DCE 27-APR-72 17:21 10248

Visit Log: Sam Rosenfeld, NASA Ames Research Center

Sam Rosenfeld, NASA Ames Research Center, 239-18 Moffett Field, Calif 94035 -- Phone: 965-5717. He came by on a get-acquainted visit. We talked for about two hours, first about ARC's work, and then about his (during which we made the following notes on line): 1

Some of his background: 2

Early 63, at MITRE, helped develop ROUT, a full-text, coordinate-index retrieval system. Had 1500 Teletype messages as the corpus. Had automatic indexing -- via a process that analyzed the text. 2a

Kept on in retrieval field; past coordinate indexing, toward more advanced techniques. 2a1

Did some work on speech recognition, too. 2a2

Then, in University (Harvard) environment, worked on computer-display techniques, trying to find intellectual problem areas for which he could provide more real aid in visualizing and working, with very abstract problems. Worked with an IBM test, which was designed for programmer testing, and worked up techniques for on-line visualization aids. Results -- depended very much on the ingenuity of the subject; the problem area and data base seemend not the best; and the PDP4 wasn't up to giving very full or responsive service (and hard to develop the instrumentation within the computer). 2b

After Harvard, worked as a consultant in info-science area. 2b1

Then (about 1969) went to NASA Headquarters, Wash.; ran Information Sciences Branch, until the research division was wiped out (like end of 1970). Then worked within the Data Processing (Now called Information Systems, or ??), and set up an Artificial Intelligence Program, involving lots of outside contracts and grants (including at SRI's AI group). 2c

Recently has come to AMES to become a more active researcher in AI and other related areas. Trying to set up a program now, sort of working to represent information in meaningful memory (e.g., some complete description of a particular domain of interest -- like "the world of cooking.") 3

Specially interested in developing a model of meaningful human memory, and the possibility of organizing computer information storage in some similar form of representation. Feels that possibly this representational problem is one of

the key problems in AI. (For instance, the representation of a simple-seeming sentence perhaps is so rich that the understanding and inference the human mind leaps to is based upon the richness of the previously stored model(s).) 3a

Also running an external-grants program, in more or less related domains. 3b

About possible shared areas of interest with ARC: 4

Information retrieval; use of displays for doing such things as editing, or ... 4a

Possibilities of representation, and portrayal generation would seem (in my terms) to be a significant mutual area.) 4b

We discuss aspects of methodology in exploration, AI, augmentation, etc. 5

The evolutionary, pragmatic way we do it, as contrasted, for instance, with the "bloom, fade, forgotten" flashes of ingenuity and hard work, done in disconncted environment. 5a

He agrees in principle, and has made statements recently about the losses that are frequently experienced from the fading and forgetting -- only it is hard in practice to change things. 5a1

After he left, I made the following notes: 6

I gave a very sketchy introduction to some of our Boostrap Community concepts, about how we aim at providing via network technology an environment within which many system-R&D groups can collaborate in a pragmatic, evolutionary way -- each group working within a well-seasoned, whole-system environment. As an example, I pointed out how an IR group could use our Journal corpus, and the retrieval/access needs of the collaborating users, as a very unique test bed for their evolutionary developments. 6a

We'll require further discssions to explore mutual interests and possibilities, but we made no specific plans. 6b

DCE 27-APR-72 17:21 10248

Visit Log: Sam Rosenfeld, NASA Ames Research Center

(J10248) 27-APR-72 17:21; Title: Author(s): Douglas C. Engelbart/DCE; Sub-Collections: SRI-ARC; Clerk: DCE;

DOE 27-APR-72 17:25 10249

Barb: Please send a copy of this message (in its Journal-printout form), together with a copy of (10248,), to Sam Rosenfeld. His address is in (10248,1). Thanks, Doug. 1

(J10249) 27-APR-72 17:25; Author(s): Douglas C. Engelbart/DCE;
Distribution: Barbara E. Row/BER; Sub-Collections: SRI-ARC; Clerk: DCE;

JBN 28-APR-72 7:54 10251

Notice of Tom Martin speaking at local ASIS

ARC - Tom Martin of Stanford's Institute for Communications Research will speak on online interaction in bibliographic search at the local meeting of ASIS May 9 at the Golden Pavilion Restaurant in Los Altos. See notice in Meetings binder in Reading Area. 1

JBN 28-APR-72 7:54 10251

Notice of Tom Martin speaking at local ASIS

(J10251) 28-APR-72 7:54; Title: Author(s): Jeanne B. North/JBN; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: JBN;

PERC Minutes 26-Apr-72 1

Attendees DCE, CHI, MDK, RWW, WHP: 2

The following topics were discussed: 3

A schedule was worked out for DCE to visit each of the planning teams to get orinted on where they are at; each pusher knows the date and time for his teams meeting. 3a

DCE indicated that he wanted a hardcopy on the shelf of the plans evolving for each planning team and he met with PR, JCN CHI to set such a mechanism up using green binders. He indicated it was each pushers responsibility to see that in fact his teams plans get in the notebook. 3b

Rww objected that through journal mechanisms and PSO services updates to these plans should be able to get to the hardcopy collection through appropriate mechanical and people procedures. RWW will discuss the problem with operations. 3b1

DCE's position is that it will be the individual pushers's responsibility; his enlisting PSO help is perfectly appropriate, but done on his responsibility. 3b2

DCE indicated that he had a memo outlining the format and topics he would like to see in the planning documents in the works. 3c

The question of supporting DNLS over the net from IMLACS was discussed. DCE expressed concern over the computer and people resource drain to support DNLS over the net. It was pointed out by CHI that we were already committed to experimental use with at least UCLA and RWW pointed out that RADC is getting three IMLACS and that it would be good for people outside to use DNLS if they had the faciloitiies. 3d

RWW and CHI will meet and define the tasks needed to support experimental use of DNLS. 3d1

The needs seem to be Documentation (user and system), some mods to the net code restricting net users from using RUN files, some handholding to get started and possibly some restrictions on hours in which net users can experiment with DNLS> 3d1a

Ann Harringtons candidacy for employment was discussed ad it

was decided to get additional reference information before a final decision. 3e

Topics for further development of LINAC were raised for discussion at the next meeting involving definitions of responsibilities and authoriies of pusher roles and general allocation of resources. 3f

With WSD's planned shift to being an independent software contractor the question of how and under what conditions to subcontract to outside contractors was discussed. 3g

Questions raised were 3g1

communications problems with remote people which exist because of the limited face to face contact and opportunity for constant informal dialog. 3g1a

types of work suitable for being done by remote people and outside contractors (for example RWW felt that many of the communications problems could be minimized if remote or outside people could work on fairly well defined short term tasks; WHP pointed out that we don't tend to have many such tasks and that when MPS is used as the basis for NLS, then less communication between programmers should be needed to keep up with current folklore) 3g1b

the future location of WSD's IMLAC (phone lines and terminals can't be provided by ARC-- the IMLAC will return to ARC for other use) 3g1c

SRI'S policy toward outside consultants (DIA's consultant status in essentially a full time mode is unsatisfactory by new regulations affecting government contractors; therefore he probably needs to shift to being an SRI employee) 3g1d

The cost of maintaining a remote employee (full SRI overhead plus communication and terminal costs) 3g1e

3g1f

4

5

PERC Minutes 26-Apr-72

(J10252) 28-APR-72 10:50; Title: Author(s): Richard W. Watson/RWW; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC SRI-ARC; Clerk: RWW; Origin: <WATSON>PERC2.NLS;5, 28-APR-72 10:48 RWW ;

As we discussed, I asked Duane Stone of RADC (in a telephone conversation today) if they would be willing to consider loaning two or three of the IMLAC's they are about to get to the ARPA Network demonstration part of the ICCC Conference in Washington, DC in October 1972. 1

He felt that Bill Bethke, Head of Duane's division, might well look on this as something wotrhwhile for RADC to be involved with. 2

There would be some difficult paperwork to handle, transferring RADC equipment to Washington. That would have to be checked out. 3

Duane suggested that we send him a Journal message, requesting such an arrangement. He would then take up our proposal with Bethke and other appropriate Rome people. 4

I agreed that we (Watson?) would try to formulate our request and send it to him. 5

I told him that our ideas were still in the early formative stage: we haven't even mentioned them to BBN yet. 6

He also asked if maybe IMLAC might be interested in supplying such equipment. 7

We discussed the need for a TIP (in the same room, or at least within 500' ?) and I told him that you thought that there would be a TIP for hardwiring the IMLAC's to in the room. 8

On Using RADC IMLAC's at the ICCC in October

(J10254) 28-APR-72 12:35; Title: Author(s): James C. Norton/JCN; Distribution: Richard W. Watson, Douglas C. Engelbart, Duane L. Stone/RWW(for action) DCE DLS; Sub-Collections: SRI-ARC; Clerk: JCN; Origin: <NORTON>ICCC.NLS;1, 28-APR-72 12:31 JBT; HJOURNAL="*** DRAFT *** JCN 17 MAY 72 3:01AM xxxx";

integration of new people

This is a suggestion about how to help with the integration of new people into ARC. 1

After a new person has gone through an initial orientation period of between one week and a month, I suggest we hold a show and tell type meeting. 1a

This meeting would consist of the new person, all the people that are in his/her professional group, and at least one person from each of the other professional groupings. 1a1

The format of the meeting would be as follows: 1a2

Each of those present, with the exception of the new person, would speak for five to ten minutes about what they are working on now and in the near future. 1a2a

Those not in the same professional grouping as the new person would be a bit more general and would attempt to represent the other members from their group who are not present. 1a2b

The new person shold be made to feel free to ask questions at this meeting. 1a2c

However, I feel these questions should be of a general nature, and related to who has resposibility for what, rather than detailed technical questions. 1a2c1

The reason for waiting awhile before holding the meeting is so that the new person will have some context into which to digest the information presented. 1a3

I fell that two valuable things can be gained from such a meeting: 1a4

The obvious advantage is for the new person who would gain valuable knowledge. 1a4a

The second advantage would be for the old members who would be kept up to date as to what was going on in general. 1a4b

Perhaps we could consider holding such meetings on a monthly basis, independent of whether or not there are any new people 1a4b1

KEV 28-APR-72 12:58 10255

integration of new people

(J10255) 28-APR-72 12:58; Title: Author(s): Kenneth E. Victor/KEV; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: KEV;
Origin: <VICTOR>SHOW-AND-TELL.NLS;1, 28-APR-72 12:36 KEV ;

DLS 28-APR-72 13:47 10256

The RADC Planning Activity--Program Call

This document was an early attempt to describe programm call at RADC Its somewhat oudated now but is being journalled for historical purposes.

RADC CONSOLIDATED PROGRAM CALL

OVERVIEW:

Starting about the middle of October, RADC will begin its annual planning exercise (program call) to determine the FY-73 financial plan and the FY-74 budget estimate. The final documentation, describing in detail the efforts which will be accomplished in FY-73 and the resources which will be required, leaves the Center about the middle of Feb. During the intervening four months, the proposed efforts are subjected to continuing review and refinement at ever increasing levels of management.

