INFORMATION CHANGES,

CONCERNS, CHALLENGES:

Changing Role of Government
Changes and Challenges in Indexing
Concerns in Research
Challenges of Deposited Documents

March 8-9, 1977

Stouffer's National Center Hotel
Arlington, Virginia

Nineteenth Annual Conference

1977 NFAIS Annual Conference

Schedule of Events

Tuesday, March 8, 1977

- -

8 00 a m -5 00 p m — Registration
(Roanoke, Rappahannock, and James Rooms)

- -

9 00 a m 9 15 a.m	Welcome and General Program Introduction
Wecome.	*John E. Creps, Jr. NFAIS President Engineering Index, Inc.*
Program Outline	*Russell J. Rowlett, Jr. 1977 Conference Program Chairman Chemical Abstracts Service*
9 15 a m -10 45 a.m	Theme Session I The Changing Role of Government Information Programs
Chairman	*Hubert E. Sauter Defense Supply Agency*
	George P. Chandler, Jr. National Aeronautics and Space Administration
	Fred E. Croxton Library of Congress
	William M. Thompson Defense Documentation Center

11:00 a.m.-12:15 p.m. Continuation of Theme Session I

> *A. G. Hoshovsky*
> *Department of Transportation*
>
> *Peter F. Urbach*
> *National Technical Information*
> *Service*

12:15 p.m.-2:00 p.m. Lunch Break
(Attendees must make their own
arrangements)

2:00 p.m. 4:30 p m Theme Session II: Indexing, the
Key to Retrieval

Chairman. *Lois Granick*
American Psychological
Association

* Techniques Used in Printed
Indexes

A Keyword or Natural Language
Indexing

Joyce Duncan Falk
American Bibliographical
Center, CLIO Press

B. Thesaurus or Controlled
Language Indexing

Peter Clague
INSPEC

C Continuity Indexing

Ben-Ami Lipetz
Documentation Abstracts,
Inc

* Computer Generated Indexing
(re-indexing) for On-Line
Retrieval

Daniel U. Wilde
New England Research Applica-
tion Center

4.30 p.m.-5.30 p.m. NFAIS Assembly Business
Meeting

6:00 p.m.-8:00 p.m. Conference-wide Reception
(Decatur Room)

Wednesday, March 9, 1977

8:30 a.m.-2:00 p.m. — Registration
(Roanoke, Rappahannock, and James Rooms)

9:00 a.m.-11.45 a.m. Theme Session III: Current
Activities Related to
Abstracting and Indexing of
the National Science
Foundation Division of
Science Information

Chairman *Lee G. Burchinal*
National Science Foundation

(speakers to be announced)

— No coffee break this morning —

11:45 a.m.-12:30 p.m. Miles Conrad Memorial
Lecture

Dr. William O. Baker
Bell Laboratories

* * *

Dr. Baker has long been active in scientific and technical information matters at a national level. He chaired the panel of the President's Science Advisory Committee that authored the landmark study "Improving the Availability of Scientific and Technical Information in the United States" (The Baker Report) in 1958 He also served as chairman of the Science Information Council of the National Science Foundation from 1959 through 1961 and was a member of the Weinberg Panel that produced the report "Science, Government, and Information" in 1963. He currently is a member of the Board of Regents of the National Library of Medicine, a director of Annual Reviews, Inc., a member of the National Commission on Libraries and Information Science, and a participant in many other important national committees and commissions.

The Miles Conrad Memorial Lecture was established to honor G. Miles Conrad, first president of NFAIS This lecture is "to be presented every year at the Annual Meeting of the Federation by an outstanding person on a suitable topic in the field of abstracting and indexing, but above the level of any individual service."

