American Journal of Computational Linguistics Microfiche 65

NEWSLETTER OF THE ASSOCIATION FOR COMPUTATIONAL LINGUISTICS

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This mailing consists of two numbers of the Finite String, with accompanying opaque cards, and a survey of the membership of AJCL from which to judge the contributions published heretofore: A prize will be awarded by ACL in the fall for the most respected contribution to date

It is hard to imagine how a journal published on any other medium could maintain a publication schedule without a backlog; an issue without technical papers in the academic sense may be unwelcome, but it is possible.

These are the first numbers of the Finite String on microfiche that the Editor has not designed page by page; William Benzon is responsible; his increased participation keeps the Editor alive during a period of excessive responsibility. If the Association can afford it, Mr. Benzon will probably do it again.--DGH

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Association for Computational Linguistics

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PRESIDENT'S ADDRESS 1977

THE INTELLECTUAL RESPONSIBILITY OF COMPUTATIONAL LINGUISTS

I'm not going to talk long tonight. I'm now an administrator, or if you want to be nasty, a bureaucrat, and not a teacher or researcher. My public speaking these days runs mostly to explaining to Senator Proxmire that there is still some room for advance in linguistic research beyond the accomplishments of George Bernard Shaw. My natural inclination would be to use my time here to give you all a form to fill out in triplicate

However, I feel a certain obligation to maintain the tradition of my illustrious predecessors, so I am harking back to a much earlier stage of my career. It is not generally known, but one of my occupations in college was itinerant preacher. (I'm not kidding.) I was finally forced out of that business by the manufacturers of Sleep-Eze, as a competitive threat But every so often I get the urge to preach a sermon, and that's what I've decided to do tonight, albeit briefly

Every good sermon starts with a text. I considered taking as my text Proverbs 23 20, "Be not among winebibbers, among riotous eaters of flesh," but I decided this was the wrong audience for that. I settled instead on Ecclesiastes 7 5, "It is better to hear the rebuke of the wise, than for a man to hear the song of fools." Hopefully the import of that will become clearer as I go on

I've titled my talk "The Intellectual Responsibility of Computational Linguists." Intellectual responsibility is a broad notion, and I know that in many ways computational linguists fully meet their intellectual responsibilities. In keeping with the

hortatory tone of a sermon, however, I'm going to point out some ways in which I feel we've neglected our intellectual responsibilities

The first and most immediate way is in the response, or lack of it, to fundamental criticism of the field as a whole To my knowledge there has been no intellectually serious response to the extended arguments, familiar to all of us, which have called the viability of most of the field into question I refer to the philosophical arguments of Dreyfus, the moral arguments of Weizenbaum, and the pragmatic arguments of Lighthill (I am aware that these arguments were raised against artificial intelligence research generally, but each of the authors includes in his indictment much of the research that is taking place in computational linguistics today) I have seen plenty of attacks on these people More than one person, for example has observed to me that a computer beat Dreyfus at chess, the insinuation being a Samuel Johnson-like "Thus I refute Dreyfus," when of course this has nothing whatsoever to do with his arguments I have heard a person whom I respect highly call Weizenbaum's thoughtful, anguished book "terrible, anti-science " The defensive reactions which appeared in the literature upon the appearance of the Lighthill report were in the spirit of political fervor, calls to solidarity with our British colleagues, rather than reasoned rebuttals to Lighthill's principal charges But attacks are not arguments If the critical arguments are bad, they should be easy to refute with better ones, if they are good, if we cannot refute them, then intellectual responsibility demands that we alter our outlook and our practices to conform to them. A failure to respond at all, a retreat into mutual self-assurance and a search for converts to the cause among students and the uninformed general public, not only violates intellectual responsibility but also leads to increading intellectual isolation, as disinterested members of the intellectual community observe the one-sidedness of the debate and draw their own conclusions accordingly

Perhaps these comments make clear the reasons for my choice of text

The second way in which I think our intellectual responsibilities demand more of us than we now do has to do with the future of the field, the way we train graduate students in computational linguistics About nine years Kuno and Oettinger published in the CACM a graduate curriculum in computational linguistics. The curriculum was heavy on computation, and contained a fair-sized dollop of linguistics, specifying numerous topics in each of these areas which were important to cover at that time A reviewer in Computing Reviews, while giving the curriculum fulsome and deserved praise, pointed out that the areas covered were necessary but scarcely sufficient for a Ph D. in Computational Linguistics Computational linguistics is clearly an interdiscipline, and full mastery of an interdiscipline entails mastery of the disciplines it is "inter-". Opinions may differ on this, but I would say that a fully qualified professional in computational linguistics should not only have mastered computer science and linguistics proper (and by "mastered" I mean at the ABD graduate level in both disciplines), but should also have had more than casual exposure to experimental psychology, to appreciate the discipline of experimental evidence for the validation of models, and to analytic philosophy, to the extent of controlling the philosophical literature on the metaphysics and epistemology of the minds-machine controversy, which goes so directly to the roots of the science, as we discussed previously Perhaps I am poorly informed, being out of direct contact with graduate education, but it is my impression that in many if not all graduate programs in computational linguistics, a high degree of programming skill and survey-level exposure to linguistics are the major requirements for writing a thesis in computational linguistics Many people, of course, acquire expertise in other pertinent competencies, to their credit; but a graduate curriculum is really a definition of the field, a tangible projection of our image of what the field is really about, and I would maintain that our intellectual responsibility is to broaden that image from what it is at present

The third and final responsibity I would urge on you is our responsibility to the educated citizenry at large The most direct way that academic members of our profession have of meeting that responsiblity is in the teaching of undergraduates, liberal arts students who are not majors in computer science or linguistics A course in "Language and Computers" or the like can perform the vital function of demystifying the computer, of teaching the future businessmen and politicians and teachers of our society the capacities and the limitationa of this large and growing social force I think that an undergraduate computational linguistics course can be more effective in this way that the standard introductory programming course I also think that, properly taught, it can lead to a greater of humanistic values, of the uniqueness and significance of human beings, than most courses in the humanities As a practical matter, in the growing number of institutions where there is a premium on undergraduate enrollments in departmental courses, such a course can be very popular

A final Biblical text is one that I will apply to myself at this point, which I should probably have heeded earlier. It is Proverbs 17 28 "Even a fool, when he holdeth his peace, is counted wise and he that shutteth his lips is esteemed a man of understanding "

Paul G. Chapin, President, ACL

Delivered at the annual banquet on March 16, 1977.

EDITOR'S REPORT 1976

During 1976, AJCL received 30 submissions for review This number is smaller than in 1974 and 1975, an effort to obtain more submissions is taking shape

The total stands at 50 contributions published out of 116 submitted, or 42%. This is probably a permanent peak percentage If more submissions are obtained, the ratio will probably decline gradually

During 1976, AJCL published 22 microfiches and 42 opaque cards These counts are about the same as in 1975, and the numbers for 1977 will be about the same again

The number of frames published in 1976 was 1834, higher than in earlier years. For one thing, AJCL now uses blank space following technical contributions for ephemeral matter, the space is almost free to the Journal 1834/22 = 83 frames per fiche, which comes close the the physically available 97 In 1977, we will come a little closer

EDITORIAL BOARD MEETING
MARCH 17, 1977

The Editorial Board of AJCL met at noon following the close of the Annual Meeting of ACL Although personal schedules caused some comings and goings, the business of the meeting was conducted generally with the participation of Paul G. Chapin, ACL President, David G. Hays, Editor, Jerry Hobbs, Search Committee Chairman, Donald E Walker, Managing Editor; Martin Kay, Technical Counsellor, and Jonathan Allen, Fred J Damerau, and Joyce Friedman, Members of the Board

SOLICITATION OF CONTRIBUTIONS

The quantity is poor, although the quality has been high Can the Membership Committee support the Journal? The Editor will inquire Can the bibliographic machinery generate letters to those who publish relevant articles elsewhere? The Technical Counsellor will work on the system as he can afford the time Do we want to look again for noncurrent material worth publishing? (Kay's 'Experiments with a Powerful Parser' was published, another contribution was solicited but has not appeared) The Associate Editor when appointed will be charged with identification and solicitation of the Best Papers in Computational Linguistics for 1977, for publication (reprinting) in AJCL early in 1978 The

Board suggests distributed aggressiveness; if each Member can obtain one good submission per year, the flow will increase by 50%. The Editor will supply printed matter to Board Members

NOMINATION OF BOARD MEMBERS FOR 1978-1980

The Search Committee will submit a slate to the Executive Committee Suggestions should be given to Hobbs

SEARCH FOR AN ASSOCIATE EDITOR

The present Editor intends his tenure to close in 1978 A Search Committee has been appointed by the Executive Committee, and charged with a May 1 deadline The Associate Editor will have tasks to perform immediately (see above and below)

HARDCOPY BULLETIN

An inexpensive Bulletin will be dummied in early summer If approved, the first number will be published in summer and perhaps circulated not only to members of ACL but also widely to potential members It will appear 4 times yearly, its schedule interleaving with ACL to provide news on 8 dates The Associate Editor will edit it, all per Executive Committee action

ANONYMITY OF REVIEW

Shall instructions to contributors be altered so that the referees have no definite knowledge of the source? No The procedure is illusory, since many contributions provide internal evidence of source The source of a proposal is a legitimate item in evaluation, since ability to perform must be judged, and many ACL contributions are accepted by the Board on the basis of

proposals (3-page summaries) The present policy stands until reconsidered

CLASSIFICATION AND INDEXING OF AJCL CONTENTS

Automatic or intuitive? In view of ACL's substantive field, a preference for automatic indexing and classification Gerard Salton has offered to provide a classification, if transfer of the file to his computer can be accomplished. The Technical Counsellor offers a list of medium-frequency words (which Salton, among others as long ago as H P Luhn has shown to be most useful) The present intuitive classification has been called obsolete by at least one member, revision is needed, and intuitive revision would be a big task If Salton's offer cannot be accepted with reasonable effort, no retrospective classification will be published Kay's index of medium-frequency words will be published whether or not Salton's classification is obtained, as soon as Kay can produce it

ACCEPTANCE OF AJCL

A Member of the Board asks whether authors are willing to submit good work to AJCL AJCL is better characterized as a monograph series than as a journal. For full reports, especially theses, it is almost the only available channel We make no page charges. No journal is read by all subscribers, the American Psychological Association once reported 1% readership for a good article in a major journal Acceptance of micro-

fiches is growing The Realist Compact projector was bought by some 9 members in spite of poor placement of a small announcement in AJCL, and ACL can make many more announcements of the availability of different kinds of projectors Many kinds of material are available cheaply on microfiches If ACJL can hold on for a few years more, the point is likely to be won Meanwhile. steps can be taken. For browsing in public libraries, a cover can be published The content of the current issue, with space for the librarian to show where AJCL is stored, to be placed among current journals on display An award can be offered for the best paper in AJCL to date (the Editor will seek Executive Committee approval), the ACL members' ballots can be analyzed for readership, as an indicator of both acceptance of microfiche and success of the foreshortened review policy. The readership data can be circulated to potential contributors If the contributions accepted after review by proposal are judged poor by the membership at large, then the policy should be abandoned

Editor's remark in passing The foregoing business was transacted in the space of an hour and a half, and lunch was eaten during the same interval Rarely have I seen as rapid a management session My gratitude to those who attended

ASSOCIATION FOR COMPUTATIONAL LINGUISTICS

MINUTES: 15th Annual Business Meeting
16 March 1977
Georgetown University, Washington, D.C.

MINUTES OF THE PREVIOUS MEETING

Chapin noted that the minutes of the previous meeting had been published in the last 1976 issue of the Finite String, Volume 13, Number 7, Microfiche 55 of the American Journal of Computational Linguistics.

SECRETARY-TREASURER'S REPORT

Don Walker began the Secretary-Treasurers Report by noting that the transfer of records from the Center for Applied Linguistics to Stanford Research Institute was not yet complete. As of 14 March, the membership for 1977 was 373 individuals and 144 institutions. A financial report from SRI reported income of $10,433.02 and expenses of $1,341.84, leaving a current balance of $9,091.18. However, the assets and indebtedness of the ACL with respect to CAL remain to be determined. Walker promised a more complete report in the AJCL following a review of the total financial picture of the Association.

MEMBERSHIP

Chapin announced that a membership drive will begin during the year toward a goal of 1500 by 30 June 1981. An increase in membership is essential for meeting current expenses. In addition, that number of members would satisfy the requirements for continuation of our current status in the American Federation of Information Processing Societies. The drive will be carried out in conjunction with the issuance of a hardcopy newsletter (discussed below).

EDITOR'S REPORT

Dave Hays reported that 30 manuscripts had been submitted during 1976, in contrast to 42 for both 1974 and 1975. Concerted efforts will be made to encourage more papers. Of the 116 papers submitted since AJCL began publication, 50 were accepted. Hays expected this rate of

42% to be reduced to one-third or one-quarter in the future. For 1976, 22 microfiches were published, the same number as in 1975; However, 1834 full frames were issued (only 150 were left blank), reflecting an increased use of available space. 42 opaque cards were printed.

Hays announced an Editorial Boad meeting scheduled for the following day and invited all interested members to attend. The agenda included procedures for soliciting conributions, the hardcopy newsletter, anonymity of review, and methods for classifying contributions. Hays called attention to the presence in the registration area of the $44 Realist Compact microfiche reader advertised in the last issue of the AJCL (opaque card 131). Nine orders from members already have been received, and more machines are available. Brochures also were in the registration area for a $149 reader developed by Micro Information Systems under ERIC sponsorship and available through Roberts Information Services, 8305-G Merrifield Avenue, Fairfax, VA 22030.

EDITORIAL BOARD APPOINTMENTS

Chapin described the new system for three year terms on the Editorial Board of the AJCL. New appointments for 1977-1979 are Jonathan Allen, Gary Hendrix, Raymond Perrault, Jane Robinson, and William Rounds. Terms will expire in 1978 for Robert Barnes, Fred Damerau, Gary Martins, John Olney, and Naomi Sager. Terms will expire in 1977 for Joyce Friedman, Winfred Lehmann, Christine Montgomery, Don Walker, and Terry Winograd. Terms expired at the end of 1976 for Joseph Grimes, Martin Kay, Ignatius Mattingly, and William Woods. Martin Kay will stay on as Technical Advisor. A search committee, chaired by Jerry Hobbs, is being appointed to identify an Associate Editor who will replace Dave Hays when he completes his term as Editor at the end of 1978.

HARDCOPY NEWSLETTER

Chapin reported that a decision has been made to issue a hardcopy newsletter at quarterly intervals so that they arrive in between issues of the AJCL. The first issue is expected sometime this summer. The new Associate Editor will be responsible for the newletter.

NEXT MEETING

The next meeting of the ACL will be held 26-27 July 1978 at the University of Illinois in conjunction with the meeting of the Linguistic Society of America during the LSA Summer Linguistic Institute.

NOMINATING COMMITTEE

Bill Woods, reporting for the Nominating Committee, announced the following nominations for officers for the Calendar Year 1978:

President: Jonathan Allen, MIT
Vice President: Ron Kaplan, Xerox PARC
Secretary-Treasurer: Don Walker, SRI
Executive Committee: Bertram Bruce, BBN
Nominating Committee: Paul Chapin, NSF

No additional nominations were received from the floor. Chapin called for a vote and the slate was declared elected by acclamation.

AFIPS REPORT

Hood Roberts, ACL Representative to AFIPS, described the criteria and the advantages of membership in AFIPS for ACL.

RESOLUTIONS

Chapin expressed his appreciation to Jonathan Allen, Program Chairman; Madeleine Graitson, for local arrangements; Stan Petrick, and the IBM Corporation, for producing the Meeting Handbook; Muriel Saville-Troike and Mary Owens, and the Georgetown School of Language and Linguistics, for their hospitality in providing the space for our meeting, and their organizational help; and particularly to Don Walker for service above and beyond the call of duty in the difficult job of notifying the membership of the meeting on such short notice.

The meeting adjourned.

Donald E. Walker
Secretary-Treasurer

ASSOCIATION FOR COMPUTATIONAL LINGUISTICS

Secretary-Treasurer's Report
(as of 14 March 1977)

MEMBERSHIP STATUS FOR 1977

373 Individual
144 Institutional
---
517 Total

FINANCIAL STATUS (SRI Accounts)

Income	717.25	1976 Meeting
	9,090.00	1977 Dues
	325.77	1976 Dues and TINLAP receipts
	300.00	Advance from ACL funds at CAL
	10,433.02	
~~Expenses~~	251.55	1976 Meeting
	325.23	Postage
	83.60	Printing
	414.75	Services
	266.71	Supplies
	1,341.84	
Balance	9,091.18	

FINANCIAL STATUS (CAL Accounts)

Assets	4,808.83	Savings
	4,762.09	Checking
	9,570.92	
Liabilities	2,680.50	Secretariat Expenses (9-1-76 to 2-28-77)
	10,805.76	AJCL Account
	13,486.26	
Balance	(3,915.34)	[deficit]

FINANCIAL STATUS (summarized)

Assets	9,091.18
Liabilities	3,915.34
Balance	5,175.84

SUGGESTIONS FOR CONTRIBUTORS

T H E O P A Q U E C A R D

PURPOSE. 1. To serve as fully as possible the reader who has no microfiche viewer.
2. To guide the reader into the microfiche.

FORMAT: Four blocks of text, each 30 lines of 39 pica characters. The first block must include the title, the author's name and address, and an AJCL citation, this information occupies at least 9 lines, if title or author's name goes beyond 39 characters, add more lines The second block must contain a topical heading, allow two lines.

SUBSTANCE. An informative summary: A brief but complete report of the research described more fully on the microfiche. Purpose, theory, method, and results can be included.

TECHNIQUE: If space allows, the opaque card can carry an important figure or table, the table of contents, a list of figures or algorithms with frame numbers, or other special materials.

SUGGESTIONS FOR CONTRIBUTORS

F I C H E F O R M A T

THE FICHE: 7 rows of 14 frames each, with a direct-readable header at the top.