The process begins with engineers who submit draft descriptions of their individual efforts based on logical extensions of their current efforts, rough guidance from their section and branch cheifs, and budgetary limitations. These estimates are reviewed by the section cheif, changed, deleted, merged, etc. until he feels he has a reasonably defenseable program. Approximately the last week in Nov. the updated effort descriptions are typed onto form 30a's and submitted to the project engineers.

The project engineer is the focal point for all planning/budgetary type information pertainent to an approved AF project. He may be someone in the managerial chain, or a regular engineer, who by reason of long association with a project, has been delegated the job.

The project engineer reviews all of the form 30a's and prepares a form 30 Project Summary Sheet, listing efforts in order of priorty and indicating fund ceiling cutoff points. During this two week period the program undergoes major revisions as "negotiations" between project engineers, effort engineers, branch cheifs, section cheifs, etc proceed. Approximately the second week in Dec. the form 30's and 30a's are submitted to the division office.

Division review generally starts with each project engineer presenting a discussion of the project's goals with viewgraphs of how individual efforts (past, proposed, and future) flow together toward relization of project goals. Individual effort engineers are generally available in the audience for detailed discussion as required.

Division management interacts heavily at this time-oftimes resulting in major overhauls of the proposed programs. This necessatates rewrites, merging of efforts, switching from contractual to in house and vice versa, changing tasks to different projects, etc.

A second review is generallu held, with the program finalized at division level by the last week in Dec.

A series of meetings is then held between the division chiefs, the Commander, and his staff. The program may undergo revision again. Final review by Center staff is made of funding, manpower, and preceedence. Formal final documentation is prepared by divisions and forwarded to staff by the second week in Feb.

SPECIFICS:

The Air Force conducts research at five different levels--basic research, exploritory development, advanced development, engineering development, and systems. In addition, Engineering Service Projects are created when a significant amount of R&D manpower is used to assist an Air Force operational command.

The principle projects of concern to the Information Processing Branch(ISI) are:

#0967,"Network Information Center and Computer Augmented Team Interaction", basic research.

#5581,"Information Processing Deveopment", exploritory development.

#5550, "Data Processing Hardware and Software Technology", advanced development.

#9339,"Data Handling Support for Air Staff", engeneer services .

#6917, "Data Services Support", engineering services.

Projects 5581 and 5550 represent the bulk of the planning documentation activity within ISI. The exercise typically results in 50-60 form 30a's representing continuing efforts and new starts; both in-house and contractual. Approximately 25 engineers, two section chiefs, and one branch chief are involved.

The ISI branch contains the following people as of July 71:

INFORMATION PROCESSING BRANCH (ISI)

Frank Tomaini-chief, L/C Lee Kortz-deputy

INFORMATION MANAGEMENT SCIENCES SECTION (ISIM)

John MacNamara-chief

Capt. James Bair

Dean Bergstrom

Richard Caliccia

Joe Cavano

Casper DeFiore

Thomas Lawrence

Ray Liuzzi

Roger Panara

James Previte

Oscar Reiman

Frank Slwia

Neil Stillman

Duane Stone

Don VanAlstine

SYSTEM SOFTWARE SCIENCES SECTION (ISIS)

Richard Nelson-chief

James Cellini

Sam DiNitto

Don Elefante

Roc Iuorno

Andy Kobziar

Mike Landes

Frank LaMonica

Fred Norman

Richard Robinson

William Rzebka

Rona Stillman

Armond Vito

In addition to the techinal personnel in the branch there are four secretaries:

Rebecca Levine

Carmella Marcoccia

Marcelle Petell

Josephine Stellato

and two adminstrators:

Thomas Bucciero

Louis Cassetta

The form 30a's, which document proposed efforts and estimated resources, is a single 8"X10" page with the following format and preprinted information:

PROPOSED EFFORT FOR FY 73-74 PROGRAM CALL

(for in-house and contractual efforts)

---

project task fy-73 funds comp. funds eng. name & symbol

---

effort description

---

requirement (tn# if applicable)

---

background

---

technical approach

---

type of contract work statement date contract number

---

d and f required unsolicited proposal sole source company

---

remarks

Following is a brief description of the contents of the data fields in a form 30a.

Project-a four place alpha-numeric

Task-a four digit number

FY-73 Funds-in thousands of dollars ($1,220K)

Follow on Funds-same as above

Eng. Name & Symbol-(Stone,dl ISIM)

Effort Title-(Network Information Center)

Effort Description-A tecnical description of proposed effort--identifing the objective of the effort, what is being procured, and what is to be delivered.

Requirement-TN# stands for the number of a "Technical Need" document which formallly states the needs of Air Force operational commands. This section will also contain statements of the "relevance" of the proposed effort to Air Force problems (outside the TNs), about which the engineer is aware.

Background-A description of present capability/current technology

Technical Approach-Description of how the objectives will be reached ie. how the problem will be attacked.

Type of Contract-new, old, extension, phased (N/A for in-house efforts)

Workstatement Date-this is the engineer's estimate of when a formal statement of work can be prepared for procurement.

Contract Number-applies only to efforts which are being extended or to efforts whic need additional funding to complete prior year comitments.

D&F Required-yes or no. Any efforts which are expected to exceed $100K have to be staffed through AFSC and HqAF. A Deteminations and Findings (D&F) document is the vehical for this staffing.

Unsolicited Proposal-yes or no. Is the proposed effort based on an unsolicited proposal?

Sole Source Comp-if the engineer has already determined there is only one source for procuring this effort, he gives the company's name.

Remarks-this is a "miscellaneous" data element and will contain manpower (RADC only) estimates for in-house and contractual efforts. Statements of relationships to and dependency upon other on-going or proposed efforts will also be included in this field.

The data fields in a form 30a would represent approximately 20 statements in NLS. The form could contain a max. of 3000 characters, however an average form will contain only 1200-1500 characters The total form 30a data base for ISI would represent some 75,000 characters.

The form 30's contain five header fields for each project and nine data fields for each effort (a repeating group). The effort fields are: title, task number, lab, and dollars, precedence, manyears (for both FY-73 and FY-74). The form 30 data base would represent an additional 5-6000 characters.

In addition to the documentation which is produced as a result of Program Call, there is bacground information which would be usefull.

Project documentation:

The narative describing the goals, milestones, funding, etc. of each project varies greatly in length.

#9339--3pages

#6917--5pages

#5581-10pages

#5550-50pages

A rough estimate of the total characte size is 100,000. This documentation is relatively stable, ie. it changes infrequently except for the manpower, funding and milestone charts.

Effort writeups:

A group of informal documentation relating to Program Call is maintained within each section. For example, in ISIM there are four development activities with a total of 20 effort writeups. The effort writeups are updated as required by the responsible engineer, and represent short term planning at the lowest level. They are a vital input to engineers and section chiefs during the first month of Program Call however, since they represent what is actually transpiring at the time, regardless of what last year's Program Call said. The effort writeups represent 60,000 characters.

DLS 28-APR-72 13:47 10256

The RADC Planning Activity--Program Call

(J10256) 28-APR-72 13:47; Title: Author(s): Duane L. Stone/DLS;
Distribution: Duane L. Stone, James H. Bair, Thomas F. Lawrence, James C. Norton, Paul Rech, Dirk H. van Nouhuys/RBMS; Sub-Collections: RADC RBMS; Clerk: DLS;
Origin: <STONE>PROGCALL.NLS;1, 28-APR-72 7:38 DLS ;

Memo to JBN from AAM

Dear Jeanne,

1) What is the status of the on-line version of the Resource Notebook?
2) What is the status of the set of all known updates to the Protocols Notebook?
3) Where is my copy of "Transmittal to NIC Station Agents #44 (see Journal document # 10030)
4) It would be helpful to me, and perhaps to others, if the NIC could send out more frequent updates to the Network Participants list. Since this is a thick document which is undoubtedly hard to produce frequently perhaps the following method would work:
   Send out (maybe through the journal) a list of "errata" to the list official publication of the notebook. Each "errata sheet would supecede the previos one, and corrections which appeared for the first time on a given sheet would be flagged. This would give recipients the choice
   of;
   a) Ignoring the "errata" sheets
   b) Using the latest "errata" sheet whenever a mailing was being prepared
   c) Updating their copy of the Network Participants list every time a new "errata" sheet came out by looking only at the flagged entries

   As indication of the usefulness of such a service, check the entries for NIS's Technical Liaison, UCSB's Technical Liaison, Rand's Principal Investigator, etc.

1

AAM 28-APR-72 14:07 10258

Memo to JBN from AAM

(J10258) 28-APR-72 14:07; Title: Author(s): Alex A. McKenzie/AAM; Distribution: Jeanne B. North/JBN; Sub-Collections: NIC; Clerk: AAM;

Suggested Work Mode and Directions for Fir POD

DATE: 27 April 1972 1

TO: Fir POD (Info copies: SRI-ARC) 2

FROM: Mil Jernigan 3

SUBJECT: Suggested Work Mode and Direction(s) for Fir POD 4

Fir POD has arrived at a point where we have established a sound basis for constructive dialog. We talk to each other and have overcome our initial defensiveness and unwillingness to open up on any personal basis. We have discovered that we appreciate challenges, thought provoking ideas, and are not afraid to take stands on issues. 5

Dick Watson is perfectly right when he says that we are ready for the next step in "podding". Here are some suggestions in two areas: (1) A change in our mode of working, and (2) a direction(s) for our efforts. 6

Mode of Working 6a

Contrary to opinion expressed elsewhere, I feel that up to the present time it has been useful to have a completely unstructured, "bull session" format to our meetings. When we first met we were so guarded and selfconscious -- defensive -- that we stood the very large chance of not ever arriving at a point of ease with each other in which we could conduct an honest discussion. We have passed that hurdle and are now so much at ease that it is turning into a free-for-all. Now it is time to reach for the next step in progress and turn from the extremes of the pendulum swing. Let's arrive at BOTH a state of ease with each other AND a state of self-discipline in which we can unite toward some constructive effort. 6a1

What would the rest of the Fir PODers think of having a fairly energetic "work-discussion" session for the first hour and a half of our meeting; then, if we choose, have the rest of the time in a no-holds-barred rap session? This would allow us to continue as long as we wished over the two hours (as long as we want to stay after 5 PM), in a real rap session. 6a2

Possible Direction(s) for Our Efforts 6b

There are three levels or areas that are immediately visible as directions in which it would be profitable to expend our efforts. These are: Education, Exploration,

and Practice. For the moment I can think of the following items to list under these headings. Each of you will have many more very intriguing entries under these headings, so how about hearing from all of you? If you don't want to take the trouble to write them down, drop by or stop me in the hall and tell me about them and I will record them for you. Let's do some "blue sky-ing" on it. 6b1

Education 6c

At the moment I can think of the following lecturers/authors/innovators who would have something to say that would be useful, interesting, and thought provoking: 6c1

George Leonard -- Vice President (?) of Esalen Institute. Educator, writer, lecturer, psychologist. Author of "Education and Ecstacy" and a new book, title not known. It would be very interesting to hear his ideas on cooperative and collaborative styles in education, and what he knows of advanced education research going on in the United States and Canada. His concepts in education, from what I have read, are directly relevant to our computer-augmented information-handling concepts. 6c1a

