acm

SIGDA NEWSLETTER

SPECIAL INTEREST GROUP ON DESIGN AUTOMATION

Vol. 1 No. 3 September 1971

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Present SIGDA Organization

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Charles E. Radke - IBM, Poughkeepsie, New York - Chairman

Lawrence Margol - Microdesign, Anaheim, California - Vice Chairman

John Hanne - Texas Instruments, Dallas, Texas - Secretary/Treasurer

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Walter Samek - Combustion Engineering, Windsor, Connecticut - Editor

Gerhard Paskusz - University of Houston, Houston, Texas - Associate Editor

Lawrence Margol - Executive Committee Representative

Technical papers appearing in this
issue are unrefereed working papers.

For future SIGDA Newsletters, please send copy to Walter Samek
by January 15, 1972 (February issue) and May 1, 1972 (June issue).

Message from Chuck Radke

Recently I read an article entitled "Architects Find Computer a Friend" by Carter B. Horsley (The New York Times, Sunday, August 29, 1971). One sentence in this article read "one authority calls for machines that can learn, can grope and can fumble, that will be architectural partners, architecture machines".

During this past summer I had an opportunity to sit in on several sessions concerned with architectural DA. There was one entire set of parallel sessions on architectural DA at the 1971 DA Workshop. At ACM '71 Steve Krosner chaired a very interesting session on the subject.

The referenced article when read by a layman might give the impression that automated design had already arrived. I quote: "Computers can now be programmed not only to relieve an architect from the drudgery of drafting, but also to make his sketch pad come alive, ... to guess whether a sketched line is meant to imply depth, shade or erasure .....". The question, of course, is how many such installations are there? Probably only one or two! But the shocker is that of 15,000 architectural design firms in the country, not more than 200 are estimated to use computers. I remember that at one of the sessions someone said that about 200 firms in U. S. do around 80% of the design business. But I also recall that in discussions at the two conferences some comments were made that many of these firms used the computers for other than design purposes, like as window dressing, or as playthings.

At the DA sessions (not just architectural DA) one asks of the speaker "Has this program been used in a production mode?" The answer that comes back, is "What is production mode?".

From The New York Times article one would get the impression that DA has arrived in the architectural profession, but from the conferences one gets the impression that DA is still trying to get a foot in the door.

I guess the measure of whether DA has arrived in one particular discipline is to ask the question "What happens if someone pulls the plug, will chaos ensue?"

From the session at ACM '71 Conference "Quarter Century/The Look Ahead" chaired by Professor Oettinger, I got the message loud and clear: for the future, application areas are the big thing. To me this says that Mr. Horsley may be giving the wrong impression today, but this impression may be true sooner than we think.

Purpose of the SIGDA Newsletter

SIGDA Newsletter is the informal publication of ACM Special Interest Group on Design Automation.

The general objectives of SIGDA are directed toward furthering the development of techniques, algorithms, and computer programs for computer aided design, fabrication, and testing of equipment and systems; this includes optimization and heuristic methods for automating or assisting, the design process, generation of design documentation, the automatic control of fabrication processes, and related application of graphic display and plotting equipment.

SIGDA, together with two other organizations (SHARE and IEEE) sponsors the Annual Design Automation Workshop.

The SIGDA Newsletter attempts to

1. Provide a chronicle of SIGDA and other DA-related activities during the period immediately preceding its publication.

2. Serve as a medium for the dissemination of Chairman's messages, Executive Committee decisions, election results, announcements of upcoming meetings, appointments and other items concerning SIGDA.

3. Serve as a medium for the dissemination of news concerning SIGDA members, report their achievements, publications, patents and personal data.

4. Serve as a medium for the dissemination of technical information and newsworthy items related to DA.

5. Serve as a forum for the expression of opinions related to items previously published.

6. Exercise a unifying influence on the activities of SIGDA. This editorial policy can be put into a nutshell by stating that DA is a multidisciplinary activity, and that SIGDA is trying to crystallize the common ingredients from the various approaches reported by its members.