NUMBERING: The frames are numbered consecutively, with Arabic numerals placed at the top, from 1 to 97. 1-14 in row 1, and so on. Frame 98 is a test frame and not available.

TITLE FRAME. Frame 1 is typed by the editor from copy supplied by the contributor.

SUMMARY. Frame 2, and subsequent frames if necessary, carry either the 600-word summary printed on the accompanying opaque card or a different summary as the contributor prefers.

CONTENTS: The next frames carry lists of sections, of figures, tables, algorithms, etc , as needed.

BODY: The remaining frames are at the contributor's disposition.

RESERVATION: The Editor reserves the right to fill empty frames following a long contribution with ephemeral material.

SUGGESTIONS FOR CONTRIBUTORS

P A G E F O R M A T

PAPER SIZE: 8.5 x 11 inches The aspect ratio of the microfiche frame is unchangeable

MARGINS: 1.5 inches at top. 1 inch at sides and bottom. Inside the top margin, the contributor writes a page number for long articles (40 pages or more); the editor puts a running title and page number in that space for short contributions. The edges of the viewer screen are not as easy to read as the central area.

ORIENTATION Everything must read directly with the long axis of the page vertical. Viewers generally do not permit rotation.

FIGURES: The best arrangement is to place a figure at the top of a page with explanatory text below it. To move from frame to frame is not as easy as to move from page to page. If a figure occupies more than half a page, perhaps it can be redesigned as a series of figures, each easier to understand. It is worth leaving blank space at the end of a page for the sake of getting a figure together with the explanatory text on one frame.

NOTES: The best place for a note, if a note is needed, is on the frame where it is signaled. Separate the note from body text with a line or a blank space.

LINE SPACING: This paragraph is double-spaced; the one above is line-and-a-half spaced; the top paragraphs are single-spaced.

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CHRONICA

The following article first appeared in CHRONICA, a journal of the The Research Foundation of State University of New York. The author is presently director of Research Services Information at Hahnemann Medical College and Hospital in Philadelphia.

Researching Foundations

by JAMES KLEVENS

Since the need for federal and private support is basic to quality education and research as well as to the health and prestige of an institution, the search for research and training funding is an activity in which all educational institutions are involved.

If I have learned anything from having been on both sides of the granting fence over the last 18 years, it is that it is easier to dispense funds than to obtain them. But even after that observation, the bottom line is that foundations can be a valuable source of funding, if approached appropriately.

The first problem of an academic research administrator in trying to keep his faculty informed is to ascertain all potential funding sources. The major avenues of approach include the numerous federal government programs, voluntary health associations and the hundreds of foundations.

Governmental sources are well documented and specific. It takes only a familiarity with the necessary publications to be well informed and a great deal of time to research them. In this area, the publications I find most valuable are the *Catalog of Federal Domestic Assistance, NIH Guide, Federal Register, Commerce Business Daily, NIH Program Announcements* and *Guide to NIH Programs and Awards* Other sources include the *Directory of Research Grants, Medical Research Funding Bulletin* and *Funding Sources in Health and Allied Fields*

Voluntary Health Associations also provide adequate descriptions of their programs and application procedures, although it takes work to ferret out all that exist and obtain detailed information The number and range of voluntary associations can be determined by consulting the list of the National Health Council, Inc. and by monitoring references such as the *Annual Register of Grant Support* and the *Grants Register*

Private foundations are, for the most part, another matter as their descriptions in the *Foundation Directory, Foundation News Foundation Grants Index* and other publications are often general or vague and getting more detailed information may be difficult Many administrators are familiar with governmental and association funding sources, but frequently find the foundation field is more obscure.

Foundations differ from governmental and voluntary health associations in their funding source. Governmental funding derives from tax revenues, the health associations' from fund drives for voluntary contributions and most foundations from donations, gifts or bequests, frequently in the form of company stock. Therefore, foundation monies available for grants are usually dependent upon stock dividends.

This was dramatically illustrated from 1973 to 1974 when the Ford Foundation assets dropped from a market value of $3 billion to $2 billion, the Rockefeller also went down a third and Mott, Kettering Duke and Luce declined as much as a half with a resulting drop in awards made and often a concommitant reduction in staff. There goes your job security! Many individuals were caught in the repercussions of a flagging economy—grantors and grantees alike.

For a long time foundations held large amounts of stock in one or a few companies. Although the market value of these assets may have been high, it was not necessarily reflected in income. Many foundations with large assets awarded very few grants. To some members of Congress, a foundation's holdings of large blocks of stock was a way of controlling companies and resulted now and then in "self-dealing" Another problem was that the foundation, in its preferential tax position, was a public trust, set up for philanthropic purposes. Yet, if the dividends weren't forthcoming, no monies went into the public domain for which the foundation was ostensibly created. Thus, the Tax Reform Act of 1969 came into being. The measure insisted upon diversification of stock holdings, insuring a better return and a reasonable amount of funds being expended each year. To obtain this, Congress mandated a minimum payout, starting at the beginning of the phase in period in 1972, of 4.5% to 6% of their assets by 1975.

This should have been good news to those seeking funds but the ultimate benefits perhaps have not fully materialized due to the nation's economy. It appears hopeful, however, that this depressed economic period is about over and that we are entering a time of growth in foundation activity.

How then to make foundation approaches? First, one should be sure that a project falls as much as possible within the foundation's purview. Second, one should determine the form of application required. In lieu of substantive information derived from annual reports or specific foundation instructions, it is safe to say that a letter of inquiry is the preferred contact.

Despite my years of experience, I find it difficult to convince faculty members that a brief letter of two or three pages is the correct method of approach. Yet, such is the case even with very large foundations such as The Robert Wood Johnson Foundation. It is counterproductive to prepare a full proposal or send one that has either been turned down by NIH or even been approved without funding and submit it to a foundation.

Why, you might ask? A review of foundation annual reports would make it clear. The first year that I joined the Hartford Foundation, with a staff of six, only two of whom reviewed proposals and handled all administrative functions, we made 100 awards (one of ten proposals) for a total of $14 million. Small staffs hold down the administrative cost, allowing more money for the foundation's programs. This is something everyone should want.

Administratively, an institution should try to control the flow of requests to foundations. There are those foundations that will only fund one grant at a particular institution during a given year, and only want to receive one application at a time. Some will consider two, and others more, but that should be

researched. At times, I have found foundation officials becoming very disturbed over multiple submissions of which the institution's officials were unaware.

One must appreciate the role of the reviewer(s) evaluating proposals for a foundation because, for the most part, they are sincerely trying to objectively decide where their limited funds can be spent to achieve the greatest good for society; an awesome responsibility considering the many requests they receive. Making their job easier by keeping your proposal within their area of interest and conforming to their stated application procedures can only serve your own objectives.

In preparing a letter of proposal, remember that clarity is of the utmost importance. Often you will be addressing a well-informed laymen. Make it easy to perceive what you plan to do, how you plan to do it and why your idea differs from other approaches. Stress the originality of your protocol. Usually give a round figure budget per year for the number of years you are seeking support. Attach a curriculum vitae, pertinent papers and information about your institution, including a tax exempt letter. These data are especially important if this is your institution's first contact with the foundation. It is also wise to have your institutional authorized official countersign the letter to show that your project has administrative approval. If human experimentation is involved, tell them you will send on the approval of your Human Studies Committee if they are interested in your project.

The question of personal contact comes up often when discussing foundation submissions. There are almost as many answers as there are foundations. If this means trying to use the fact that someone involved with your institution knows a foundation trustee, I would generally say it serves no purpose at least where larger foundations are concerned. A local foundation might be a different matter. At the Hartford Foundation, when a trustee received a direct communique, he referred it to the administrative staff for the customary review, which I always felt was admirable. Judgments, hopefully, will be made on the merits of a proposal, not on the basis of whom someone knows.

On the other hand, preconsultation by phone is recommended. It is also appropriate to ask in the letter of inquiry for a personal interview which would allow the investigator and/or perhaps the research officer to answer questions and describe the project in greater depth. Considering foundation's small staffs, however, I would not push for this personal contact.

As for a brief description of a foundation's review process, the proposal is first reviewed for originality of approach and its correspondence to the foundation's stated objectives. Further considerations may be similarity to already supported research, number of projects funded or under consideration at an institution, etc.

If the project survives the initial review, a fuller proposal is usually requested. The detailed proposal is frequently sent to experts in the field for comment. If this review is affirmative, a concise project description and the evaluation of the reviewer(s) is presented for consideration to the Board of Trustees and an award is made.

One last word for research administrators. As excellent as the government publications are, of the thousand programs described perhaps only a third pertain to the medical field in which I am involved. Then, many relate only to state and local educational and service agencies. Therefore, the need arises for a personal list, containing those areas involving only private or public non-profit educational institutions. This problem is skirted by many administrators by simply giving out a few standard, well-known sources. But considering the tight money situation, I feel an administrator should provide a truly comprehensive list.

NATIONAL SCIENCE FOUNDATION - LINGUISTICS PROGRAM - GRANT LIST

The following frames contain a list of research grants awarded by the NSF through its Linguistics Program during the Fiscal Year 1976, July 1, 1975 - June 30, 1976, and the Transition Quarter, July 1, 1976 - September 30, 1976. International Travel Awards initiated by the Linguistics Program are not listed.

In NSF usage "Investigator(s)" refers to the chief scientist or scientists with overall responsibility for the project. In the case of grants for doctoral dissertation research, the "Project Director" is the scientist directing the student's research. "Duration" refers to the period of research to be supported by the listed grant amount, except when "(Suppl.)" appears - which means that the award is a supplement to an earlier grant; the duration listed is the duration of the earlier grant. In some cases the amount and duration listed are for one phase of a continuing research grant, and additional awards have been committed for future fiscal years for the continuation of the research.

The Linguistics progam was formally established on 31 October 1975. Linguistics research projects before that date were supported through the Special Projects Program in the Division of the Social Sciences. Eleven of the grants listed for FY 1976 were awarded through the Special Projects Program. All grants listed are now administered by the Linguistics Program.

In most cases information about a project can be obtained from the investigator or project director. Summary descriptions of all research projects can be obtained for a small fee from:

Smithsonian Science Information Exchange, Inc.
1730 M Street, N.W.
Washington, D.C. 20036

These projects do not exhaust the range of subjects that might by supported by the Foundation in the future. Any promising project is eligible for consideration. In doubtful cases, preliminary inquiries may be addressed to the Program Director, Paul. G. Chapin.

FISCAL 1976

Investigator(s)	Title	Amount	Duration
E V Clark Stanford U	Strategies in First Language Acquisition	16,400	09/75--09/76
W Wang J Ohala U California, Berkeley	Phonological Research	5,200	09/73--04/76 (Suppl.)
L Hyman U Southern Cal	Linguistics -- The Interlocking Roles of Phonetics and Grammar	39,400	08/75--08/77
I Dyen Yale U	Linguistics -- Language Classification	22,000	08/75--08/77
D Bickerton U Hawaii, Manoa	Origin of Syntactic Devices in Hawaiian Creole English--A Study of Universals of Creolization	100,300	08/75--08/77
W J Gedney U Michigan	Comparative Tai Linguistics	34,400	07/75--07/77
W A Stewart CUNY Graduate School and U Center	Study of Linguistic Change in Gullah	37,000	08/75--08/76
L Campbell M McClaran SUNY at Albany	Linguistics -- Languages Nearing Extinction	55,900	08/75--08/77
U Bellugi E Klima Salk Institute for Biological Studies	Formal Constraints on Language in a Visual Mode	107,000	05/76--05/77
J H Greenberg S Steele Stanford U	Linguistic Studies of Luiseno	8,900	11/75--09/77
C A Ferguson J Greenberg Stanford U	Phonology Archiving Project	92,500	11/75--11/76
C A Ferguson J Greenberg Stanford U	Research Project on Language Universals	120,500	11/75--12/75
C A Ferguson D Huntington Stanford U	Cross-Linguistic Studies in the Acquisition of Phonology	184,500	06/76--06/78
J Ohala U California, Berkeley	Research in Experimental Phonology	82,000	10/75--10/77
W Wang C Fillmore U Cal, Berkeley	Individual Differences in Language Behavior	134,500	11/75--09/77

Investigator(s)	Title	Amount	Duration
P Ladefoged V Fromkin U Cal, Los Angeles	Research on Linguistic Phonetics	77,900	05/76--05/77
C N Li U Cal, Santa Barbara	A Symposium on the Mechanisms of Syntactic Change, Santa Barbara, California, May 7-9, 1976	7,700	03/76--03/78
J Anderson Yale U	Memory for, and Processing of, Linguistic Material	20,000 (total awarded 27,500)	09/75--09/76
G W Grace A Pawley U Hawaii, Manoa	Oceanic Comparative Linguistics	99,500	10/75--10/77
I Howard U Hawaii, Manoa	Grammar and Dictionary of Takuu	21,100	01/76--08/77
L C Thompson U Hawaii, Manoa	A Salish Indian Language of the Northwest	6,300	07/74--04/77 (Suppl.)
L J Rips U Chicago	Cognitive Processing of English Adjectives	13,200 (total awarded 26,400)	03/76--03/78
C E Osgood U Illinois, Urbana	Atlas of Affective Meaning	37,800	07/75--07/76
J B Gleason Boston U	Studies in the Acquisition of Communicative Competence	39,700	12/75--06/77
D M Perlmutter MIT	Investigations in Relational Grammar	36,200	10/75--05/77
J E Grimes Cornell U	Language Variation and Limits to Communication	44,750	04/76--04/78
L Campbell SUNY, Albany	Conference: American Indian Linguistics, an Assessment July 2-4, 1976 at Oswego, NY	5,400	04/76--04/77
W Labov U Pennsylvania	The Quantitative Study of Linguistic Change and Variation	98,500	05/76--05/77
P W Davis Rice U	Verbal Particles and Textual Analysis of a British Columbian Language: Bella Coola	11,000	02/76--02/77
T Shopen S Anderson T Givon E Keenan S Thompson R Troike Center for Applied Linguistics	Syntactic Typology	105,400	01/76--01/78

DOCTORAL DISSERTATION RESEARCH IN LINGUISTICS

Project Director	Student	Amount	Duration
J Catlin Cornell U	Carolyn B. Mervis	2,500	07/75--07/76
P L Kilbride Bryn Mawr C	Lenore D. Ralston	3,900	08/75--08/76
B Stross U Texas, Austin	Willett Kempton	3,600	08/75--08/76
S Chung U California, San Diego	William J. Seiter	3,450	10/75--10/76
T G Bever Columbia U	Michael K. Tanenhaus John M. Carroll, Jr.	3,800	02/76--02/77
R W Casson Duke U	Ruth Hamilton	1,500	08/75--08/76
I Lehiste Ohio State U	John W. Perkins	600	11/75--11/76

NSF Linguistics Grants

TRANSITION QUARTER

Investigator(s)	Title	Amount	Duration
J M Kari U Alaska	A Study of the Ingalik Language of Alaska	28,000	08/76--08/78
C A Ferguson J Greenberg Stanford U	Phonology Archiving Project	49,700	08/76--04/77
E Clark Stanford U	Strategies in Language Acquisition	23,900	09/76--09/77
T Gay U Connecticut	Electromyographic-Cinefluorographic Studies of Speech	17,100	09/76--09/78
J Anderson Yale U	Memory for, and Processing of, Linguistic Material	10,000 (total awarded 34,800)	08/76--08/77
I Dyen Yale U	Genetic Classification of Languages--Austronesian	7,000	09/75--02/78 (Suppl.)
J Hankamer Harvard U	Investigations in Turkish Syntax	20,500	08/76--08/78
W A Stewart CUNY Graduate School and U Center	Study of Linguistic Change in Gullah	56,600	03/76--08/77
L Bloom Teachers C	Structure and Function in Language Development	68,700	09/76--09/77
P Siple H Whitaker U Rochester	Conference on Sign Language and Neurolinguistics to be Held in Rochester, New York During September 1976	7,400	08/76--08/77

DOCTORAL DISSERTATION RESEARCH IN LINGUISTICS

L J Karttunen P S Peters U Texas, Austin	Model-Theoretic Semantics for Transformational Syntax	80,500	08/76--08/78
C Osgood U Illinois	Atlas of Affective Meaning	28,500	09/76--08/77

Project Director	Student	Amount	Duration
D M Perlmutter MIT	Laura Knecht	4,400	08/76--08/77

NATIONAL INSTITUTE OF EDUCATION

GRANTS COMPETITIONS AND REQUESTS FOR PROPOSALS: FISCAL YEAR 1977

The Institute - A Brief Introduction

The National Institute of Education (NIE) was created by the Congress in 1972 to help solve or alleviate critical problems of American education through the conduct and support of research and development activities. General Institute policy is set by the National Council on Educational Research, a panel of distinguished citizens appointed by the President and confirmed by the Senate To focus NIE activities on the most pressing academic and administrative problems in education, the Council has identified six program areas around which the Institute is organized These NIE program Groups and their missions are:

Dissemination and Resources - improving the dissemination and application of the results of education research and development, and building an effective R&D system.

Educational Equity - improving schools' ability to provide equal educational opportunity for populations whose opportunities have been limited because of their racial, ethnic, or language background, sex, or socioeconomic status.

Education and Work improving the ability of the education system to prepare youth and adults for entering and progressing in careers.

School Capacity for Problem Solving - improving the capability of schools and school systems to diagnose their own problems and to design solutions adapted to local circumstances.

Basic Skills improving student performance and teacher competencies in such essential skills as reading and mathematics

Finance and Productivity - improving the ability of educational institutions to provide high quality education under conditions of declining enrollment, rising costs, and increased competition for funds

Funding Methods

Unlike many other Federal agencies, the Institute does not distribute funds on a "formula" basis or through scheduled yearly competitions Approximately 80 percent of NIE's funds in the current fiscal year will be used to provide continuing support for long-term research and development programs. The remaining funds will be used to support new activities which contribute to the Institute's goal of improving American education.

The Institute's intention to support new research efforts is generally announced through either a Grants Competition or a Request for Proposals (RFP).