Stuart Brand - Portola Institute. Some of us are fairly new to ARC and the area and have not met Stuart Brand and are perhaps not familiar with some of the ideas of Portola Institute and its subsidiary/allied groups. I, too, would be very interested to hear a run down on the directions their ideas and life-styles are going. 6c1b

Chester M. Sinnett -- Contributing Editor of R/D (Research/Development journal). (R/D, Editorial Office, 205 W. Wacker Drive, Chicago, Illinois 60606) Sinnett is widely known as a writer, innovator, and general firebrand in the fields of management and manager-employee relations. He writes the editorial each issue of R/D and always has something worthwhile to say. His ideas are far-advanced but deal with basic, practical issues. It would be interesting to have him conduct a seminar in group communication and group organization (his pet subjects). 6c1c

The principal and a couple of students from Pacific High School on Skyline Drive, above Palo Alto. This is an experimental school in which much of the governing of the school is done by the students. It would be

interesting to have them describe their cooperative, collaborative mode of management. 6c1d

James A. Fadiman and Charles A. Tart - describe their work in Psychosynthesis and with the groups of industrial leaders, exploring the use of parapsychology in their management practices. 6c1e

Erwin Watermeyer - Technical Director, Rosicrucian Order, AMORC, San Jose. Writer, lecturer, physicist, concert pianist, gestalt psychologist, one of the recognized world's experts on the Tarot, consultant to some of the better known directors and studios in Hollywood as film editor and in the use of light shows to effect altered states of consciousness. Watermeyer, some time ago, gave a lecture to an adult creative writing class on the subject of "Creativity, and How to Find It In Yourself and Use It". This lecture, according to several people I know who heard it, was one of the most exciting and thought provoking they had ever heard. I think the group here at ARC, who are naturally highly creative, would find that subject very interesting. 6c1f

Lange Medical Publications, Palo Alto, Calif. phone 948-4526. Lange publishes several yearbooks and smaller publications in the field of medicine. It would be very interesting to hear from their technical and executive editorial staff a seminar presentation of the mechanics of organization necessary to publication of a timed, repetitive publication, the "watch out for's" and the "do's and don'ts". 6c1g

Exploration 6d

American Management Association -- Possibility might be explored of requesting some of the AMA management consulting staff to come to ARC for a couple of days, working-type seminar in which they go from point to point with our staff discussing in team fashion what we do, why we do it, pressures of time-prestige-desires on us, with a cooperative, exploratory mode in which WE FIND OUR WAY WITH THEIR HELP, but not as an instructor-time-motion study thing, and without the feeling that what they say will be forced on us. There are several areas in ARC in which their knowledge and experience would be very interesting and helpful -- employee relations, office records, efficiency ratings, manager-employee interviews, intra-office communication, lessening of our sea of paper,

work schedules, deadlines, what we should expect of our maintenance -- I could go on and on. 6d1

Internal ARCers - I hesitate to suggest this, because I, too, hate with a purple passion to "audit" my moment to moment activities and purposes. However, here goes. I think all of us would be very interested to discover some things about ourselves that we didn't know before, if we would VERY PRIVATELY conduct the following one-day experiment, telling no one what we are doing or the results: For one working day, keep a little scratch note pad beside you and record in as much depth as possible and later examine and analyze and think seriously about (1) the actions you performed, (2) what you were trying to do, (3) ultimate purpose of what you were doing, (4) logic of the WAY you were trying to do it, (5) success or failure (scale value) of your efforts, (6) private, almost subliminal reasons for going at it the way you did, (7) why you had those reasons (be REALLY honest with yourself), (8) decide if those reasons were logical, honest, open, motivated by good-will, motivated by fear and, if so, why, (9) if any lack of good will or any fear was found, delve into yourself and find out why and analyze the logic of it, (10) decide if what you did and how you did it is sufficiently efficient and logical to repeat the present procedures, or if your methods should undergo some change, and if so, what change is indicated. 6d2

Internal ARC - It would be very interesting to take some task that comes up fairly often in ARC and which is fairly well defined as to procedures and purpose, and do some exploratory work on that task, such as: 6d3

(1) As a baseline from which to judge, do a fairly close analysis of present procedures, methods, and results, and time spent in each portion of the task. 6d3a

(2) Give several successive tries at doing this task in a cooperative mode with another person, (a) doing each portion together, (b) doing the entire job by each person doing successive portions in rapid succession, (c) other methods that might suggest themselves from the task under study. During the cooperative mode, really try to "psyche out" your partner and understand and predict his movements and actions, and reasons for them. (How about some advice from JAF in line with his ESP in industry experiments?) 6d3b

(3) After a fair analysis and study of the results over

enough time to be able to give a fair judgment, decide (a) if there are other ways of doing things that we might find by exploring ways and means, (b) decide if the partners in the experiment are any nearer to a close understanding of each other's "working style" or working habits, if they "fit together" on the job better, (c) analyze what this means in "team building" efforts. 6d3c

Practice 6e

Internal ARC - See .5d2 above, a natural evolution of that experiment would be to put into practice such changes as might be seen practical as a result of the experiment. 6e1

Internal ARC - For the month of May, let's "put our money where our fingers are" and toss into a beer-tapper kitty one penny for each typographical or spelling error we make in JOURNALIZED articles (same error not to be counted twice). If we keep tabs on each other, we can both get the journal entries read and keep each other honest. (Now I'll see if I'm really a good typist or not "No fair" for wheels to have PSO do all your typing for you -- get in there and play fair.) 6e2

MEJ 28-APR-72 14:50 10259

Suggested Work Mode and Directions for Fir POD

(J10259) 28-APR-72 14:50; Title: Author(s): Mil E. Jernigan/MEJ; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC; Clerk: MEJ;
Origin: <JERNIGAN>FIRPOD-WORK.NLS;1, 28-APR-72 14:47 MEJ ;

(J10260) 28-APR-72 15:03; Title: Author(s): Stanley Cohen/SC;
Distribution: Stanley Cohen/SC; Keywords: EYWORDS
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; Sub-Collections: NIC; Clerk: SC;

ARC New Document Bulletin No. 2

<NIC>NICNUMLIST.NLS;3, 29-JUN-71 8:57 JBN ;

ARC New Document Bulletin No. 2 1 MAY 1972 10272

(A10171) Analytical Techniques for Logistics Management (Ad Hoc Working Group No. 13).

Richard J. Baker (U.S. Army, Advanced Materiel Concepts Agency, Alexandria, Virginia).

U.S. Army, Advanced Materiel Concepts Agency, Alexandria, Virginia, Report Number AMCA 71-007. October 1970. 138p.

2

(A10170) Costs, Benefits, Effectiveness: Challenge to Educational Technology.

Lawrence P. Grayson (U.S. Office of Education, Division of Technology Development, Washington, D.C.).

Science, Vol. 175, No. 4027, p.1216-1222. 17 March 1972.

Suggests changes in organization, in budgeting and accounting, of schools, while stressing changes should accommodate concerns and values of people affected. Contains figures on federal spending and federal legislation. 32 references.

3

(A10169) Analysis of a Continuum of Processor-Sharing Models for Time-Shared Computer Systems.

Jiunn Hsu (University of California at Los Angeles, School of Engineering and Applied Science, Los Angeles, California).

University of California at Los Angeles, School of Engineering and Applied Science, Los Angeles, California, Report Number UCLA-ENG-7166. October 1971. 143p.

Such models are defined and some new results presented. Family of selfish scheduling algorithms is defined and Laplace transform of response time functions obtained. Selfish round robin and selfish foreground background systems are examples. Fundamental properties established.

4

(A10168) Computer Network Measurements: Techniques and Experiments.

Gerald D. Cole (University of California at Los Angeles, School of Engineering and Applied Science, Los Angeles, California).

University of California at Los Angeles, School of Engineering and Applied Science, Los Angeles, California, Report Number UCLA-ENG-7165. October 1971. 350p.

Development of a measurement capability and utilization of capability to create and iteratively improve analytic models of network behavior and true system parameters, for role of Network Measurement Center of ARPA Network.

5

(A10167) [Letter Requesting Information on ARPA Network], Letter to Richard Watson (Stanford Research Institute, Augmentation Research Center, Menlo Park, California).

John M. Flannery (University of Southern California, Los Angeles, California).

22 March 1972. 1p.

USC has NSF grant to study computer resource sharing with UCLA and CIT, and author is doing literature search. Requests leads to ARPANET documents.

6

(A10166) Network Reliability Analysis: Part I.

R. Van Slyke and H. Frank (Network Analysis Corporation, Glen Cove, New York).

Networks, Vol. 1, p.279-290. 1972.

Considers networks with randomly failing links and nodes. A combinatorial analysis is given when all links have equal reliabilities. A simulation method useful for a wide range of failure probabilities is considered. Another combines a combinatorial analysis with stratified sampling to yield major computational savings.

7

(A10165) Bibliography on Digital Image Processing and Related Topics.

University of Southern California, Electronics Sciences Laboratory, Los Angeles, California.

University of Southern California, Electronics Sciences Laboratory, Los Angeles, California, Report Number USCEE 410. February 1972. 260p.

Approximately 1300 references to books, reports and articles, arranged in three ways: broad subject, first author, and year of publication. References from 1933-1971.

8

(A10164) Data Processing Salary Report, Yesterday, Today and Tomorrow.

Edited by Edward J. Bride (Computerworld, Inc., Newton, Massachusetts).

1971. 18p.

Results of questionnaire, broken by 9 regions.

9

(A10162) The Computer Network as a Marketplace.

Joseph T. Hootman (Remote Computing Corp.).

Datamation, p.43-46. April 1972.

Considerations of network economics, selling to networks, selling through networks, seller's network selection, buyer's network selection, and the brokerage function.

10

(A10161) Management's Role in Networking.

Einar Stefferud (Einar Stefferud & Associates, Santa Monica, California).

Datamation, Vol. 18, No. 4, p.40-42. April 1971.

Specific management problems to be resolved in sharing: user/supplier agreements for the exchange of services over the network; controls to protect and regulate competition among suppliers and users; policies for decisions to add computer capacity; establishment for responsibility for allocation of network resources; ways to buffer users from each other so they can suballocate their resources within their own areas of responsibility. Also need for top management to adjust organization to deal with shifts in power structures.

11

(A10160) Networks: An Introduction.

David J. Farber (University of California, Irvine, Irvine, California).

Datamation, Vol. 18, No. 4, p.36-39. April 1972.

Descriptions of seven networks: ARPA, CYBERNET, DCS, MERIT, Octopus, TSS, TCC, and discussion of their basic similarities and differences.

12

(A10144) COSATI Inventory of Information Sciences Technology (Reports of Federally Funded Research and Development Projects in the Information Sciences, FY 1968).

Charles P. Bourne and Jeanne B. North (Information General Corporation, Palo Alto, California).

May 1969. 2200p.