HOW TO BECOME A MEMBER OF SIGDA

Persons interested in joining SIGDA (whether or not they are ACM members) are invited to write to:

Association for Computing Machinery
1133 Avenue of the Americas
New York, New York 10036

The membership fee of $3 for ACM members, or $5 for non-members, should accompany their letter. This will cover one year of membership and will put them on the mailing list for the SIGDA Newsletter.

CALL FOR ABSTRACTS

Attention Authors of DA Related Material

You are invited to submit 100 - 200 word abstracts of your books or papers to the editor of the SIGDA Newsletter, whose address you will find elsewhere in the present publication.

OFFICIAL SIGDA

MINUTES OF MEETING, MAY 19, 1971 reported by C-E Radke.

SIGDA met at 6:30 p.m. on Wednesday, May 19, 1971 in Atlantic City at Hotel Traymore during the 1971 Spring Joint Computer Conference. The Chairman, Chuck Radke, conducted a brief business meeting. Jerry Evitts of Texas Instruments represented John Hanne, Secretary-Treasurer, who was unable to attend.

The highlights of the discussions which followed are:

1. Review of the companies which furnish DA services, especially in the chip design area, the services these companies provide, and pros and cons of buying such services.

2. SIGDA must realize that a sizable percentage of SIGDA membership is scattered around the world, and must adjust its activities to provide the expected services to all of them.

3. Mr. Kenji Kobayashi, manager of CAP (Computer Aided Piping) project team at Chiyoda Chemical Engineering and Construction Company in Japan presented some of the problems in the computer design of piping systems.

There were six people in attendance. The meeting adjourned at 8:15 p.m.

MINUTES OF MEETING, JUNE 28, 1971 reported by J. R. Hanne, Secretary-Treasurer of SIGDA.

SIGDA met at 7:00 p.m. on Monday evening at the Hotel Shelburne in Atlantic City, New Jersey during the 1971 Design Automation Workshop.

Sixteen people attended, eight at the beginning of the meeting, eight came in later.

A general discussion of the goals of SIGDA was led by Charles Radke, SIGDA Chairman.

Al Halpin and others stressed the fact that SIGDA had progressed from a dead SIG at the last DA workshop to a growing SIG with newsletter by this time.

The main discussion centered about the difference (is there one? should there be one?) between the IEEE Computer group DA effort, and SIGDA. The basic feeling was that the IEEE is principally oriented to achieving electronic design and that ACM should address itself to the computational and systems aspects of design, such as electronic design, mechanical design, architectural design, civil engineering design.

The meeting concensus was that we needed a membership chairman who addressed the problem of increasing membership. Toward this end, the following suggestions were made.

1. Insert SIGDA notices in other societies' bulletins.

2. Send notices to academic design groups with computer orientation.

3. Send letters to the major professional societies' presidents.

4. Send SIGDA publicity sheets to all DA workshop attendees.

MINUTES OF MEETING, AUGUST 4, 1971 reported by S. P. Krosner

Chuck Radke, Chairman, opened the meeting at 5:30 p.m. on Wednesday, August 4, 1971, at the 1971 ACM National Conference.

Walt Samek reported on the ACM Newsletter editors' meeting. He is planning to start a "Have you missed?" column. This would contain items of interest to SIGDA members appearing in out-of-the-way publications. In the future the newsletter will be sent by first class mail.

John Donovan, the Technical Chairman of ACM '72, told us that he will be looking to the SIG/SIC's to prepare sessions again next year. He would like tutorial type papers and applications programs.

Chuck Radke described the history of SIGDA and DA Workshop. I reported on the 1971 DA Workshop and the plans for the 1972 DA Workshop. We also discussed the SJCC and FJCC.

The following is the SIGDA Treasurer's report furnished by John Hanne.

OCTOBER 1, 1970 TO MARCH 1, 1971

Balance on Hand	$231.89
Income from Membership Dues	315.42
Deferred Income from Dues	(21.98)
Newsletter and Sundry Expense	309.22
ACM Service Bureau	20.00
Charge for Non-ACM Members	8.00
Cummulative Balance	210.19
Deferred Income	318.13
TOTAL	$528.22

The meeting adjourned at 7:00 p.m.; nine people were in attendance.