* * *

12 30 p m 2·00 p m	Conference Luncheon (Decatur and Farragut Rooms)	
2 00 p m -4 30 p m	Theme Session IV Deposited Documents and Other Evolving Publication Media	
Chairman	*James L Wood* *Chemical Abstracts Service*	

Karl F Heumann
Federation of American,
   Societies for Experimental
   Biology

Larry X Besant
The Ohio State University

Albert L Batik
American Society for Testing
   and Materials

NFAIS

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PUBLICATIONS

NEWSLETTER

N1   NFAIS Newsletter Subscription - $25 per calendar year (issued bi monthly) Separate issues available at $5 00 each

REPORT SERIES

R2   Position Statement on SATCOM Report, January, 1970. $5 00

R6   National Federation of Abstracting and Indexing Services Member Service Descriptions, July, 1973 $5.00

R7   Science Information Services in an Environment of C*a*e* *·* *s* *·* *·* *·* *·* *·* *·* *V* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·* *·*

R8   USSR/USA Scientific and Technical Information in Perspective, Dale B. Baker (1974 Miles Conrad Memorial Lecture) September, 1974 $5 00

R9   Science Literature Indicators. Project supported by NSF OSIS Contract C873 May, 1975 $5 00

OTHER FEDERATION PUBLICATIONS

FP10   1975 Miles Conrad Memorial Lecture, Melvin S. Day (Published in NFAIS Newsletter Apr I 1975 issue). $5 00

FP11   On Line Commands Chart (A Quick Users Guide for Bibliographic Search Systems) Barbara Lawrence and Barbara G Prewitt May, 1975 $1 00

FP12   KEY PAPERS (On the Use of Computer-Based Bibliographic Services) Joint publication with American Society for Information Science October, 1973 $10 00 (ASIS & NFAIS Members $8.00)
NOTE· Contains Federation Report No 3, Data Element Definitions for Secondary Services June, 1971, and Report No 4, The Canadian National Scientific and Technical Information (STI) System, A Progress Report Jack E. Brown (1972 Miles Conrad Memorial Lecture, May, 1972)

CP1   1971 Conference Digest, Washington, D C , 1971 $10 00

CP2   1970 Conference Digest, Boston, Mass , September, 1970 $7 50

CP3   1969 Annual Conference Proceedings, Raleigh, N C., September, 1970 $10 00

CP4   1963 Annual Meeting of NFSAIS, Washington, D C , March 20-22, 1963 (Contains the National Plan for Science Abstracting and Indexing Service prepared by Heller Associates) $4.50

CP5   1962 Annual Meeting of NFSAIS, Boston, Mass, March 28-30, 1962 January, 1963. $3 50

American Association for the Advancement of Science

SECTION ON INFORMATION AND COMMUNICATION—T
JOSEPH BECKER, Secretary

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	John W. Murdock Informatics, Inc.

NEW FELLOWS OF SECTION T

Lee G. Burchinal

Ruth M. Davis

Odom Fanning

ANNUAL MEETING - DENVER - FEBRUARY 20-25, 1977

EMERGING NATIONAL AND INTERNATIONAL POLICY ON INFORMATION   Frame 61

BEYOND GUTENBERG: COMMUNICATION WITHOUT PAPER?   Frame 63

A CYBERNETIC APPROACH TO ASSESSMENT OF CHILDREN   Frame 64

INTERNATIONAL COMMUNICATION IN BIOMEDICAL RESEARCH   Frame 66

THE MANY FACES OF INFORMATION SCIENCE   Frame 67

The following frames contain lists of participants and summaries of symposia as furnished by organizers in the fall of 1976.

EMERGING NATIONAL AND INTERNATIONAL POLICY

ON INFORMATION

Arranged by L. B. Heilprin (University of Maryland); with
    E. B. Adams (George Washington University): A. A. Aines
    (National Science Foundation); and, G. Chacko (University
    of Southern California)

Tuesday, 22 February   Holiday Inn, Silver Plume

9:00 a.m.   Presiding: Elizabeth B. Adams (Assoc. Prof., Management,
                    George Washington University)

               Impact of Science and Technology on Information Systems
                    Joseph C. R. Licklider (Prof. of Electrical Eng., MIT)

               Impact of New Technology on National Copyright Policy
                    Arthur J. Levine (Natl. Comm. on New Technol. Uses
                    of Copyrighted Works)

               FCC Policy Towards Computers and Communication
                    Donald A. Dunn (Prof. of Eng. Econ. Systems,
                    Stanford University)

