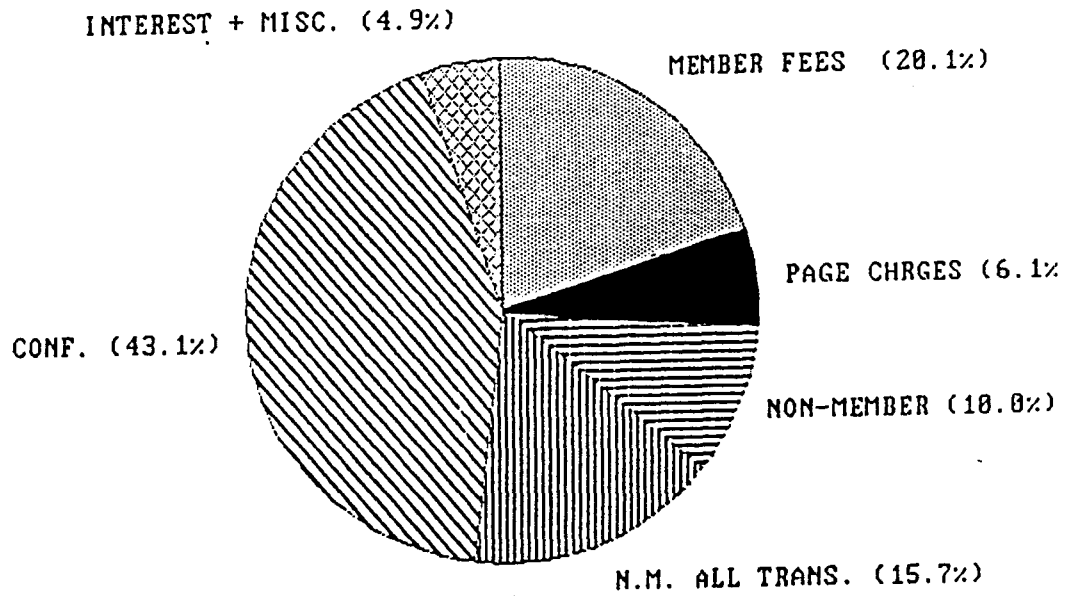
INCOME 1990 THRU 2/28/90



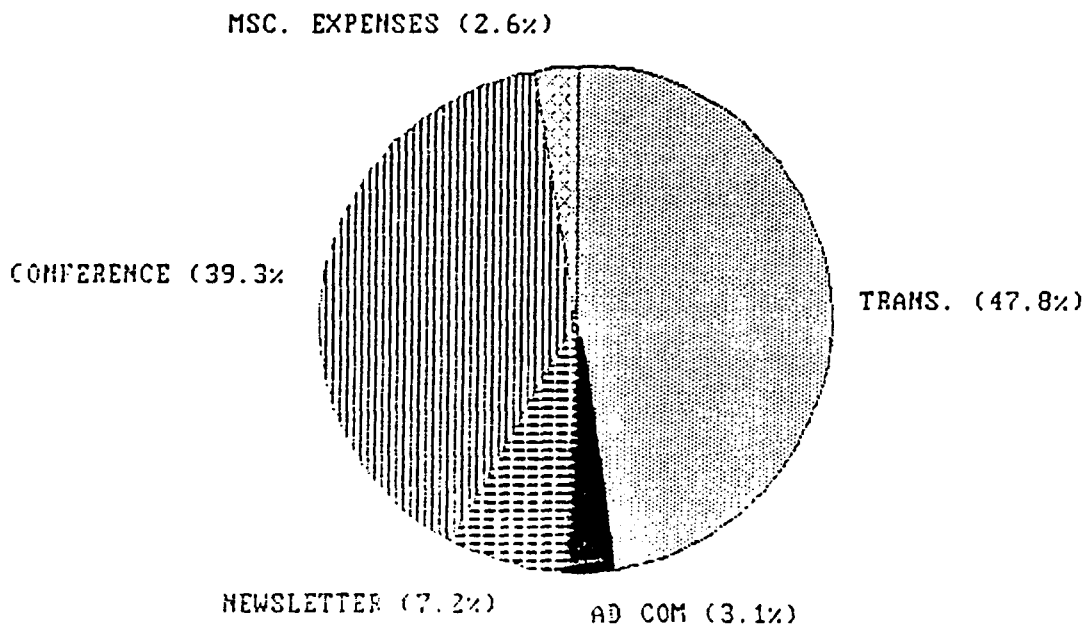
1990 EXPENSES - THRU 2/28/90



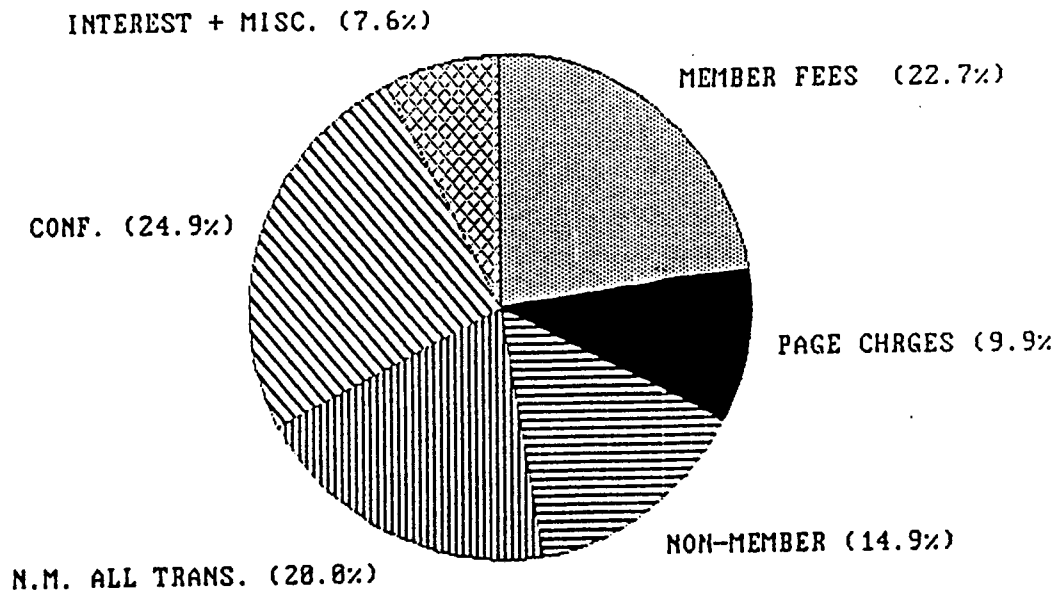
1990 BUDGETED INCOME



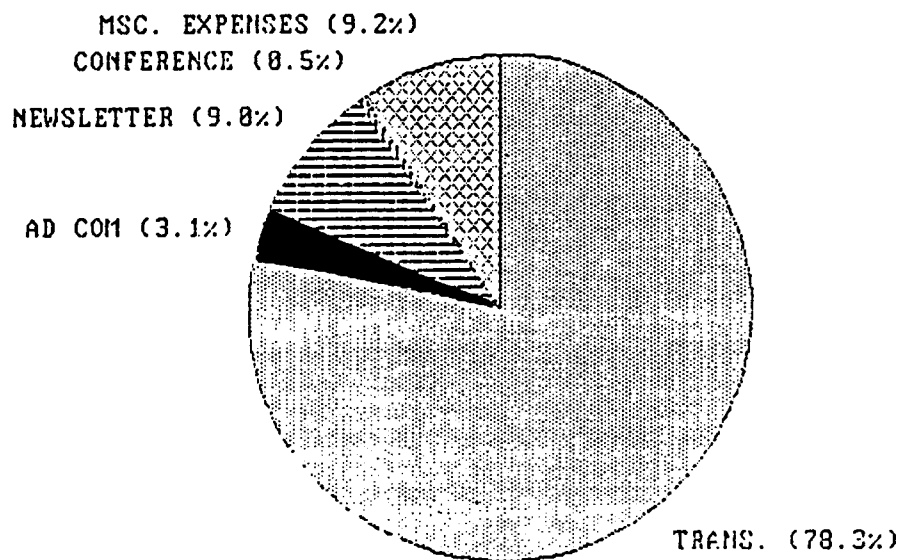