Grants Competitions These generally call for research proposals in one or more specific areas of interest (i e , career decision-making skills, or the cognitive processes affecting reading comprehension) The areas covered by a particular competition, as well as that competition's application procedures, eligibility requirements,

and deadlines will be announced in the *Federal Register* Competition announcements will also be widely distributed by NIE to research institutions, universities and colleges, education associations, and interested individuals The *Register* is sold by the Superintendent of Documents, U S Government Printing Office, and is available in libraries of many universities and research institutions

Requests for Proposals (RFP) These are formal procurement actions which announce NIE's intent to issue a contract to carry out specific tasks, such as the evaluation of an ongoing project A contract will be awarded to the bidder who submits the best technical proposal meeting the requirements of the announced scope of work within a competitive budget range Brief synopses of all RFP's are published in the *Commerce Business Daily*, subscriptions to which are available from the Superintendent of Documents The summary published in *Commerce Business Daily* includes information on how to obtain a complete copy of the RFP

The Institute will also consider unsolicited proposals which meet basic eligibility criteria and yet do not specifically fall within the scope of an RFP or announced competition areas

Unsolicited Proposals Outstanding unsolicited proposals which meet strict criteria and outline studies relevant to the Institute's mission are supported to the extent permitted by available funds However, because no special funds have been set aside for unsolicited proposals in this fiscal year, only a small percentage of those submitted may actually receive NIE support This level of funding for unsolicited proposals is not expected to increase much, if at all, in the immediate future

Unsolicited proposals are reviewed three times a year March, July, and November Application deadlines for these review cycles are January 31, May 31, and September 30 Application guidelines for the submission of an unsolicited proposal are available from the NIE Proposals Clearinghouse, National Institute of Education, Washington, D C 20208

Who May Receive NIE Awards

Colleges, universities, State departments of education, local education agencies, other public or private non profit agencies, organizations, groups, and individuals are usually eligible for grants Corporations, institutions, or agencies whose net earnings accrue to the benefit of any private shareholder or individual are also eligible to receive awards from NIE, but if successful, will be awarded a contract rather than a grant (Note Only contracts will be awarded in response to a Request for Proposals)

Eligible Areas of Research

NIE support is restricted to research and development projects in the field of education The general definition includes research (basic and applied), planning surveys, evaluations, investigations, experiments, and developmental activities directly

related to research in the field of education. Projects such as the following are not generally eligible for funding.

projects which are primarily service in nature;

projects which seek primarily operational funds;

projects which appear to be of primary benefit to a limited geographical area, organization, or number of individuals, and whose outcomes or processes do not appear to be generalizable to a broader segment of American education;

projects which appear to duplicate or be very similar in nature to existing projects already supported by NIE or other funding organizations;

projects which offer standard services or routine analyses in accordance with standard existing practices

Note: Several of the grants competitions listed on the following charts are sheltered competitions, i.e., applicants are restricted to the Regional Education Laboratories and university-based Research and Development Centers. This has been done to ensure an increased degree of programmatic and financial stability to a special class of institutions created under Federal statute.

For More Information

The following pages list funding activities being planned by NIE program Groups during the fiscal year. The timing of an individual announcement, as well as the types of work eligible for support, application criteria, eligibility requirements, and deadlines for proposals submission are subject to change For more detailed information about a particular activity, prospective applicants are urged to contact the individual and program Group cited.

It should be noted, however, that any information provided in advance of a formal solicitation is subject to change Further, the information that may be provided in advance, especially in the case of an RFP; is limited so as not to prejudice the competitive process. For example, the estimated funding level for an RFP may not be divulged

The National Institute of Education is currently establishing a mailing list for individuals interested in receiving a brief notification of Grants Competitions and major RFP's. If you would like to be placed on the list to receive these brief announcements, please write Funding, Office of Government and Public Affairs, National Institute of Education, Washington, D C. 20208.

Please keep in mind that formal announcement of each Grants Competition will be published in the *Federal Register*, synopses of Requests for Proposals will be published in the *Commerce Business Daily*.

Dissemination and Resources Group

Grants Competition	*Announcement Date*	*Eligibility*
Linkage Support Professional Association Program (Thomas Clemens)	March	Professional Ed Assoc
Program to Increase Participation of Minorities and Women in Education Knowledge Production and Utilization (Lab & Center Program) Awards will be made to (1) support a broad range of training activities for women and minorities in areas of education knowledge production and utilization, and (2) engage in institutional analysis to create an environment conducive to participation by and utilization of women and minorities in education KPU (Rafael Valdivieso)	March	Labs and Centers
State Dissemination Grants Dissemination Capacity Building* Special Purpose Awards Technical Assistance (Thomas Clemens)	March	Labs and Centers
Requests for Proposals		
Assessment - R&D Utilization Data Analysis Common data analysis across the 7 projects to examine the process of schools' review, decision, and try-out of R&D products suited to local needs, and the alternative linkage mechanisms used to provide information and technical assistance regarding R&D outcomes useful to rural schools (Larry Hutchins)	February	Open
Information System Sensing Network The collection of sensing data to identify topics and relevant content coverage on which information is needed, the information -seeking and -using behavior or preferences of educators, indicating types of products and services appropriate, and the utility of existing products and services (Thomas Clemens)	March	Open

*Awards to be made during Fiscal Year 1978

Dissemination and Resources Group

Requests for Proposals	*Announcement Date*	*Eligibility*
ERIC Evaluation Design/Pilot: The design and pilot testing of a comprehensive evaluation of the ERIC system that will provide evidence on the effectiveness and efficiency of ERIC. This effort should result in the development of instruments and methods that can be used to monitor and evaluate the system on a regular basis. (Thomas Clemens)	March	Open
Information System Improvements/New Files Project: Several new information areas are presently under consideration for inclusion in new data bases The purpose of this study will be to select one information area and to design and field test a data base (Thomas Clemens)	April	State Education Agencies
ERIC Clearinghouses: Awards will be made for the establishment and maintenance of ERIC Clearinghouses to acquire, critique, coordinate, index, abstract, catalog, and make available unpublished, noncopyrighted materials in selected areas of education. (Thomas Clemens)	April	Open
Clearinghouse contracts to be competed:		
- Language/Linguistics	January	Open
- Higher Education	April	Open
- Urban Education	April	Open
- Education Management*	July	Open
- Science/Mathematics*	July	Open
- Tests, Measurement, & Evaluation*	July	Open
- Counselling/Personnel Service*	July	Open
- Social Studies*	July	Open

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*Awards to be made during Fiscal Year 1978

Educational Equity Group

Requests for Proposals	*Announcement Date*	*Eligibility*
Professional Practices Center Establishment of a center to identify current professional practices and training components that focus on desegregated and multicultural schools and classrooms, to develop models for successful training programs for teacher counselors and administrators in desegregated settings (Amos Isaac)	February	Labs and Centers
Language Proficiency and Acquisition To investigate language acquisition characteristics for individual languages and communities, and determine how children learn to use their language resources (Jose Vazquez)	February	Open
Analyses of Bilingual Legislation A study to explore the implication for legislation regarding teacher credentialing in bilingual education (Jose Vazquez)	February	Open
Affirmative Action A study to consider affirmative action as it affects the education system (J Lipman-Blumen)	February	Labs and Centers
Women's Studies Evaluation Comprehensive evaluation of approximately 200 existing Women's Studies Programs to assess current and future needs and to identify model programs. (J Lipman-Blumen)	February	Labs and Centers
Due Process Project The development of due process procedures intended to make school practices consistent with recent Supreme Court decisions, fair from the student's viewpoint, and effective in fostering a good school climate (Oliver Moles)	March	Open
Achievement Styles Project National data collection on achievement styles of females and males, from adolescence through midlife (J Lipman-Blumen)	March	Open
Conflict Resolution Training Development nd testing of training programs for teachers nd administrators to prevent and deal ffectively with disruptive behavior and elated problems (Oliver Moles)	April	Labs and Centers

Educational Equity Group

Requests for Proposals	*Announcement Date*	*Eligibility*
Educational and Occupational Aspiration and Achievement of Married Women: Longitudinal study of social, psychological and economic factors (including the Women's Movement) affecting the educational and occupational behavior of married women. (J. Lipman-Blumen)	April	Open
School Performance and Student Behavior: A study of the apparent relation between grading practices, individual behavior, and social climate. (Oliver Moles)	May	Labs and Centers
Social Values and School Environments: An investigation of the changing role of youth in the family and the effect of that change on the school social environment. (Oliver Moles)	May	Labs and Centers
School Discipline and Student Rights An examination of the student's perception of disciplinary practices, their impact on student rights, and implications for school social relations (Oliver Moles)	May	Labs and Centers
Alternative Schools Study. An examination of promising alternative schools for "disruptive" youngsters (Oliver Moles)	May	Open
Ethnographic Study Ethnographic research in rural desegregated schools, generating a data base on the actual school life within such settings (Amos Isaac)	May	Open
Educational Diagnosis and Classification-I: To extend a survey procedure to count the number of children of limited English-speaking ability in the country and to identify their needs. Another phase of this project will survey and analyze operating conditions in bilingual education programs to include different models of bilingual education (Jose Vazquez)	May	Open
Design of a National Bilingual Clearinghouse This is a joint USOE/NIE project for which the National Institute of Education has lead responsibility. To design a National Clearinghouse as required by Section 742(c)(2) of the Bilingual Education Act (P L 93-380), after considering the expressed desires of the bilingual education community at six regional conferences (October-November 1976 San Diego, Seattle, Chicago, New York, San Antonio, and Miami) (Jose Vazquez)	May	Not Determined
Academic Readiness To develop instruments appropriate for students with limited English-speaking ability as determined by a needs analysis study currently being performed under an existing contract (Jose Vazquez)	July	Open

Education and Work Group

Grants Competition	*Announcement Date*	*Fligibility*
Research on Transferable Skills and Occupational Mobility. Can students do math in school, but not do the arithmetic required by their employers, or vice versa? How is the succession of jobs that individuals have over a lifetime tied together by the skills and abilities that are needed to do them and which the individual brings to them? These and other questions will be explored in a series of research grants. The purpose is understanding how the schools can better teach and assess what it takes to adapt and to be prepared for the many kinds of work one will need to do during a lifetime. (Bob Stump)	March	Open
Testing the Ability to do a Job. Employment selection tests and requirements (including educational experience) which have discriminatory consequences have been successfully challenged in court on the basis that the validity of the requirements is not established. Finding out how to develop valid and fair school exit and work entry tests offers an opportunity for educators and employers to work together to ensure that any person demonstrating through a truly fair test that he/she can do the work gets an opportunity to be hired or promoted. Several research grants will be awarded to further the efforts already begun in this field. (Jean Miller)	March	Not Determined
Research Grants, Women and Mathematics. The under-supply of women interested in and prepared for careers requiring mathematical skills contributes to occupational segregation. The purpose of these research grants will be to explore what education can do to remove self-limiting barriers on women's interest and participation in mathematics (Mary Lou Randour)	April	Open
Measurement of Career Education Outcomes. The outcomes of education that may seem most important are often the hardest to measure reliably, validly, and sensitively. This project will help improve the capacity of school systems to measure the effectiveness of their programs on these outcomes (Bob Wise)	May	Labs and Centers

Education and Work Group

Requests for Proposals	*Announcement Date*	*Eligibility*
Linkages Education-Industry Councils and council-like activities have been suggested as one good way of coordinating community resources to ease the transition from school to work for youth, and from work to school for adults. Evaluative research and policy studies will examine the assumptions underlying the councils and council-like activities, their operations, and their effectiveness with a view to informing public debate regarding this approach to improving the linkage between education and work (Cameron Buchanan)	February	Open
Minority Women's Studies Of all groups in American society, minority women suffer the most discrimination economically, educationally and occupationally Although they share with other groups the burden of sex and ethnic discrimination, they have differing needs from majority women, from men in their ethnic groups, and from each other At earlier conferences sponsored by NIE, women from these groups identified issues specific to minority women A research grants competition will provide support for studying these issues (Nevzer Stacey)	March	Open
Policy Center on Youth Transition to Adulthood Efforts to build education and work opportunities into the school program have outpaced other efforts to build a solid educational foundation for such reform However, attention to various research and policy issues is essential to the long term success of such efforts The policy center on youth transition to adulthood will examine aspects of the broader issues of youth employment, age, segregation, the family and youth sociopathy (David Goodwin)	June	Not Determined

School Capacity for Problem Solving Group

Grants Competition	*Announcement Date*	*Eligibility*
Fundamental Research An ongoing program of research into the organizational aspects of schooling There will be several deadlines for proposals and 20-30 grants awarded each year. (Fritz Mulhauser)	February	Open
Requests for Proposals		
Rural Education Exchange Will explore existing and potential roles of informal networks of rural educators, citizens, and resource people in education problem-solving and decision-making (Charles Thompson)	March	Not Determined
Teacher-Organized Teacher Centers. A two-year program of research, development, and technical assistance to explore the impact of teacher centers on inservice education and to help teachers participate in the design and implementation of such centers. (Mary Harahan)	April	Open
Research on Networking Will draw on multiple social science disciplines to describe and analyze the roles of both informal and deliberately created social networks in the process of education change. (Charles Thompson)	June	Open
Integrating Problem-Solving Strategies At The School District Level A set of contracts with school systems to support the further development of promising approaches to school-site management and budgeting NIE funds will also be used to study the programs in the different school districts and to communicate the results of those studies. (Saul Yanofsky)	June	Local Education Agencies

Basic Skills Group

Grants Competition	*Announcement Date*	*Eligibility*
Human Information Processing. Issues of decoding and reading comprehension will be addressed through basic research on how people acquire, store, process and produce information (Larry Frase)	June	Open
Teaching as a Linguistic Process Research to improve teaching through increased understanding of linguistic phenomena in school settings, including such areas as rules of classroom talk, acquisition of school discourse, differences in language use, student-teacher encounters, and bilingual and second language learning (Virginia Koehler)	June	Open
Test Validity (C.R.T and Test Bias) Research to organize, extend, and integrate the theory and practices of criterion-referenced testing into a functional model, and studies of test bias issues (Jack Schwille)	June	Open
Improving Analysis Strategies Studies focusing on development of better research design and analysis strategies, and on the issue of how to facilitate and encourage exploitation of existing data sets through secondary analyses (Jack Schwille)	June	Open
Reading Comprehension Research on the reading comprehension and writing problems of middle-grade students, including studies to determine the extent and type of reading problems encountered, the interrelationship between reading, listening, and writing abilities and the nature and efficacy of testing practices currently used (Larry Frase)	June	Open
Engineering Comprehensible and Usable Documents Empirical work based on information processing rationales for making decisions about the design of effective text and graphic displays, such as new typographical formats, flowcharts, diagrams, and tables (Larry Frase)	June	Open
Functional Literacy The classification and measurement of reading demands of frequently encountered reading tasks in American society, such as filling out forms, reading bus schedules, or interpreting legal documents (Larry Frase)	June	Open

Basic Skills Group

Grants Competition	*Announcement Date*	*Eligibility*
Investigation of Individual and Cultural Differences in Math Learning Studies of individual and cultural variability in math learning along such dimensions as mathematical content (e g. numerical, geometric, probabilistic), the student's culture, and differences in cognitive style. (Edward Esty)	June	Open
Investigation of Psychological Factors In Early Math Learning Research on the relationship between achievement in early mathematics and the acquistion of numerousness, seriation, multiple classification, etc (Edward Esty)	June	Open
Education Adequacy Legal, Scientific and Political Problems Research needed to help implement policy changes by studying such issues as mandated proficiency levels, competency-based teacher licensing requirements, and implementation of court decisions on education. (Tommy Tomlinson)	June	Open
Inservice Teacher Training and Staff Development Research on factors and processes which improve the competencies of classroom teachers and their ability to successfully implement programs designed to increase student achievement in the basic skills (Virginia Koehler)	June	Open
Requests for Proposals		
Mathematical Problem-Solving Studies of how children in the first years of school (kindergarten, first and second grades) acquire or fail to acquire the initial concepts of number and numeration that are essential for later learning in mathematics. (Edward Esty)	February	Open
Issues Related to Hand-Held Calculators Calls for planning a variety of calculator-dependent programs for different portions of the K-12 mathematics curriculum (Edward Esty)	February	Open
Decoding and Comprehension Studies of the relative influences of decoding and comprehension skills on reading achievement in the middle grades. (Larry Frase)	June	Open

Finance and Productivity Group

Requests for Proposals	*Announcement Date*	*Eligibility*
Finance and Productivity Center To develop a conceptual framework and R&D agenda in education finance and productivity, to provide national leadership in carrying out the agenda, to implement selected portions of the agenda (Jeffry Schiller)	January	Open
Satellite Planning Studies To develop plans for a set of development and demonstration activities in the use of media and satellite communications to improve access to educational services, to implement selected portions of these plans (Kevin Arundel)	January	Open
Evaluation of the California High School Proficiency Examination To evaluate the financial and organizational effects of the California High School Proficiency Examination on secondary and postsecondary institutions (Susan Abramowitz)	March	Open
School Finance and Organization Studies To generate a set of analytic studies focused on school finance reform, the finance and organization of special education for young children, and alternate approaches to financial planning and management for LEAs (David Mandel)	May	Open

NEH NATIONAL ENDOWMENT FOR THE HUMANITIES - 1976-1977

The National Endowment for the Humanities —Its History and Purpose

The National Endowment for the Humanities is an independent federal grant making agency created by Congress in 1965 to support projects of research, education, and public activity in the humanities Its establishment came in response to an increased awareness on the parts of educators, legislators, and the general public that the humanities required sustained and widespread federal support.