Directory to R and D projects funded by the Federal government which include research in the following: biological information processing; artificial intelligence; language analysis; information retrieval; computers; information services; and documentation.

13

(A10122) Verbal and Graphical Language for the AED System: A Progress Report.

Douglas T. Ross and Clarence G. Feldman (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number MAC-TR-4. 6 May 1964. 26p.

Describes how a single language process technique, which is in turn a special application of more general concepts concerning the step-by-step growth and processing of large structures of interrelated elements, can efficiently process both language forms in the same manner.

14

(A10025) Cost Analysis of Debugging Systems.

Bruce P. Lester (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number MAC-TR-90. September 1971. 112p.

General method for performing cost analysis of interactive debugging systems is based on an abstract model of program execution, and derived from the interpreter used in the Vienna method of semantic definition of PL/1. A brief discussion of the overall operation and significance of the Vienna interpreter is included.

15

(A10024) CTSS Technical Notes.

J. H. Saltzer (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number MAC TR-16. 15 March 1965. 77p.

Technical description of the 7094 Compatible Time-Sharing system in use at Project MAC and the M.I.T. Computation Center. Separate chapters discuss the overall supervisor program flow; console message input and output; the scheduling and storage algorithms; and a thumbnail sketch is given of each of the subroutines which make up the supervisor program.

16

(A10023) Toward Interactive Design of Correct Programs.

Robert W. Floyd (Stanford University, Computer Science Department, Stanford, California).

Stanford University, Computer Science Department, Stanford, California, Report Number CS-235; AIM-150. September 1971. 12p.

Proposes an interactive system proving the correctness of a program, or locating errors, as the program is designed.

17

(A10022) Generalized Organization of Large Data-Bases; A Set-Theoretic Approach to Relations.

Andrew Irwin Fillat and Leslie Alan Kraning (Massachusetts Institute of Technology, Department of Electrical Engineering, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Department of Electrical Engineering, Cambridge, Massachusetts, Report Number MAC TR-70. June 1970. 246p.

Problems inherent in representation and manipulation of large data bases are discussed, and a detailed analogy introduces concepts embodied in a data management system. A particular implementation, the GOLD STAR system, provides a model for data bases by which complex data handling problems can be solved with relative ease.

18

(A10005) The Marketing of Information Analysis Center Products and Services.

Walter H. Veazie, Jr. (Hughes Aircraft Company, Electronics Properties Information Center, Culver City, California) and Thomas F. Connolly (Oak Ridge National Laboratory, Research Materials Information Center, Solid State Division, Oak Ridge, Tennessee).

Education Resources Information Center, Clearinghouse on Library and Information Sciences, Washington, D.C., Report Number ED 050 772; LI 002 834. June 1971. 33p.

Presents the basic philosophy of the information analysis center, information center variables, service charge considerations, and guidelines for marketing information center products and services. Two case studies of effort to secure service charges and a survey of government-sponsored information center managers' evaluation of service charges and marketing are appended. A bibliography of 33 references is included.

19

(A10004) NCAR Research and Facilities Programs -- Annual Report 1969.

National Center for Atmospheric Research, Boulder, Colorado.

May 1970. 123p.

Report on the research activities and programs at the National Center for Atmospheric Research, includes the follows: atmospheric dynamics; planetary-scale motion; convection and turbulence; atmospheric observation techniques; atmospheric chemistry. Also a list of 200 publications by NCAR staff members in 1969.

20

(A10003) [Untitled].

Federal Council for Science and Technology, Committee on Scientific and Technical Information, Washington, D.C.

Federal Council for Science and Technology, Committee on Scientific and Technical Information, Washington, D.C., Report Number COSATI-70-1. January 1970.

Mission, scope, and services of 119 information analysis centers supported by the Federal government. An index of subject areas, an index of center directors, a list of organizations, and a list of locations are included.

21

(A10002) GEMS - A Graphical Experimental Meta System.

James E. George (Stanford University, Stanford Linear Accelerator Center & Stanford Computer Science Department, Stanford, California).

Stanford University, Stanford Linear Accelerator Center & Stanford Computer Science Department, Stanford, California, Report Number SLAC-134; STAN-CS-71-227. August 1971. 184p.

A mode for graphical systems with a linguistic base is presented; the model provides symmetry between recognition and generation of pictures, although emphasizing generation. A graphical system defined utilizing GEMS can function interactively or as a slave system. A bibliography of 184 references is included.

22

(A10001) ECSS: An Extendable Computer System Simulator.

N. R. Nielsen (Stanford University, Computer Center, Stanford, California).

Rand Corporation, Santa Monica, California, Report Number RM-6132-NASA. February 1970. 45p.

A review of current techniques for simulating computer systems and a description of the major design features of a special-purpose language -- ECSS: Extendable Computer System Simulator. Host language is SIMSCRIPT.

23

(A10000) A Graph Model for Parallel Computations.

Jorge E. Rodriquez (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number ESL-R-398; MAC-TR-64. September 1969. 120p.

Presents a computational model called program graphs which makes possible a precise description of parallel computations of arbitrary complexity on non-structured data. The concept of the state of a program graph is introduced and it is proved that every program graph represents a deterministic computation; 23 references included.

24

(A9996) A Mechanistic Model of Speech Perception.

D. R. Reddy, L. D. Erman, and R. B. Neely (Carnegie-Mellon University, Pittsburgh, Pennsylvania).

April 1972. 10p.

Proposes an alternative to motor theory and analysis-by-synthesis models of speech perception with emphasis on efficient machine realization of the model. Consists of a small set of cooperating parallel processes, each with heuristics for generation and verification of hypotheses based on a semantic, syntactic or lexical representation of the language to be perceived.

25

(A9995) Speech Recognition in a Multiprocessor Environment.

D. R. Reddy, C. G. Bell, and W. A. Wulf (Carnegie-Mellon University, Computer Science Department, Pittsburgh, Pennsylvania).

December 1971. 8p.

Discusses role of perception research in AI in task representations, data representations, and program organizations which will permit effective use of many sources of knowledge. Description of HEAR-SAY system, and CMU Multiminiprocessor system.

26

(A9994) Speech Recognition: Prospects for the Seventies.

D. R. Reddy (Carnegie-Mellon University, Computer Science Department, Pittsburgh, Pennsylvania).

1971. 14p.

Discusses structure and organization of speech recognition systems, and considers a specific example, HEAR-SAY system developed at CMU. 21 references.

27

(A9993) Speech Recognition in the Presence of Noise.

R. B. Neely and D. R. Reddy (Carnegie-Mellon University, Pittsburgh, Pennsylvania).

1971. 7p.

Presents the effect of 3 types of noise, teletype idling, teletype typing, and machine room noise, on a particular speech recognition system and discusses possible transformations on the speech to reduce degradation in recognition.

28

(A9992) Implications of Telephone Input for Automatic Speech Recognition.

L. D. Erman and D. R. Reddy (Carnegie-Mellon University, Pittsburgh, Pennsylvania).

1971. 7p.

Simple analog frequency enhancement of telephone signal resulted in error rate of 11%. Only one system was investigated, and only small amount of data from one speaker over one local telephone connection was used. Degradation of telephone recognition believed not to be significantly greater than human under same conditions.

29

(A9991) The CMU Speech Recognition Project.

D. R. Reddy, L. D. Erman, and R. B. Neely
(Carnegie-Mellon University, Computer Science Department, Pittsburgh, Pennsylvania).

1970. 11p.

System capable of recognition of limited language appears feasible if some problems could be solved: connected speech problem, multiple speaker problem, real-time performance, self-analysis capability, speech independent linguistic problems. Description of CMU system. 11 references.

30

(A9990) Speech Input Terminals for Computers: Problems and Prospects.

D. R. Reddy (Carnegie-Mellon University, Computer Science Department, Pittsburgh, Pennsylvania).

1970. 16p.

Outlines factors affecting cost, utility, structure and engineering of speech input terminals for computers: accuracy, response time, vocabulary size, complexity of words, complexity of language. Suggests applications where need justifies cost.

31

(A9989) A Limited Speech Recognition System (Final Report).

Daniel G. Bobrow and Dennis H. Klatt (Bolt Beranek and Newman, Inc., Cambridge, Massachusetts).

Bolt Beranek and Newman, Inc., Cambridge, Massachusetts, Report Number BBN 1667. 15 May 1968. 78p.

LISPER, a program designed for limited speech recognition, learns to identify utterances as one of a limited input message set. This system has been used as both a research tool for exploring characteristics of speech, and a prototype of a trainable speech pattern recognition system. A valuable bibliography is included.

32

(A9988) Some Solutions to the Problem of Defining and Compiling Graphic Languages.

R. Morpurgo and M. Sami (Polytechnic Institute of Milan, Department of Electrotechniques and Electronics, Milan, Italy).

Revue Francaise d'Informatique et de Recherche Operationnelle, Vol. 4, No. B-1, p.21-30. March 1970.

Some problems concerning the structure of a computer with graphic interactive facilities are considered to better define the various questions connected with the creation of a compiler for a graphic language.

33

(A9987) Storage and Retrieval of Information; A User-Supplier Dialogue.

H. F. Vessey (TIL Reports Centre, Ministry of Technology, United Kingdom) and I. J. Gabelman (Rome Air Development Center, Advanced Studies Group).

AGARD, Avionics and Technical Information Panels, Storage and Retrieval of Information, A User-Supplier Dialogue, Munich, Germany (18-30 June 1968). 1968. 198p.

Topics covered are: present operational manual and mechanical reading; online storage and retrieval; user needs; selective dissemination of information; interactive information processing; and education of user and supplier.

34

(A9986) The Frame Problem and Related Problems in Artificial Intelligence.

Patrick J. Hayes (University of Edinburgh, Metamathematics Unit, Edinburgh, Scotland).

University of Edinburgh, Metamathematics Unit, Edinburgh, Scotland, Report Number MEMO AIM-153; CS-242. November 1971. 18p.

The frame problems arises in considering the logical structure of a robot's beliefs; various methods for its solution are outlined and described in a uniform notation. It is shown that a variation on the situation notation of (McCarthy and Hayes, 1969) permits an elegant approach, and relates this problem to the frame problem.

35

(A9985) SIMPLE: A Simple Precedence Translator Writing System.

James E. George (Stanford University, Stanford Linear Accelerator Center, Computer Sciences Department, Stanford, California).

Stanford University, Stanford Linear Accelerator Center, Computer Sciences Department, Stanford, California, Report Number SLAC-133; STAN-CS-71-226. July 1971. 92p.

SIMPLE is a specialized translator writing system composed of a simple precedence syntax and a semantic constructor, and is designed to aid the implementation of an experimental graphic meta system in PL/1. It provides an error diagnostic and recovery mechanism for any system implemented using SIMPLE.

36

(A9984) STRESS: A Problem-Oriented Language for Structural Engineering.

John M. Biggs and Robert D. Logcher (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number MAC-TR-6. 6 May 1964. 22p.