1990 BUDGETED EXPENSES



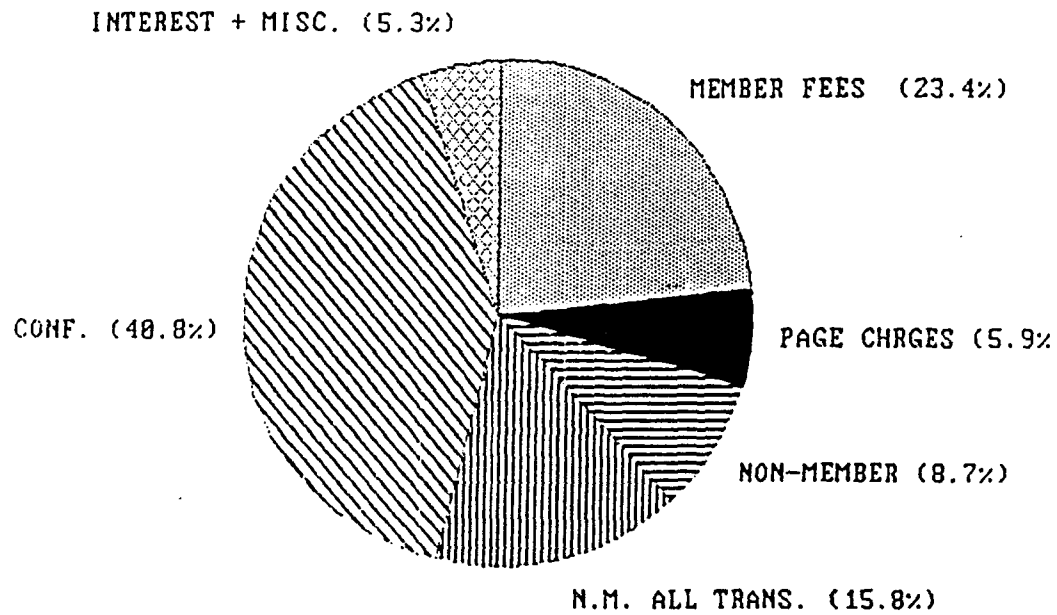
ACTUAL INCOME - 1989



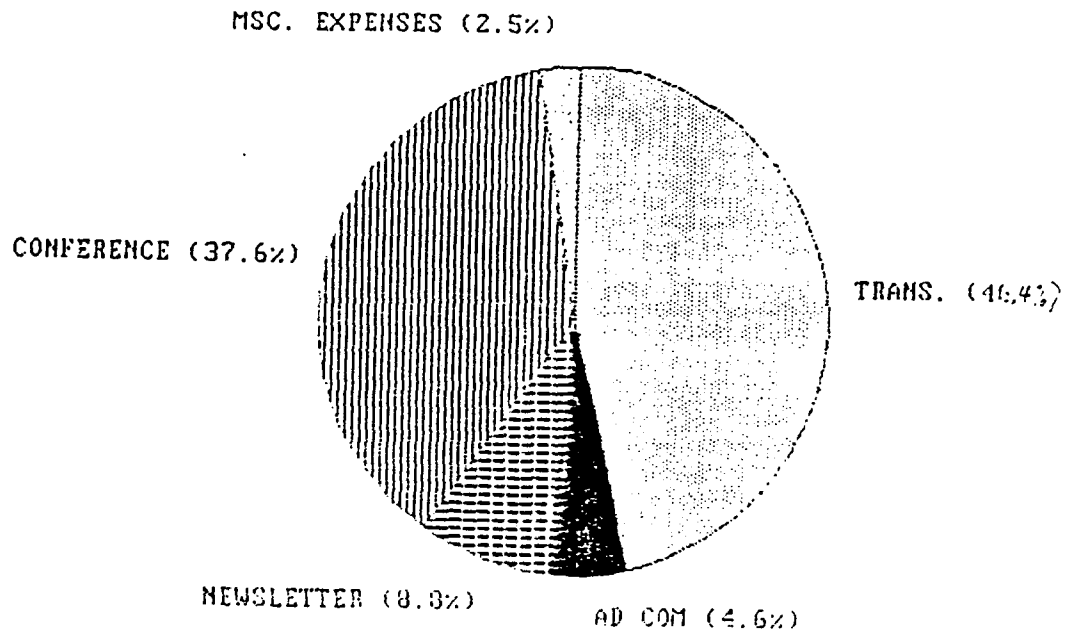
1989 ACTUAL EXPENSES



1989 BUDGETED INCOME



1989 - BUDGETED EXPENSES



1989 ROBOTICS AND AUTOMATION CONFERENCE - FINAL REPORT

	ACTUAL	BUDGET
ATTENDEES		
1. MEMBERS	304	340
2. NON-MEMBERS	159	156
3. STUDENTS	<u>124</u>	<u>154</u>
4. TOTALS	587	650

WORKSHOPS		
5. MEMBERS	88	102
5A. HALF DAY	42	
5B. FULL DAY	46	102
6. NON-MEMBERS	55	33
6A. HALF DAY	18	
6B. FULL DAY	37	33

