SIMULETTER is a quarterly publication of the ACM Special Interest Group on Simulation

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SIMULETTER is an informal quarterly publication of the ACM Special Interest Group on Simulation. This special publication serves as a medium for the dissemination of information about modeling and simulation and related subject matter of interest to the membership and as a means of circulating official announcements.

All contributions to SIMULETTER are refereed working papers unless otherwise indicated. Except for editorial items, all sources, of material appearing in SIMULETTER will be clearly identified. Articles and items attributed to individuals are ordinarily to be interpreted as personal rather than organization opinions, and in no way does this non-editorial material represent the opinion of the editor regarding its accuracy or quality. Unless specifically stated, the contents of SIMULETTER do not represent the official position of SIGSIM or ACM.

All contributions should be sent to the editor. All correspondence must be signed, however, letters to the editor will be published anonymously if requested. Contributions to SIMULETTER should be submitted in camera-ready form, typed clearly on white paper with appropriate margins; exact specifications will be sent upon request by the editor.
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Special welcome to Dr. Tuncer I. Oren of the University of Ottawa (Canada) who
has joined the editorial staff of SIMULETTER as our Associate Editor working
on NTIS bibliography on simulation. Before the year is over we hope to
publish Dr. Oren's extensive bibliography of all papers at both the Summer and
Winter Simulation Conferences - it is an outstanding work. - hjh, ed.
• RETROSPECTIVE

It is with ambivalent feelings that I write this, my last column as Chairman of SIGSIM. In the past two years I have come to realize the real difficulties in having that title, the myriad problems faced in dealing with ACM, and most importantly, learning about friendship and reliability.

By the time you read this issue, you will have voted for a new Chairman of SIGSIM as well as for the other officers. I have promised both candidates for the chairmanship that I would continue, if they wish, as Editor of Simuletter.

This is not going to be a sentimental article! Although I should express my thanks to a number of SIGSIM members who have volunteered their services and done a successful job, I prefer to do this on a personal basis. Instead, I would appreciate it if each and every member of SIGSIM read this column — there is much will govern the future course of our SIGSIM!

• FINANCIAL CRISIS

Little did I realize when I took over from Mike Morris, who must again be congratulated for the job he did as Chairman, that I would be entering a new era with ACM. Mike was aware of some of the problems that SIGSIM faced with ACM — we had impounded funds. But since that time ACM has come up with a number of rules for operation which I as well as the other officers of SIGSIM found objectionable. In the last issue I made some reference to this. I did not, however, include in my column at that time, that I seriously considered resigning from ACM. I still have not paid my dues for 1975-1976, but since all officers of SIGSIM must be paid-up members of ACM, I shall pay my dues this time in order to complete my term in office.

I should like to point out that I have no quarrel with the ACM Headquarters staff! They have been wonderful and cooperative; it is only the financial operating rules made by our officers and board of ACM that we find objectionable.

As of December 31, 1974 we had about 1500 members in ACM. [See page 8 of this issue for an analysis of SIGSIM membership.] About 19% — some 150 plus — are student members who pay only $2.00 a year. However, I wonder how many of our SIGSIM members are aware of the proportion of our dues which go to support ACM officers, council, various committees as well as the headquarters staff (which by the way I feel are underpaid for the work they really do).

- about 13% — 65¢ out of every $5.00 dues paid by regular members of SIGSIM is taken out of our operating budget for ACM.
- about 33% of the $2.00 dues paid by the student members likewise goes for ACM.
- about 38% of the non-members' dues to SIGSIM goes to ACM and is not used by us — $2.00 out of the $7.00 immediately goes into the ACM pot and then 65¢ more.

We have been operating out of current income while building a small reserve fund. I personally have undertaken to mail various proceedings instead of paying ACM their fee for handling the orders. The difference has been more than one dollar per order. It is now much financially (the headaches are much greater) but it is a matter of principle. Under the new ACM rules we must maintain a reserve fund with headquarters. And it has been necessary to build that fund without touching our outside bank account, which is exceedingly small and not sufficient to cover that reserve.

• THE MISSING ISSUE

To build that reserve fund with ACM, it was
necessary to take drastic action! This I did by combining issues 2 and 3 of Volume 6 of Simuletter. I am sorry that many of you believed that we missed you on the mailing list. Notification to all members would have involved the cost of mailing labels, the printing of the notice, the envelopes, the manpower, etc. I personally felt that most of our members would understand and accept my decision.

**WINTER SIMULATION**

Many of you no doubt wonder what happened to the follow-up of the 1974 Winter Simulation Conference. It has been postponed!

After you as members agreed by ballot that SIGSIM should coordinate all such future conferences, I, as chairman, appointed Mike Morris, the Chairman of the 1974 Winter Simulation Conference, as SIGSIM's Conference Chairman. He had done a wonderful job with that conference in Washington, D.C. Harold Steinberg was appointed Chairman of the forthcoming conference. However, various problems arose. First, several sponsors wanted a more detailed financial report. Since Mike had retired from the Air Force and was busy setting up his own operation, I could fully understand his lack of time and enthusiasm in preparing yet another report for the sponsors after he had present one already. In addition, Harold Steinberg shifted his job with IBM from New York to Miami. He too encountered problems and resigned from that post.

In light of the late date for me as chairman of SIGSIM, I have personally decided to leave this in the hands of the newly elected Chairman of SIGSIM. I have been busy writing to many about this conference; for those who received a form notice or maybe none at all, I am sorry. Like the other two I have had extra activities encroach upon my time - I have explored a possible job change into educational administration which would take me for a time out of the computing field (in work not in interest).

**BOULDER CONFERENCE**

The Third Symposium on the Simulation of Computer Systems, sponsored jointly with the National Bureau of Standards, will be held this year in Boulder, Colorado, August 12th-14th.

The committee has done an excellent job and has come up with an exceptional program - they deserve your support by your attendance at the conference.

Because of budget problems, we shall have only a limited number of Proceedings of this conference. If you cannot attend, see page 68 for an order form! Because of the extra work and difficulties in handling non-prepaid orders only prepaid orders will be accepted. If it is not possible to prepay, you may be able to obtain copies using the order form in the next issue, which will be sent to ACM.

**NEW CONFERENCE**

Over a year ago I spoke with Bill LaPlant about setting up a symposium covering the use of simulation in administrative decision making.

During that period we have had several meetings and it now appears that SIGSIM will have another symposium, which I hope will be as successful as SSCS. This will be a jointly sponsored symposium with SIGBDF and DPMA in Washington D.C. sometime in 1976 or maybe early in 1977.

"Computer Aids To Administrative Decision Making" is the working title of the new symposium.

For those interested in working, present papers, etc., communicate with Bill LaPlant. [See page 60 of this issue.]

**SIGSIM CELLS ?**

Dean Uyeno, Assistant Professor of Commerce and Business Administration of the University of British Columbia, wrote to me about setting up SIGSIM "Cells." This would provide a more frequent exchange of information among the SIGSIM members with specified interests. [See page 41 of this issue for details.] If the idea is appealing to you, please let me know! If we get sufficient response, I shall appoint Dean Uyeno to handle to many details since this will be a big, big job. Or maybe you feel that SIGSIM should cut down on the issues of Simuletter and issue monthly flyers?