DA Sessions at ACM '71

COMPUTER AIDED ARCHITECTS: THE ARK-TWO SYSTEM BY KAIMAN LEE AND CLIFFORD STEWART, OF PERRY, DEAN, AND STEWART, ARCHITECTS, BOSTON, MASS.

Clifford and Kaiman started their delivery off with a color movie, a pretty display of equipment, buildings, all in bright colors and sound. Then they got down to business.

The ARK-TWO System developed to aid their architectural firm in designing and planning consists of three basic programs: COMPROGRAPH, COMPRORELATE, and COMPROPLAN. The costs ran something like $100K for equipment, $100K for programming and now around $27K/year/a operation. Their system is graphic display and pen oriented, on which they commented that there are no human factor problems at the graphics terminal.

One objective which they strove for was to allow the designer to describe properties, e.g., social, outside rooms, room size, natural lighting, happiness (?). The first program, COMPROGRAPH, provides the input and the data base for the system. Further, there were statistics gathering subprograms to provide total floor area and dollar cost. One could enter constraints on size, cost, and space consumed.

Next COMPRORELATE, through the use of a bubble diagram and an attracting and repelling force vector technique allows the functions (the bubbles) within a building, e.g., hospital, to move about, overlap, and be generally placed on the diagram depending upon six degrees of relationships between functions, e.g., next to, close to, neighboring, away from.

Finally COMPROPLAN takes the bubble diagram and allows the designer interactively to assign actual floor dimensions and shape to the functions.

The interesting point brought out is that although design output per man increases, the designer tends to iterate through the design more often and hence comes up with a better design, at about the same cost as before. There must be a law for that, maybe related to job security.

A GEOMETRIC HEURISTIC MODEL FOR DESIGN APPLICATIONS TO URBAN RENEWAL

BY ARTURO MONTAGU, UNIVERSITY OF BUENOS AIRES AND ARGENTINA NATIONAL ACADEMY OF SCIENCE.

As we all know someone has to determine in urban renewal which buildings are to be demolished and which are to be left standing. Senor Montagu showed us that there are other factors in this besides political ones.

The concepts his program uses are based on geometric models: volume models (according to volume standards set by law), constraints on combinations of these basic volume models (called complex volumes), translation in X and Y directions, juxtaposition of complex volumes, collection of complex volumes (in relationship to a parcel of land). Since he had not yet received his ordered graphic display terminal, and his set of programs was geared to interactive graphics, his results were on standard computer printout paper.

So we now have the question, of which buildings in town or urban planning are to be demolished and which ones are to remain standing, answered on aesthetic and economic grounds. (We'll get human factors in there yet.) Humanity came in when Senor Montagu indicated that it was difficult to get a smooth working arrangement between the architects and the system analysts.

PANEL: THE SPEAKERS PLUS WILLIAM MILLER OF ALBERT C. MARTIN AND ASSOCIATES, L.A.

Both Mr. Stewart and Senor Montagu stressed the bringing of people into the buildings, - their needs and functions. However, one kept coming back to the economic criterion, - the dollar investment in the buildings or in urban renewal. I felt that the two major points brought out in the panel discussion were:

1. The design mehtodology was changing because of Design Automation. How does one get the traditionalists to change? One conclusion was that it is easier to educate architects in programming than programmers to doing architecture. (The concept of programming here is a reasonably shallow one.)

2. The futurist of the panel, Bill Miller, stressed the changing technology which was to give us all kinds of "goodies", e.g., graphic displays, holograms, electronic tablets, and colored 3-D displays. He attributed much of the rapid change entering the architectural DA world to the aerospace porfessionals who were entering planning and architectural firms.

Note: Mr. Gonzalo Velez from Caracas, Venezuela, could not attend ACM '71, hence his paper on Rectangular Meshes was not presented.

INTERACTIVE LINKAGE SYNTHESIS ON A SMALL COMPUTER

BY ROGER E. KAUFMAN AND WALTER G. MAURER OF M.I.T.

A method was described by which a linkage system can be designed on the basis of the desired motion. All simplifying assumptions, so dear to engineering instructors, were cast aside, and the problem tackled in its full complexity.