TUTORIALS		
7. MEMBERS	65	102
8. NON-MEMBERS	68	33

INCOME (\$1,000)

9. REGISTRATION	\$108.7	\$116.7
10. WORKSHOPS	\$14.2	\$14.3
11. TUTORIALS	\$20.3	\$14.3
12. PROCEEDINGS SALES	\$43.0	\$32.5
13. EXHIBITS	\$4.5	\$3.8
14. INTEREST	\$3.4	
15. MISCELLANEOUS	<u>\$4.4</u>	<u>\$0.7</u>

TOTAL INCOME	\$198.5	\$182.3
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EXPENSES (\$1,000)

16. PROMOTION	\$21.7	\$22.5
17. CONFERENCE PROCEEDINGS	\$39.6	\$54.5
18. ADMINISTRATION	\$24.0	\$28.2
19. SOCIAL	\$24.2	\$36.3
20. COMMITTEE	\$9.8	\$17.5
21. WORKSHOP	\$4.7	\$6.5
22. TUTORIALS	\$6.9	\$9.5
23. ADCOM EXPENSES AT CONFERENCE	\$0.4	\$3.0
24. MISCELLANEOUS	<u>0.1</u>	<u>0.0</u>

TOTAL EXPENSES	\$131.4	\$178.0
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25. CONFERENCE SURPLUS	\$67.1	\$4.3
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BUDGET
1992 IEEE INTERNATIONAL
ROBOTICS AND AUTOMATION
May 10-15
Nice, France

ESTIMATED INCOME

REGISTRATION

1. Advance		
a. Members	\$ 210 x 288	60.480
b. Non-members	\$ 260 x 132	34.320
c. Students	\$ 100 x 130	13.000
2. Late		
a. Members	\$ 250 x 52	13.000
b. Non-members	\$ 280 x 24	6.720
c. Students	\$ 120 x 24	2.880

Total: \$ 130.400

WORKSHOP

1. Advance		
a. Members	\$ 100 x 80	8.000
b. Non-members	\$ 125 x 30	3.750
2. Late (& at Conference)		
a. Members	\$ 110 x 15	1.650
b. Non-members	\$ 135 x 5	675
	Total:	\$ 14.075

TUTORIAL

1. Advance		
a. Members	\$ 100 x 80	8.000
b. Non-members	\$ 125 x 30	3.750
2. Late (& at Conference)		
a. Members	\$ 110 x 15	1.650
b. Non-members	\$ 135 x 5	675
	Total:	\$ 14.075

PROCEEDING SALES

a. At Conference & by mail	\$ 125 x 50	6.250
b. Sales back to IEEE Society	\$ 50 x 500	25.000
c. Page charge net		7.000
	Total:	\$ 38.250

EXHIBITS INCOME \$ 22.000

CHAMBER OF COMMERCE
AND CITY OF NICE
SPONSORSHIPS

\$ 64.000

2 Total Income \$ 282.800

ESTIMATED EXPENSES

PROMOTION

a. Call for Papers	8.000
b. Advance Announcement	7.500
c. Advance Program	9.500
d. Final Program	1.700
e. Promotion in Europe	6.000

Total: \$ 32.700

CONFERENCE PROCEEDINGS

a. Printing 1300 @ x \$ 40	52.000
b. Shipping & Handling	4.000

Total: \$ 56.000

ADMINISTRATION

a. *	
b. Consultant (H.H.)	9.000
c. Secretarial	3.000
d. Office Material	1.500
e. Telephone & Elect. Mail	1.500
f. *	
g. Visa & Master card discount	2.500
h. Miscellaneous	1.000
i. Secretarial Europe	3.000

Total: \$ 21.500

* Registrations and sign have been transferred to "On site expenses".