**SIMULATION BIBLIOGRAPHY**

Over the past several months I have been accumulating material for a special issue of Simuletter which will contain Phase I of a Simulation Bibliography. I call it Phase I since I am certain that a number of books and/or articles will have escaped from my team's searching eyes. I consider running it as a special issue with its own price since it will provide SIGSIM with another publication which it can sell and add to its activities and funds. Have any reviews? 

(continued on page 29)
SIMULETTER is a publication for and by the members of SIGSIM. As Editor, I have from time to time found articles in other publications which I felt would be of interest to our members. However, it is not possible to maintain SIMULETTER on reprints from other journals.

During the past six months I have, in response to member's offers to prepare an article for publication (noted when they returned the Membership Questionnaires or when they wrote a personal note) sent the necessary copy paper together with preparation instructions. I have sent these special packets to some 63 individuals! As of today I have had only 2 articles from these individuals.

If SIMULETTER is to survive as a viable force, there must be input. It is possible to produce the publication in 24 pages if that is what the membership wants. Yet, I feel that this is NOT what is wanted; it has helped build SIGSIM membership, and if we wish to find ourselves with fewer and fewer members, the failure to send articles to me is the solution. As we now stand, I am planning the Simulation Bibliography Issue - Phase I for sometime later this year ...... and after that ..........
LETTERS TO THE EDITOR

In the October issue of Simuletter, the Chairman's Column was in part devoted to the financial problems with ACM; here are some letters which I received. - hjh

Dear Editor:
Re: page 20 v Dues - YES to increase; Reduce Simuletter-NO
Dr. Francis A. Marolla
Staten Island, N.Y.

Dear Editor:
October Simuletter Chairman's Column fantastic Can I help support your position?
R. Reddoch, Cheif Engineer
USS Bainbridge

Dear Editor:
Thank you for your synopsis of the SIG funds situation. I do agree with your conclusions and your stand in not accepting the resolutions to be presented to the SIG/SIC chairmen in San Diego. I would like to find out just what ACM does with the funds it gets from the SICs and SIGs, i.e., what the services are provided. As far as I am concerned, if the SIG funds are not always available to their respective SIGs - and not to anyone else - then there is not much point in having SIG dues as high as they are. If ACM cannot operate out of current income as they have recently compelled the SIGs to do, then ACM ought to cut back its current programs(as it did in FY74) or find out if its membership would support its current programs with increased ACM dues. The solution is not overcommitment with a fallback position requiring SIG fund impoundment.

I encourage you and the chairmen of the other SIGs I am a member of (i.e., SIGIR, SIGOPS, SIGMOD, and SIGMETRICS) to vote against the proposed resolutions shown in your column and for the alternate solutions you detailed.

Joseph W. Burke
Bellevue, Nebraska

I should like to thank Dr. Marolla, Chief Reddoch and Mr. Burke as well as the several others who wrote to me about this point. Just to keep all informed, let me say that I received telephone calls from several ACM brass before the San Diego meeting. A compromise of a sorts was worked out, but in favor of ACM. The SIGs were able to keep their outside bank accounts but - and this is the big BUT, we as SIGs had to maintain a 'reserve' fund with ACM. That fund amounts to about 25% of our annual operating budget. See current Chairman's Column to see the slice ACM takes out of (continued on page 45)
The Proceedings of the first and second Symposium on the Simulation of Computer Systems are available from SIGSIM. Both symposia were held in conjunction with the Institute for Computer Sciences and Technology of the National Bureau of Standards.

**VOLUME ONE = 1973**

There are 26 original papers in this 288-page volume, covering such topics as:
- Languages for Computer Systems Modeling
- Simulation of Computer Systems
- Critical Issues in Computer Systems Simulation
- Simulation of Computer Software
- Trace-Driven Modeling
- Simulation of Computer Components
- Hardware and Software Monitors

Each volume is available [individually or as a set] at only $15.00 each to all members of SIGSIM and ACM; the price to all others is $25.00 per copy. All orders are sent book rate; allow six to eight weeks for delivery. If you wish your copy by airmail, add $2.00 for the U.S. and Canada [add $4.50 for overseas]. All orders should be prepaid; otherwise, a $3.50 surcharge will be added to cover the cost of billing [this includes all purchase orders]. Make checks payable to SIGSIM and enclose with completed form below.


I am enclosing my check for $__________.

[Print all data below]

NAME ________________________________

COMPANY ________________________________

ADDRESS ________________________________

CITY _____________ STATE _____ ZIP _____

Mail this form together with your check to:

Dr. Harold Joseph Highland
Chairman, Data Processing Department
State University Technical College
Farmingdale NY 11735

**VOLUME TWO = 1974**

There are 16 original papers in this 216-page volume, covering such topics as:
- Simulation and Measurement of Computer Systems
- Simulation Methodology
- Simulation of Computer Systems in a University Environment
- Simulation and Resource Scheduling
- Miscellaneous: Use of Statistical Analysis, Systems Simulators, Simulated Demand, etc.

[Please fill in appropriate box below]

☐ Current member of SIGSIM
☐ ACM membership # ________________
☐ Send airmail! Add $2.00 for U.S. and Canada; add $4.50 for overseas
☐ Please bill me; a $3.50 surcharge will be added to your bill.

Do not write in box

Date received
Check included: Yes ☐ No ☐
Date mailed ________________
Billing status ________________
This is Report IV on the membership of SIGSIM. It has been three years since the last semi-comprehensive report to the membership; and some interesting changes have taken place.

As of December 31, 1974, the latest official data, SIGSIM membership has virtually reached 1500 - 1495 to be exact. The history of membership grown (as of December 31 of each given year) since 1970 is shown in graphic form on the facing page. Illustration I is a standard linear graph showing the climb of SIGSIM membership from some 471 members as of December 31, 1970 to the current level. For those interested in the rate of growth during this period, we have included Illustration II, a semi-logarithmic graph of the same data for the same period. During 1974, SIGSIM experienced its greatest rate of growth as well as its greatest numerical increase in membership.

As present Chairman of SIGSIM, I should like to point out that we have had two official membership chairpersons during this period. First there was Ms. Mary Jane Haley of NCR Corporation, and second was Major Richard B. Ensign, USAF of FEDSIM and current with SAC. I would be remiss were I to point out that the former SIGSIM Chairman, Michael F. Morris, was possibly the greatest membership chairman of all. There are many others who have been left out of this list (and I am certain that I shall hear from them by mail); but I must admit that we have had many members working to build SIGSIM membership. [One purpose of this report is to ask each and every current member of SIGSIM to consider himself or hersel itself (or herself) as part of the membership team. The greater the membership, the greater the inflow and exchange of information and the greater the services which we can offer to our members. - hjh]

- Basis for Survey

Repeatedly in the issues of Simuletter, we have included a two-page membership questionnaire. I should like to thank all those members who took the few minutes to complete the questions and mail those reports to me. In all we have received more than 200 responses or about 15% of total membership. If we exclude institutional membership and subscribers, the return is closer to 20%, far more data than we had upon which to base our analysis. Some of the analysis included is based on ACM mailing lists of SIGSIM members - a 100% response.
• Affiliation Analysis

Members affiliated with business and industrial organizations still comprise the largest percentage of total membership in SIGSIM - some 44.63% of total. The next largest group are those located at colleges and universities, both in the United States and abroad. This group consists of slightly over 31% of total.