According to the act which established the Endowment, the humanities include, but are not limited to, the following fields history, philosophy, languages, literature, linguistics, archeology, jurisprudence, history and criticism of the arts, ethics, comparative religion, and those aspects of the social sciences employing historical or philosophical approaches This last category includes cultural anthropology, sociology, political theory, international relations, and other subjects concerned with questions of value and not with quantitative matters

Because man's experience has been principally preserved through books, art works, and other cultural objects, the humanities are often defined in terms of the specific academic disciplines listed above The National Endowment for the Humanities exists, however, not only—or even primarily—for the support of formal work in these disciplines, but to encourage the understanding of ideals, values, and experiences which have been and will be formative in our culture, and to relate the study of the humanities to national concerns The programs of the Endowment—and the divisions which administer them —are designed to this end

Major Endowment Programs

The Endowment has four divisions which administer most of its programs The Division of Research Grants provides support to group projects of research in the humanities, to centers for research, to the preparation of important research tools, and to the editing of significant humanistic texts The Fellowships Division, through several programs, provides stipends which enable individual scholars, teachers, and members of non-academic professions to study areas of the humanities which may be directly and fruitfully related to the work they characteristically perform The Division of Education Programs supports projects and programs through which institutions endeavor to renew and strengthen the impact of teaching in the humanities at all levels The Public Programs Division, through projects in the media, projects involving individual academic humanists, and projects of non-academic public institutions such as museums, libraries, and historical organizations, seeks to encourage broad national dissemination and increased understanding of the humanities This division also administers a State-Based Program, through which specially formed groups in each state act as re-grant agencies in support of projects designed to infuse humanistic knowledge into the discussion of important issues at the state and community level. In addition, there is the Youthgrants in the Humanities Program, which operates through the Endowment's Office of Planning and Analysis and which supports projects designed and conducted specifically by young people

Office of Planning and Analysis Projects

The Endowment is also interested in projects in the humanities which do not readily fall within the scope of the established programs outlined above Such projects are the direct responsibility of the NEH Office of Planning and Analysis (OPA) The Office particularly encourages project ideas in the following areas

OPA Program Development. In order to promote innovative programming, the Office supports a selected number of projects designed to develop and test new applications of humanistic knowledge or new dissemination modes which show promise of enhancing the use of humanistic knowledge These programs should be conceived as experiments or models and involve a component of evaluation. Especially sought are proposals seeking to.

- promote activity and interest in the humanities among groups and sectors of the society not normally involved in humanistic study,
- test new uses of various forms of the media for non-traditional study in the humanities,
- test effective ways of utilizing scholars and resources in order to add a humanistic dimension to the work of non-educational institutions, and
- develop joint community-wide planning and resource sharing among different kinds of institutions conducting humanities programs

Examples of OPA Program Development have included Courses by Newspaper, media experimentation, humanistic programs in performing arts institutions, and non-traditional study programs for adults.

Evaluation and Analytical Studies As an aid in understanding national needs in the humanities and designing new or improved programs to meet such needs, OPA also invites proposals for the following·

collection and analysis of data assessing the status and effectiveness of important sectors of humanistic activity

- research and development of more efficient, lower-cost ways of exploring, organizing, and disseminating humanistic knowledge,
- testing and demonstration of improved management and dministrative systems for humanities organizations, and
- design of evaluation models, techniques, and instruments suitable for assessing institutional humanities programs

Science, Technology, and Human Values

Another area of Endowment interest is the relationship between science, technology, and human values In response to growing national concern about the value implications of new advances in science and technology, the National Endowment for the Humanities and the National Science Foundation have jointly announced a special interest in fostering research, education, and public-oriented activities on this subject Proposals for projects in which the disciplines of the humanities will be predominantly employed may be submitted to the Endowment through one of its established divisional programs For projects requiring major involvement of scientists, preliminary inquiry may also be made to the National Science Foundation, concerning the appropriateness of concurrent submission and review and with a view to possible joint funding by the two agencies Endowment efforts in this area are coordinated through the Program of Science, Technology, and Human Values in the Office of Planning and Analysis

As part of the NEH program, the Office also seeks proposals for developing models for collaborative, interdisciplinary work between humanists and social and behavioral scientists on approaches to value questions arising from emerging social and economic issues

Support for Projects in the Social Sciences

As indicated on page 1, the Endowment supports those aspects of the social sciences which have humanistic content and employ humanistic methods The Endowment is particularly interested in two kinds of social science projects first, those in which historical or philosophical approaches predominate, and second, those which suggest new possibilities for a humanistic discipline by combining it with one of the social sciences

For social science projects in which statistical measurement and clinical approaches predominate, support is available from the National Science Foundation, the National Institutes of Education, and other government agencies Endowment applicants whose projects are eligible for support from these other agencies may apply to them and the Endowment at the same time, but they should indicate to the Endowment that they are doing so

Support for Projects in the Arts

The National Endowment for the Humanities does not offer support for creative, original works in the arts or for performance or training in the arts. Historical, theoretical, and critical studies in the arts are, however, eligible for Endowment support Projects dealing with appreciation of the arts may also be suitable for support, but a severe limitation of funds available in this area dictates that such projects must clearly relate art appreciation to other fields of the humanities, rather than to fields of the creative and performing arts Thus a project designed to develop a broader perspective of a culture by examining the values reflected in its arts might qualify for support, while a project focusing on the arts as such probably would not

At the time of its founding, the National Endowment for the Humanities was joined with the National Endowment for the Arts under the National Foundation on the Arts and the Humanities Though there is a shared staff for administrative functions, the two Endowments are essentially autonomous and have separate budgets Federal support for the creative and performing arts is the essential responsibility of the National Endowment for the Arts The Arts Endowment has grantmaking programs in, for example, architecture and environmental arts, dance, education, expansion arts, folk arts, literature, music, theater, and the visual arts It also provides a limited number of fellowships to creative and performing artists of exceptional talent Inquiries to the National Endowment for the Arts (Washington, D C 20506) should specify an area of interest

Areas Not Funded

Because of limited funds, the Endowment cannot at this time give consideration to requests for support for

- predoctoral fellowships, except insofar as they may be integral parts of a broader program and requested by the institution undertaking such a program,
- construction or restoration costs, except for limited amounts incidental to carrying out other purposes of an application,
- museum or library acquisitions, except for limited amounts incidental to carrying out other purposes of an application,
- editorial costs of journals, or production costs of any publications, including books,
- costs of permanent equipment which is not essential to the carrying out of a broader program or project,
- research undertaken in pursuit of an academic degree, and
- individual requests for travel to professional meetings (Requests for aid in traveling abroad to international meetings should be addressed to the American Council of Learned Societies, which has a small grant from the Endowment for that purpose)

Who Is Eligible for Endowment Support

The Endowment's function is to encourage the understanding and use of humanistic knowledge at all levels It serves its various constituencies by supporting the work of individual humanists and of a variety of non-profit institutions and organizations engaged in projects involving the humanities Those institutions include universities, four-year colleges, junior and community colleges, elementary and secondary schools, educational, cultural, professional and community groups, museums, historical organizations, libraries; public agencies, and radio and television stations The Endowment welcomes applications for support from all such institutions and groups, from individual United States citizens or nationals and from foreign nationals who have been living in the United States or its territories for at least three years at the time of application Applications are not usually accepted from others, but support may be given to any individual or organization whose work, in the judgment of the National Council on the Humanities (or the Chairman acting in the Council's behalf) promises significantly to advance knowledge and understanding of the humanities in the United States.

Certain institutions may receive support from several divisions of the Endowment, as well as from State Based Committees These include

Libraries All of the Endowment's divisions have supported library projects The Fellowship Division's program of Fellowship Support to Centers for Advanced Study provides funds to independent research libraries for stipends to resident scholars The Education Programs Division supports library projects through its joint College Library Program with the Council on Library Resources, as well as through its experimental Cultural Institutions Program Numerous library projects are funded through the Division of Research Grants Centers of Research Programs. The Public Program Division supports special public library projects for adults through its Program Development section Finally, the Office of Planning and Analysis has given a number of grants to libraries and library organizations for projects which do not fit into any of the divisional categories

Museums In addition to the Public Programs Division's support to exhibitions, through its Museums and Historical Organizations Program, the Education Programs Division supports museum projects—of an educational nature—through its Projects Program, its Consultants Program and its Cultural Institutions Program Research projects involving museum collections are eligible for support through the Division of Research Grants. Museums may also apply to the Office of Planning and Analysis if they have projects which fall within that office's current priorities, and to the Division of Fellowships if they may qualify as institutes of advanced studies

Historical Organizations These organizations—some of which are closer to libraries in their functions, and others to museums—can receive support for exhibitions, interpretive programs, and personnel development from the Museums and Historical Organizations Program within the Division of Public Programs Such organizations may also apply for the support of educational projects to the Education Division's Projects and Consultants Programs They may apply for funding for specific research projects through the Division of Research Grants In addition, experimental activities involving these organizations might be eligible for support through the Endowment's Office of Planning

Centers for Research These centers may receive funds with which to offer stipends to resident fellows through the Fellowships Division's program of Fellowship Support to Centers for Advanced Study Their research activities are supported through the Research Division's Centers of Research Program.

Public Radio and Television Stations These stations may apply to the Division of Public Programs' Media Program for funds with which to develop and produce high quality humanities programs for broadcast to the general public audience Media projects for use as part of an educational curriculum may receive support through the Projects Program within the Education Programs Division Other media projects which do not fall within the guidelines for these two programs may be eligible for support through the Office of Planning

How to Apply

Prospective applicants should read this brochure carefully and write to the appropriate division for more detailed information about the program which interests them Unless they plan to apply for a fellowship, applicants should submit to the division concerned a preliminary description of their project This preliminary step enables Endowment staff to inform the applicant whether his proposal meets the criteria of the program to which he intends to submit it, or whether any other Endowment program or other federal agency might more appropriately consider it Submission of a preliminary description also enables the division to furnish additional material to the prospective applicant in the form of specific guidelines and instructions and to determine what additional information about the project is needed to ensure complete and accurate evaluation by reviewers and panelists.

Deadlines for all Endowment programs are listed on pages 22 and 23 and summarized in calendar form on page 6 Applicants who plan to begin projects by a particular date are strongly advised to submit their proposals well in advance of that date in order to ensure against possible delays in the processing or announcing of grants

How Grants Are Awarded

Unlike some federal agencies, the National Endowment for the Humanities does not provide funds of a "formula" or "program" nature to sustain ongoing institutional or individual activities Its grants are awarded competitively and on individual merit, following a careful review process All applications are reviewed individually by professionals outside of the federal government and judged in competition with one another within each program by non-federal panels Four times each year, the National Council on the Humanities, an advisory council appointed by the President of the United States, meets to consider all applications, along with reviewers and panelists' comments During Council meetings all applications and review summaries are considered within Council committees and finally brought before the full Council for its recommendations The Chairman of the Endowment, who also serves as Chairman of the National Council on the Humanities, makes the final decision on each proposal after receiving the Council's recommendation, and notifies the applicant of that decision

A recommendation to fund may be of several types An outright award may be made, either in the full amount requested or in a reduced amount A gifts-and-matching award, which utilizes the Endowment's Congressional authorization to provide Treasury funds to match private gifts, may be made in support of a project And a combination of outright and gifts-and-matching funds is frequently recommended A fuller explanation of gifts-and-matching grants follows.

Gifts-and-Matching Grants

As a supplement to an outright grant or as the sole form of Endowment support, an applicant may sometimes be offered a "gifts-and-matching" grant When the Endowment offers to support a project through one of these grants, it is up to the grantee to raise gifts up to a level approved by the Endowment and have them donated to the Endowment The Endowment then matches this money with federal funds and disburses the whole

A gift for a particular project will not be accepted by the Endowment until the National Council on the Humanities has made a favorable recommendation to the Chairman When an applicant does receive from the Endowment a formal offer of support contingent upon the receipt of gift money for his project, he should ask the donors to make their gifts payable to the Endowment

The Endowment may accept and pass on an unlimited number and amount of gifts, but the sum which can be federally matched is limited by the annual Congressional appropriations Donors wishing to support work in the humanities generally, rather than a specific project, may make unrestricted gifts to the Endowment, which will match them to the limit of the Congressional appropriation and apply them to assist individual projects recommended by the National Council

Staff Directory

The following is a brief listing of those staff members who may be contacted for further information concerning the various programs of the National Endowment for the Humanities.

Chairman
Ronald Berman

Deputy Chairman
Robert Kingston

Public Information Office

Public Information Officer
Darrel deChaby/202 382-5721

Division of Research Grants

Director
Harold Cannon/202 382-1072

Deputy Director
Leeds Barroll/202 382-1072

Assistant Director, General Research Program
Philip Marcus/202 382-3414

Assistant Director, Research Materials Program
George Farr/202 382-1072

Assistant Director, Centers of Research Program
Margaret Child/202 382-5857

Division of Fellowships

Director
James Blessing/202 382-1491

Deputy Director
Guinevere Griest/202 382-1491

Program Officer, Fellowships for Independent Study and Research
David Coder/202 382-5827

Program Officer, Fellowships in Residence for College Teachers
Karen Fuglie/202 382-5827

Program Officer, Fellowships for the Professions
Julian MacDonald/202 382-3771

Program Officer, Summer Seminars and Summer Stipends
Marjorie Berlincourt/202 382-3771

Division of Education Programs:

Director
Abraham Ascher/202 382-5891

Deputy Director
Richard Ekman/202 382-5891

Assistant Director, Institutional Grants
Susan Cole/202 382-8085

Program Officer, Elementary and Secondary Education Projects
William Russell/202 382-7081

Program Officer, Consultants Grants
Janice Litwin/202 382–5891

Program Officer, Humanities Institutes
Cynthia Frey/202 382-5177

Program Officer, Cultural Institutions and College Library Program
Terry Krieger/202 382-5177

Division of Public Programs:

Director
John Barcroft/202 382-1111

Deputy Director
Alex Lacy/202 382-1111

Assistant Director, Media Program
Steven Rabin/202 382-5537

Assistant Director, Museums and Historical Organizations Program
Nancy Englander/202 382-5714

Assistant Director, Program Development
Martin Sullivan/202 382-8333

Assistant Director, State-Based Programs
Geoffrey Marshall/202 382-3986

Office of Planning and Analysis:

Director
Armen Tashdinian/202 382-5862

Coordinator, Program of Science, Technology, and Human Values
Richard Hedrich/202 382-5996

Coordinator, Youthgrants
Marion Blakey/202 382-8301

Evaluation Officer
Arlene Krimgold/202 382-2495

Program Development Officer
James Kraft/202 382-7068

Planning and Analytical Studies Officer
Stanley Turesky/202 382–5862

Deadlines remaining in 1977

July 1	**Fellowships** Summer Seminars for College Teachers (Directors), 1978
	Education Programs Program Grants, beginning after November, 1977
August 1	**Education Programs** Development Grants, beginning after April, 1978
August 26	**Public Programs** Projects beginning after January 1, 1978
September 1	**Research Grants** Centers of Research Grants, beginning after July 1, 1978
September 15	**Education Programs** Consultants Grants, beginning after December, 1977

H. William Koch, N F A I S President-Elect

The National Federation of Abstracting and Indexing Services (NFAIS) has elected Dr. H. William Koch as its President-Elect. Dr. Koch is Director of the American Institute of Physics (AIP). He will take office as President of NFAIS in March, 1978. The election was held at the NFAIS 1977 Annual Membership Meeting in Arlington, Virginia on March 8.

NFAIS is devoted to the encouragement, improvement, and implementation of abstracting, indexing, and analysis of the scientific and technological literature of the world. It fosters the interchange of scientific and technological information among scientists and technologists in the United States and foreign countries.

As Director of the American Institute of Physics since 1966, Dr. Koch has led that organization through its development of a secondary information system that produces abstract journals, indexes, monthly microfilms, and computer-readable magnetic-tape information notices. Prior to his current position at AIP, Dr. Koch was Chief of the Radiation Physics Division of the National Bureau of Standards. He has also taught and done research at the University of Illinois.

nfais

NATIONAL FEDERATION OF ABSTRACTING & INDEXING SERVICES

N F A I S PUBLISHES OVERLAP REPORT

NATIONAL FEDERATION OF ABSTRACTING & INDEXING SERVICES
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The National Federation of Abstracting and Indexing Services has announced publication of the report on A Study of Coverage Overlap Among Fourteen Major Science and Technology Abstracting and Indexing Services (research conducted under National Science Foundation Contract C875 from the Division of Science Information.)

The 84-page report by Toni Carbo Bearman, Principal Investigator and William A. Kunberger, Project Coordinator, was issued February, 1977, as NFAIS-77/1. This report provides extensive information on the study of journal article overlap among fourteen services. Also included in the report is a set of 8 microfiches providing CODEN, journal title, the codes for the abstracting and indexing (A&I) services covering that journal (a list of these codes with corresponding service name appears in the report), and the number of 1973 articles selected from the journal by each service for the 5,466 journals from the Overlap Study with possible article overlap. A four-page bibliography is also included.