The authors deserve special credit for digging up an old, almost forgotten, German author, who did pioneer work in this field almost a century ago. Graphic display is used to verify the results.

It was especially pleasing to see this method applied in a hospital environment to correct malfunctions of human limbs and joints.

A movie on the use of this computer aid was shown on Thursday afternoon by Professor Kaufman. The movie illustrates the use of the method by proceeding through the design of an orthopedic brace for an injured knee, such that rubbing of affected bones was prevented. The design was based on X-rays taken of the knee and lower portion of the leg in a number of positions. The x-ray pictures furnished the four fundamental positions on the basis of which the mechanism was synthesized.

COMPUTER AIDED DESIGN OF MECHANICAL LINKAGES

BY VICTOR RAPPAPORT OF UNITED AIRCRAFT RESEARCH LABORATORIES.

The system described here is used in the analysis of three-dimensional linkages and their interactive modification to make them conform to desired performance specifications. The system is completely general and permits the analysis of linkages containing any number of constraints and loops. Modifications are made recursively on line. This approach saves many hours of drafting time in checking the operation and proper functioning of a given design.

Note: The presentations by Liguori and Urban will be discussed in the next issue of the SIGDA Newlsetter.

GOALS OF A DESIGN AUTOMATION SYSTEM

BY CHARLES E. RADKE

On June 11th I recieved a call from John Hanne who had put together a joint panel session "The Management of Design Automation" for the DA Workshop. He indicated that one of his key men was indisposed and he needed help to get this matter straightened out before June 29. Although I was to leave for Europe on June 15 and John was to leave for Europe that very day, I agreed to help him; neither one of us would be back until June 26.

John assigned me a task of talking on "Goals of a Design Automation System". My ideas were not to talk about DA of Computer Design but to make it general for any design endeavor. My ideas are summarized in a set of slides, the contents of which are reprinted herewith for interested SIGDA members.

SLIDE 1 DESIGN AUTOMATION SYSTEM

DESIGN - ITERATIVE, DECISION-MAKING PROCESS

AUTOMATION - PROCEDURES/RESOURCE UTILIZATION FOR WORK WITH REDUCED EFFORT.

SYSTEM - APPLICATION PROGRAMS TIED INTO COMMON DATA BASE

SLIDE 2 DA SYSTEM

INPUT LANGUAGE AND PROCESSING

DATA BASE

FUNCTIONAL DESIGN AND ANALYSIS (SIMULATION, MODELS, TESTS)

PHYSICAL DESIGN AND CHECKING (GLOBAL AND DETAILED LAYOUT)

OUTPUT AND DOCUMENTATION

RELEASE TO BUILD AND SERVICE

CONTROL LANGUAGE AND PROCESSING

SLIDES 3, 4, 5 POSSIBLE GOALS FOR DA SYSTEM

DOLLAR COST SAVINGS IN DESIGN

REDUCED MANPOWER REQUIREMENTS

IMPROVED FORMALISM, BETTER COMMUNICATIONS

SLIDES 3, 4, 5 (Cont'd.)

LESS DESIGN ERRORS

LESS ERROR IN DATA HANDLING

REDUCED DESIGN TIME

LESS TIME TO FIX DESIGN BUGS

FASTER UP TIME FOR FIRST MODEL

LESS COST FOR FIRST MODEL

INTRODUCING IMPROVED DESIGN TECHNIQUES

USE OF MULTI-TECHNOLOGIES IN DESIGN

OPTIMIZATION OF DESIGN

REDUCED COST OF PRODUCT

IMPORVED PERFORMANCE OF PRODUCT

CONTROL OF DESIGN

UPDATED DOCUMENTATION

INPUT TO EXTERNAL, MULTIPLE MANUFACTURERS

INTERFACE ENGINEERING TO MANUFACTURING

INTERFACE ENGINEERING TO FIELD SERVICE

USE OF PRODUCT BY OTHER DESIGN GROUPS

BOOTSTRAP OF DA SYSTEM

SLIDES 5 AND 6 SUMMARIZED GOALS

DOLLAR COSTS OF DESIGN

TIME OF DESIGN

QUALITY OF DESIGN

FLEXIBILITY IN DESIGN

SLIDES 5 AND 6 (Cont'd.)