Student membership in SIGSIM now constitutes slightly over 10% of total membership as compared with under 2% three years ago in 1972. While it is rewarding to see that we have attracted an increased number of students into SIGSIM it should be recognized that under our present dues structure, this is a negative budget item since the cost of preparing and mailing Simuletter is more than double the dues collected from students. Nonetheless, I personally do not feel that there should be any modification in this structure since today's student members are very likely to become tomorrow's full SIGSIM members. — hhh ]

Illustration III is an analysis of membership's affiliation.

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business and Industry</td>
<td>44.63%</td>
</tr>
<tr>
<td>Research Institutes</td>
<td>9.60%</td>
</tr>
<tr>
<td>Federal Government</td>
<td>11.86%</td>
</tr>
<tr>
<td>State and Local Government</td>
<td>2.83%</td>
</tr>
<tr>
<td>University Faculty</td>
<td>20.91%</td>
</tr>
<tr>
<td>Students</td>
<td>10.17%</td>
</tr>
</tbody>
</table>
Membership in SIGSIM

(continued)

- Geographical Distribution

About 80% of total SIGSIM membership lives within the United States and the remaining 20% in foreign countries. There has been only a slight shift in this distribution over the past three years, when at that time there were 84% of the members in the United States and about 16% living in foreign countries; more about this later in the report.

For a distribution, as of December 1, 1974 within the United States see Illustration IV below. The concentration of membership has shifted somewhat and there are five states wherein SIGSIM has no membership: Alaska, Arkansas, Maine, Nevada and North Dakota. There are nine states in addition to these five wherein SIGSIM has only one or two members. [I sometimes wonder if there aren't some individuals interested in modeling and simulation, especially at the universities, whom we have failed to reach. Know anyone there? Help build SIGSIM membership to even greater levels in 1975!]

The geographical distribution within the United States is best compared on a regional basis in order to make some comparisons with the report of December 31, 1972 membership. This regional division is shown in Illustration V on the accompanying page; it is the standard regional breakdown used by the U.S. Department of Commerce in their analysis of census data.

Illustration IV

[Map showing geographical distribution of SIGSIM membership in the United States, with numbers indicating the number of members in each state.]

Illustration V
Illustration VI contains an analysis of the percentage distribution by each of the nine regions indicated in the map above. In each area there has been an increase in actual membership although there have been changes in the percentage distribution of United States Membership. The slowest numerical growth in membership since 1972 took place in area #6 - Kentucky, Tennessee, Mississippi and Alabama. The greatest growth in numerical membership took place in area #7 - Oklahoma, Arkansas, Louisiana and Texas.

The illustration below also contains actual membership numbers as well as percentage of total United States membership, and the percentage change of each.

<table>
<thead>
<tr>
<th>Geographical Region</th>
<th>Number of Members</th>
<th>% of Total US</th>
<th>% Change 1974/1972</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. New England</td>
<td>34</td>
<td>90</td>
<td>7.00%</td>
</tr>
<tr>
<td>2. Middle Atlantic</td>
<td>133</td>
<td>303</td>
<td>28.18</td>
</tr>
<tr>
<td>3. East North Central</td>
<td>75</td>
<td>169</td>
<td>15.89</td>
</tr>
<tr>
<td>4. West North Central</td>
<td>27</td>
<td>73</td>
<td>5.93</td>
</tr>
<tr>
<td>5. South Atlantic</td>
<td>79</td>
<td>232</td>
<td>16.74</td>
</tr>
<tr>
<td>6. East South Central</td>
<td>13</td>
<td>25</td>
<td>2.75</td>
</tr>
<tr>
<td>7. West South Central</td>
<td>23</td>
<td>75</td>
<td>4.87</td>
</tr>
<tr>
<td>8. Mountain</td>
<td>17</td>
<td>43</td>
<td>3.60</td>
</tr>
<tr>
<td>9. Pacific (^1)</td>
<td>71</td>
<td>191</td>
<td>15.04</td>
</tr>
</tbody>
</table>

\(^1\) Includes Alaska and Hawaii

Source: Mailing Distribution List for SIGSIM from ACM as of December 31, 1974

- Foreign Membership of SIGSIM

SIGSIM is now represented in all five major continents aside from North America and naturally (?) Antarctica. A review by the percentage outside of the United States would indicate:

<table>
<thead>
<tr>
<th>% of Total Foreign Membership</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America (^1) ..........</td>
</tr>
<tr>
<td>Europe ........................</td>
</tr>
<tr>
<td>South America ................</td>
</tr>
<tr>
<td>Asia ...........................</td>
</tr>
</tbody>
</table>

Simulettet/VI/3 11
Membership in SIGSIM
(continued)

- Australia ......................... 4.13%
- Africa ............................. 0.88%

1 Excluding the United States

From a numerical point of view, those foreign nations in which SIGSIM has membership includes:

- Canada ......................... 102
- West Germany .................. 39
- France ............................ 21
- Sweden ........................... 18
- Japan ............................ 16
- Italy ............................. 15
- Switzerland ..................... 13
- Venezuela ....................... 13
- Israel ........................... 12
- Great Britain and Scotland ..... 10

Among the other nations wherein SIGSIM members reside are: Czechoslovakia, Finland, India, China, Ireland, Iran, Algeria, Indonesia, Portugal, as well as several others.

Distribution by Degree and Age

Illustration VII contains an analysis of SIGSIM membership both by age and the highest degree attained. According to the latest survey:

- 26.6% of the members have a B.S. as the highest degree;
- 48.0% have a M.S. degree; and
- 25.4% have a Ph.D. degree.

While the 'average' B.S. was attained in 1967 among those with a B.S. as the highest degree, the M.S. and Ph.D. 'average' was in 1971.

From an age analysis, the average age of those with a B.S. as the highest degree was 29; among those with an M.S., the average age was 32 and the average age of those with a Ph.D. was 34.