               Are there "Responsible Computer Systems" and is a
                    National Policy in Sight?
                    Ruth M. Davis (Dir., Inst. for Computer Sciences
                    and Technol., Natl. Bur. Standards)

               Discussants: Elizabeth B. Adams, Ruth M. Davis,
                    Donald A. Dunn, Arthur J. Levine, and Joseph
                    C. R. Licklider

3:00 p.m.   Presiding: · Laurence B. Heilprin (Prof. Emer. of
                    Info. Science, University of Maryland)

               Conflict and Agreement Between National and International
                    Policy on Copyright
                    Barbara A. Ringer (Register of Copyright, Library
                    of Congress)

               Global Probems in International, Information Sharing
                    Andrew A. Aines (NSF and Natl. Comm. on Lib. and
                    Info. Science)

               Is an Interntional Policy or Meta-Policy on Information
                    in Sight?
                    Donald G. Fink (Exec. Consultant, IEEE)

               Discussants: Andrew A. Aines, Lewis M. Branscomb,
                    Donald G. Fink, Laurence B. Heilprin, and
                    Barbara A. Ringer

Evidence that the post industrial society is an information society includes proliferation of data and information; a growing community of researchers and writers, processors and disseminators; increase in number and variety of channels that handle and deliver information; institutionalization and internationalization of information systems, networks, programs. A few countries, with the United States in the van, are emerging as information societies employing electronics as key means of information banking and delivery. As we enter this age economists, political scientists, sociologists, legislators and public administrators deal increasingly with issues which may emerge as a composite national policy on information. In parallel, international issues and policies are taking shape. The morning session will consider national policy.

The afternoon session will extend the discussion to international policy. Special emphasis will be placed on needs of developed and developing countries and on information barriers that separate them, including the imperative to remove barriers as wisely as possible.

Each session will end with a "blue sky" discussion, open to the floor. They will consider such matters as obstacles to flow of knowledge in existing national and international channels; possible impacts of yet new telecommunication technology; need for policies concerning conduits of knowledge and the flow of scientific and technical information; and the need to facilitate the one-world global village thrust deriving from the information technology and other revolutions.

(Sponsored by AAAS Section T. cosponsored by Section P and by the American Society for Information Science)

BEYOND GUTENBERG: COMMUNICATION WITHOUT PAPER?

Arranged by Harold E. Bamford, Jr. (Program Director, Access Improvement
    Program, National Science Foundation, Washington, D.C.)

Wednesday, 23 February   Holiday Inn, Cripple Creek

9:00 a.m.   Presiding: Harold E. Bamford, Jr.

              An On-Line Intellectual Community
                  Dr. Murray Turoff

              Getting and Using Scientific Information at a Computer
                  Terminal
                  Dr. William Paisley

              Access to Computer-Readable Data and Literature
                  Dr. Roger Summit

              Recording Newly Discovered Information
                  Mr. David Staiger

              Toward an Integrated Communication System
                  Dr. George Chacko

        Even if the paper-based communication system of science can
continue to expand with the body of knowledge and the population of
users, it offers little hope that scientific information will ever be
much more readily accessible than it is today. An attractive alternative
may result from the marriage of computer technology with telecommunications
The panel will discuss various options of this electronic alternative,
considering their likely impact on user productivity and demand for
information services, their technical and economic feasibility, their
legal and policy implications, and obstacles to their realization. In
preparing their presentations the panelists will have engaged each other
over a period of months in computer conference, one of the techniques
which they will discuss.

        (Sponsored by AAAS Section T)

TOWARD THE HUMAN USE OF HUMAN BEINGS:

A CYBERNETIC APPROACH TO ASSESSMENT OF CHILDREN

Arranged by Mark N. Ozer (Assoc. Prof. Child Health & Development,
George Washington School of Medicine, Washington, D.C.)

Wednesday, 23 February   Holiday Inn, Silver Heels

3:00 p.m.   Presiding: Frank Baker (Dir. Div. Commun. Psych.,
             SUNY, Buffalo, N.Y.)

           The Joint Regulation of Infant-Child Interaction
             T. Berry Brazelton (Assoc. Prof. Ped., Harvard
             Med. Sch., Boston, Mass.)