STRESS, a general purpose programming system for the analysis of structures, has three distinguishing characteristics: 1) input language is that of the structural engineer which makes possible direct communications between the engineer and the machine; 2) capable of analyzing a wide variety of structural types and loading conditions thus permitting industrial use on a routine basis; and 3) modifications of the original structure may be easily made thus expediting the iterative design process.

37

(A9983) The Number of Messages That Can Be Stored On a Drum.

R. A. Gildea and D. F. Votaw, Jr. (MITRE Corporation, Bedford, Massachusetts).

MITRE Corporation, Bedford, Massachusetts, Report Number MTR 952. November 1969. 28p.

It is shown, by means of the renewal theory, that the distribution of the number of messages N is approximately a normal distribution whose mean and variance are simple functions of the drum size and the parameters of the message population. An estimate of the expected fraction of wasted characters of drum storage is also shown.

38

(A9982) Standard Handbook for Electrical Engineers (Tenth Edition).

Edited by Donald G. Fink (Institute of Electrical and Electronics Engineers, Inc.).

Mc-Graw Hill Book Company, 1968. 2506p.

Reference source covers following areas: properties of materials; d-c power transmissions; units and conversion factors; nuclear technology; wire communications; and illumination (light sources and design of illumination systems).

39

(A9981) Real-Time Display of Computer Generated Half-Tone Perspective Pictures.

Gordon W. Romney, Gary S. Watkins, and David C. Evans (University of Utah, Computer Sciences Department, Salt Lake City, Utah).

Information Processing 68: Fourth Congress of the International Federation of Information Processing, p.973-978. International Federation of Information Processing, Information Processing 68: Fourth Congress of the International Federation of Information Processing, Edinburgh, Scotland (5-10 August 1968). North-Holland Publishing Company, Amsterdam, Netherlands, 1969.

Attainment of real-time generation and display of half-tone perspective pictures should become a reality in the near future with the utilization of the hidden line algorithm, which utilizes the order in which triangles enter from one scan line to the next and greatly reduces the amount of scan line computations.

40

(A9980) Programming a Robot.

Bertram Raphael (Stanford Research Institute, Menlo Park, California).

Information Processing 68: Fourth Congress of the International Federation of Information Processing, p.1575-1581. International Federation of Information Processing, Information Processing 68: Fourth Congress of the International Federation of Information Processing, Edinburgh, Scotland (5-10 August 1968). North-Holland Publishing Company, Amsterdam, Netherlands, 1969.

A "robot" was constructed to perform tasks requiring interaction with its environment without human intervention; areas of artificial intelligence considered were optical pattern recognition, automated problem solving, question-answering systems, modeling and learning.

41

(A9979) The Systems Approach.

C. West Churchman (University of California, Berkeley, California).

Dell Publishing Company, Inc., New York, New York, 1968. 243p.

Approaches to studying problems in government, business, and industry, resources available (such as computer systems), for systems analysis, and the various ways in which science can assist society in decision making are presented.

42

(A9978) The MAC System: A Progress Report.

R. M. Fano (Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts).

Massachusetts Institute of Technology, Project MAC, Cambridge, Massachusetts, Report Number MAC-TR-12. 9 October 1964. 26p.

Present research suggests a trend toward memory-centered, instead of processor-centered systems, including pools of bulk memories, core memories, central processors, and I/O channels, all communicating with one another, with core memories acting as buffers. Trend seems to be toward software execution processes with many subroutines and data structures which are never assembled into a single program. Implications of this unusual approach are not yet clear, but are the major objective of the next MAC system.

43

(A9977) The Safeguarding of Information: A User's View.

E. L. Glaser (Case Western Reserve University, Cleveland, Ohio).

Information Processing 68: Fourth International Congress of the International Federation of Information Processing, p.1616-1619. International Federation for Information Processing, Information Processing 68: Fourth Congress of the International Federation of Information Processing, Edinburgh, Scotland (5-10 August 1968). North-Holland Publishing Company, Amsterdam, Netherlands, 1969.

Explores the dimensions of problems of information integrity and possible solutions of these problems. One possible solution is to use system auditing, in which a set of criteria are incorporated to determine if the operators of a particular system are operating the system in accordance with good and established ethical practice.

44

(A9976) The LEAP Language and Data Structure.

P. D. Rovner (Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts) and J. A. Feldman (Stanford University, Computer Science Department, Stanford, California).

Information Processing 68: Fourth Congress of the International Federation of Information Processing, p.579-585. International Federation of Information Processing, Information Processing 68: Fourth Congress of the International Federation of Information Processing, Edinburgh, Scotland (5-10 August 1968). North-Holland Publishing Company, Amsterdam, Netherlands, 1969.

Presents a computer language for manipulating relational information structures, and a representation scheme for such structures within a digital computer. The language is presented as a set of new data types and language forms which are to be added to a conventional algebraic programming language.

45

(A9970) Pattern Recognition and Waveform Analysis.

O. J. Tretiak (Massachusetts Institute of Technology, Cambridge, Massachusetts).

1969 NEREM Record, Vol. 11, p.20-21. Institute of Electrical and Electronics Engineers, Inc., Boston, Massachusetts, 1969.

Pattern recognition theory; discussion of measurements and discrimination necessary.

46

(A9916) [TENEX Loading and Dumping Procedures].

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 19p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number 119. [Undated].

Procedures for loading monitor, clearing and loading the disc, disc dumping, loading files, checking mag tape against the disc, login message, directory name slot operations, DLUSERS, daily accounting.

47

(A9915) TENEX-12 Scheduling and Storage Management.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 25p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-12. 20 January 1970.

Describes process controller, real-time scheduler, balance set control.

48

(A9914) TENEX-11 Special Capabilities, Resource Allocation.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 6p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-11. 15 January 1970.

Discusses capabilities of EXEC system, assignment and availability of these characteristics, resource allocation, special devices, and resources through the ARPANET.

49

(A9913) TENEX-10 General Interprocess Communication.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 4p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-10. 15 January 1970.

The general mechanism of inter-process communication is discussed.

50

(A9912) TENEX-9 PDP-10/50 Software Compatibility.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 3p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-9. 15 January 1970.

Specifies which PDP-10 software is compatible with TENEX and in what areas.

51

(A9911) TENEX-8 Monitor Calls and Pseudo-Interrupts.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 13p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-8. 4 December 1970.

Includes sample routines.

52

(A9910) TENEX-7 Fork Structure and Communication.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 14p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-7. 23 November 1970.

Fork structure and communication, fork accumulators, fork structure specification, fork creation and control, fork suspension, pseudo-interrupts, channels vs. priority levels, panic-channels, terminal interrupts.

53

(A9909) TENEX-6 EXEC Language.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 50p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-6. 2 December 1970.

Technical description, system access commands, resource allocation commands, file commands, subsystems and programs, program control and debugging commands, primary input/output redirection commands, information printing commands, miscellaneous commands, privileged commands.

54

(A9908) TENEX-5 Terminal Service.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 13p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-5. 20 November 1971.

Treats terminal input-output, paper tape readers on terminals, terminal interrupts, character sets, etc.

55

(A9907) TENEX-4 File System.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 35p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-4. 14 January 1970.

Explains file directory structure, directory index structure, file names, files, file operations, file sharing, file access protection, special files.

56

(A9906) TENEX-3 Job Structure.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 12p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-3. 30 November 1970.

Explains memory, processes and forks, jobs, private memory, storage blocks, monitor map.

57

(A9905) TENEX-2 Coding Style.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 9p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-2. 15 January 1970.

Coding consistency, mnemonics, variables, symbolic files, measurements, considerations of devices and multi-processors, and techniques are discussed.

58

(A9904) TENEX-1 System Overview.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 20p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-1. 15 January 1970.

Covers introduction to TENEX System, design goals, extensions into BBN-LISP and other services, use in the ARPANET, resource allocations made by TENEX, human factors in engineering of the system, reliability and maintainability, transferability to other PDP-10s, general structure of TENEX, and the implementation of the "full system" of TENEX.

59

(A9903) Status of the TENEX Memos.

[Bolt Beranek and Newman, Inc.].

[TENEX System Memos], 7p. 1 March 1972.

Comments on and corrections of currently active TENEX memos: Numbers 3, 4, 5, 6, 7, 8, 12.

60

(A9902) [TENEX System Memos].

[Bolt Beranek and Newman, Inc.].

22 January 1970. separately paged.

Collection of TENEX memos.

61

(A9869) Sur Note No. 32 (Revised Computer Phonetic Representations).

Mark Medress (UNIVAC).

11 April 72. 2p.

Updates 8477.

Presents revised Computer Phonetic Representations Table which was distributed in SUR Note No. 16, NIC 8477.

62

(A9862) SUR Note No. 31 (Presampling Filter Design Considerations).

J. Tierney (LINC).

11 April 72. 9p.

63

(A9830) Meeting Calendar.

Stanford Research Institute, Augmentation Research Center, Network Information Center, Menlo Park, California.

6 April 1972. 1p.

64

(A9825) Campus Computing Management.

Charles Mosmann and Einar Stefferud (Einar Stefferud and Associates, Santa Monica, California).

Datamation, Vol. 17, No. 5, p.20-23. 1 March 1971.

65

(A9824) Computer Management: Procedures Are User's Concern, But Policy is President's Decision.

Einar Stefferud (Einar Stefferud and Associates, Santa Monica, California).

College and University Business, p.82. September 1970.

66

(A9823) Interaction.

David A. Straus (Interaction Associates, Inc., Berkeley, California).

10 November 1971. 33p.

67

(A9822) OEP Wage/Price Computer Information System Detailed at 1971 Fall Joint Computer Conference.

Office of Emergency Preparedness, Washington, D.C.

10 November 1971. 3p.

Given to DCE by Dr. Turoff at Las Vegas, 16 November 1971 (see FJCC Proceedings).

68

(A9821) PDP-10 Reference Handbook.

Digital Equipment Corporation, Programming Department, The Software Writing Group, Maynard, Massachusetts.

1969. 658p.

69

(A9820) Generalized Retrieval of Information Program (GRIP) - Preliminary Copy [Draft].

University of California, Santa Barbara, Information Systems Staff.

[1971]. 22p.

Program has two main objectives: (1) It promotes the concept of having a common data base serve many users; (2) it is designed to directly address the problems of information relevance, data accessibility and changing needs for information. Present file copy is a pencil-corrected preliminary copy.

70

(A9819) SRI Program Profile - The Decision Analysis Group.

Stanford Research Institute.

Intercom, No. 158, p.2. 27 April 1971.

71

(A9818) SRI Computerizes Chemical Directory.

Stanford Research Institute.

Intercom, No. 158, p.3. 27 April 1971.

72

(A9817) [Transmittal of Final Draft of Libraries and Information Technology - A National System Challenge].

Anthony G. Oettinger (Harvard University, Aiken Computation Laboratory, Cambridge, Massachusetts).

13 August 1971. 1p.

73

(A9816) Proposal to the National Science Foundation for Support of ADMINS Development.

Massachusetts Institute of Technology, Center for International Studies, Cambridge, Massachusetts.

4 November 1968. 43p.

74

(A9815) The Language of ADMINS.

Stuart McIntosh and David Griffel (Massachusetts Institute of Technology, Center for International Studies).