The average age of a SIGSIM member is just over 32, ranging from one who is just 20 years

<table>
<thead>
<tr>
<th>Age</th>
<th>B.S.</th>
<th>M.S.</th>
<th>Ph.D.</th>
<th>Percent of Total by Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 25</td>
<td>7.5%</td>
<td>2.3%</td>
<td>0.0%</td>
<td>9.8%</td>
</tr>
<tr>
<td>25 - 29</td>
<td>6.9%</td>
<td>16.8</td>
<td>2.3%</td>
<td>26.0</td>
</tr>
<tr>
<td>30 - 34</td>
<td>4.6%</td>
<td>14.5</td>
<td>11.6%</td>
<td>30.7</td>
</tr>
<tr>
<td>35 - 39</td>
<td>3.5%</td>
<td>6.9%</td>
<td>5.8%</td>
<td>16.2</td>
</tr>
<tr>
<td>40 - 44</td>
<td>1.7%</td>
<td>4.6%</td>
<td>2.3%</td>
<td>8.6</td>
</tr>
<tr>
<td>45 - 49</td>
<td>0.6%</td>
<td>2.3%</td>
<td>1.2%</td>
<td>4.1</td>
</tr>
<tr>
<td>50 - 54</td>
<td>1.7%</td>
<td>1.2%</td>
<td>1.2%</td>
<td>4.1</td>
</tr>
<tr>
<td>55 - 59</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.6%</td>
<td>0.6</td>
</tr>
</tbody>
</table>

§ Figures rounded and do not necessarily add up to 100%
old to one who will be 58 when this issue is published. [A personal note: if all the data about age are correct, then I qualify as the old man of SIGSIM. - hjh]

Fields of Interest

Overwhelmingly the members of SIGSIM are most interested in discrete digital simulation. A comparison of interests between the current survey and that conducted in 1972 indicates the following:

<table>
<thead>
<tr>
<th>Field</th>
<th>Interest - Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
<td>1974</td>
</tr>
<tr>
<td>Digital</td>
<td>87% 74%</td>
</tr>
<tr>
<td>Analog</td>
<td>6 12</td>
</tr>
<tr>
<td>Hybrid</td>
<td>6 14</td>
</tr>
</tbody>
</table>

If we examine this by comparing discrete and continuous simulation, we find the following:

<table>
<thead>
<tr>
<th>Interest - Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1972</td>
</tr>
<tr>
<td>Discrete</td>
</tr>
<tr>
<td>Continuous</td>
</tr>
</tbody>
</table>

In light of these shifts in interest, we hope to modify the editorial content in Simuletter to reflect the work and interests of our readers. Yet, we need your help. For those working in areas other than digital discrete simulation, how about submitting articles for Simuletter? Please communicate directly with me and I shall forward the necessary copy paper for the preparation of the articles. Without your help this will not be possible. Naturally, this will not be done at the expense of the many articles about discrete digital simulation; if we obtain sufficient articles and membership we will publish larger issues in the future. If you wish to help, do it today!

About Cabbages, Kings and Packages

When last we did a report on membership of SIGSIM, we did not make any real note about the utilization of simulation packages. We failed to make any mention because the number of members using such commercial packages was so small. As a result of the current survey we can report that about 23% of the respondents, if they are typical of the entire membership - and the statistical analysis of the response seems to indicate so - have or are using commercial simulation packages.

While many within the university walls seem to think that great strides are made in those ivory centers, the results of the survey show different facts. If we divide the package users - on the basis of 100% - we find the following exposure and usage of commercial simulation packages, such as CASE, SCERT, SAM, etc.:

- Industry and business .... 54%
- Government ................. 24
- Universities ............... 17
- Research institutes ....... 5

The above data are based on those who made a positive response on the questionnaire; it is assumed that those who did not answer either have not used or are not using any of the simulation packages.

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Ming en osaa vielä puhua GPSS

Members of SIGSIM speak many computer tongues. Considering all dialects of both languages, we find that some 45% more members are familiar (and use?) GPSS than Simscript!

Of the 'natural native' languages, we found that:
- 97.8% know Fortran and/or one of its dialects, such as Focal, etc.;
- 55.6% are familiar with some form on Assembly language (this does not include Algol on any of the Burroughs' systems);
- 50.0% know PL/I;
- 47.0% use or can use Cobol;
- 25.1% use APL; and
- 11.7% know Algol in one of its versions.

When we come to simulation languages, we find that:
- 78.9% are familiar with some form of GPSS;
- 54.4% claim knowledge of some form of the Simscript family;
- 54.4% have knowledge of Simula; and
- 10.6% use or can use Dynamo.
Membership in SIGSIM (continued)

• When Did You Get That Degree?

Aside from the Bachelor's degree as the highest degree held by the membership, the overwhelming majority received either their M.S. or Ph.D. since 1970. Since 1970, 58% and 61% received their M.S. or Ph.D., respectively. About 40% received their B.S. since 1970. The table below shows the year during which the highest degree was obtained by the members who answered the survey, based on total respondents (see Illustration VIII below).

● What’s Your Special Interest?

The diversity of fields of study and the different levels of advanced degrees is evident in the analysis of special interests of the membership of SIGSIM. Below is a partial listing of the many different interests in modeling and simulation as noted by those who responded to the membership questionnaire.

- generation of random numbers
- inventory control

<table>
<thead>
<tr>
<th>Year Degree Granted</th>
<th>B.S.</th>
<th>M.S.</th>
<th>Ph.D.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1940-1944</td>
<td>-</td>
<td>-</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>1945-1949</td>
<td>-</td>
<td>2.3%</td>
<td>*</td>
<td>2.4%</td>
</tr>
<tr>
<td>1950-1954</td>
<td>1.7%</td>
<td>1.1%</td>
<td>2.3</td>
<td>5.1</td>
</tr>
<tr>
<td>1955-1959</td>
<td>2.3%</td>
<td>1.7%</td>
<td>*</td>
<td>6.1</td>
</tr>
<tr>
<td>1960-1964</td>
<td>6.3%</td>
<td>3.4%</td>
<td>2.9</td>
<td>12.6</td>
</tr>
<tr>
<td>1965-1969</td>
<td>5.2%</td>
<td>12.6%</td>
<td>2.3</td>
<td>20.1</td>
</tr>
<tr>
<td>1970-1974</td>
<td>10.3%</td>
<td>29.3%</td>
<td>14.4%</td>
<td>54.0</td>
</tr>
</tbody>
</table>

* Indicates less than 1%; total does not add to 100.0% because of rounding and probable errors by the author. -hjh

• A Mixed Bag of Educational Backgrounds

Although the largest number of individuals received their degrees in computer science, information science, mathematics, operations research and statistics, among the other areas in which the membership specialized in their studies are:

- law, psychology, urban and regional science, econometrics, hydraulics, business administration, accounting, biology, chemistry, petroleum engineering, medicine.

It is this diversity which has served to provide simulation and Simuletter with its growth and development. This is a true interdisciplinary field drawing upon the background of technical specialists in computing and a myriad of other fields. Probably a substantial number of members never did study simulation and modeling as traditional courses in their normal educational program, but developed their ability on their own. It would be interesting to pursue this subject and maybe will do so in a future study.

Would it not be an aid to SIGSIM and Simuletter if only a few of these members would write in to let us know what they are doing? - hjh
short lived and self-defeating. A transparent model is still about as likely to be wrong, but at least concerned persons can investigate the points at which they disagree. By achieving a consensus on assumptions, opposing parties may find they actually agree on conclusions. A good deal of effort will be required to get people to think this way, because it is a trait of modelers and non-modelers alike to throw in everything at once when they do not understand a problem; odds are that somewhere in the jumble are the parts to the explanation. The trouble is, nothing is learned from such an exercise, and future problems receive the same treatment. Patience and good will are necessary in this communication and education process; big "black-box" models are not.