The report is available for $15 prepaid from the National Federation of Abstracting and Indexing Services, 3401 Market Street, Philadelphia, Pennsylvania 19104, U.S.A.

recent IFIP publications

IFIP, the International Federation for Information Processing is a multi-national federation of professional-technical societies (or groups of such societies) concerned with information processing For many years, there has been an excellent cooperation between IFIP and the North-Holland Publishing Company which has resulted in a number of publications Details on the most recent of these are mentioned in this advertisement
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Proceedings of the IFIP Second World Conference on Computers in Education Marseilles France 1-5 September 1975
edited by **O Lecarme** and **R Lewis**
1975 xxii+1020 pages
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HUMAN CHOICE AND COMPUTERS
Proceedings of the IFIP Conference on Human Choice and Computers Vienna 1-5 April 1974
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DATA BASE MANAGEMENT
Proceedings of the IFIP Working Conference on Data Base Management Cargèse Corsica France 1-5 April 1974
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DATA BASE DESCRIPTION
Proceedings of the IFIP TC-2 Special Working Conference on Data base Description Wepion Belgium 13-17 January 1975
edited by **B C M Douqué** and **G M Nijssen**
1975 viii+382 pages
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COMMAND LANGUAGES
Proceedings of the IFIP Working Conference on Command Languages Lund Sweden July 29-August 2 1974
edited by **C Unger**
1975 viii + 402 pages
Price US $27 75/Dfl 72 00

COMPUTER SIMULATION OF WATER RESOURCES SYSTEMS
Proceedings of the IFIP Working Conference on Computer Simulation of Water Resources Systems Ghent Belgium July 30 August 2 1974
edited by **G C Vansteenkiste**
1975 viii+680 pages
Price US $51 95/Dfl 135 00

MEDINFO 74
Proceedings of the First World Conference on Medical Informatics, Stockholm Sweden 5-10 August 1974
edited by **J Anderson** and **J M Forsythe**
1975 xlviii+1192 pages
Price US $115 50/Dfl 130 00

HEALTH-INFORMATICS
Canadian Experience
by **J F Brandejs**
IFIP MEDICAL INFORMATICS MONOGRAPH SERIES, Vol 2
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MINICOMPUTER SOFTWARE
Proceedings of the IFIP Conference on Software for Minicomputers Lake Balaton Hungary 8-12 September 1975
edited by **J R Bell** and **C G Bell**
1976 xiv + 334 pages
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MODELLING IN DATA BASE MANAGEMENT SYSTEMS
Proceedings of the IFIP Working Conference on Modelling in Data Base Management Systems Freudenstadt Germany 5 8 January 1976
edited by **G M Nijssen**
1976 viii + 418 pages
Price US $35 00/Dfl 90 00

DECISION MAKING AND MEDICAL CARE CAN INFORMATION SCIENCE HELP?
Proceedings of the IFIP Working Conference on Decision Making and Medical Care Dijon France 24 29 May 1976
edited by **F T de Dombal** and **F Grémy**
1976 xviii + 604 pages
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Proceedings of the IFIP Working Conference on Biosystems Simulation in Water Resources and Waste Problems Bruges Belgium September 3-5 1975
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American Journal of Computational Linguistics *Microfiche 65 : 50*

BBN SPEECH UNDERSTANDING SYSTEM - FINAL REPORT
30 OCTOBER 1974 TO 29 OCTOBER 1976
REPORT NO. 3438

The report, which totals 526 pages, has been divided into 5 approximately equal-sized volumes which cost $2.50 each, or $12.50 for the full set. Orders should be directed to:

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ABSTRACT: The BBN speech understanding project is an effort to develop a continuous speech understanding system which uses syntactic, semantic, and pragmatic support from higher level linguistic knowledge sources to compensate for the inherent acoustic indeterminacies in continuous spoken utterances. These knowledge sources are integrated with sophisticated signal processing and acoustic-phonetic analysis of the input signal, to produce a total system for understanding continuous speech. The system contains components for signal analysis, acoustic parameter extraction, acoustic-phonetic analysis of the signal, phonological expansion of the lexicon, lexical matching and retrieval, syntactic analysis and prediction, semantic analysis and prediction, pragmatic analysis and prediction, and inferential fact retrieval and question answering, as well as synthesized text or spoken output.

Those aspects of the system covered in each volume are listed on the next page.

Volume I. Introduction and Overview
- A. Introduction
- B. Design Philosophy of HWIM
- C. Overview of final system
- D. Design of final performance test and performance analysis overview
- E. Future
- F. References
- G. Appendices
  1. Sample set of sentence types
  2. Sample trace of an utterance being processed
  3. Publications
  4. Comprehensive Index to Technical Notes

Volume II. Acoustic Front End
- A. Acoustic Front End
- B. Acoustic-Phonetic Recognition
- C. A Speech Synthesis-by-Rule Program
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  1. Dictionary Phonemes
  2. List of APR labels
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  2. Sample Parse-Interpretations
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- A. Introduction
- B. The Travel Budget Manager's Assistant
- C. Flow of Control
- D. Linguistic Processing
- E. Execution
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- G. Conclusions
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American Journal of Computational Linguistics *Microfiche 65 : 53*

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P R O G R A M M E

Jeudi 17 Mars

matin 9H30 - Accueil des participants

10H - INTRODUCTION AUX PROBLEMES DE L'INTERACTIVITE EN INFORMATIQUE.

Interventions :

. E. CHOURAQUI, Laboratoire d'Informatique pour les Sciences de l'Homme, C.N.R.S., Marseille.

. J. LE MAITRE, Centre de Recherches Archeologiques, Valbonne.

. F. PICARD, Laboratoire d'Informatique pour les Sciences de l'Homme, Centre de Calcul du Pharo, Marseille.

. P. ROUSSEL, Groupe "Intelligence Artificielle", Marseille-Luminy.

13H15 - Dejeuner.

apres midi 14H30 - EXPOSES D'EXPERIENCES UTILISATION DE METHODES ET DISPOSITIFS
18H INTERACTIFS DANS LES SCIENCES DE L'HOMME.

- Exposes de 60 minutes, suivis d'une discussion de 15 minutes.

Interventions :

. J. AUTRAN et al, GAMSAU, Ecole d'Architecture de Marseille-Luminy.

. J. PIOLLE, Universite de Provence, Aix-en-Provence.

. Ph. RICHARD, Musee des Arts et Traditions Populaires, Paris.

Vendredi 18 Mars

matin 10H - Suite des exposes.

Interventions :

. R. MOREAU, Developpement Scientifique IBM-France, Paris.

. D. PASCOT, Institut d'Amenagement des Entreprises, Aix-en-Provence.

13H15 - Dejeuner.

apres-midi 14H30-18H - Discussions et syntheses.

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PROGRAM AREAS

AREA 1 Theoretical Foundations of Information Processing

Chairman *Professor S Igarashi — Japan*

Details
- Formalization of concepts in program verification, programming methodology, data bases and artificial intelligence
- Mathematical theory of programs, computation and languages
- Representation, semantics, optimization and complexity

AREA 2 Computer Hardware

Chairman: *Professor F H. Sumner — United Kingdom*

Details Developments in technology and their influence on computer system design It is expected that there will be particular emphasis on
- Parallel Processing
- Special purpose Processors
- Microprocessors
- Collections of Microprocessors
- Very large memories
- Evolution of Information Processing Technology

AREA 3 Computer Software

Chairman *Dr. H D. Mills — U S A*

Details Programs and procedures which facilitate the development, operation and evolution of application systems
- Operating systems
- Programming systems
- Data management
- Development tools
- Software engineering
- Software reliability
- System performance
- Micro programming systems

AREA 4	Computer Networks
Chairman	*Professor E Manning — Canada*
Details	Aspects of the merger of computer and telecommunications technologies • Modelling and analysis • Distributed processing hardware, software, data management • Packet-switched communications technology, standards, experiences • Impact of minicomputers and microprocessors • Protocols • Applications
AREA 5	Applications in Science and Engineering
Chairman	*Professor Y Shmyglevsky — USSR*
Details	Recent advances in mathematical computation and in the computational aspects of cybernetics and process control • Numerical computation and packages • Symbol manipulation • Parallel algorithms • Models of the environment • Pattern recognition • Robotics • Picture processing • Process control systems
AREA 6	Computer Aided Design
Chairman	*Mr J Vlietstra — The Netherlands*
Details	Computer Aided Design is a technique which allows a designer or development engineer the use of the power and facilities of modern computing, computer graphics, and other equipment in the design process Important case studies will be presented on the introduction and implementation of CAD, and on its practical successes • Case studies • Analysis of applications • Means, methods and techniques • Hardware considerations • Computer graphics • Economic and social aspects
AREA 7	Applications in Management and Administration
Chairman	*Mr P.J Dixon — Canada*
Details	• Management of change • Managing information processing • Applications in management • Applications in administration • Minicomputers in administrative data processing • Cost effectiveness • Information systems and organization structures • Telecommunications and information management • Data processing operations management • Security and privacy
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Chairman	*Professor L Bolliet — France*
Details	• User needs • Industry needs • Science needs • Computer education systems

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- Interconnection of Networks
- Understanding of Natural Language
- Methods of Pattern Recognition
- Models of Ecosystems
- Organization of Large Computations
- Economics, Organizational and Social Implications of Computer Aided Design
- Design Automation and Large Scale Integration
- Which Way in Computer Graphics
- Modelling in Computer Aided Design
- Business Problems in Planning of Data Communications Networks
- Information Systems for Manufacturing and Distribution
- Interactive Approaches to Corporate Planning and Control
- Effects of Information Technology on Organization Structures
- Consequences of Expected Changes in the Cost Effectiveness of Information Technology
- Progress of Data Management and Teleprocessing in Large Organizations
- Role of Information System Professionals on General Management
- Organizational Productivity The Role of Information Technology
- From Word Processing to Corporate Planning — Global Information Systems, Strategies and Achievements
- Computer Systems for Education in Schools
- Computer Systems for Education in Universities
- Computer Systems for On-the-Job Training
- Technological Limitations on Computer Assisted Instruction

IFIP EXHIBITION 77

IFIP'S headquarters for the 1977 Exhibition is the Sheraton Centre (formerly The Four Seasons Sheraton Hotel) Its superb design for combined meetings and exhibitions epitomizes the total convenience of Toronto

EXHIBITION 77 will be held in Exhibition Hall and in the Grand Ballroom and will occupy 30,000 square feet Exhibited products and services will attract experienced users from science, medicine, business and industry For exhibitors, EXHIBITION 77 represents a rare opportunity to reach an international audience including engineers, designers, financial management, and data processing users of every kind

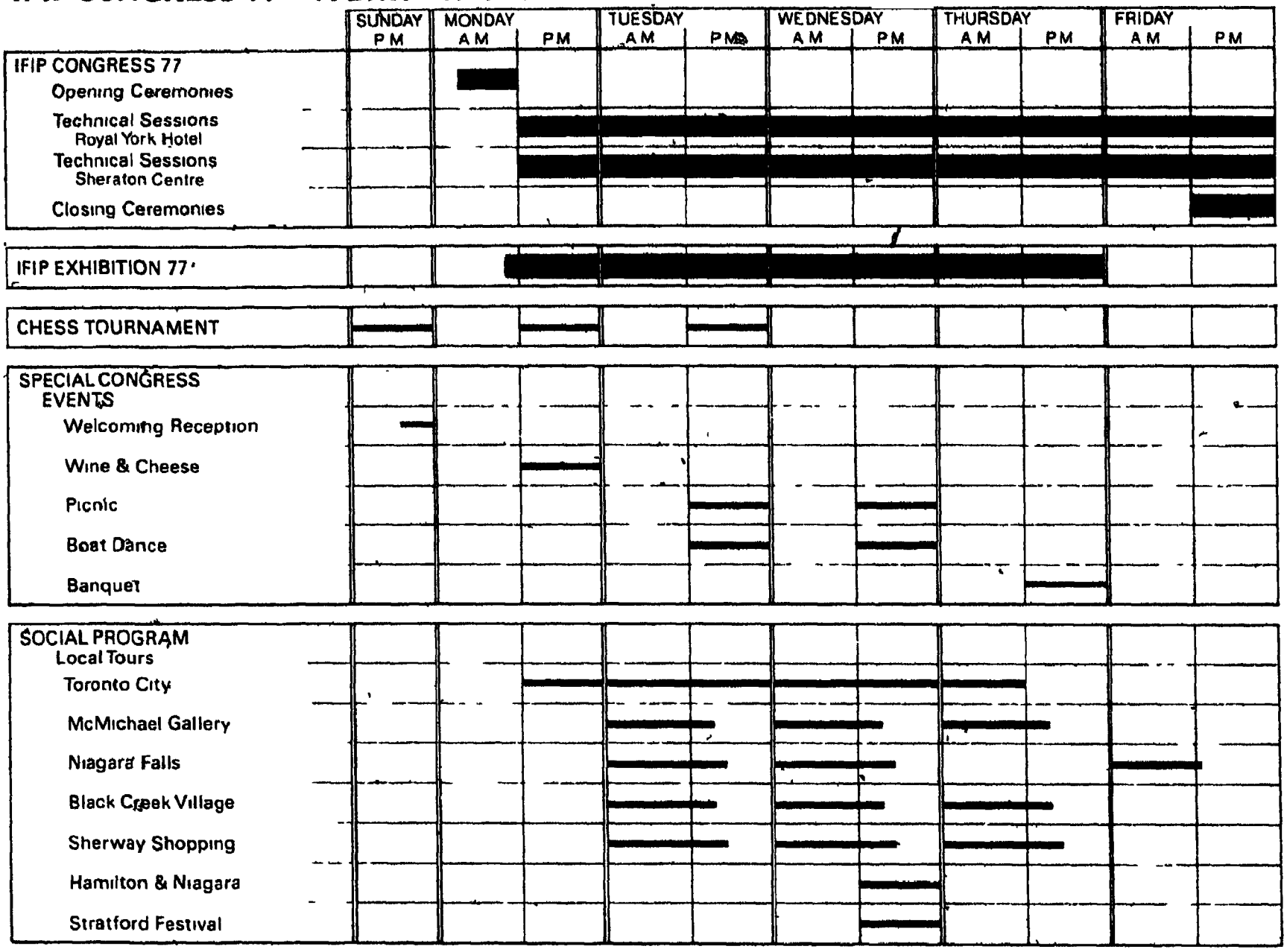
Visitors to the 4-day exhibition will enjoy an exciting, rewarding opportunity to study at first hand the latest developments in large and medium scale central processing units, smaller processors plus the latest in highly developed systems for business, government, science and communications The exhibition will display new trends in peripherals and data entry systems, plus a comprehensive range of design applications, software and services that should challenge the imagination of both dedicated professionals and first time users

Some countries will take space in special exhibition areas MEDINFO 77 will have a distinctive area of its own

The Exhibition will open Monday, August 8 at 11 00 a m so as not to conflict with IFIP CONGRESS 77 opening ceremonies and remain open until 6 00 p m It will be open on Tuesday, August 9 through Thursday August 11 from 9 00 a m to 6 00 p m

Attendance as a delegate at either IFIP CONGRESS 77 or MEDINFO 77 will permit free admittance to EXHIBITION 77

IFIP CONGRESS 77 – A Brief Forecast



M E D I C A L I N F O R M A T I C S

SECOND WORLD CONFERENCE - MEDINFO 77

AUGUST 8 - 12, 1977, TORONTO, CANADA

Sponsored by: IFIP Technical Committee for Information Processing in Medicine (TC4)

In conjunction with: IFIP Congress 77 (See frame 56, this fiche)

- Biomedical Research
- Biomedical Modelling
- Mortality and Morbidity Statistics, Medical Profiles, Risk Register, etc
- Advanced Hardware & Software Technology
- Computer Techniques in Medical Teaching
- Medical Linguistics
- Health Bibliographical Information Systems
- Planning & Analysis of Health Service Systems & Units
- Preventive Care Population & Group Monitoring Systems
- Preventive Care Screening Systems
- Financial Management Systems
- Theory of Medical Decision Processes
- Computer-aided Medical Practice Oriented Toward Prognosis, Therapy & Follow-up
- Computer Systems for the G P and Ambulatory Care
- Computer-aided Medical Practice Oriented Toward Diagnosis
- Technical Aspects of Data Protection
- Social, Legal & Political Aspects of Data Protection
- Evaluation of Information Systems in the Health Care Environment
- Education of Health Staff in Information Processing Techniques
- Pharmacy Systems
- Hospital Auxiliary Systems
- Patient Service Scheduling
- Cytology & Pathology
- Radiology
- Radiotherapy
- Nuclear Medicine

CANADIAN LINGUISTIC INSTITUTE

JUNE 20 - AUGUST 13, 1977

McGILL UNIVERSITY MONTREAL

ADMINISTRATIVE OFFICERS

UNIVERSITY

Robert E Bell, Principal and Vice-Chancellor/*Recteur et Vice-Chancelier*

Walter Hitschfeld, Vice-Principal (Research) and Dean of the Faculty of Graduate Studies/*Vice-Recteur (Recherche) et Doyen de la Faculté des Etudes Superieures*

Robert Vogel, Dean of the Faculty of Arts/*Doyen de la Faculte des Arts*

INSTITUTE

C Douglas Ellis, Director/*Directeur*

Michel Paradis, Coordinator/*Coordonnateur*

Glyne L Piggott, Coordinator/*Coordonnateur*

Marie Rivet-Remillard, Administrative Secretary/*Secrétaire administrative*

FACULTY/*CORPS PROFESSORAL*

Aronoff, Mark (SUNY - Stony Brook)
Bouton, Charles P (Simon Fraser University)
Chastain, Kenneth (University of Virginia)
Cook, E -D (University of Calgary)
Goldsmith, John (Indiana University)
Harris, James W (M I,T)
Morin, Jean-Yves (McGill University)
Paradis, Michel (McGill University)
Piggott, Glyne L (McGill University)
Reighard, John (Universite de Montreal)
Wilson, Dan (Queen's University)
Williams, Marianne (SUNY-Albany)

DISTINGUISHED LECTURE SERIES

An additional feature of the Institute will be the Distinguished Lecture Series centering on the theme of the week. The following scholars have agreed to participate.