[Undated]. 41p.

75

(A9814) La Documentation Automatique en Temps Partage.

Jacques F. Vallee (Stanford University, Computation Center, Stanford, California).

R.I.R.O. Revue Francaise d'Informatique matique et de Recherche operationnelle, Vol. 5, No. B-1, p.3-13. 1971.

76

(A9813) Theoric des Systemes Autocodeurs.

Jacques F. Vallee (Northwestern University, Vogelback Computing Center, Evanston, Illinois).

R. I. R. O., Vol. 1, No. 3, p.63-70. 1967.

77

(A9812) The Organization of Research Data Banks: Experience with DIRAC-Based Information Systems.

J. Vallee (Stanford Computing Company, Inc., Palo Alto, California), J. Hynek (Northwestern University, Dearborn Observatory, Evanston, Illinois), G. Ray (Stanford University Medical Center, Department of Radiology), and P. Wolf (Stanford University Medical Center, Clinical Laboratory, Stanford, California).

ASIS Proceedings, Vol. 8, p.387-394. American Society for Information Science, Annual Meeting, Denver, Colorado (6-11 November 1971). 1972.

78

(A9811) Re: Committee Meeting during the SJCC.

Reg A. Kaenel (IEEE, Technical Committee Computer Communication).

25 March 1971. 3p.

79

(A9810) [Prospectus for the] International Conference on Computer Communication.

IEEE and ACM.

2 June 1971. 10p.

An interdisciplinary conference on computer communication has been planned jointly by ACM and IEEE, to be held in Washington, D.C. during October 1972.

80

(A9809) Minutes of the Meeting of the IEEE Technical Committee on Computer Communication.

IEEE, Technical Committee on Computer Communication.

24 May 1971. 4p.

81

(A9808) [Form Letter Sent to People who Inquired about ALPS], Letter to Form Letter.

Karl M. Pearson, Jr. (System Development Corporation, Library and Documentation Systems, Santa Monica, California).

[Undated]. 2p.

Explains ALPS, SDC's Automated Library Processing Services system.

82

(A9807) Subject: Running AED on the M.I.T. 360.

C. G. Feldman (Massachusetts Institute of Technology, Electronic Systems Laboratory, Cambridge, Massachusetts).

2 May 1968. 54p.

AED System is presently available on the IBM 360 at MIT Information Processing Services Center. Description of how to run the system, appendix with examples, and comparisons of statistical size and execution time between 7094/C755 and OS/360 versions.

83

(A9806) AED Progress Report No. 19.

Massachusetts Institute of Technology, Electronic Systems Laboratory, Computer-Aided Design Project, Cambridge, Massachusetts.

Massachusetts Institute of Technology, Electronic Systems Laboratory, Computer-Aided Design Project, Cambridge, Massachusetts, Report Number ESL Memorandum 70429-M-203. 22 May 1968. 12p.

The AED Cooperative Program is a major activity of MIT Computer-Aided Design Project of the ESL with visiting staff members from several other organizations using MIT facilities. Goal is to develop machine-independent compiler and language processing base from which full-scale Computer-Aided Design System can evolve.

84

(A9805) Subsets of the Standard Code for Information Interchange (Hardware Standard Interchange Codes and Media).

National Bureau of Standards, Washington, D.C.

1 October 1971. 10p.

85

(A9804) Recorded Magnetic Tape for Information Interchange (800 CPI, NRZI) (Hardware Standard Interchange Codes and Media).

National Bureau of Standards, Washington, D.C.

1 November 1968. 4p.

86

(A9803) Perforated Tape Code for Information Interchange (Hardware Standard Interchange Codes and Media).

National Bureau of Standards, Washington, D.C.

1 November 1968. 4p.

87

(A9802) MISRC Working Paper Series.

University of Minnesota, School of Business Administration, Management Information Systems Research Center, Minneapolis, Minnesota.

[1972]. 2p.

88

(A9801) ARPA/NASA Symposium: Programming for ILLIAC IV, Letter to ?.

NASA/Ames Research Center, Moffett Field, California.

17 February 1972. 6p.

89

(A9800) Technology: What Will It Mean to Librarians?.

Heinz Von Foerster (University of Illinois, Department of Electrical Engineering and Biophysics, Biological Computer Laboratory, Urbana, Illinois).

University of Illinois, Department of Electrical Engineering and Biophysics, Biological Computer Laboratory, Urbana, Illinois, Report Number BCL Report 9.1; UILU-ENG 72 2517. 1 February 1972. 38p.

A distinction is drawn between Document Storage, Retrieval Systems, and Information Systems(Artificial Intelligence). Internal organization and handling of machine data bases is discussed. Cost-efficiency studies delineate the break point between conventional library record systems and machine-based systems with economically and efficiently feasible conventional systems considered to be relegated to small libraries (20,000 books or 100,000 articles). Discussion of interactive semantic data based library of the future.

90

(A9799) IVC-Model 1000 HID Tape Recorder.

International Video Corporation, Sunnyvale, California.

19 April 1971. 4p.

91

(A9798) The Greening of the Wired City.

Gordon B. Thompson (Bell-Northern Research, Public Relations Department, Ottawa, Canada).

[1971]. 7p.

Contains a print of response to this article, "Discovering Community - A Creative Response to the Greening of the Wired City".

92

(A9797) Report on the Algorithmic Language ALGOL 68.

B. J. Mailloux, J. E. L. Peck, and C. H. A. Koster.

Numerische Mathematik, Vol. 14, p.79-218. Springer-Verlag, Berlin, Germany, 1969.

First report on Algorithmic Language ALGOL 68, for publication by IFIP, under auspices of Technical Committee 2, and assisted by discussions with Working Group 2.1(ALGOL), for purpose of design of common programming languages. The report represents one of the possible approaches, rather than a final answer.

93

(A9796) Management Information Systems: A Program of Education and Research.

University of Minnesota, School of Business Administration.

June 1971. 26p.

Description of the MISRC, with names of staff, facilities, organization, and courses.

94

(A9795) Determining the Equivalence of Algebraic Expressions by Hash Coding.

William A. Martin (Massachusetts Institute of Technology, Alfred P. Sloan School of Management, Cambridge, Massachusetts).

Journal of the Association for Computing Machinery, Vol. 18, No. 4, p.549-558. October 1971.

95

(A9794) Data Sharing on Computer Networks.

Arie Shoshani (System Development Corporation, Santa Monica, California).

April 1971. 7p.

96

(A9793) Transmittal for paper "Data Sharing on Computer Networks".

Ari Shoshani (System Development Corporation, Santa Monica, California).

30 April 1971. 1p.

97

(A9792) Acknowledgement of receipt of paper on "Data Sharing on Computer Networks", Letter to Arie Shoshani (System Development Corporation, Santa Monica, California).

Douglas C. Engelbart (SRI, Augmentation Research Center, Menlo Park, California).

11 May 1971. 1p.

98

(A9791) The User Interface for Interactive Bibliographic Searching - Part II 4-10 p.m. November 7, 1971, Denver, Colorado: Workshop Announcement.

Thomas Martin (Stanford University), Siegfried Treu (University of Pittsburgh), and James Carlisle (Yale University).

6 August 1971. 2p.

99

(A9790) Catalogue No. 13.

CIDOC - Centro Intercultural De Documentacion, Cuernavaca, Mexico.

March 1971. 28p.

Information on the intensive Spanish language course, the rules of CIDOC, and the program of activities organized at CIDOC under the initiative of the interested parties as of April 1971.

100

(A9789) The Development of an Interactive Design Optimization Study.

G. H. Michaud (Purdue University, School of Mechanical Engineering, Lafayette, Indiana).

3 June 1971. 112p.

101

(A9788) Graduate Training Program in Information Systems Research.

Stanford University, Institute for Communication Research, Stanford, California.

January 1971. 6p.

102

(A9787) Graphics (Semiannual Technical Summary).

Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts.

Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts, Report Number ESD-TR-70-355. 30 November 1970. 22p.

103

(A9786) Advanced Research Projects Agency -- Statement of Stephen J. Lukasik, Director.

[No Author].

Senate Hearings Before the Committee on Appropriations (Department of Defense Appropriations for Fiscal Year 1972), p.643-742. 30 April 1971.

104

(A9783) Discovering Community (A Creative Response to "The Greening of the Wired City").

Louis Le Gall.

Bell-Northern Research, Public Relations Department, Ottawa, Ontario, Canada, [1971]. 2p.

Contained in reprint from Bell-Northern Research, Gordon B. Thompson, The Greening of the Wired City.

105

(A9782) Education Research at SRI - No. 2.

Harry Kinkaid (Stanford Research Institute, Menlo Park, California).

13 November 1970.

Change to 9782, giving additions and corrections to current list of education research being conducted at SRI.

106

(A9781) Announcement of TENEX Version 1.29, Letter to Don Wallace (Stanford Research Institute, Augmentation Research Center, Menlo Park, California).

Daniel L. Murphy (Bolt Beranek and Newman, Inc., Cambridge, Massachusetts).

28 February 1972. 2p.

107

(A9780) TENEX Users Group.

[Daniel L. Murphy] ([Bolt Beranek and Newman, Inc.]).

February 1972. 2p.

108

(A9779) Dimensions of American Business (2nd Annual Directory Issue).

[No Author].

Forbes, Vol. 105, No. 10, p.74-175. 15 May 1970.

109

(A9778) File Management Systems: A Current Summary.

Carolyn J. Byrnes (University of California at San Diego) and Donald B. Steig (Hoffman-La Roche, Inc.).

Datamation, Vol. 15, p.138-142. November 1969.

110

(A9777) Subject: Computer Science Research.

Jack Goldberg (SRI).

30 September 1970. 2p.

111

(A9776) Subject: Education Research at SRI.

Harry Kincaid ([Stanford Research Institute], [Menlo Park, California]).

5 October 1970. 6p.

Current research, proposals, and projects at SRI in the field of education.

112

(A9775) A Graph Manipulator for On-Line Network Picture Processing.

Hugo A. Di Giulo (Stanford University, Stanford, California) and Paul L. Tuan.

AFIPS Proceedings (Fall Joint Computer Conference), Vol. 35, p.387-398. AFIPS, Fall Joint Computer Conference, Las Vegas, Nevada (18-20 November 1969). AFIPS Press, Montvale, New Jersey, 1969.

113

(A9774) Analytical Techniques for Logistics Management (Ad Hoc Working Group No. 13).

Richard J. Baker (U.S. Army Advanced Materiel Concepts Agency).

U.S. Army Advanced Materiel Concepts Agency, Report Number AMCA 71-007. October 1970. 138p.

114

(A9773) The User's Guide to Evaluation Products.

L. E. Hart (UNIVAC, Program Definition Group).

Datamation, p.32-35. 15 December 1970.

115

(A9772) PDEL--A Language for Partial Differential Equations.

Alfonso F. Cardenas and Walter J. Karplus (University of California at Los Angeles, Computer Science Department, Los Angeles, California).

Communications of the ACM, Vol. 13, No. 3, p.184-191. March 1970.