From the inspection and evaluation of previous large-scale models and their flaws, a few rough guidelines can be derived for designing future modeling efforts:

1. A balance should be obtained between theory, objectivity, and intuition. Excessive concern for theory results in a loss of contact with the policy problem, but policy cannot be formulated well without a strong theoretical foundation. Overemphasis on objectivity is one of the major mistakes of the large models, and results in an empty-headed empiricism; on the other hand, most social questions have a quantitative component and require quantitative information to resolve. Some kind of wisdom or judgment is also essential, but intuition in the absence of theory and methodology is useless for dealing with urban problems. Both traditional comprehensive planning and large-scale modeling have been significantly lacking in theory.

2. Start with a particular policy problem that needs solving, not a methodology that needs applying (master planning is a methodology in this sense). Work backward from the problem, matching specific methods with specific purposes, and obtaining just enough information to be able to provide adequate policy guidance. Overkill is not only wasteful, it is almost always too late. Long-range planning means evaluating immediate decisions with regard to long-run consequences, rather than constructing grand plans or big models.

3. Build only very simple models. Complicated models do not work very well if at all. They do not fit reality very well and they should not be used in any case because they will not be understood. The skill and discipline of the modeler is in figuring out what to disregard in building his model.

Planning is in the unique position of being oriented around urban problems rather than around any discipline or science. The field can draw from others, selecting only those theories and methods that will be most useful. At the same time, practitioners in other fields are seeking to apply their knowledge to our urgent social problems, from environment to urban services. If planners fail to adopt and adapt theory and methodology as these become available, they will find themselves working less and less on the problems; on the other hand, if planners pick up ideas naively and uncritically, the field will simply jump from fad to fad. Somewhere between lies the optimum path.

From the inspection and evaluation of previous large-scale models and their flaws, a few rough guidelines can be derived for designing future modeling efforts:

1. A balance should be obtained between theory, objectivity, and intuition. Excessive concern for theory results in a loss of contact with the policy problem, but policy cannot be formulated well without a strong theoretical foundation. Overemphasis on objectivity is one of the major mistakes of the large models, and results in an empty-headed empiricism; on the other hand, most social questions have a quantitative component and require quantitative information to resolve. Some kind of wisdom or judgment is also essential, but intuition in the absence of theory and methodology is useless for dealing with urban problems. Both traditional comprehensive planning and large-scale modeling have been significantly lacking in theory.

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With this issue we start a new feature in Simuletter. "Simulation Documents Available from NTIS" is being prepared by our new Associate Editor, Professor Tuncer I. Oren.

Dr. Oren is Assistant Professor in the Computer Science Department, University of Ottawa in Ottawa, Ontario, Canada.

He received his Ph.D. in Systems Engineering with a minor in Mathematics from the University of Arizona. His M.S. in Mechanical Engineering was granted by the Technical University of Istanbul, in Turkey. He also studied at the IBM Education Centre in London, England. Dr. Oren is our 'linguistics' member of the editorial board, since he speaks fluent English, French, Italian and Turkish and can read German, Spanish and Portuguese.

Dr. Oren has had both industrial and educational teaching experience and we welcome him and his column to SIGSIM and Simuletter. – hjh
Practioners of the art of simulation are scattered all across the globe. (See Membership Report IV starting on page 8.) Rarely do most of us get the chance to talk face-to-face with other practitioners except at the occasional conference and/or symposium. We hear of most projects only when an article appears in one of the journals we read. From submission of the paper through revision to publication may take months or even years unless the paper is suitable for Simuletter.

To do useful, non-redundant research and to keep closer tabs on the state of the art, a means of more rapid communications is required. Thus SIGSIM is considering the initiating of a pilot project, which has been named by Dean Uyeno of the University of British Columbia:

**POSTAL STUDY CELL**

The Postal Study Cell would be composed of people interested in a specific area of simulation; we already have one group in GASP IV and another in SIMSCRIPT II, headed respectively by David Wortman and Jackson Harper, respectively. But according to the proposal by Professor Uyeno, each participant would have a mailing list of cell members to whom he could route working papers and drafts for criticism and comments without the months of delay attending formal publication or the quarterly Simuletter.

As Chairman of SIGSIM and Editor of Simuletter, I should like the membership reaction. I have tried to do this through the membership forms, but Professor Uyeno has a speedier idea. Among the areas of interest (and there could be more) are:

1. Simulation language development: digital
2. Simulation language development: continuous
3. Statistical design of Simulation Experiments
4. Random Number Generators
5. Development of Simulation Games
6. Heuristics
7. Simulation Optimization
8. Validation of Simulation Results
9. Production Modeling
10. Ecological Modeling
11. Corporate Modeling
12. Econometric Modeling

This Postal Study Cell would involve a monthly news round-up. It would involve any interested member in supplying 12 self-addressed stamped envelopes; or maybe only 8 with Simuletter carrying the news in the quarterly issues.

**THIS IS A PROPOSAL!** Act now and please let me hear from you! Are you interested in joining a Postal Study Cell? Do you think that we should send highlight information monthly to all members? (This would result in only a slight increase in dues). Should cells be limited to only 10 or 12 and start duplicate cells if more are interested?

WRITE NOW! This is a good idea by Dean Uyeno so let's act! Send a brief note today to the editor and let me know which group you might want to join. Full report in our next issue. - hjh
SYMPOSIUM ON THE SIMULATION
OF COMPUTER SYSTEMS III

AUGUST 12-14, 1975

Sponsored by: SIGSIM and the National Bureau of Standards

BOULDER COLORADO

For the past two years, SSCS has offered an exposition of the latest developments for the manager and analyst with technical knowledge and experience in the field. Tutorial program will also provide attendees with an interest but no prior background in one or more aspects of the modeling and simulation process. Each of the past symposiums has been attended by 200/300 participants.

The registration fees for the Symposium to be held this year at Boulder, Colorado are:

- For SIGSIM, NBS and ACM members ...................... $60.00
- For nonmembers .......................................... $75.00
- For students .............................................. $25.00

For registration and further information, communicate with:

Mr. John Carson, FEDSIM/NA, Washington DC 20330.
TUESDAY

AUGUST 12, 1975

• first day

8:30 A.M. Registration and coffee

9:30 Welcome addresses

10:00 Session 1: Tutorial--Introduction to the Simulation of Computer Systems
Paul F. Roth
National Bureau of Standards

Session 2: Workload Definition
Allan G. Pomerantz, Chairman
Sun Oil Company
A Model for Workload Characterization
Ashok K. Agrawala and J. M. Kehr
University of Maryland
Describing Program Behavior in a Multiprogramming Computer System
Joseph W. Keim and H. D. Schwetman
Purdue University
Modelling "System Independent" Software Resource Demands
Brian W. Unger
The University of Calgary

11:30 LUNCH

1:30 P.M. Session 3: Tutorial--Languages for Computer System Simulation
Process and Event Control in ASPOL
M. H. MacDougall
Control Data Corporation
Introduction to ECSS-II
Robert Feingold
Federal Computer Performance Evaluation and Simulation Center