HARRY A. WHITAKER (Psychology, University of Rochester)
Neurolinguistics June 23

MORRIS HALLE (Philosophy and Linguistics, M.I.T.)
Phonology - June 30

WALTER A. WOLFRAM (Center for Applied Linguistics)
Sociolinguistics July 15

RAY JACKENDOFF (English, Brandeis University)
Syntax and Semantics July 5 - 8

LOIS BLOOM (Teachers' College, Columbia University)
Developmental Psycholinguistics - July 29

WINFRED P. LEHMANN (Linguistics, University of Texas at Austin)
Historical Linguistics - August 5

ROBERT J. DI PIETRO (School of Languages & Linguistics, Georgetown U.)
Applied Linguistics - August 11

FOURTH LACUS FORUM:

ASPECTS OF BILINGUALISM

13 - 17 AUGUST, 1977 MCGILL UNIVERSITY, MONTREAL (To coincide with the last week of the *CANADIAN LINGUISTIC INSTITUTE*)

The Linguistic Association of Canada and the United States will will host a Forum on:

NEUROLINGUISTIC

PEDAGOGICAL

SOCIOLINGUISTIC

THEORETICAL aspects of bilingualism. For further information please contact :

Michel Paradis, Chairman,
Local Organizing Committee
Fourth LACUS Forum
Department of Linguistics
McGill Univeristy
1001 Sherbrooke St. West
Montreal H3A 1G5
CANADA

American Journal of Computational Linguistics *Microfiche 65 : 66*

INTELLIGENT QUESTION-ANSWERING AND DATA BASE SYSTEMS

AN INTERNATIONAL SEMINAR - JUNE 21 - 30, 1977 - BONAS (GERS), FRANCE

A. F C E T	Association Française pour la Cybernetique Economique et Technique
A Ş C E B	Association Scientifique, Culturelle et Educative de Bonas
D R M E.	Direction des Recherches et Moyens d'Essais
I P	Institut de Programmation, Universite Paris VI
I R I A.	Institut de Recherche d'Informatique et d'Automatique

The Seminar is supported by the Direction des Recherches et Moyens d'Essais (DRME) of the French Ministry of Defense It is organized by the Institut de Recherche d'Informatique et d'Automatique (IRIA), the Institut de Programmation and sponsored by the Association Française pour la Cybernetique Economique et Technique (AFCET).

Director of the Seminar	Pr J C. SIMON Institut de Programmation Universite Paris VI and IRIA
Co-Director	Pr L SIKLOSSY University of Texas - Austin USA

Invited Speakers

Dr ANDREEWSKY	CEA Saclay (France)
Dr BOBROW	Rank Xerox Research Laboratory PALO ALTO, California (USA)
Pr EISENSTADT	Open University, Milton Keynes (Great Britain)
Pr GUIHO	University of Paris XIII, Orsay (France)
Dr LAUSCH	Institut für Informatik, University of Stuttgart (FRG)
Pr METZING	University of Bielefeld (FRG)
Dr PIROTTE	M B L E Bruxelles (Belgique)
Dr PITRAT	CNRS, Institut de Programmation, Paris (France)
Pr SIKLOSSY	University of Texas, Austin (USA)
Pr WILKS	University of Essex (Great Britain)

PROGRAMME

The program of the tutorial courses is divided into three parts

I Formalisms for representing knowledge
Text analysis, high level programming languages, memory organization

II Answering questions about data
Interface with natural language, the large data base problems, data preprocessing and selection, design of a Q. A system as a whole

III Analysing common sense knowledge
Formalization of knowledge about many human activities and motivations, and its use

Each morning two tutorial lectures will take place under the responsibility of an invited lecturer

June 21	Dr PITRAT	Formalisms for text analyses
June 22	Dr PIROTTE	High level query language for data bases
	Dr ANDREEWSKY	Computational learning of semantic lexical relations
June 23	Pr GUIHO	Memory organization
June 24	Pr LAUBSCH	Natural language interface
June 25	Pr METZING	Task oriented dialog systems
June 27	Pr WILKS	Analysing common sense knowledge
June 28	Pr EISENSTADT	Understanding newspaper stories
June 29	Dr BOBROW	Design of Q A Systems
June 30	Pr SIKLOSSY	Large data base problems

Panel discussions will be held during the afternoon mainly on applications The topics will be mainly on data base problems in the fields of

Archeology and Museography
Robotics and engineering
Social sciences and applications
Medical diagnosis
Commercial applications
Management applications

COMPUTER MUSIC - 2ND INTERNATIONAL CONFERENCE

OCTOBER 26 - 30, 1977

UNIVERSITY OF CALIFORNIA, SAN DIEGO
LA JOLLA, CALIFORNIA

- CONFERENCE THEME: COMPOSITION & PERFORMANCE
- TECHNICAL AND NON-TECHNICAL SESSIONS
- TWO PUBLIC COMPUTER MUSIC CONCERTS
  THURS. OCT. 27
  SAT. OCT. 29
- COMPUTER ARTS EXHIBITION

REGISTRATION: $20, STUDENTS $10 (AFTER OCT. 1ST - $30, STUDENTS $15)
PAPERS AND TAPES NOW ACCEPTED FOR CONSIDERATION
FOR REGISTRATION/INFORMATION WRITE:

COMPUTER MUSIC CONFERENCE
UCSD - G037
LA JOLLA, CA. 92093

DEADLINES: PAPERS - JUNE 30, TAPES - JULY 31

THIRD INTERNATIONAL CONFERENCE ON VERY LARGE DATA BASES

TOKYO, JAPAN **OCTOBER 6-8,1977**

DATABASE DESIGN

DATABASE MACHINE ARCHITECTURE

DATABASE SYSTEM ANALYSIS

LARGE-SCALE DATABASE APPLICATIONS

SPONSORS:

ACM and its Special Interest Groups on:
- Business Data Processing
- Information Retrieval
- Management of Data

IEEE Computer Society and its Technical Committee on Database Engineering

Information Processing Society of Japan

International Federation for Information Processing

Society for Management Information Systems

REGISTRATION RATES:

	Pre-Conference	*Conference*
Member of sponsoring society	$ 75	$125
Non-member	125	175
Student	50	75

FOR MORE INFORMATION CONTACT:

James Gabbert
Room E53-330
MIT Sloan School
50 Memorial Drive
Cambridge, MA 02139 USA

(617) 253-2781

INTERNATIONAL COMPUTER SYMPOSIUM - 1977

DECEMBER 27-29, 1977

NATIONAL TAIWAN UNIVERSITY, TAIPEI, REPUBLIC OF CHINA

CALL FOR PAPERS

MAIN THEME
Information Systems and Chinese Data Processing

OTHER AREAS OF INTEREST
* Software Engineering
* Computer Architecture
* Operating Systems
* Microprocessor Applications
* Management Information Systems
* Signal Processing
* Fault-Tolerant Computing
* Government EDP Policy
* Data Communication Systems
* Pattern Recognition and Artifical Intelligence
* Computer Graphics
* Computing Theory
* Computer Education
* Computer Applications

REQUIREMENTS
Submit three copies of a complete paper of digest length (20- page maximum) and an abstract of no more than one page by July 1, 1977 to

Professor Te-Son Kuo
Chairman of Paper Committe, ICS-1977
P O Box 23-72
Taipei
Republic of China
Tel (02) 3913174, Taipei
Cable NTUEE, TAIPEI

All papers typed in English / Chinese, double-spaced and one side of each page with the size of 8½" x 11" Papers typed in Chinese should be accompanied with an abstract in English Local authors are requested to provide abstracts both in Chinese and English

NB: The author's registration fee (covering a copy of the proceedings and three lunches) will be waived. ICS77 will also arrange a one-day tour for the authors.

SPONSOR:
National Taiwan University

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China Computer Society
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Chinese Language Computer Society
IEEE, Inc , Republic of China

JUNE 6 8, 1977
RENSSELAER
POLYTECHNIC
INSTITUTE
TROY NEW YORK

IEEE Computer Society Conference on

pattern recognition and image processing

Monday, June 6, 1977

A NEW METHOD FOR ERROR CORRECTION AS APPLIED TO SPEECH RECOGNITION, R L Kashyap & M C. Mittal, Purdue University

RECOGNITION OF LINES IN SPECTROGRAMS, J F Bohme, Institut fur Informatik der Universität Bonn

AUTOMATIC SPEAKER RECOGNITION BY COMPUTERS, F Bunge, Philips GmbH Forschungslaboratorium, German Federal Republic

Wednesday, June 8, 1977

AUTOMATIC DESIGN OF DECISION TREES FOR OCR, George Nagy & R Casey, University of Nebraska and IBM

HANDPRINTED CHARACTER RECOGNITION, R J Shillman, MIT

AUTOMATIC VERIFICATION OF SIGNATURES BY MEANS OF ACCELERATION PATTERNS, Noel Herbst, IBM T J Watson Research Center

AN APPLICATION OF LINE AND CHARACTER RECOGNITION IN CARTOGRAPHY, Peter Seuffert, Gesellshaft fur Mathematik und Datenverarbeitung, German Federal Republic

Philip S Nyborg Director
Washington Office

afips Washington Report

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Vol. III, No. 4 April, 1977 72

AFIPS IN WASHINGTON

CONFERENCE/WORKSHOP HELD TO GATHER MARKET RESEARCH DATA FOR AFIPS STUDY

The AFIPS Washington Office last month convened a Conference/Workshop to gather market research data for a study entitled *Information Processing in the United States*. The report, being prepared by the Washington Office, updates a 1973 AFIPS' study, *The State of the Computer Industry in the United States* (*Washington Report*, 1/77, p 7) It includes information on U. S. computer suppliers, users, personnel and education, as well as significant trends in the field.

Representatives from three market research firms attended the Workshop in the Washington Office March 11 to contribute data on U.S and overseas computer shipments, installed base, and revenues of U S. computer firms The market research firm participants were James Peacock, director/Publications, International Data Corp ; Robert I Wallace, vice president, Commercial Industrial Division, Auerbach Associates, Inc , and Frederic G Withington, senior staff member, Arthur D. Little, Inc.

The Workshop produced 1976 consensus estimates and 1981 consensus forecasts for U S and overseas computer shipments, installed base and revenues The participants estimated $6.3 billion in U S shipments of general purpose computer systems for 1976, with $10 billion in shipments of U S general-purpose computer systems forecast for 1981. U.S installed base for general-purpose computer systems is estimated at $40 billion for 1976, $65 billion in U.S installed base for general-purpose computer systems is forecast for 1981. General purpose computer systems are defined as including "machine room peripherals," systems software and small business systems.

Gross value of U S firms' general-purpose computer systems shipments overseas were estimated at $5.3 billion in 1976. U S. installed base for general purpose computer systems overseas is estimated at $30 billion for 1976, $51 billion in U S installed base for general-purpose computer systems overseas is forecast for 1981

U S. and overseas totals for annual revenues of U S computer firms are estimated at $31.86 billion, $64 billion is the forecast for total U S and overseas revenues in 1981. U S. computer firms are defined as firms which are 51 per cent or more U S.-owned 1981 forecasts are expressed in 1976 dollars.

Other participants in the Workshop included Dr. Bruce Gilchrist, director of Computing Activities, Columbia University, and editor (with Dr. Richard E Weber), *The State of the Computer Industry in the United States*, Martha M Gray, computer specialist, Computer Information Section,

Technology Division, Institute for Computer Sciences and Technology (ICST), National Bureau of Standards (NBS); Madeline M. Henderson, chief, Computer Information Section, Technology Division, ICST, NBS; and Saul Padwo, director, Science and Electronics Division, Office of Business Research and Analysis, Domestic and International Business Administration; U.S. Department of Commerce. The workshop was organized and moderated by Pender M. McCarter, research associate, Washington Office.

[*Correction*: The following article was published in incomplete form in last month's *Washington Report*; the full article appears below.]

NRC OUTLINES CSTB RESPONSIBILITIES; HANDLER NAMES CHAIRMAN

In response to a request from the AFIPS Washington Office, the National Research Council (NRC), Assembly of Mathematical and Physical Sciences (AMPS) has made available the following description of responsibilities for the recently approved Computer Science and Technology Board (CSTB) CSTB is charged with:

> looking after and promoting the health of the discipline, which includes algorithms, architecture, artifical intelligence, design, information science, languages, numerical and non-numerical methods, programming, systems, and technology as applied to computers;
>
> fostering the interaction between computer science and technology with the other fields of pure and applied science and technology,
>
> providing a base of expertise within NRC in the areas of computer science and technology,
>
> responding to requests addressed to NRC from the government and non-profit foundations for advice in the areas of computer science and technology; and
>
> initiating studies in the areas of computer science and technology which further the objectives of the first two items above.

The AMPS document states that most issues addressed "will be identified by the Board itself; some may be brought to the attention of the Board by external agencies."

CSTB Chairman and Membership. Dr. Philip Handler, president of the National Academy of Sciences, has approved the appointment of Dr. Victor Vyssotsky of Bell Laboratories as chairman of CSTB, the appointment is for one year as chairman, and two years as a member of the Board. [Dr Vyssotsky is executive director, Business Information System/Support Division at Bell Laboratories Raritan River Center, Piscataway, New Jersey.] It is anticipated that other members will be named within two months.

--P. Nyborg

NEWS BRIEFS

The White House last month named Dr. Frank Press as Presidential Science Adviser - Designate; Dr Press is a geophysicist who was chairman of the Department of Earth and Planetary Sciences at the Massachusetts Institute of Technology (MIT)

President Carter last month, at the request of the Presidential Science Adviser - Designate, accepted the *pro forma* resignation of the Republican-appointed Committee on Science and Technology Policy, according to an article in *Science & Government Report*.

After concluding its six-year study into divestiture of Western Electric Co. by AT&T in February (*Washington Report*, 3/77, p. 4), the Federal Communications Commission (FCC) said that the Bell System could be "more responsive" to consumer needs and technological innovations; the FCC ordered AT&T to submit proposals on how Bell System operating companies could be more autonomous in ordering new equipment from Western Electric, the manufacturing subsidiary of the Bell System.

An increase in funds over FY 1977 are proposed for the Office of Telecommunications Policy (OTP) in President Carter's FY 1978 *Budget Revisions*, announced in February, under the new proposal, OTP would receive $8.4 million, which includes $5 million recommende for the Department of Commerce's Office of Telecommunications (OT).

Sen. Ernest F. Hollings (D-S.C.) was named chairman of the Senate Subcommittee on Communications last month; Rep. Olin F. Teague (D-Tex.) was also elected chairman of the House Committee on Science and Technology

Rep Charles Rose (D-N.C.) is chairing a new Policy Group on Information and Computers, established by the Committee on House Administration in January; the new group, which replaces the Ad Hoc Computer Subcommittee, also includes as members Rep. Edward Pattison (D-N.Y.) and Rep. David Stockman (R-Mich.).

An Internal Revenue Service (IRS) proposal to provide on-line access to five years of taxpayers' records in each of 10 service areas has been criticized by the Congressional Office of Technology Assessment (OTA) as posing a threat to individuals' constitutional rights to privacy; according to an article in *Computerworld*, an OTA draft report states that the IRS provided incomplete information on the proposal, called the Tax Administration System (TAS), and requested a more detailed description of TAS from IRS.

"We are coming in with recommendations to put on some restraints [with the collection and dissemination of personal information in the Government and in business]," said David F. Linowes, chairman of the Privacy Protection Study Commission; in an interview with the Associated Press, Mr. Linowes indicated that the Commission is scheduled to issue its final report to Congress and the President in June.

The X3T9 Subcommittee of the American National Standards Institute (ANSI) in February voted to publish the proposed I/O Channel Interface Standard for public comment; the standard will eventually be sent to the X3 Computer and Information Processing Subcommittee of ANSI and to NBS for approval.

Use of the National Bureau of Standards' (NBS) data encryption algorithm suggests a need for a system-wide approach to security, according to Robert V. Jackson, assistant vice president of the Chemical Bank,

New York; speaking at February's NBS Conference on Computer Security and the Data Encryption Algorithm, Mr. Jackson recommended a "balanced program" of security, according to an article in *FCP Weekly*

The Automated Data and Telecommunications Service (ADTS) of the General Services Administration (GSA) last month issued a report which endorsed facilities management for the Federal government as one means of relying on the private sector to provide data processing services; the study can be obtained directly through Mr. Roy Chisholm, CDPP, ADTS, GSA, at (202) 566-0194, or through the AFIPS Washington Office.

The *AFIPS Washington Report* is researched and written by Pender M McCarter, research associate, AFIPS Washington Office. Production assistance is provided by Linda Martin, secretary, Washington Office. AFIPS societies have permission to use material in the *Washington Report* for their own publications; however, when an article appears with an asterisk, clearance must first be obtained from the AFIPS Washington Office. Documents indicated by the symbol "(*)" are available on request to the Washington Office. Requests should specify the date(s) of the *Washington Report* in which the document(s) appeared. Where price is noted, make checks payable to "AFIPS."

Philip S Nyborg, Director
Washington Office

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American Federation of Information Processing Societies Inc Suite 420 2100 L Street N W Washington D C 20037 202 296-0590

Vol. III, No. 3 March, 1977

WASHINGTON DEVELOPMENTS

FEDERAL GOVERNMENT DP OPERATIONS REFLECT 'INADEQUATE SECURITY': SENATE GOVERNMENT OPERATIONS COMMITTEE REPORT

The Executive Branch has failed to take "adequate steps" to protect Federal government computer systems, according to a staff study released last month by the Senate Government Operations Committee. The report cites two areas in which it said civilian agencies are remiss in enforcing computer security: systems which disburse public funds, and systems which contain "economically valuable" data and privacy information. According to the report, the White House Office of Management and Budget (OMB) has advised the Committee that it is investigating computer security in these areas.

Origin of Study. The Senate Government Operations Committee study follows publication of three reports by the General Accounting Office (GAO) last year *Improvements Needed in Managing Automated Decisionmaking by Computers Throughout the Federal Government; Computer-Related Crimes in Federal Programs;* and *Managers Needed to Provide Better Protection for Federal Automatic Data Processing Facilities.* Last May, Sen. Abraham Ribicoff (D-Conn.), chairman of the Government Operations Committee, announced that the Committee staff would conduct an investigation into the issues raised by the three GAO reports (see *Washington Report*, 7/76, p.3) In June, the staff issued a Committee print consolidating the three earlier studies into one publication, entitled *Problems Associated with Computer Technology in Federal Programs and Private Industry.*

Findings and Conclusions In the latest report, *Computer Security in Federal Programs*, the Committee notes the Government's dependence on computers "To a significant extent--the true measure of which no one knows--the U S. Government could not function, as presently organized, without computers " The study also warns that computer crimes may become "prevalent white collar crimes of the future."