           A Cybernetic Approach to Psychological Testing
             Irving E. Sigel (Educational Testing Service,
             Princeton, N.J.)

           Cybernetic Testing
             Bernard Brown (Div. Res. & Eval., Off. Child Devel.,
             Washington, D.C.)

           Assessment as an Interactive Process
             Mark N. Ozer

           Discussants: William Powers (author, Northbrook, Ill.)

      Historically, cybernetics has tended to focus on the interaction
between people and machines. Cybernetic issues of control and feedback
of information are to be explored in this symposium as they relate to
human interaction. The application of these issues to human systems
requires an awareness of the sharing of control and informational
feedback as the aspect to be highlighted. More specifically, the
assessment of children will be explored as a place to illustrate the
value of this concept. The traditional testing process has viewed
the subject as someone who is to be manipulated by the examiner. The
application of a cybernetic approach to assessment offers a model for
the revision of the power relationship that has direct relevance to
the process of child development. The examiner is intent upon the
effects of the very process of examination on the person being assessed.
In order to sample the process of child development, the examiner must
now stimulate it. The individual being examined must become aware of
some reciprocal effect upon the examiner as a simulation of what
happens in the natural process of growth and development. Assessment
is viewed as more nearly an interactive process between the individuals
involved. The person being examined is no longer merely subject to the

examiner. With even rather young children, it becomes possible to
make such reciprocal effects explicit by providing feedback as to the
value of the input provided to the interaction. It is the feedback
as to the reciprocity of the relationship that is the crucial parameter
that distinguishes the human use of cybernetic concepts.

(Sponsored by the American Society for Cybernetics and AAAS
Sections J, T, and Q)

SCIENCE INFORMATION

INTERNATIONAL COMMUNICATION FOR

RESEARCH IN BIOMEDICINE

Arranged by Arthur W. Elias (Director of Professional Services,
     BioScience Information Service, Phila., Pa.)

Wednesday, 23 February   Denver Hilton, Beverly

3:00 p.m.   Presiding: Arthur W. Elias

               Communications for Research in Biomedicine in the
                    United Kingdom and Commonwealth Countries
                    Brian Perry (British Library)

               Communications for Research in Biomedicine in
                    Western Europe
                    Rolf Fritz (Dimdi)

               Communications for Research in Biomedicine in Canada
                    George Ember (National Research Council)

               Communications for Research in Biomedicine in
                    Scandinavia
                    Goran Falkenberg (MIC, Karolinska Institutet)

               Communications for Research in Biomedicine in the
                    United States
                    Mary Corning (National Library of Medicine)

               Communications for Research in Biomedicine in UNISIST-
                    The World System
                    Lee Burchinal (National Science Foundation)

     The symposium will attempt to bring together authoritative
decision makers in the fields of biomedical information retrieval
from the scientific world. It will try to redate national activities
of the present in supporting biomedical research through information
activities and to forecast future impacts and developments. In
addition to national plans, the symposium will attempt global
perspectives in relation to regional cooperation (eg. EEC) and
overall programs (UNISIST).

     (Sponsored by AAAS Section T)

THE MANY FACES OF INFORMATION SCIENCE

Arranged by' Edward C. Weiss (Program Director, Information Science
    Program, Division of Science Information, National Science
    Foundation, Washington, D.C.)

Friday, 25 February   Denver Hilton, Denver

9:00 a.m. Presiding: Edward C. Weiss

> An Integrated Theory of Information Transfer
>   William Goffman (Dean, Sch. of Lib. Science, Case
>   Western Reserve University)
>
> Theoretics of Information for Decision-Making
>   Marshall C. Yovits (Chm., Dept. of Computer and Info.
>   Science, Ohio State University)
>
> Information Structures in the Language of Science
>   Naomi Sager (Linguistic String Project, N.Y. University) ·
>
> Knowledge Transfer Systems
>   Donald J. Hillman (Dir., Center for Info. Science,
>   Lehigh University)
>
> The Portent of Signs and Symbols
>   Vladimir Slamecka (Dir. School of Info. and Computer
>   Science, Georgia Institute of Technology)