Session 4: Minicomputers and Networks
John Y. Hsu, Chairman
California Polytechnic State University
Simulators and Assemblers for Minicomputers
Donald D. Fisher
Oklahoma State University
Reliability Simulation of Spaceborne Computer Systems
W. N. Hume and J. E. Weatherbee
Computer Sciences Corporation
Simulation of a Real-Time Microprocessor Network
E. J. Passanow
Naval Electronics Laboratory Center

3:00 Coffee

3:30 Session 5: Tutorial--Computer System Simulation Packages
Dennis Gilbert and John Caron
Federal Computer Performance Evaluation and Simulation Center

Session 6: Software Simulation
Gerald W. Findley, Chairman
General Services Administration
The Obsolescence of Look-Ahead Buffering
H. Lynn Beus
Brigham Young University
A Simulation Model of UNIVAC's DVS-1100--More Than Just A Performance Evaluation Tool
W. G. Griffith, Satellite Columbus Labs
D. Ingerman, Arlinc Research Corporation
C. E. Price, South Central Bell
Simulation of Error Detection in Computer Programs
M. P. Schneiderwind
Naval Postgraduate School

5:00 DINNER

7:30 Session 7: Workshop--Simulation Techniques for Large Computer Centers
R. E. Paulhamus and H. P. Artis
Bell Laboratories

Session 8: Workshop--Simulation of Minicomputers
Elwood Bass
Army Missile Testing and Evaluation Center

Simuletter/VI/3 43
WEDNESDAY

AUGUST 13, 1975

SECOND DAY

9:00 A.M.  Coffee

9:30  Session 9: Tutorial--Emulation
      Eileen Silo
      National Security Agency

      S. Harris Dalrymple
      McDonnell Douglas Astronautics Corporation

Session 10: Computer Scheduling
      Arthur F. Chantker, Chairman
      National Bureau of Standards
      A Simulation Study of a Demand-Driven
      Scheduling Algorithm
      R. B. Hunt
      University of Saskatchewan
      J. N. F. Nune
      University of Toronto
      A Simulation Study of Dynamic Dispatching
      A. C. Cho
      IBM Corporation
      J. C. Strauss
      University of Pennsylvania
      Sensitivity of Predictive Scheduling
      Ka-Lai Leung and Roger G. Wood
      University of California, Santa Barbara
      Willy Wai-Yee Chiu
      IBM Thomas J. Watson Research Center
      A Multiple Subsystem Simulator of
      Processor Scheduling
      Thomas E. Reeves and Udo W. Pooch
      Texas A and M University

11:30  LUNCH

1:30 P.M.  Session 11: Tutorial--Validation Criteria for
      Computer System Simulation
      Toby J. Teorey
      University of Michigan

Session 12: Computer Simulation Languages and Packages
      Donald Ingerman, Chairman
      Arinc Research Corporation
      Interactive Graphical Simulation
      Using Petri Nets
      C. P. Crowley and J. D. Nei
      University of Washington
      A Methodology for Tuning and Verifying
      Package Simulation Models
      David C. Effron
      Xerox Corporation
      CSPII--A Universal Computer Architecture
      Simulation System
      Harold Y. Iwata and Kelvin W. Cutler
      Hughes Aircraft Company

3:00  Coffee

3:30  Session 13: Advanced Tutorial and Workshop--Computer
      System Simulation Packages
      John Caron and Dennis Gilbert
      Federal Computer Performance Evaluation
      and Simulation Center

Session 14: Computer System Design
      W. R. Franta, Chairman
      University of Minnesota
      Simulation is Unreal
      Bernard A. Lichtig
      Lockheed Missiles and Space Company, Inc.
      Some Uses of Simulation in Systems Design
      Gary J. Nutt
      University of Colorado
      Design Analysis Using Simulation
      Ron Willis
      Hughes Aircraft Company

5:00  DINNER

7:30  Session 15: Workshop--Data Collection, Analysis and
      Validation
      Edward Arthurs
      Bell Laboratories
      Warren J. Erikson
      University of Southern California
THURSDAY
AUGUST 14, 1975
• third day

9:00 A.M. Session 16: Mathematical and Economic Models in Computer System Simulation
James Mighower, Chairman
California State University, Fullerton
Gulf Computer Network Economic Planning Model
M. Boksenbaum
Gulf Oil Corporation
Simulation of a Large Computing Facility as a multiproduct Firm
Charles J. Brauch
University of Colorado
A Practical Queue-Ordering Algorithm to Improve Through-Put of a Server with Sequence Dependent Wake-Ready Delays
Richard G. Raymond
General Electric Research and Development Center

10:30 Coffee

11:00 Session 17: Session Chairmen's Panel
Philip J. Kiviat, Moderator
Federal Computer Performance Evaluation and Simulation Center

12:30 P.M. END OF SYMPOSIUM

LETTERS TO THE EDITOR
(continued from page 5)

SIGSIM's dues. As for services, ACM headquarters prepares the mailing labels, sends the copy to the printer (just as we do without ACM with the various proceedings SIGSIM has produced), takes care of the mailing and keep the books. Personally, as I have repeatedly said, I have not fight with ACM Headquarter's staff which is doing a fine job. I just wonder, the way Joe Burke does, what ACM does do with its funds - the travel expenses of some of its committee members, officers, etc. Do, and if yes, how often, committee members travel to New York for a one-day meeting at current airfares? How many meetings are held? I know that running ACM is a big job - I was once Executive Secretary for a large trade organization. But maybe because I was Executive Secretary and saw what some of the elected officers and committee members of that organization spent for 'running' the association that I am sceptical about ACM. Murphy's Laws or Parkinson's Laws work for such organizations as they do for large corporations. May I also add that as of the coming year, I have reduced my membership in various SIGs. I would like to belong but I have this means of protest other than outright withdrawal from ACM. I do remain as a member of SIGSIM, SIGMETRICS since both SIGs with Mike Morris and Phil Kiviat, respectively, were actively opposed to the SIC/SIG Board resolutions at San Diego.

I should add that I have spoken with one of the officers of the Simulation Council and with IEEE - with those interested in simulation. I hope the new Chairman of SIGSIM maintains these options and I believe (no matter who is elected) he will. I could continue on this topic, but will stop now and let this topic be continued in our next issue of Simulette.

Dear Editor:

I am a student member of ACM and also a member of SIGSIM. I would appreciate it if you could possibly send me the free material you have available concerning SIMSCRIPT I/5. If possible, I would also like a text explaining this programming language. All materials can be sent to the above address.

Samuel G. Griffin, Huoma, LA
(continued page 66)
PROCEEDINGS OF

1974 WINTER SIMULATION CONFERENCE
NOW AVAILABLE

THE PROCEEDINGS OF THE
1974 WINTER SIMULATION CONFERENCE

are now available for a limited time at a special price to all members of SIGSIM!