COST OF PRODUCT

PERFORMANCE OF PRODUCT

COST OF MANUFACTURE

CHOICE OF MANUFACTURER

TIME FOR MANUFACTURING

ACCURATE DOCUMENTATION

COST OF SERVICE

TIME FOR SERVICE

USE OF DA SYSTEMS (FOR SAKE OF USING)

ADDED SUMMARY

Objective - Reduced time from product specification (or specification change) to delivery to builder(s)

At Reduced Cost
With Assured Performance

That is,

1. Increase design output per man,
2. Reduce design cost per product unit,
3. Improve control over design performance,
4. Standardize release to multiple builders,
5. Assure proper, accurate, and rapid documentation to field and service.

THE SIGDA PROFILE - Part Two

BY GERRY PASKUSZ

In the last issue of the SIGDA Newsletter we published some preliminary results on the basis of 45 returns of the survey of SIGDA members. We now have 47 replies, some statistical analysis, and a more detailed report.

Let us again first look at the function which we, as a SIG, think our newsletter ought to perform. The order of preference here has not been changed by the two additional returns. It still is Dissemination of Technical Information first, SIGDA Activity Announcements second, and Opinion Forum third, with the idea of unification being challenged and the executive committee announcements being told where to go.

Function of Newsletter: Dissemination of Technical Information

Many individual respondents indicated strong preferences for various topics listed under "Dissemination of Technical Information" in the questionnaire. Only one topic, "Brief Discussions of Specific DA Subjects", received overwhelming support. Twenty-eight listed this topic as 1st, 2nd, or 3rd choice, four listed it as 4th choice and only seven as 5th, 6th, and 7th. The topics are listed in Table 1 below in order of their indicated importance.

TABLE 1

Most to Least Important Types of Technical Information

a. Brief Discussion of Specific DA Subjects
b. Description of DA Computer Programs
c. Description of Present Work of Individuals
d. Abstracts of Published Papers
e. Abstracts of Industrial/University Reports
f. Abstracts of Paper Accepted for Publication
g. Abstracts of Paper Accepted for Delivery at Conferences

Under SIGDA Activities Announcements, the strong first preference was for Approaching Conferences of Interest to DA, and Call for Papers came in second.

Area of Interest

The questionnaire did show that we are a fairly heterogeneous group. The area of interest replies are tabulated in Table 2.

TABLE 2

Are of Interest

Mechanical Design	4
Computer Design	4
Computer Graphics	4
Economic Aspects of DA	4
DA Implementation	3
Simulation	3
Digital System Design	3
EE Design	2
Data Base for DA	2
Design of Software	2
Packaging	2
Design Verification	2
Total Design	1
PC Board Design	1
Artificial Intelligence for DA	1
Diagnostics	1
Computers in Design	1
Semi-Conductor Design and Testing	1

Job Function

The replies to this question are summarized in Table 3 below, where the subcategories have been omitted since they contain very little information.

TABLE 3

Job Function

Development of DA Programs	38
Development of DA Information Systems	25
Application of DA	10

The various aspects of DA Program Development, for example, are represented almost uniformly . On the other hand, the category "Development of Design Automation Information Systems" shows a big gap in Documentation and Records. Those of us who are users of such systems could of course have predicted that.

Occupational Area

Replies to this question are summarized in Table 4 below.

TABLE 4

Occupational Area

Aerospace Design	2
Mechanical Engineering	6
Electronic Circuit Design	14
Computer Design	24
Other	17

The single most listed "other" category was education.

Organization Function

As was to be expected, many respondents checked off more than one organization function listed under this question. The results are tabulated in Table 5 below:

TABLE 5

Type of Organization

Hardware	8
Software Design	14
Running of DA Programs	5
Development of DA Programs	26
Education	10
Students	2
Professors	8
Research	15

Organization Membership

Since the questionnaire was mailed to SIGDA members of record, it was not surprising that 46 of the 47 returns claimed ACM membership, and admitted that they were in fact SIGDA members. There was a sprinkling of SIGRAPH and SIGPLAN members and most other SIG's and SIC's were represented to some extent.