SOCIAL

a. Reception 500 x 20\$	10.000
b. Coffee Break 4000 X 3.38\$ (including workshops and tutorials	13.500
c. Banquet (400 x \$ 45)	18.000
d. Author's breakfast	4.725
e. Committee & Society Banquet 75 x 50 \$	3.750

Total: \$ 49.975

COMMITTEE

a. General Chairman	
Travel	3.000
Miscellaneous	1.000
b. Program Committee	
Travel	6.000
Plenary Speakers	4.500
Mailing/Telephone	1.500
Miscellaneous	500
Secretarial	1.500
c. All other Committee	3.000
d. Travels in Europe and Europe/U.S.	14.000

Total: \$ 35.000

WORKSHOP EXPENSES

a. Workshop notes	3.000
b. Speakers honoraria	4.000
c. *	

Total: \$ 7.000

TUTORIAL EXPENSES

a. Tutorial notes	3.000		
b. Speakers honoraria	7.000		
c. *			
		Total:	\$ 10.000

ON SITE EXPENSES

a. Rooms Rental	26.800		
b. Equipment rental	15.500		
c. Exhibition expenses	14.000		
d. Miscellaneous	1.500		
e. Registration 650 x \$ 8	5.200		
f. Signs	2.500		
		Total:	\$ 65.500
		Total expenses:	\$ 277.675
		Total income:	281.800
			<hr/>
		Surplus	\$ 5.125

* Workshops and tutorials set up expenses have been included in the "on site expenses".

IEEE Robotics and Automation Society

Standards Committee Report

May 14, 1990

prepared by Leonard S. Haynes, Ph.D.
Chairman, Standards Committee

1. IEEE Robotics and Automation Society Standards Committee

The Standards Committee advertised for interested members in the Newsletter and received several responses. We are having our first meeting at NIST in Gaithersburg, MD on May 24, 1990. The meeting will also be attended by members of the Industrial Electronics Society, by Mr. Ken Goodwin, the NIST point of contact for robot related standards, and by Dr. John Mills, director of the standardization tasks for the Next Generation Controller Project. The primary purpose of that meeting is to identify areas where standards are needed and where there is currently no ongoing efforts toward standardization. Our goal will be to formalize these topics into work items for submission to the IEEE. The IEEE process of approving new work items is a very formal process with many opportunities for input from interested organizations.

In preparation for the Standards Committee meeting, funding was provided jointly by the National Institute of Standards and Technology and by Intelligent Automation, Incorporated for the preparation of a document entitled **Overview of Standards and Standards Organizations Related to Industrial Machines and Associated Equipment**. The report was prepared by JFB Enterprises. It will be presented at the meeting as background material defining the current status of robot related standardization activity. A copy of the document can be obtained at no cost from either NIST or IAI.

2. Significant Standards Approved or in Comment Phase

A. **Draft Standards for Circular Mechanical Flange Interfaces and Shaft Mechanical Interfaces** for robots have been submitted to ANSI by RIA R15.03 and interested parties should obtain copies for comment.

B. The RIA standards committee R15.04 has completed the **Robot Companion Standard for the ISO 9506 Manufacturing Message Specification** and that standard has been submitted to ISO and approved by ISO as a Draft Standard.

C. RIA standards committee R15.05 has developed the standard for **Evaluation of Point-to-point Static Performance Characteristics of Industrial Robots** and this has been approved as an ANSI standard. They are now developing a draft standard for **Dynamic Robot Performance**.

D. The Automated Imaging Association has received ANSI approval for a standard for **Automated Vision Systems - Performance Test -**

Measurement of Relative Position of Target Features in Two Dimensional Space.

3. Significant U.S. Activities Related to Robot Standards

The Next Generation Controller Program sponsored by the Air Force is nearing completion of the system initial specifications. It is their intent to have NGC interfaces adopted as ANSI standards however the details of the work on the project are still unavailable to non-U.S. persons or companies. This precludes review of the developing specifications by current standards committees under the usual procedures.

There has been recent congressional discussion on having the National Institute of Standards and Technology be the focal point for U.S. Standards instead of ANSI as is now the case, and there have been public hearings on specific proposals. The primary reason given is that in most other countries it is a government organization which oversees standards and that U.S. interests are at a disadvantage because of the lack of government involvement or resources. ANSI is a private organization with no support, financial or otherwise, from the U.S. government.

4. Significant International Activity Related to Robot Standards

Rapid Progress is being made by ESPRIT (a consortium of 21 major European companies from seven countries) to develop a Computer Integrated Manufacturing Open System Architecture (called CIM-OSA). A meeting is being held at NIST on May 22, 23, and the morning of the 24 to review various aspects of the CIM-OSA project and other activities related to an open system architecture for manufacturing.

A new project for IEC/TC 44 has been proposed by the German National Body based on their work on a digital data link between machine controllers and electric drives (called SERCOS.) It is expected that this work item will be approved and it will be a joint project between IEC/TC 44 and ISO/TC 184/SC1.