The two volumes, 840 + xvi pages, includes some 70 timely original papers in the area of simulation plus some 40 abstracts of unusual work in this field. The major areas covered include:

- Simulation Languages
- Manufacturing Applications
- Simulation of Computer Hardware
- Simulation of Financial Decision-Making
- Environmental Systems / Ecosystems Simulation
- Data Base / Data Communications Systems Simulation
- Simulation of both Stock and Commodities Markets
- Urban Planning Simulation
- Simulation of Hospital Systems
- Computer Software Simulation
- Educational Systems Simulation
- Statistical Methodology
- Traffic / Transportation Systems Simulation
- Marketing Systems Simulation
- Simulation of Computer Job Scheduling

In all there were 24 technical sessions as well as 5 work sessions at this Conference held at the Washington Hilton, January 14th - 16th, 1974 in Washington D.C.

The two-volume set not only includes a complete table of contents but also an index by author and article title. Also included is a complete index of authors together with their affiliation and address so that you can communicate with any of them for additional information.

The Proceedings of the 1974 Winter Simulation Conference is clearly printed in a rugged-covered two volume set and is officially priced at $25.00 per set. A special price of $20.00 has been set for members of SIGSIM and membership requests for these volumes will be honored by SIGSIM so long as our supply lasts.

Place your order now for these two unusual volumes! A convenient order form is enclosed at the bottom of this page. Please print all information clearly and send the order form together with your check today.

I am enclosing my check for $____ for my copy of the Proceedings of the 1974 Winter Simulation Conference, both Volumes I and II.

NAME [print] __________________________________________ (Please fill in appropriate box)
COMPANY [if any] __________________________________________
ADDRESS __________________________________________
CITY _______ STATE _______ ZIP _______

Mail this form together with your check to:

Dr. Harold Joseph Highland
Chairman, Data Processing Department
State University Technical College
Farmingdale NY 11735

☐ Current member of SIGSIM
☐ Member of ACM {indicate membership # ________}

☐ Please ship via air mail: add $4.00 for domestic or add $8.00 for foreign to payments to cover costs.
☐ Please bill me; a $4.50 service charge must be added to the cost.

Simuletter/VI/3 53
The GASP IV Users Group was formed to satisfy a three-fold objective. First, the group provides a communications medium for the discussion of GASP IV, for the dissemination of GASP IV user information, and for the exchange of techniques and experiences of GASP IV users. Second, the group serves as a clearinghouse for possible extensions and embellishments to the GASP IV language suggested by its users. Third, the group demonstrates and encourages the use of GASP IV in the simulation community.

The chairman of the GASP IV Users Group is:

David B. Wortman
Pritsker & Associates, Inc.
1201 Wiley Drive
West Lafayette, IN 47906
Phone: (317) 743-3287

If you or any of your colleagues are interested in participating in the activities of the GASP IV Users Group, please contact the chairman.

In order to make the GASP IV Users Group a success, we need your help. Space in issues of SIMULETIER has been provided to allow communication among all GASP IV users. If you wish to prepare an article on your application of the GASP IV simulation language, present personal comments or anecdotes, or share some experiences, please contact the GASP IV Users Group chairman. Your assistance in this area will be greatly appreciated.

A seminar entitled "Simulation with GASP IV" will be held February 19-21, 1975 in Lafayette, Indiana. The objective of the seminar is to present the GASP IV approach to systems simulation modeling and analysis. The GASP IV philosophy and programming techniques will be presented. Applications of GASP IV will be detailed to illustrate the use of the programming techniques. This seminar will also be offered June 4-6, 1975. For additional details and registration information, contact the GASP IV Users Group chairman.

The eleven example problems discussed in the GASP IV textbook are now fully coded and available. These examples illustrate much of the power of the GASP IV simulation language and can be used as an aid in learning the language.

Updates to the GASP IV program have been sent to those of you who have GASP IV in your software library. Included in the update package is a routine for sampling from user-defined discrete probability distributions, as well as minor adjustments to the GASP IV program.

New GASP IV developments

Free form input has been developed for use with the GASP IV simulation language. Free form input permits GASP IV input data to be punched without card column restrictions. This new capability greatly reduces the complexity of data input preparation and also provides extensive editing features. The routines for adding this capability to the GASP IV program are now available.

A routine capable of preparing non-monotonic plots of GASP IV output data is now available for use with present versions of the GASP IV program. The plotting routine presently incorporated in GASP IV restricts the user to the preparation of plots in which the independent variable is either increasing or decreasing. The incorporation of this new feature increases the flexibility of the GASP IV plotting capability.

An interactive version of GASP IV has been implemented on a General Automation SPC 16/65 minicomputer. This new development allows the GASP IV user to play an active role in the simulation process. Both programmed and user-initiated interrupts are supported by this new GASP IV version.

News from GASP IV users

From its inception, GASP IV has been found to be useful in many non-engineering applications. A recent example of this is the work of a major insurance company in developing a corporate financial model using GASP IV.

Plans are underway to use GASP IV in a study of the energy requirements of an Alaskan community. Of particular interest is the evaluation of the use of wind power as the main energy source for the community.
Interactive Simulation (continued)

Figure 10. Plot of One State Variable, Example 2.

I want to help with the forthcoming symposium ☑
I want to prepare a paper for the symposium ☑
I want more information about the symposium ☑

MAIL TO:
William La Plant
AFDSC/SFP
Pentagon
Washington DC 20330

or if you wish to call:
202-697-3577

***** Work with SIGSIM *****
New Publication on Mathematical Software

The Association for Computing Machinery announces a new quarterly

**acm transactions on mathematical software**

(TOMS)

John R. Rice, Editor-in-Chief   Lloyd D. Fosdick, Algorithms Editor

Associate Editors
Abe Bjork  W. J. Cody  M. Stuart Lynn
W. Stanley Brown  Patricia J. Eberlein  Joel Moses
B. F. Caviness  Morven Gentleman  M. J. D. Powell
Alan Cline  Thomas E. Hull  Joseph F. Traub

Scope: Significant research and development results in the area of
Fundamental Algorithms and Associated Software
Analysis of Mathematical Algorithms  Methodology of Evaluation and Analysis
Construction of Algorithms and Programs  User and Systems Interface with Algorithms
Analysis of Programs  Dissemination and Maintenance of Programs
Critical Evaluation of Programs

**Within this scope, content material is expected to**

Interface With Traditional Areas

Arithmetic Functions  Symbolic Algebraic Computations
Numerical Analysis  Optimization and Nonlinear Programming
Polynomial Manipulation  Statistical Computations
Computational Linear Algebra  Sorting, Ordering, and Classifying
Pattern Recognition  Symbolic Mathematical Algorithms
Languages for Mathematical Software  Operations Research

The content of papers in those areas that are primarily applications will be applicable
to a reasonably wide class of problems and not just to the consideration that
motivated the paper.

Papers will be of two kinds: (1) the usual technical variety, and (2) algorithms as in
the highly valued Algorithms section of *Communications of the ACM*. The Algorithms
section of *Communications* will be phased into TOMS and the algorithms will
continue to be issued in ACM's looseleaf service: *Collected Algorithms from ACM*.