The report finds that both physical and personnel security can be strengthened in the two areas mentioned above, *i.e.*, those systems which disburse public funds, and systems which contain "economically valuable" data and privacy information. It stresses that precautionary measures followed by the Federal government in other areas should be implemented with private firms which perform computer services for the Government. According to the study, contracts with private companies "should contain language attesting that personnel of the contractor firms, as well as the contractor firms themselves, are suitable for Government employment." It also cited "careless" use of Computer Sciences Corp.'s Infonet, described as the Executive Branch's "largest commercial timesharing bureau "

Recommendations. According to the report, OMB should coordinate computer security measures in the Federal government and in Government business transactions with private companies. The Committee states that the National Bureau of Standards (NBS) is not the "appropriate" agency for enforcing computer security. It called the basic document on security in Federal programs, *i.e.*, the *Federal Information Processing Standard Publication 31 (FIPS PUB 31)*, "vague" and "inadequate."

The study suggests that OMB should amend *Circular A-71*, which encourages agencies to use private services (including ADP private services) whenever possible, to give "fair and reasonable attention to the issue of computer security." NBS should develop physical and personnel standards, and GSA should enforce security requirements in all computer-related contracts which it oversees, according to the report. The Civil Service Commission should be responsible for "appropriate personnel security policies" in "critical-sensitive areas" involving computer security, the study said.

The Committee recommends legislation that would prohibit unauthorized use of computers owned, operated, or contracted for by the U S Government. Legislation is also suggested to expand the category of wire fraud to include wire communications transmitted intrastate as well as interstate. Finally, the Committee recommends legislation that would clarify whether negotiable instruments issued by computers in the public and private sector are forgeries, when they are provided on the basis of "improper" or "fraudulent" data. Copies of the report are available through the Senate Government Committee at (202) 224-2791 or through the AFIPS Washington Office.

FCC RULINGS PROMOTING COMPETITION IN TELECOMMUNICATIONS SAID TO BE CONSISTENT WITH '1934 COMMUNICATIONS ACT' JUSTICE DEPT. REPORT

The legislative history of the *1934 Communications Act* supports the "procompetitive decisions" of the Federal Communications Commission (FCC) in dealing with the telecommunications industry, according to Donald I Baker, assistant attorney general, Antitrust Division, Department of Justice In a report to Rep Timothy E Wirth (D-Colo), filed in January , Baker wrote "While established carriers have opposed [the FCC's] procompetitive decisions, our review of the legislative history of the [1934] statute does not support this view now being advanced that those rulings are in plain conflict with the intentions of the Congress at that time " The *1934 Communications Act* provides the basis for regulation of the nation's telecommunications systems.

The Justice offical said that the established common carriers, which support enactment of the *Consumer Communications Reform Act of 1976*, have called FCC decisions, sanctioning competition, "a change in legislative intent " He notes that, despite the many technological changes since 1934, when the *Communications Act* was enacted, it is "striking that much of the testimony before the cognizant Congressional subcommittees [in 1934] is directly relevant to the issues which are being raised again today " The report was prepared at the request of Rep Wirth.

[*Ed.* Assistant Attorney General Baker is expected to return to his teaching position at Cornell University this month.]

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[*Ed.* Assistant Attorney General Baker is expected to return to his teaching position at Cornell University this month]

USPS SHOULD ADOPT ELECTRONIC MESSAGE SERVICE SYSTEMS: NRC/NAS REPORT

A two-year study on electronic message distribution systems in the United States and elsewhere was completed last month by the Committee on Telecommunications, Assembly of Engineering of the National Research Council (NRC), National Academy of Sciences (NAS). Implementation of the final generation of an electronic message service system (EMSS) "would blur today's clear distinction between the mail [*i.e.*, a Government monopoly] and the service rendered by the electronic communications common carriers [*i.e.*, private enterprise]," according to the report which was prepared at the request of the U.S. Postal Service (USPS). The document, presented at a hearing of the Commission on Postal Service, suggested that EMSS could "reverse the present trend of rising costs, decreasing volumes, and increasing deficits" within USPS.

According to the study, titled *Electronic Message Systems for the U.S. Postal Service*, EMSS could replace as much as one-third of all of today's letter mail, including about one-half of all first class mail. Business or government would originate most electronic messages, the report said, with private individuals probably accounting for less than 10 per cent of the total output.

The study stated that the technology which will be employed in EMSS in 10 to 15 years is already available or is now being developed. It adds that privacy and security considerations should be stressed in the developmental stages of EMSS.

The report recommends that USPS top management make the same commitment to EMSS now that top management of the National Aeronautical and Space Administration (NASA) made to the manned space program in the 60s. It suggests increased emphasis on planning, R&D systems engineering, and in-house capability for USPS. (The USPS is said to devote less than one half of one per cent of its operating budget to R&D, contrasting with the communications industry, which devotes about 3.7 per cent of its gross revenues to R&D.) Finally, the study recommends that the Congress consider the adoption of an EMSS policy "that best serves the nation."

Copies of the report may be ordered for $6.30 from the NRC/NAS Archives at (202) 389-6454 or through the AFIPS Washington Office.

NSF, ARPA, ICST FY 78 BUDGET REQUESTS ANNOUNCED; PRESIDENT SENDS AMENDED FY 78 BUDGET TO CONGRESS

The anticipated FY 78 budget for Computer Research at the National Science Foundation (NSF), under the $440 billion FY 78 budget proposed by President Ford, is $17.0 million, reflecting a $1.5 million increase over the FY 77 budget of $15.5 million. The actual FY 76 budget for NSF Computer Research was $13.2 million.

The Information Processing Techniques Office of the Department of Defense Advanced Research Projects Agency (ARPA), under the Ford Administration proposal, anticipates a $38.3 million budget, a $500,000 increase over the FY 77 budget of $37.7 million.

Anticipated expenditures for the Institute for Computer Sciences and Technology (ICST) of the National Bureau of Standards (NBS), under the Ford Administration proposal, are $4.7 million for FY 78, no increase over the actual FY 77 budget.

President Carter sent an amended $459 billion FY 78 budget to Congress last month. At press time, there were no changes in the NSF, ARPA, and ICST projections.

OTA INFORMATION TECHNOLOGY ASSESSMENT' PROPOSED BY SEN. KENNEDY

Sen. Edward M. Kennedy (D-Mass.) last month proposed an."information technology assessment" to be conducted by the Congressional Office of Technology Assessment (OTA). Sen Kennedy said that the proposed assessment will analyze the development and applications of information technologies from 1977-90.

The assessment is planned to determine "the adequacy of existing institutions and policies" vis-a-vis "information futures." It will also identify and evaluate policy options; Kennedy said. He added that "the emphasis will be on issues that cut across traditional jursidictional lines, both in the Congress and the Executive Branch."

The Technology Assessment Board has been asked to approve an initial budget for project development of $173,000 for FY 77 and $130,000 for FY 78. Kennedy's remarks appeared in the *Congressional Record*, January 25, 1977, p. S 1420.

NEWS BRIEFS

Divestiture of Western Electric Co. by AT&T would not necessarily increase competition in the telecommunications industry, the Federal Communications Commission (FCC) said last month after concluding a six year study into the breakup of AT&T, details will appear in the April *Washington Report*.

Federal agencies may be ignoring private sector operation of data communications systems and relying too extensively on in-house systems, according to guidelines being circulated for comment by the White House Office of Telecommunications Policy (OTP); *Computerworld* reported January 31 that the OTP circular criticized agency emphasis on non-shared data communications systems and special communications security measures (such as encryption) due to what the trade paper called "an apparent misinterpretation of the *Privacy Act of 1974*."

[It] may become appropriate to have a governmental operational role in point-of-sale (POS) switching and clearing facilities to insure an effective national payments system," the National Commission on Electronic Fund Transfers (NCEFT) said last month in its interim report to Congress (*), according to an article in February's *EFTS--Industry Report*, the Commission recommended that rules for deployment of off-premises electronic funds transfer (EFT) terminals "should be separate, distinct, and less restrictive than the rules that apply to conventional branches."

The Department of Justice's Antitrust Division supports "voluntary" sharing of electronic funds transfer systems in contrast to "mandatory" sharing of these systems, according to a position paper submitted

to the National Commission on Electronic Fund Transfers in January; Justice held that the free market system, in combination with antitrust laws, would help prevent a larger financial institution from dominating a smaller financial institution.

Sen. Edward M. Kennedy (D-Mass.) last month said that he intends to ask the Carter Administration to investigate press reports that American computer firms are selling computers to secret police agencies in foreign countries such as Chile. Kennedy added that he is also considering legislation on the matter.

Rep. Edward I. Koch (D-N.Y.) and Rep. Barry M. Goldwater, Jr. (R-Calif.) January 4 reintroduced to Congress *H.R. 1984*, legislation which would apply principles of the *Privacy Act of 1974* to data systems in the private sector.

AT&T began marketing its Dataspeed 40/4 CRT terminal as an interstate communications device in late January, the day after the U.S. Court of Appeals for the Second Circuit refused to stay the Federal Communications Commission (FCC) decision authorizing the Dataspeed 40/4 service (*Washington Report*, 2/77, p.2); both IBM Corp. and the Computer and Communications Industry Association (CCIA) appealed the FCC decision to the Federal Court.

In January, the Federal Communications Commission (FCC) approved both Telenet Communications Corp. and Graphnet Systems, Inc. as international record carriers (IRCs); the FCC held that, at present, neither Telenet nor Graphnet would be required to establish separate corporate subsidiaries for their domestic and international operations.

The National Science Board (NSB), policymaking body of the National Science Foundation (NSF), is preparing to take "a more active external role in science policy formulation," according to Dr. Norman Hackerman, chairman of the NSB, and president, Rice University; testifying in January before the House Committee on Science and Technology concerning NSF's budget authorization for FY 78, Dr Hackerman stressed that "a key role of the NSF is to provide a means for balancing the total Federal basic research effort."

The Division of Science Information of the National Science Foundation (NSF) is allocating approximately $800,000 for "support of research relating to the dissemination and use of scientific and technical information (STI)," according to a program solicitation (#) issued last month; proposals, due April 15, 1977, are being considered in "Innovations in Engineering Publications"; "The Use of STI and the Effectiveness of Scientists and Engineers"; "Improved STI Communication Among Scientists and Engineers Engaged in Interdisciplinary or Applied Research/Engineering Activities"; and "Economics of Information.'

The National Communications System (NCS) is soliciting comments on implementation of the data encryption algorithm (see *Washington Report*, 1/77, p. 1) in Federal government telecommunications applications, comments should be directed to Frank M McClelland, Office of the Manager, NCS, Washington, D. C. 20305

At the end of FY 76, approximately 9,650 computers were employed by the Federal government, according to the General Services Administration (GSA) Automated Data and Telecommunications Service (ADTS) *Inventory of Automatic Data Processing Equipment (ADPE)*; the inventory (#--enclose $7.05), released last month, provides an overview of the use of ADPE by Federal agencies.

About 50 per cent of the labor force is "now in the business of generating, packaging, distributing, storing, interpreting, or in some other way manipulating data and information," according to a study by

Dr. Joseph Wates; the report (#) has been released as Volume 9, "Technological Change," by Sen. Hubert H. Humphrey (D-Minn.), chairman of the Joint Economic Committee.

Complete transcripts of the September, October and November, 1976, meetings of the National Commission on New Technological Uses of Copyrighted Works (CONTU) are now available for purchase through the Department of Commerce, National Technical Information Service at (703) 557-4650 or through the AFIPS Washington Office; the transcripts cover (in September) copyright implications of automated data bases (Number PB 259749--$10.50), (in October) photocopying (Number PB 261946--$9.00), and (in November) copyright protection for software (Number PB 261947--$7.50).

Copies of the National Science Foundation (NSF) report, titled *U.S. Scientists and Engineers: 1974*, are available for $1.25 through the AFIPS Washington Office.

Thomas J. Houser resigned as director of the White House Office of Telecommunications Policy (OTP), in January; Dr. William J. Thaler, chief scientist and acting deputy director of the Office, is now serving as OTP acting director.

Dr. Frank B. Ryan last month resigned as director of House Information Systems, Committee on House Administration. Boyd Alexander, former director of Computer Services, Office of Management and Budget (OMB), reportedly fills Dr. Ryan's position on a temporary basis.

AFIPS IN WASHINGTON

AFIPS-ORGANIZED PANEL SUBMITS COMMENTS ON COMPUTER-RELATED OCCUPATIONS LISTED IN OMB DRAFT OF 'STANDARD OCCUPATIONAL CLASSIFICATION MANUAL'

In response to the White House Office of Management and Budget's (OMB) request for public comments, the AFIPS Washington Office last month submitted proposals from an AFIPS panel on the computer-related occupations listed in the draft of the OMB *Standard Occupational Classification Manual (SOCM)*. The panel suggested a "complete review" of the computer and data processing sections of the draft *SOCM*, which it said should include three "broad" programmer classes: (1) Scientific, (2) Business Data Processing, and (3) Systems.

The panel recommended an overall category called "information processing personnel" which would include as sub-categories: computer scientists, the various types of programmers, and systems analysts. It suggests that the draft *SOCM* places "undue emphasis" on "computer scientists." The panel noted the omission of data processing equipment sales personnel and data processing services sales personnel, as well as personnel engaged in the assembly of computers and data processing equipment.

The AFIPS volunteer panel consisted of: Dr. Bruce Gilchrist, director of Computing Activities, Columbia University, and editor of AFIPS' *The State of the Computer Industry*; Mr. Donn B. Parker, senior research analyst, Stanford Research Institute, and chairman of the AFIPS Professional Standards and Practices Committee, responsible for a major study which led to the publication of AFIPS' *Computer Programmer Job Analysis Reference Text*; and Dr. Raymond Berger, independent consultant, Pychometrics, Inc., and author of the *Computer Programmer Job Analysis Reference Text*.

NRC OUTLINES CSTB RESPONSIBILITIES; HANDLER NAMES VISSOTSKY CHAIRMAN

In response to a request from the AFIPS Washington Office, the National Research Council (NRC) Assembly of Mathematical and Physical Sciences (AMPS) has made available the following description of responsibilities for the recently approved Computer Science and Technology Board (CSTB) CSTB is charged with:

> looking after and promoting the health of the discipline, which includes algorithms, architecture, artificial intelligence, design, information science, languages, numerical and non-numerical methods, programming, systems, and technology as applied to computers;
>
> - fostering the interaction between computer science and technology with the other fields of pure and applied science and technology;
>
> - providing a base of expertise within NRC in the areas of computer science and technology;
>
> - responding to requests addressed to NRC from the government and non-profit foundations for advice in the areas of computer science and technology; and
>
> - initiating studies in the areas of computer science and technology which further the objectives of the first two items above.

The AMPS document states that most issues addressed "will be identified by the Board itself; some may be brought to the attention of the Board by the external agencies." It is anticipated that other members will be named within two months.

--P. Nyborg

FEDERAL GROUPS SEEK FORMULATION OF U.S. POLICY ON TRANSNATIONAL DATA FLOW: SPECIAL REPORT BY G.R. PIPE

[*Ed*: Mr. Pipe is a consultant associated with the Organization for Economic Cooperation and Development (OECD), Computer Privacy Studies Unit.]

Some 18 countries currently preparing legislation regulate personal data, whether processed domestically or abroad, have been joined by four international organizations looking to a possible international convention for "harmonization of transnational data practices."

National approaches to information privacy largely parallel provisions of the U.S. *Privacy Act of 1974* and the recommendations of the Council of Europe governing electronic data banks. The emergence of international data transmission networks, coupled with the realization that national legislation is effective only for domestic processing, has resulted in demands for the creation of international standards for the treatment of personal information. While the objectives of these laws have been

widely applauded, the consequences of imposing restrictions on the movement of data may run counter to traditional "free flow of information" principles. Additionally, some U.S. computer manufacturers, timesharing services, and mutinationational users are troubled about possible disruptions, or shrinkage of markets,resulting from the rules adopted by various countries.

This has led the Organization for Economic Cooperation and Development (OECD), European Community, Council of Europe and Nordic Council, to undertake investigations into the extensiveness of transborder data flows and their impact on human rights, cultural values, national sovereignty, unrestricted movement of information,and implications on technological development:

> With a ministerial level mandate, a Committee of Experts on Data Protection was created at the Council of Europe. The Committee met on November 29 for three days to consider "procedures for elaborating a draft international convention on protection of trans-frontier data flows," and to examine a proposed text introduced by the Secretariat.
>
> The European Community was requested by the European Parliament in April, 1976, to collect information for the possible drafting of a binding directive on privacy A working group is now studying legislation before the nine parliaments to see to what extent a directive is appropriate.

- At the OECD, the approach is to develop rules consistent with "the normal expansion of international data linkages and computer telecommunications networks."

- In the Nordic Council, comprising the five Scandinavian countries, a committee of officials from Ministries of Justice is trying to harmonize national draft laws and prepare a suitable legal umbrella for data flows moving outside their "data free zone "

Two countries, Sweden and Germany, have adopted privacy legislation, with Austria, Belgium, France, Canada, Denmark, Luxembourg Norway, Finland, and possibly the Netherlands, expected to follow suit this year or early in 1978 With 10 sets of legally enforceable rules confronting them, the accelerated activities of the OECD and Council of Europe are being encouraged, especially by the Europeans and Canadians The main points for an international agreement have been suggested by Mr Frits Hondius of the Directorate of Legal Affairs of the Council.

1. The right of every person,without regard to nationality or domicile, to data protection;

2 The establishment of basic principles of data protection;

3 Designation of a data protection authority by each county,

4. A decision on rules to determine which national data protection regime is applicable in cases of transfrontier data processing; and

5. Designation of competent inspection or judicial bodies to issue decisions when disputes arise which will be binding on all contracting parties.

In the United States, the absence of a national law regulating data processing in the private sector could act to the detriment of American firms. This issue is gaining in importance as potential "data protectionism" grows aborad. Thus, several trade associations, the Departments of State and Commerce, the Office of Telecommunications Policy, and some Members of Congress are seeking to see a U.S. policy formulated.