Twenty-three respondees are members of IEEE and also belong to the IEEE Computer Society.

So now we know who we are.

CALL FOR PAPERS
SIXTH ANNUAL PRINCETON CONFERENCE
ON INFORMATION SCIENCE AND SYSTEMS
MARCH 23-24, 1972

The Sixth Annual Princeton Conference on Information Sciences and Systems will be held at Princeton University on March 23-24, 1972. Authors are invited to submit papers describing new advances, applications and ideas in the fields of computer science, communication theory, system and circuit theory, including contributions which explore the application of these and related disciplines to current societal issues.

Two kinds of contributed papers are solicited. The first consists of regular papers requiring approximately thirty minutes for presentation; these will be reproduced in full (up to ten pages) in the Conference Proceedings. The second consists of short papers suitable for presentation in about fifteen minutes; one page summaries of these will be published in the Conference Proceedings.

A regular or short designation, title, 50-word abstract (for regular papers only), and summary are to be submitted by January 10, 1972. Summaries should be of sufficient detail and length to permit careful reviewing. Authors will be notified of acceptance by February 1, 1972. Instructions for the preparation of accepted papers for the Proceedings will be sent to each author. All manuscripts are to be submitted to Professor Murray Edelberg, Department of Electrical Engineering, Princeton University, Princeton, New Jersey 08540. (609-452-5498) Contact Professor Edelberg for additional information.

CALL FOR DA PAPERS - SJCC '72

Chuck Radke will chair a technical session at the Spring Joint Computer Conference May 16, 17 and 18, 1972, to be held in Atlantic City. Its title is LSI Perspectives-Design Automation. The deadline is October 1, 1971. Send papers to

Jack Schwarts
Technical Program Chairman
1972 Spring Joint Computer Conference
Box A - Computer Science Department
Courant Institute
251 Mercer Street
New York, New York 10012

INSTRUCTIONS TO AUTHORS

Only new unpublished papers may be sumbitted. The text should not exceed 6000 words. Include a 100-200 word abstract and a full set of illustrations keyed to the text. Obtain any necessary company approval before submission

Manuscript must be typed, double spaced, one side of the paper only.

On the first page give: title; full name of author(s) with co-authors in desired order; company or university affiliation of each author; name, address, and telephone number of the responsible author. Responsible author's hame and page number must appear on each subsequent page.

Six copies of the draft manuscript, each complete with abstract, and illustrations (all of which will be retained), must be submitted to the Technical Program Chairman. Please notify the Technical Program Chairman in advance of your intention to enter a paper.

Chuck Radke (see address in front) can furnish you additional information.

By the time this reaches you the deadline may be passed; we solicit your indulgence and appreciation of the problems involved in publishing a newsletter. Contact Chuck Radke if you still want to submit.

call for papers

Ninth Annual Design Automatio Workshop

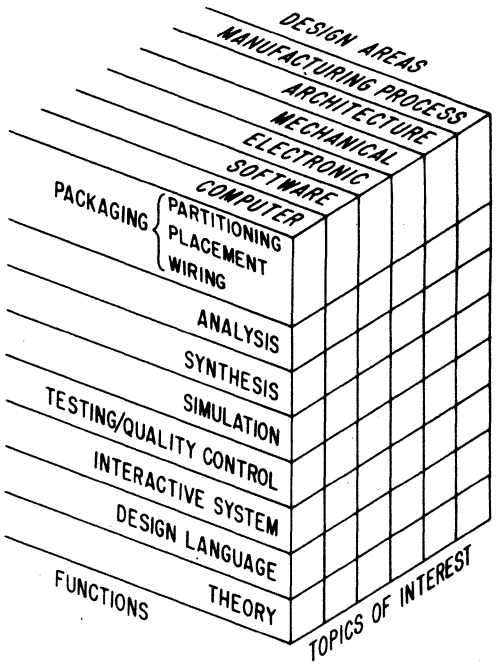
June 19-21, 1972
Statler Hilton Hotel
Dallas, Texas

Design Automation:

Design Automation implies the use of computers as tools which aid the design process and is often extended to include areas such as testing, simulation and certain portions of manufacturing.