Quarterly  •  First Issue March 1975  •  Projected 400 pages annually

ACM Transactions on Mathematical Software (TOMS)  •  Order Form

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<tbody>
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LETTERS TO
THE EDITOR
(continued from page 45)

• Contact Joseph S. Annino, Manager, Systems Planning, Consolidated Analysis Centers, Inc., 12011 San Vicente Boulevard, Los Angeles CA 90049 for information about SIMSCRIPT II.5.

The best text, also available from Joe Annino, is SIMSCRIPT II.5 Programming Language by P. J. Kiviat, R. Villanueva and H. Markowitz.

Dear Editor:
I am a student at the University of Wyoming. I am currently undertaking an independent study project dealing with Planning Model Generators. Any help your organization could give me would be greatly appreciated.

Michael Joe Waiters
919 Grand Apt. 1
Laramie Wyoming 82070

• Any SIGSIM members have material or ideas for Mr. Waiters? As Editor I have tried to get members to form an inquiry pool - at this I must admit I have failed. Yet I feel that this is a good idea since we receive many letters from students for help. As part of SIGSIM's activities, there should be an educational service. Is there some SIGSIM member who would like to try getting this together? — Ed.

SIMSCRIPT II.5 for UNIVAC

CACI under contract with GSA will implement SIMSCRIPT II.5 simulation and programming language compiler for the U.S. Army. The compiler will be used for simulation model development on UNIVAC 1108/1110 series computer systems. Joseph Nichols with the Army Concepts Analysis Agency, will participate in the development and FEDSIM will monitor the project.

The new compiler will be generated through the use of CACI's proprietary 'bootstrap technique.' A SIMSCRIPT II.5 compiler is available for both IBM 360/370 systems and Honeywell 6000 series. More than 100 colleges and universities have been provided with such compilers at no cost by CACI for teaching and research purposes.

SUMMER SIMULATION COURSES

Again this summer, the College of Engineering of the University of Michigan will be offering introductory courses in GPSS which will be taught by Dr. Thomas J. Schriber, associate editor of Simuletter.

"Simulation Using GPSS v Introductory and Intermediate" will be offered August 11-15 and again August 18-22, 1975; the latter is an advanced program. For full information, contact:

Engineering Summer Conferences
400 Chrysler Center, North Campus
University of Michigan
Ann Arbor, Michigan 48105

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Dear Editor:

I am writing in response to your open request for mail in the recent issue of SIMULETTER. I am a full-time Researcher at CSHE and a full-time second year graduate student in Applied Psychological Research at Hofstra. I have been involved in the computer simulation of human behavior since I was a junior in college. Currently, my special interests are in the behavior of the college students, especially in a modeling approach to decision making processes at a social and cognitive level. I enjoy SIMULETTER very much, which I believe is in a large part due to your fine job, but I have some comments and requests which, from my point of view, would increase the broad base which the newsletter provides.

Although I realize that SIGSIM is a branch of the ACM and not the APA, and that there is a special interest group called SIGART, I think that the computer simulation of human behavior, especially some of the work done in the field of psycho-cognitive social models would be appropriate. This type of research has been badly neglected in the past, and at the very least, references should be made to relevant articles in these areas as they are produced. This is a rather large task, but one that I feel is worthwhile in a general educational sense to all of the SIMULETTER readers and in a very specific sense to my own purient interests.

Another general area which I am currently involved in is building models from data. I found out through many trial and error runs through critical reviews that an empirical basis for simulation is worthwhile and necessary condition. Of course, the nature of simulation is based on hypothetical inputs and interconnections, but previous experimental results may help aid the modeler in determining constraints and/or pathway probabilities. The most clear cut example is probably used in Monte Carlo studies of bivariate phenomena where the correlation between the variables is used in the random selection of a second variable after the first variable is determined. What I am suggesting, is more articles of this nature, as well as a generalized format for this type of empirical modeling.

I guess you can see by the previous request that I thoroughly enjoyed McLeod's article in the current issue. He has done an excellent job in presenting this information. I believe that his ideas are very timely. However, I recommend some alterations. From my psychological training and research, I can fully appreciate the effect of a full review of the previous literature on the topic area. Thus, I would suggest that McLeod's structure lend itself to a larger section on previous work. The introduction should begin with a broad overview and narrow itself down to the specific topic and experimental design. In addition to this, I would suggest an expansion of his 3.5 section on the validation of the model. The researcher should be specific in statistical techniques used to analyze output as well as the overall experimental basis of the project. These are just some slight revisions that I feel might make McLeod's fine article even better.

I have used SIMULETTER as a bibliography, as well as a reference source and I hope that you will continue to provide your short abstracts and reference notes to other publications in the field. I would also suggest that you try to keep us abreast of courses and seminars in this field (especially in the New York area).

As a relatively new member in the field, I recognize the fact that you may have already toyed with some of the ideas that I propose for SIMULETTER. I may have missed some relevant issues, and for this I apologize. Of the ones I have seen, I can only be thankful that someone is interested in the same things that I am. Thanks very much for your fine job, and if I can be of any assistance (being in the area) please let me know.

Jack McArdle
Research Analyst
Hofstra University
Hempstead, N.Y. 11550

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[For readers not familiar with all acronyms, CSHE is the Center for the Study of Higher Education at Hofstra University. As editor I received this letter some time back, but decided not to publish it in Simuleter, especially after having Jack as a graduate student in my class on Conceptual Modeling, which I taught at Hofstra's Department of Engineering and Computer Science.] Too many of us in SIGSIM have one areas of special interest and when time permits, we look at the rest of the field. As Editor, I have had to maintain a broad perspective of modeling and simulation and I believe that there is considerable food for thought in this letter. When compared with Dean Uyeno's approach, we find we have two poles. There are many, I hope, who have a catholic view of modeling and simulation, interested in all areas, while there are also many who are engrossed in one special area. Maybe it is a sign of the times that our educational system permits so many to concentrate on so small an area. We need both and SIGSIM should serve both. What would the members think of a symposium on modeling techniques? — Ed.
The third annual Symposium on the Simulation of Computer Systems will be held in Boulder, Colorado, August 12-14, 1975.

This symposium is being sponsored by the Commerce Department’s National Bureau of Standards and the Special Interest Group on Simulation (SIGSIM) of the Association for Computing Machinery.

For the past two years, the Symposium has offered an exposition of the latest developments for the manager and analyst with technical knowledge and experience in the field. A tutorial program will also be provided for attendees with an interest but no prior background in one or more aspects of the modeling and simulation process.

The Symposium will augment the formal technical sessions and tutorials with informal discussion/workshop sessions on:

- Computer System Simulation Packages
- Simulation of Minicomputers
- Techniques for Large Computer Centers
- Data Collection, Analysis, and Validation

For registration and further information please contact Mr. John Caron, FEDSIM/NA, Washington, D.C. 20330.

RESERVATION FORM FOR PROCEEDINGS OF THE SSAC '75

Yes, I want a copy of the Proceedings of the Symposium on the Simulation of Computer Systems '75 which will be held in August 1975 at Boulder, Colorado. I am enclosing my check for $20.00 for the volume as a member of SIGSIM and/or ACM. Price to all others is $25.00.

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