The *AFIPS Washington Report* is researched and written by Pender M. McCarter, Research Associate, AFIPS Washington Office. Production assistance is provided by Linda Martin, Secretary, Washington Office.
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WASHINGTON DEVELOPMENTS

DOMESTIC COUNCIL PRIVACY COMMITTEE RECOMMENDS CREATION OF WHITE HOUSE OFFICE OF INFORMATION POLICY

A "unified approach" in finding answers to information policy questions raised by advances in computer and communications technology has been recommended to the President in the recent *Report of the Domestic Council Committee on the Right of Privacy*. The *Report* recommends creation of an Office of Information Policy within the Executive Office of the President to help coordinate national information policy Submitted to President Ford in September, the document was released to the public last month by Vice President Rockefeller.

In his "Foreword" to the study, Quincy Rodgers, director of the Domestic Council Committee on the Right of Privacy, wrote: "The interrelationships which exist between and among information communications, information technology, information systems, information confidentiality, information science, information networks, and information management have signalled the need for a broader, more comprehensive approach [to a national information policy]."

Origin of Report. In March, 1976 (*Washington Report*, 4/76), President Ford directed the Vice President, also chairman of the Domestic Council Privacy Committee, to "review and clearly define the information policy issues which confront Federal policymakers," by September 1. After its funding expired, the Domestic Council Privacy Committee ceased operations October 1, 1976.

Technological Background. The *Report* cites a predicted four to sevenfold increase in the volume of information flow by 1985. The study also notes an increase in the nation s dependence on information and communications services reflected by almost one million on line, interactive terminals installed in the U S. Finally, the *Report* recognizes an increase in interdependence among "previously autonomous institutions and services," *e.g.*, use of a library and information center network by the National Commission on Libraries and Information Scien (NCLIS).

Government Response. The study criticizes Federal agencies which have responded to "specific stimuli" in relation to information processing issues such as those raised in the *Freedom of Information Act* and the *Privacy Act*. It states that "as a general rule, [the agencies] have not considered in any systematic way the impacts they are having on government-wide policy development or even the information needs of their own agencies."

According to the *Report*, Congress' failure to address information issues directly has resulted in the formation of numerous study commissions. It

cites such national commissions as: the National Commission for Review of Federal and State Laws on Wiretapping and Electronic Surveillance; the National Commission on Libraries and Information Science; the National Commission on Electronic Fund Transfers; the National Study Commission on Records and Documents of Federal Officials; the National Historical Publications and Records Commission; the Commission on Federal Paperwork; the Privacy Protection Study Commission; and the National Commission on New Technological Uses of Copyrighted Works.

The *Report* added that the Executive Branch has also failed to address information issues directly. It states that the Office of Telecommunications Policy (OTP), the Domestic Council Privacy Committee, and the previous Office of Presidential Science Adviser, could have helped to coordinate information policy. Instead, the study said, these offices have been so "beleagured by constant proposals for their abolition, by inadequate resources, and by limited authority that such a role has been impossible."

Recommendations. In addition to the formation of the proposed Office of Information Policy, Executive Office of the President, the *Report* recommends creation of an Inter-Agency Council on Information Policy. The Inter-Agency Council would be composed of "high-level" agency representatives, and chaired by the director of the Office of Information Policy. The study also suggests the formation of an Advisory Committee which would include representatives from the private sector, local government, as well as academicians and professionals concerned with information policy issues. The *Report* states that the Office of Science and Technology's (OSTP) Presidential Science Adviser "should be the primary focus of policy with respect to science information."

FCC ISSUES 'MEMORANDUM OPINION AND ORDER' ON AT&T'S DATASPEED 40/4 TERMINAL DEVICE, EXPANDED NEW COMPUTER INQUIRY SUGGESTED

The Federal Communications Commission (FCC) last month issued a *Memorandum Opinion and Order* explaining its approval of tariff filings for AT&T's Dataspeed 40/4 terminal, first announced last November. (see *Washington Report*, 12/76) The FCC said it is not yet convinced that the Dataspeed 40/4 is a data processing device, and that AT&T can provide the Dataspeed 40/4 service because the service is construed to be primarily data communications. AT&T is forbidden from offering a data processing device by the FCC's *Computer Inquiry* and the Department of Justice's 1956 *Consent Decree*.

In January, IBM Corp. filed a petition seeking review of the Commission's decision to be made by the U.S. Court of Appeals for the Second Circuit. Also last month, the FCC denied a request by the Computer and Communications Industry Association (CCIA) for a stay of the January 19th effective date of the order.

As an expansion of the new *Computer Inquiry*, the Commission also suggested, in the *Memorandum Opinion and Order*, a reexamination of those data processing functions performed outside of the host computer, *i.e.*, in terminal devices. Thus, FCC Chairman Richard E. Wiley said that the decision

should be viewed in the context of "overall inquiry and rulemaking." Wiley added that the ruling should be interpreted as "a conclusion of transitory import."

Details of Decision. According to the *Order*,"If AT&T, as a common carrier, offered as a part of the Dataspeed 40/4 service the data processing capabilities of the central computer, the maximum separation policy [between regulated data communications and non-regulated data processing] would apply. However, under our rules as they currently exist, it would be inappropriate to attribute to the Dataspeed 40/4 the data processing functions of the non-AT&T provided or controlled computer in determining the tariffability of the Dataspeed 40/4 service offering."

The Commission stated that the terminal device combines elements of both data communications and data processing. According to the FCC, the storage and buffering features of the Dataspeed 40/4 are related to data processing However, the Commission added: "What is being offered is a communications service wherein minimal data processing functions are incorporated into the device in order to facilitate the efficient transmisison of data over the communications link."

The FCC maintains that the decision is contingent on subsequent action in the new *Computer Inquiry*. The Commission said it is requiring AT&T to provide the FCC with any information or changes in the Dataspeed 40/4 offering.

Wiley's Concurring Statement. In chairman Wiley's concurring statement, he suggested that if the earlier rules formulated in the original *Computer Inquiry* for computers were applied to terminals today, they might limit consumer choice among available communications devices. Wiley wrote. "The case is obviously a close one. Sound arguments can be advanced in support of either proposition Under such circumstances, it is neither surprising nor inappropriate that the Commission would consider the practical consequences for consumers if they are denied access to desired equipment "

According to Wiley, the new *Computer Inquiry* will be expanded to address: (1) To what degree, if at all, should data terminals be regulated?, (2) What safeguards would be necessary to protect consumers and prevent "predatory practices," if common carriers offered data terminals on an untariffed or unregulated basis ; (3) Does the 1956 *Consent Decree* enhance or retard competition in this facet of the communications equipment market?; and (4) What state regulatory provisions, industry practices, and Congressional mandates should the Commission recognize in exploring any possible rules for data terminal equipment?

'BILL OF RIGHTS PROCEDURES ACT' PROTECTING 'NON-AURAL' COMMUNICATIONS REINTRODUCED IN HOUSE AND SENATE

The *Bill of Rights Procedures Act of 1977*, designed to prevent the interception of "non-aural" communications, including computer data transmission, was reintroduced in the House and Senate last month by Rep Charles W Whalen, Jr (R-Ohio) and Sen Charles McC Mathias (R-Md.) The new bill,

H.R. 215, is based on the proposed *Bill of Rights Procedures Act of 1975*, H R 214, introduced in the 94th Congress (see *Washington Report*, 4/76) The Bill would also limit Federal access to personal records maintained by financial institutions, telephone companies and credit card issuers.

SCIENTIFIC INFORMATION ACTIVITIES TASK FORCE HOLDS FIRST MEETINGS TO CONSIDER NSF DIRECTOR RECOMMENDATIONS

The National Science Foundation (NSF) Scientific Information Activities Task Force, established to make recommendations to the director of NSF concerning the communication and use of scientific and technical information, held its first meetings in Washington last month The Task Force is empowered to review NSF's science information activities in the private sector as well as in the Federal government, including review of NSF's role in the planned activities of the President's Office of Science and Technology Policy (OSTP). It has also been formed to advise the director on NSF policy concerning the international transfer of U.S. scientific and technological information.

The January 14 meeting was attended by AFIPS Executive Director Robert W. Rector and AFIPS Washington Office Director Philip S. Nyborg. The Task Force will be active for one calendar year. It is anticipated that, during this same period, the topic of scientific and technical information will also receive attention from the Congress and the President's Committee on Science and Technology (PCST).

NEW STANDARDS PROPOSED BY NBS FOR COMPUTER I/O CHANNEL INTERFACE AND MAGNETIC MEDIA

Standards for a Federal *Computer Input/Ouput Channel Interface* and various magnetic media (*) were proposed last month by the National Bureau of Standards' (NBS) Institute for Computer Sciences and Technology (ICST). The proposed *Federal Information Processing Standard (FIPS)* for the *Computer Channel I/O Interface* specifies requirements for attaching peripheral controllers to a computing system NBS said that it is the first of a planned family of computer peripheral interface standards

Three proposed FIPS for magnetic media specify the recording characteristics for half-inch wide magnetic computer tapes at 6,250 characters per inch; quarter-inch wide magnetic tape cartridges at 1,600 bits per inch, and 0 150-inch wide magentic tape cassettes at 800 bits per inch Implementation of the standards is expected to allow Federal procurement from multiple sources.

NEWS BRIEFS

The FCC last month approved construction and operation of a domestic satellite specialized communications system by Satellite Business Systems (SBS), SBS, a partnership which includes Comsat General Corp.

IBM Corp., and Aetna Casualty & Surety Co., will reportedly provide digital transmission in approximately six months.

Last month, the FCC approved Telenet Communication Corp.'s operation as an international record carrier; details will appear in the March *Washington Report*.

The Department of Justice last month detailed examples of AT&T activities which Justice has called "anticompetitive," in response to 63 questions posed by Bell System attorneys; the Department charged in a 570-page reply to AT&T that the Bell System allegedly refused service to some competitors; at the same time, Justice charged that AT&T offered IBM Corp.'s domestic satellite venture, now called SBS, special consideration, allegedly denied to other terrestrial carriers.

Sen. Clifford P. Hansen (R-Wyo.) and Rep. Teno Roncalio (D-Wyo.) last month reintroduced to Congress the *Consumer Communications Reform Act*, similar to measures introduced last year (*Washington Report*, 5/76).

The Supreme Court in December upheld a decision by the U.S. Fourth Circuit Court of Appeals in Richmond that the FCC is empowered to determine what noncarrier equipment can be interconnected to the telephone network, the FCC rulings permit interconnection of non-carrier-supplied modems, PBXs, and other telephone apparatus, also in December, the FCC extended from January 1, 1977, to June 1, 1977, its deadline for registration of all new equipment connected to the network.

The National Commission on Electronic Fund Transfers (NCEFT) last month announced the Commission's proposed regulations (#) for implementation of the *Privacy Act of 1974*; the NCEFT also published for comment a listing of record systems maintained by the Commission (#) which are subject to the *Privacy Act*; both announcements appeared in the *Federal Register* on January 6, pp 1267 and 1317

The Federal Home Loan Mortgage Corp., an organization chartered by Congress in 1970, which buys and sells about $1 billion in mortgages each year, is now using the Automated Mortgage Information Network (AMINET) as a central clearinghouse for offers to buy and sell mortgage/loans.

Economic policy, regulatory and technical constraints limit the growth of telecommunications technologies, according to a recent Department of Commerce study, the report, entitled *Lowering Barriers to Telecommunications Growth* (#--enclose $3 25), was prepared in Commerce's Office of Telecommunications (OT).

booklet, titled *Lessons Learned About Acquiring Financial Management and Other Information Systems*, has been published by the General Accounting Office (GAO), it includes recommendations for developing and maintaining data communications systems in the Federal government.

The number of scholarly scientific articles has increased from 106,000 in 1967 to 151,000 in 1974 with the second greatest increase in computer sciences (immediately behind the environmental field), according to a new report (#) issued by the National Science Foundation (NSF) in December, titled *Statistical Indicators of Scientific and Technical Communication, 1960-1980, Vol. 1, A Summary Report*, the study examines the growth of scientific books, journals, reports, patents and dissertations

In December, NSF released a report summarizing statistics on industrial research and development by source of financing, character of work, and geographic distribution, the study is titled *Research and Development in Industry, 1974* (#--enclose $2.00).

A study that examines ways in which citizens' rights can be protected in emerging health data systems, prepared by Dr Alan F. Westin, professor of Public Law and Government at Columbia University, was issued last month by the National Bureau of Standards; the 401-page report, titled *Computers, Health Records, and Citizen Rights* (#--enclose $4.55), recommends that individuals be given a written account of how personal information will be used in health data systems.

NBS has announced publication of an *Annotated Bibliography of Literature on Resource Sharing Computer Networks* (#--enclose $2.45) containing approximately 1,000 references with critical annotations.

AFIPS IN WASHINGTON

AFIPS PROVIDES NOMINEES TO NATIONAL RESEARCH COUNCIL

AFIPS recently received a request from the National Research Council (NRC) Assembly of Mathematical and Physical Sciences (AMPS) to provide nominees for appointments to the various working groups within AMPS. NRC is the principal operating agency of the National Academy of Sciences and the National Academy of Engineering, AMPS has responsibility for studies in the mathematical and physical sciences, with respect both to the disciplines and their societal implications.

In a letter from Dr. Theodore J. Williams, AFIPS president, the following names were given based on an initial response by the AFIPS Board: for the Computer Science and Technology Board (CSTB), Dr. Herbert R. J Grosch, Dr. Carl Hammer, and Dr. Anthony Ralston; for the Committee on National Statistics and the Committee on Applications of Mathematics, Dr. Donald Thomsen, Jr.

NRC has for several months been considering the structure of computer science-related activities within the Academies. In December, 1975, the RC Computer Science Planning Group under Prof. Richard Karp (the group is also known as the Karp Committee"--see *Washington Report*, 1/76) met to consider this issue and to develop a list of possible topics which might be addressed by CSTB, if it were instituted The Karp Committee conducted its work within AMPS, and a separate group under Dr Ivan Sutherland (the "Sutherland Committee") worked in parallel within the Assembly of Behavioral and Social Sciences. Several reports were produced, including a joint Karp-Sutherland Report, these reports eventually led to the establishment of CSTB. The AFIPS Washigton Office is presently attempting to obtain futher information on the charter and agenda for CSTB

--P. Nyborg

MONITORING SCIENCE IN THE CARTER TRANSITION

The AFIPS Washington Office has through recent weeks monitored science-related activities in the transition to the Carter Administration. While not all relevant information can be publicly ascertained, it would appear that there has been relatively little activity related to appointments to scientific posts. There have, however, been appointments of individuals with scientific *credentials*, notably Secretary of Defense Harold Brown, previously president of Cal Tech.

Thus far, primary responsibility for science-related activities in the transition appears to have rested with Dr. Alfred Stern, formerly of Wayne State University in Michigan. In addition, IBM Chief Scientist Dr. Louis Branscomb has been functioning as head of an informal Science Policy Task Force.

It has been learned, however, that the Carter Transition Team did make inquiries to various science-related groups in the Federal government, including the House Committee on Science and Technology In addition, the Transition Team commissioned a private consultant to study "science policy options" in the White House; among other topics, this report addressed the possible consolidation of the new White House Office of Science and Technology Policy (OSTP) and the Office of Telecommunications Policy (OTP) The Transition Team also requested and obtained the services of two American Association for the Advancement of Science (AAAS) staff members to assist in science matters.

There have been many unsubstantiated rumors regarding the appointment of a new Presidential Science Adviser. According to the general science press, leading candidates appear to be Dr. Branscomb, Dr. Jerome Weisner (president of MIT) and Dr Wolfgang Panofsky (director of the Stanford Linear Accelerator Center)

--P Nyborg

The *AFIPS Washington Report* is researched and written by Pender M McCarter, Research Associate, AFIPS Washington Office AFIPS societies have permission to use material in the *AFIPS Washington Report* for their own publications, except where an article title appears with an "(*)," clearance must first be obtained from the AFIPS Washington Office Documents indicated by the symbol "(#)" are available on request to the AFIPS Washington Office Where price is noted, make checks payable to "AFIPS "

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Due date for stating intent to send a paper is June 30
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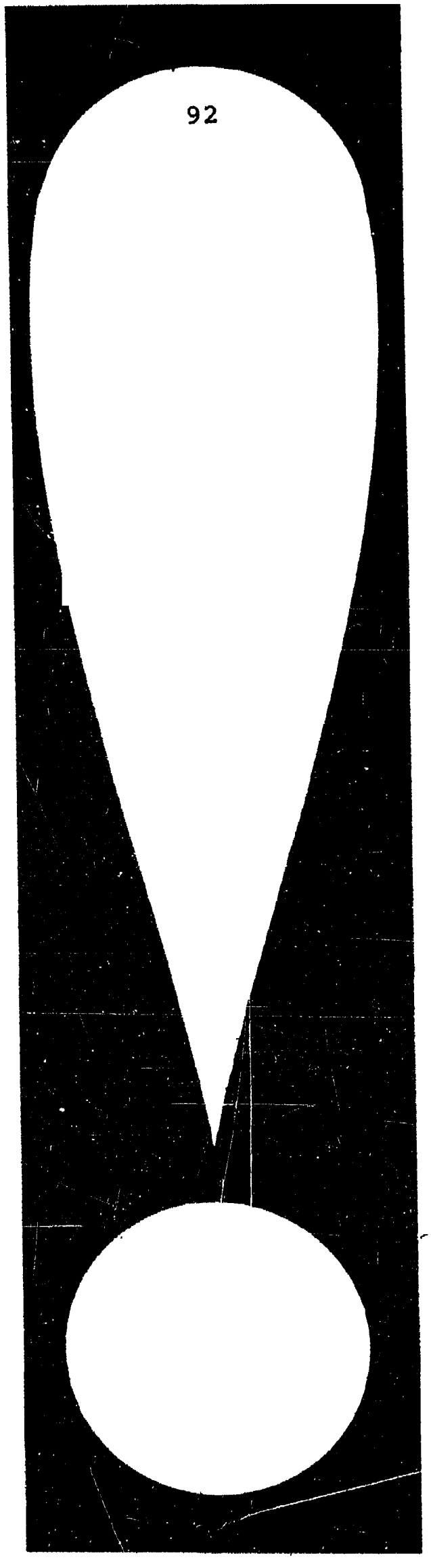
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