This symposium will examine the various faces of information
science as an emerging discipline. The growth in the development
of digital technology in the last quarter century has been phenomenal,
yet there is 'a surprising mismatch between the high capacity of the
technology and the logical level at which it is employed for
information and retrieval. The problem appears to be with the state
of the discipline itself; we have been trying to develop and apply a
technology without having a well-developed scientific foundation upon
which to support it. A discipline rests on three major parts: a
science, applications, and education; each part must support the
others. In information science, the weakest component today is the
science itself. Two questions emerge: what does information science
consist of and how can we strengthen it to provide a sound theoretical
structure from which future applications will derive. The purpose
of this symposium is' to review the current status and explore
possibilities for break-throughs.

(Sponsored by the American Society for Information Science and
the AAAS Section T)

New Journal

journal of
PRAGMATICS

An Interdisciplinary Quarterly of Language Studies

Aims and Scope

In recent years, linguists and workers in neighboring disciplines have developed an increasing interest in human linguistic activity (as opposed to the description of language systems). This interest has especially focused on the social aspects of the use of language (sociolinguistics, language acquisition, teaching of foreign languages, "language in context", theory of speech acts as a part of a general theory of social action, etc.) This interest is a clear consequence of the growing insight that every human activity (including linguistic activity) is *social* in nature.

The need for a study of language use has been manifest for a long time. Pragmatics, as a theoretical discipline, has formulated many of its problems in the area of the theoretical foundations. Its further development will help to clarify our understanding and practical knowledge of language as one of man's tools for social as well as 'societal' interaction.

The JOURNAL OF PRAGMATICS is the first journal to aim at creating a theoretical foundation for pragmatic studies of language, and will cover all aspects involved It will attempt to bridge the gap between the developing fields of sociolinguistics, psycholinguistics, man-machine interaction, applied linguistics, and several other areas.

The advisory editors will not only act as specialists in their respective fields, but will furthermore attempt to integrate developments originating in different (scientific as well as geographical) areas, thereby providing a forum for mutual information and increased debate on ongoing research and practical projects. Linguists, anthropologists, philosophers of language, as well as workers from related fields will find much of interest in the articles now being prepared for the forthcoming issues by experts in the various areas of linguistic pragmatics.

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afcet

AUTOMATIQUE

INFORMATIQUE

MATHÉMATIQUES APPLIQUÉES

RECHERCHE OPERATIONNELLE

DIVISION THEORIE ET TECHNIQUE DE L'INFORMATIQUE

PRESENTATION DES ACTIVITES DU GROUPE DE TRAVAIL

"Analyse et Expérimentation dans les Sciences de l'Homme
,par les Méthodes informatiques"

POUR L'ANNEE 1977

INFORMATIQUE INTERACTIVE ET SCIENCES DE L'HOMME

SYSTEMES-ET LANGAGES INTERACTIFS

COMME ELEMENTS CONCEPTUELS DANS

L'ELABORATION D'UNE DEMARCHE EXPERIMENTALE.

EN SCIENCES HUMAINES

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Le développement rapide des méthodes et techniques interactives et l'utilisation croissante de systèmes et/ou de langages interactifs dans des démarches expérimentales dans les sciences humaines ont conduit le groupe de travail de l'A.F.C.E.T. "Analyse et expérimentation dans les sciences de l'homme par les méthodes informatiques" à organiser ses activités, pour cette année, autour du thème général "Informatique interactive et sciences de l'homme". L'étude approfondie de certains aspects de ce thème contribuera à éclairer un ensemble de questions liées à l'introduction de ces méthodes dans les disciplines des sciences de l'homme. Cette réflexion permettra, sans nul doute, de faire émerger des axes de recherche dont les objectifs correspondent à ceux que le groupe s'est fixé lors de sa création, il y a maintenant plus d'un an.