Typical examples of Design Automation involve the application of one or more functions to a given design area.

When submitting a paper, you are invited to indicate in the cube the topics your paper spans to accompany your submission.



Requirements:

Those planning to submit a paper should send three copies of an abstract no later than January 3, 1972. Abstracts should be of sufficient length to be able to judge the paper's suitability for the Workshop (approximately 1000 words).

Notification of acceptance will be sent during the first week of February, 1972. After notification of acceptance and to insure the availability of Proceedings at the Workshop, the final manuscript is due April 21, 1972, and will be included in the Workshop Proceedings. Authors will receive detailed instructions on the format to be observed in typing the final copy.

Final papers are to be not longer than 5000 words and the presentation not longer than 25 minutes. Projection equipment for 35mm slides and vue-graph (overhead projector) foils will be available for every talk. Please indicate what additional audio-visual aids will be required, if any.

Sponsors:

SHARE (an IBM User Group, Design Automation Project,

ACM (Association for Computing Machinery-Special Interest Committee on Design Automation), and

IEEE (Institute of Electrical and Electronics Engineers– Computer Group).

Abstracts are to be sent to the program Chairman:

R. B. Hitchcock
IBM Watson Research Center
Post Office Box 218
Yorktown Heights, New York 10598

CALENDAR OF COMING EVENTS

Fall Joint Computer Conference.....Las Vegas, Nov. 16-18, 1971

Sixth Annual Princeton Conference
on Information Sciences and Systems....Princeton, N.J., March 23-24, 1972.

Spring Joint Computer Conference.....Atlantic City, N.J., May 16-18, 1972

Ninth Annual Design Automation Workshop...Dallas, Texas, June ~~19-31~~ 26-28, 1972

ACM Annual Conference...Boston, Mass., August 14-16, 1972

Fall Joint Computer Conference .....

INVITATION TO ATTEND THE SIGDA MEETING AT FJCC '71

SIGDA members are reminded that every year at FJCC, SJCC, ACM Conferences, and at the DA Workshops, a SIGDA meeting is held. Whatever your interests in DA, these meetings give you the opportunity to discuss areas of common interest with fellow SIGDA members. Non-members are also invited to attend.

To date these SIGDA meetings have been informal with members talking about items of interest to themselves, - from piping algorithms to how to get their companies to support DA. We ~~have not~~ are now planning formal programs ~~because of the relatively small number of members who usually attend~~ for 1972. Informal forums for the members seemed more appropriate. Your comments on this would be appreciated.

The Fall Joint Computer Conference (FJCC) will be held at the Sahara Hotel, Las Vegas, Nevada, November 16, 17, and 18, 1971. Larry Margol of North American Rockwell, Microelectronics Division, will be organizing and conducting the SIGDA meeting, which has been tentatively set by National ACM to take place on Tuesday, November 16th from 5:30 p.m. to 8:00 p.m. Consult your program for any changes in time and place.

Editor's Note

It is the editor's pleasant duty to express sincere thanks in the name of the entire SIGDA membership to Gerry Paskusz for doing a splendid job in collecting the membership statistical information and to summarize it in such lucid fashion. As Gerry said, now we know who we are. But, I may add, what are we going to do with this knowledge? Your executive committee is going to chew on this one for a while. Speaking strictly within the limits of my job as editor, I would like to complain that I have not heard from enough of you. You are herewith reminded of a basic principle of democratic society, that you have no right to complain of your organization doing something wrong, or failing to do something desirable, if you have not made your voice heard in the matter. Therefore, please, the address is still the same, let me know what you want from the SIGDA Newslwtter. Until and unless I receive your comments I have no choice but to proceed in accordance with the wishes expressed by the minority of members who took the trouble to return the survey questionnaire.

A suggestion was made at the Newsletter Editors' meeting at the recently concluded ACM '71 , viz. to include a special column in the newsletter, which is aimed at drawing the membership's attention to pertinent articles in out-of-the way publications in this country and abroad. This new column is herewith initiated, but the array is still empty. The column HAVE YOU MISSED? is soliciting your contributions, of magazine clippings, that is.