116

(A9771) Instrumenting Computer Systems and Their Programs.

B. Russell (UCLA, Computer Science Department, Los Angeles, California) and R. A. Koster (North American Rockwell Information Systems Company, Anaheim, California).

AFIPS Proceedings (Fall Joint Computer Conference), Vol. 37, p.525-534. AFIPS, FJCC (1970). 1970.

117

(A9751) Glossary for TENEX.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 4p. 21 January 1970.

This glossary contains certain terms used in special senses in these TENEX design documents.

118

(A9750) TENEX-14 Connection to ARPA Network.

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 16p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-14. 21 January 1970.

Discusses interfacing TENEX to the ARPANET and considerations involved in the connection.

119

(A9749) TENEX-13 Multi-Processor Considerations (Draft).

[Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts].

[TENEX System Memos], 7p. [Bolt Beranek and Newman, Inc.], [Cambridge, Massachusetts], Report Number TENEX-13. 21 January 1970.

Details of a two-processor configuration.

120

(A9726) Panel Discussion on Information Retrieval. The NBS Automated Activation Analysis Information Retrieval System.

G. J. Lutz, R. J. Boreni, R. S. Maddock, and W. W. Meinke (National Bureau of Standards, Washington, D.C.).

Modern Trends in Activation Analysis, Vol. 2, Chapter 13, p.1128-1130. National Bureau of Standards, Modern Trends in Activation Analysis; 1968 International Conference, Gaithersburg, Maryland (7-11 October 1968). 1 June 1969.

Indexing and computerized storage and retrieval processing procedures are cited for an activation analysis information system used to support current awareness and bibliography preparation requirements. Data base exceeded 2000 items.

121

(A9724) Reading Machine: From Text to Speech. 97

Francis F. Lee (Massachusetts Institute of Technology, Research Laboratory of Electronics, Cambridge, Massachusetts).

IEEE Transactions on Audio and Electroacoustics, Vol. AU-17, No. 4, p.275-282. December 1969.

A reading machine which is capable of converting printed text into connected speech in real time is presented. The system uses a 3000-morph dictionary and is capable of reading a page of a fourth-grade reader in two and one half minutes.

122

(A9723) Building Computer Programs from Modular Blocks.

W. G. R. Stevens (Urwick, Orr and Partners, Urwick Diebold Limited).

Data Processing (Great Britain), Vol. 11, No. 2, p.123-125. March-April 1969.

With modular programming, a programming job is broken down into "modules", and the modules are then distributed among a team of programmers so that a program can be completed in less time.

123

(A9722) Control of Program Changes.

G. Alexander (Ideal Toy Corporation, Hollis, New York).

Data Management, Vol. 6, No. 12, p.34-36. December 1968.

Gives three rules for program changes which allow the programmer to maintain established standards and the program manager to control strict adherence of them regardless of time or work-load pressures.

124

(A9721) Applications of Artificial Intelligence for Chemical Inference, III. Aliphatic Ethers Diagnosed by Their Low-Resolution Mass Spectra and Nuclear Magnetic Resonance Data.

Gustav Schroll (University of Copenhagen, Chemistry Laboratory II, Copenhagen, Denmark), A. M. Duffield, Carl Djerassi, G. B. Buchanan, G. L. Sutherland, E. A. Feigenbaum, and J. Lederberg (Stanford University, Stanford, California).

Journal of the American Chemical Society, Vol. 91, No. 26, p.7440-7445. 17 December 1969.

Heuristic DENDRAL, a computer program capable of interpreting the low-resolution mass spectra of aliphatic ethers is described. This program makes extensive use of the DENDRAL algorithm.

125

(A9720) Easy English, a Language for Information Retrieval through a Remote Typewriter Console.

M. Rubinoff, S. Bergman, H. Cautin, and F. Rapp (University of Pennsylvania, Philadelphia, Pennsylvania).

Communications of the ACM, Vol. 11, No. 10, p.693-696. October 1968.

Describes language developed for retrieval from computerized bibliographic data base at Moore School. A macro flowchart is included, and an appendix provides the printout of a retrieval demonstration.

126

(A9719) Human Experience in Artificial Intelligence.

Carl V. Page (Michigan State University, Computer Science Department, Ann Arbor, Michigan).

IEEE Spectrum, Vol. 6, No. 9, p.67-74. September 1969.

Artificial intelligence systems, though designed to simulate human nervous system functions, depend on the human intelligence to respond to new situations. There are various ways of programming a computer to "acclimate": one is based on a logic of syntax, another uses semantics, and a third is based on repeated human intervention and computer interplay. A review of work done by various projects, with related bibliography.

127

(A9718) Form and Content in Computer Science.

Marvin Minsky (Massachusetts Institute of Technology, Project MAC, Electrical Engineering Department, Cambridge, Massachusetts).

Journal of the Association for Computing Machinery, Vol. 17, No. 2, p.197-215. April 1970.

An excessive preoccupation with formalism is impeding the development of computer science. Form-content confusion is discussed relative to three areas: theory of computation, programming languages, and education.

128

(A9717) Underestimates and Overexpectations.

J. C. R. Licklider (Massachusetts Institute of Technology, Cambridge, Massachusetts).

Computers and Automation, Vol. 18, No. 9, p.48-52. August 1969.

Gives an analysis of difficulties of existing systems and of the clear impossibility of developing a very large and complex computer system (such as needed for an antiballistic missile system) which has to handle continually more complicated problems and can never be tested as a whole.

129

(A9716) An On-Line Data Recording System.

W. Krag, N. Daggett, R. N. Davis, and F. Perkins (Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts).

Review of Scientific Instruments, Vol. 40, No. 12, p.1606-1609. December 1969.

A relatively simple system for recording experimental data from an optical spectrometer has been built and operated; the data are then transmitted by telephone to a central computing facility and recorded on magnetic tape. Several simultaneous users can be accepted. A brief description of the interface between the experiment and the computing facility is presented.

130

(A9714) Dartmouth Time-Sharing.

John G. Kemeny and Thomas E. Kurtz (Dartmouth College, Kiewit Computation Center, Hanover, New Hampshire).

Science, Vol. 162, No. 3850, p.223-228. 11 October 1968.

Development of the Dartmouth Time Sharing System DTSS, its design and capabilities. DTSS is a general-purpose system with a limited scope; it offers a number of different types of user services, but places relatively severe limitations on the size of the computing job it could handle.

131

(A9713) Electronic Speech Recognition. Part 2: Apparatus and Applications.

W. D. Gilmour.

Wireless World, Vol. 75, No. 1400, p.76-80. February 1969.

Special purpose phonetic equipment uses combination of analog and digital circuits. Most analog signals are then digitalized using a coarse quantitizer.

132

(A9712) Electronic Speech Recognition. Part I: Basic Principles.

W. D. Gilmour.

Wireless World, Vol. 75, No. 1399, p.5-7. January 1969.

The phonetic elements of speech and the basic principles of speech recognition are presented. Acoustical instruments for analyzing and recording speech are briefly described.

133

(A9711) Analysis and Optimization of Disk Storage Devices for Time-Sharing Systems.

H. Frank (Network Analysis Corporation, Glen Cove, New York).

Journal of the Association for Computing Machinery, Vol. 16, No. 4, p.602-620. October 1969.

A major limitation for time sharing systems is the time delay encountered in transferring records between central "fast" memory and peripheral memory devices. The transfer characteristics of disk storage devices are considered along with various aspects of disk files and their behavior presented.

134

(A9710) Challenge of the Seventies: Memories, Terminals, Peripherals (Proceedings of the 1970 IEEE International Computer Group Conference).

[No Author].

Institute of Electrical and Electronics Engineers, International Computer Group Conference, Washington, D.C. (16-18 July 1970). Institute of Electrical and Electronics Engineers, Inc., New York, New York, 1970. 376p.

The papers review developments in memory and peripheral system design, review the technological changes over the years, and consider the technical issues in computer technology facing the international engineering and design community.

135

(A9709) Interface: Library Automation with Special Reference to Computing Activity.

Edited by C. K. Balmforth.

Massachusetts Institute of Technology Press, Cambridge, Massachusetts, 1971. 251p.

The future of library automation is discussed. Subjects covered include methods and techniques, centralized services in libraries, and management criteria in the design of systems for academic libraries.

136

(A9708) Collaborative Library Systems Development.

Edited by Paul J. Fasana.

M.I.T. Press, Cambridge, Massachusetts, October 1971. 241p.

These papers were presented at the New York Collaborative Library Systems Development (CLSD) Conferences at New York (Section I), Stanford (Section II), and a summary paper for 1968-70. The CLSD project was formed to provide an exchange of working data, technical reports, and ideas concerning library automation and information transfer systems among the participating institutions and to coodinate their aims and schedules.

137

(A9671) Guide to Microreproduction Equipment (Fifth Edition).

Edited by Hubbard W. Ballou (Columbia University, Butler Library, New York, New York).

National Microfilm Association, Silver Spring, Maryland, 1971. 793p.

Directory of microreproduction equipment manufacturers and equipment available including cameras, readers, reader/printers, processors, duplicators, enlargers and accessories.

138

(A9670) Information Storage and Retrieval Systems for Individual Researchers.

Gerald Jahoda (Florida State University, School of Library Science, Tallahassee, Florida).

Wiley-Interscience, New York, New York, 1970.

Written for the researcher who needs basic knowledge in indexing his own literature collection. Topics covered include the various aspects of index use and preparation, types of indexing systems now in use, basic knowledge of indexing theory and practice, and information storage and retrieval of the future.

139

(A9662) Electronics '71 Buyers' Guide.

[No Author].

McGraw-Hill, New York, New York, October 1970. 1324p.

A Buyer's Guide directory of products, services, manufacturers and trade names in the electronics industry.

140

(A9661) Diakoptics and Networks.

H. H. Happ (General Electric Company, Schenectady, New York).

Mathematics In Science and Engineering, Vol. 69, 312p. Academic Press, Inc., 111 Fifth Avenue, New York, New York, 1971.

Diakoptics, a unique piecewise problem solution method, is described, in which engineering and physical systems can be torn apart, the pieces separately solved, and the results combined to yield the solution of the total system. The theory, called the "contour theory of networks", utilizes open and closed path contours, and generates equation structures using the variables associated with the contours.

141

(A9660) Advances in Information Systems Science.

Edited by Julius T. Tou (University of Florida, College of Engineering, Center for Informatics Research, Gainesville, Florida).

Plenum Press, New York, New York, 1970. 354p.

Volume 3 of a continuing series, presenting recent advances made in the development of information systems, and emphasizing pattern recognition, pictorial information manipulation, and new approaches to logical design of information networks.

142

(A9659) ALGOL 68 Implementation: Proceedings of the IFIP Working Conference on ALGOL 68 Implementation.

Edited by J. E. L. Peck (University of British Columbia, Department of Computer Science, Vancouver, Canada).

International Federation for Information Processing, Working Conference on ALGOL 68 Implementation, Munich, Germany (20-24 July 1970). North-Holland Publishing Company, Amsterdam, The Netherlands, 1971. 375p.