Des travaux technologiques importants ont abouti à la conception d'organes d'entrée-sortie très sophistiqués - télétypes, affichage visuel alphanumérique, graphique, claviers spéciaux, photostyles, etc. - appropriés au dialogue homme-machine. Parallèlement à leur réalisation, de nombreux logiciels interactifs-systèmes, langages, procédures orientées, etc. - ont été développés, implémentés, et rendus opérationnels. L'expérience montre que de tels dispositifs - ordinateurs, interfaces, logiciels - ont été utilisés pour contribuer à résoudre une large variété de problèmes dans un nombre très divers de disciplines. Des études sur les différents modes d'interaction impliqués par ces travaux ont porté essentiellement sur les aspects techniques des liaisons, sur ceux des systèmes et de la communication et enfin sur le comportement psychologique des utilisateurs. Néanmoins les modalités d'insertion de telles machines, tant du point de vue méthodologique que du point de vue technique, dans des dispositifs expérimentaux n'ont que rarement fait l'objet de recherche spécifique et approfondie. L'une des raisons essentielles de cette lacune réside dans le fait que ce type de réflexion se situe à la frontière des méthodes de l'informatique interactive et de celle du domaine qui les utilise.

La complexité de la structure des données et des traitements à opérer - analyse et statut des données par rapport à certains objectifs, formulation d'hypothèses, détermination de modèles, évaluations et validations des résultats, etc. - dans le domaine des sciences de l'homme pose de manière plus aigue le problème de l'insertion et de l'utilisation des méthodes et techniques interactives dans la conduite d'expériences. L'examen des questions liées à cette introduction devraitconduire à dégager des thèmes de réflexion sur la contribution méthodologique de ces éléments dans la conception et l'élaboration de toute expérience, ainsi que sur les modifications éventuelles que ces méthodes peuvent apporter dans le déroulement du processus expérimental.

L'inventaire raisonné des possibilités conceptuelles offerts par les méthodes interactives et leur intégration logique dans tout dispositif expérimental fondent le programme des activités du groupe de travail qui sera en conséquences centré sur le sujet suivant : Systèmes et langages interactifs comme éléments conceptuels dans l'élaboration d'une démarche expérimentalè dans les sciences de l'homme".

PROGRAMME DES SESSIONS

Ce programme se décompose en 4 sessions.

1/ La première sera consacrée à l'étude comparative de deux dispositifs interactifs en relation avec la conception architecturale (Vendredi 11 Février 1977).

2/ La problématique de l'insertion des méthodes interactives dans un dispositif expérimental en sciences humaines fera l'objet de la deuxième session, qui durera 2 journées, les 17 et 18 Mars 1977.

3/ La troisième portera sur l'étude du développement des méthodes interactives en sciences humaines (juin 1977).

4/ Enfin la quatrième session fera la synthèse de ces travaux dans le cadre d'un atelier organisé parallèlement au déroulement du congrès de l'A.F.C.E.T. "Modélisation et Maîtrise des systèmes" qui se tiendra à Versailles les 22-23-24 Novembre 1977.

Les Animateurs : E. CHOURAQUI
J. VIRBEL

xx Pour tout renseignement ou prise de contact concernant le groupe de travail et le programme de l'année 1977, s'adresser à : E. CHOURAQUI ou J. VIRBEL
C.N.R.S.-L.I.S.H.
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13274 MARSEILLE Cédex 2
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AUTOMATIQUE

INFORMATIQUE

MATHÉMATIQUES APPLIQUEES

RECHERCHE OPÉRATIONNELLE

DIVISION TTI

GROUPE DE TRAVAIL
_____

"Analyse et Expérimentation dans les Sciences de l'Homme
par les Méthodes informatiques"

_____

Animateurs : E. CHOURAQUI, J. VIRBEL

C.N.R.S.-L.I.S.H.
31, Chemin Joseph Aiguier

13274 MARSEILLE Cédex 2

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THEME DES ACTIVITES : "Informatique interactive et sciences de l'homme"

Systèmes et langages interactifs comme éléments con-
ceptuels dans l'élaboration d'une démarche expérimen-
tale dans les sciences de l'homme.

_____

SESSION 1
_____

DATE : Vendredi 11 Février 1977 à 10 Heures (toute la journée)

LIEU : Ecole d'Architecture de Marseille-Luminy
        Salle de Conférence du GAMSAU

TITRE : Présentation et Comparaison des objéctifs et des hypothèses d'utilisation
        d'ARLANG et de TROPIC

INTERVENANTS : M. LATOMBE, ENSEGP (Grenoble)

                MM. AUTRAN, FREGIER, RODRIGUEZ, ZOLLER, GAMSAU (Marseille-Luminy)

RESUME :

L'idée essentielle du Système TROPIC est de permettre au concepteur de décrire un problème en termes principalement déclaratifs pour obtenir une solution produite automatiquement par le système. Celui-ci est suffisamment général pour permettre de travailler dans des disciplines différentes. Il met en oeuvre des techniques d'Intelligence Artificielle dont les éléments les plus intéressants sont : la représentation des connaissances en items, un mécanisme de sélection des connaissances utiles, l'application d'une stratégie descendante, la collaboration de deux programmes de résolution de problèmes, une technique de retour (backtrack) évoluée et une procédure d'apprentissage.

Le but du langage ARLANG est de fournir aux concepteurs de l'aménagement un outil de description des données et de recherche de solutions à leurs problèmes par des procédures interactives compatibles avec leur pratique ou entraînant des modifications acceptables de leur démarche.

Le concepteur décrit les données sous forme d'arborescence de description munie d'opérateurs "et" et "ou".

La recherche de solutions s'effectue par l'écriture de blocs de programmes permettant :

        - de réaliser des algorithmes de <u>traitement</u> des données décrites

        - de spécifier la <u>sémantique</u> opératoire de relations descriptives

        - d'obtenir des <u>données dynamiques</u> décrites potentiellement et générées
          par algorithmes.

Ces différentes actions autorisent la création et l'enrichissement d'une base données, à chaque modification correspond alors un état de la base qui peut être conservé s'il est jugé pertinent par le concepteur. L'ensemble des états conservés constitue la trace du processus de conception.

Stanford Phonology Archive Invites Retrieval Requests

The Stanford Phonology Archive is an NSF-sponsored project whose goal is to compile a computer-accessible file of phonetic and phonological information based on an areally and gentically balanced sample of 200 languages (including the 11 most widely spoken languages in the world). Operationally, the Archive staff analyzes, encodes, and computerizes information found in published phonetic and/or phonological descriptions, so that data from different languages can be accurately and meaningfully compared. The project, which began in 1971, is currently in its final compilation and formalization stages.

One of the Archive's major functions is to provide a usable information retrieval service to members of the linguistic community. Some of the topics which compose the Archive's data base include: specific phonetic segments and/or phonological processes (or classes of segments or processes), the frequency or areal distribution of segments or processes; systems of phonemic contrasts for classes of segments (such as tones, nasal consonants, oral vowels), patterns of segment alternations (allophonic or morphophonemic), the effects of specific segments in proximate conditioning environments; phonotactic constraints in various word and syllable positions; descriptions of stress-accent systems or syllable structure.

Extensive use has been made of the Archive's data base, and some sample requests submitted and answered include:

- Are assimilation rules primarily preservatory (progressive) or anticipatory (regressive)?
- What are the phonotactic constraints on word and syllable-initial consonants?
- How is the distribution of front rounded vowels limited areally?
- Does every language which has rising tones also have at least one falling tone?
- Do nasalized vowels tend to be more mid in height than corresponding oral vowels (i.e., lowered if high, raised if non-high)?
- In stop systems with a voicing contrast, which segments are more frequently missing from a complete phonemic paradigm?
- What is the most common environment for the voicing of voiceless obstruents; for the spirantization of stops, for shifts in point of articulation; for vowel backing or fronting, for nasalization?

All retrieval services are currently performed free of charge upon request. The Archive staff, however, places the following limitations on its capacities: (1) since they are still in the process of refining and evaluating material, some of the information in the Archive is still in "draft form"; (2) the Archive contains no syntactic, lexical, or textual data for any language; (3) the Archive is completely synchronic; (4) although most correspondence is answered as it is received, there may be occasional delays in processing.

The specific fields of data available for searching are described in greater detail in a publication entitled *A Reference Manual and User's Guide for the Stanford Phonology Archive.* Copies are available for $5 00 from Dept of Ling, Stanford U, Stanford CA 94305