Various aspects of implementation are discussed, ranging in scope from an examination of detailed facets of compiler construction to the more general question concerning implementation methods, language design or sublanguage specification. The problems examined are those raised specifically by the language ALGOL 68, but may well have more general applications.

143

(A9658) Annual Review of Information Science and Technology.

Edited by Carlos A. Cuadra (Systems Development Corporation, Library and Documentation Systems Department, Santa Monica, California).

Encyclopedia Britannica, Inc., Chicago, Illinois, 1971. 524p.

Sixth in a series of reviews on the developments in information science, this volume introduces a new content area with a slightly revised format: application of information science to law. It reports on 4 basic areas of information science: 1) planning information systems and services; 2) basic techniques and tools; 3) applications; and 4) the information science profession.

144

(A9642) Recorded Magnetic Tape for Information Interchange (800 CPI, NRZI).

American National Standards Institute, New York, New York.

13 November 1965. 16p.

Provides format and recording standard for 1/2-inch 9-track tape and reels for use with USASCII. Includes design considerations. Approval November 13, 1967.

145

(A9641) Perforated Tape Code for Information Interchange.

American National Standards Institute, New York, New York.

9 July 1965. 7p.

Represents standard method of recording USASCI X3.4-1963 in perforated tape.

146

(A9640) DS/2 User's Manual [Draft].

System Development Corporation, Santa Monica, California.

System Development Corporation, Santa Monica, California, Report Number TM 4530/000/00 Draft. 1 April 1970. separately paged.

147

(A9639) DS/2 Tomorrow's Data Management Today.

System Development Corporation, Santa Monica, California.

[Undated]. 28p.

Description of SDC's DS/2 data management system.

148

(A9638) Formal Control-Flow Properties of a Model of Computation.

V. Cerf, E. Fernandez, K. Gostelow, and S. Volansky (University of California, Los Angeles, School of Engineering and Applied Science, Computer Science Department, Los Angeles, California).

University of California, Los Angeles, School of Engineering and Applied Science, Computer Science Department, Los Angeles, California, Report Number UCLA-10P14-105; UCLA-ENG-7178. December 1971. 58+p.

Deals with modeling and analysis of parallel computations. Develops theory of a bag, an unordered set which may have more than one instance of the same element or number.

149

(A9637) Flow of Control, Resource Allocation, and the Proper Termination of Programs.

K. P. Gostelow (University of California at Los Angeles, School of Engineering and Applied Science, Computer Science Department, Los Angeles, California).

University of California at Los Angeles, School of Engineering and Applied Science, Computer Science Department, Los Angeles, California, Report Number UCLA-10P14-106; UCLA-ENG-7179. December 1971. 219+p.

Develops a graph model of computation focussing on central flow in parallel processors, demonstrates the use in multiprocessor design.

150

(A9633) NWG/RFC 326 (Network Host Status).

Ellen Westheimer (BBN).

3 April 72. 3p.

Updates 9349.

151

(A9631) NWG/RFC 324 (RJE Protocol Meeting).

J. Postel (UCLA-NMC).

3 April 72. 1p.

152

(A9630) NWG/RFC 323 (Formation of Network Measurement Group (NMG)).

V. Cerf (UCLA-NMC).

23 March 72. 10p.

Notes from 17 March 1972 meeting at Project MAC about plans to perform measurement experiments on the ARPANET.

153

(A9609) NWG/RFC 322 (Well Known Socket Numbers).

V. Cerf and J. Postel (UCLA-NMC).

26 March 72. 1p.

154

(A9608) NWG/RFC 321 (CBI Networking Activity at MITRE).

Peggy Karp (MITRE).

24 March 72. 1p.

Describes plans to select ARPANET resources to be used to support MITRE projects, and to use ARPANET as a research tool to conduct data sharing experiments to study techniques for data handling on a computer network, and demonstrate possibility of using remote ARPANET resources to augment TICCIT system.

155

(A9559) Automation of System Building.

Daniel Teichroew and Hasan Sayani.

Datamation, Vol. 17, No. 6. 15 August 1971.

156

(A9558) NASA Educational Publications.

National Aeronautics and Space Administration, Washington, D.C.

April 1970. 11p.

157

(A9557) Time-Sharing and Multi-Access Computing in the 70s.

Office of Naval Research and System Development Corporation.

November 1971. 11p.

158

(A9556) On Implementation of Label Variables.

Robert R. Fenichel (Massachusetts Institute of Technology, Cambridge, Massachusetts).

Communications of the ACM, Vol. 14, No. 5, p.349-350. May 1971.

159

(A9555) Subject: News from ARPA IPT.

Dave Brown (Stanford Research Institute).

25 February 1971. 1p.

160

(A9553) Descriptor Structures for the SOLID System.

N. F. Chaffee (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

[Undated]. 20p.

161

(A9552) Search Procedures in the SOLID System.

N. F. Chaffee and P.A.D. deMaine (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

March 1971. 20p.

162

(A9551) Automatic Classification of Digitized Pictorial Data for Storage and Retrieval.

Gordon K. Springer (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

December 1970. 20p.

163

(A9550) Biographical Outline - Paul Alexander Desmond deMaine.

P.A.D. deMaine (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

[Undated]. 9p.

Includes list of Professor deMaine's publications.

164

(A9548) Software Packages for Increasing "Traffic" in the Communication Channels of Networks.

P.A.D. deMaine, G. K. Springer, and G. M. Campbell (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

Proceedings of the American Society for Information Science, Vol. 5, p.109-114. 1968.

165

(A9547) File Security in an Information Independent Data Management System.

P.A.D. deMaine and N. F. Chaffee (Pennsylvania State University).

MIS Copenhagen 70 Working Papers, Vol. 2, p.21-53. IFIP Administrative Data Processing Group (IAG), International Conference on Management Information Systems (14-16 October 1970). 1970.

The SOLID System is a high-speed, fully automatic, Information Management/Retrieval System. It is information independent, self-organizing, and it is independent of the kind of question asked. The SOLID System can be easily used to organize any collection of information items that have been assigned unique descriptor sets.

166

(A9546) The Self-Judgment Method of Curve Fitting.

P.A.D. deMaine (University of California at Santa Barbara, Chemistry Department, Santa Barbara, California).

Communications of the ACM, Vol. 8, No. 8, p.518-526. August 1965.

167

(A9544) The SOLID System. I. A Method for Organizing and Searching Files.

P.A.D. deMaine and B. A. Marron (National Bureau of Standards, Center for Computer Sciences and Technology).

Information Retrieval: A Critical View, p.243-282. Thompson Book Co., Washington, D.C., 1967.

168

(A9543) Implementation and Demonstration of a National Retrieval System: Preliminary Proposal for a Contract or Grant.

P.A.D. deMaine (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

March 1971. 3p.

169

(A9542) The COPAK Compressor.

P.A.D. deMaine and G. K. Springer (Pennsylvania State University, University Park, Pennsylvania).

File Organisation, p.149-159. International Federation for Information Processing, FILE 68 Conference, Copenhagen, Denmark (22-24 November 1968). Swets and Zeitlinger N.V., Amsterdam, Netherlands, 1969.

170

(A9541) File Structure of the SOLID System.

P.A.D. deMaine (Pennsylvania State University, University Park, Pennsylvania).

File Organisation, p.137-148. International Federation for Information Processing, FILE 68 Conference, Copenhagen, Denmark (22-24 November 1968). Swets and Zeitlinger N.V., Amsterdam, Netherlands, 1969.

171

(A9540) Bibliography of Library Automation.

Alice Billingsley.

American Libraries, p.289-312. March 1972.

172

(A9481) Project MAC Progress Report VII.

Massachusetts Institute of Technology, Project MAC.

1 July 1970.

The broad goal of Project MAC is experimental investigation of new ways in which on-line use of computers can aid people in their individual work. This is the seventh annual Progress Report summarizing the research carried out under the sponsorship of Project MAC.

173

(A9480) [Request to Change Mailing Address and Affiliation], Letter to Richard Watson (Stanford Research Institute, Menlo Park, California).

Daniel G. Bobrow (Xerox PARC, Palo Alto, California).

[February 1972]. 2p.

174

(A9479) The Information and Computing Sciences and Engineering (Status Report 1970-71).

John Barden (Case Western Reserve University, Department of Computing and Information Sciences, Jennings Computing Center, Cleveland, Ohio).

Case Western Reserve University, Department of Computing and Information Sciences, Jennings Computing Center, Cleveland, Ohio, Report Number 1108. 1971. 43p.

175

(A9478) C.ai(P.L star) -- An L star Processor for C.ai.

D. McCracken and G. Robertson (Carnegie-Mellon University, Department of Computer Science, Pittsburgh, Pennsylvania).

Carnegie-Mellon University, Department of Computer Science, Pittsburgh, Pennsylvania, Report Number CMU-CS-71-106. 11 October 1971. 49p.

176

(A9477) ARPA Network Series: 1. Introduction to the ARPA Network at Rand and to the Rand Video Graphics System.

T. O. Ellis, E. F. Harslem, J. F. Heafner, and K. U. Uncapher (RAND, Santa Monica, California).

RAND, Santa Monica, California, Report Number R-664-ARPA. September 1971. 37p.

177

(A9476) Theater Logistics Control Center: Report of AMCA Ad Hoc Working Group No. 18.

Howard J. Vandersluis (US Army Advanced Materiel Concepts Agency, Alexandria, Virginia).

US Army Advanced Materiel Concepts Agency, Alexandria, Virginia, Report Number AMCA-72-001. October 1971. 94p.

178

(A9475) The Man-Machine Interface for 1990 Management Information System Displays ([Report of] Ad Hoc Working Group No. 17).

Howard J. Vandersluis (US Army Advanced Materiel Concepts Agency, Future Trends Directorate, Alexandria, Virginia).

US Army Advanced Materiel Concepts Agency, Future Trends Directorate, Alexandria, Virginia, Report Number AMCA-71-006, AD 712 998. September 1970. 44p.

179

(A9474) Interactive Bibliographic Search: The User/Computer Interface (Proceedings of a workshop.).

Edited by Donald E. Walker (Stanford Research Institute).

AFIPS, The User Interface for Interactive Search of Bibliographic Data Bases, Palo Alto, California (14-15 January 1971). AFIPS Press, Montvale, New Jersey, 1971. 311+p.

Thirteen papers, p.1-223, written for the Workshop, the Workshop proceedings, p.227-311, and the bibliography prepared for the Workshop. The bibliography is a reproduction of the computer printout produced at ARC, with programs for listing and Author and titleword indexes.

180

(A9473) The ASCII Codes (1963, 1967 and 1968 Versions).

Western Union.

August 1971. 6p.

Explains differences in the codes and describes how code is implemented in WU 8-level equipment. Gives charts and legends for 1963 and 1968 Standards, and a comparison chart for the two standards.

181

(A9472) E & S Display Software.

Elaine L. Thomas (Bolt Beranek and Newman Inc., Cambridge, Massachusetts).

December 1971. 27p.

182

(A9471) TENEX Monitor Manual: Technical Summary of the TENEX Monitor.

Raymond S. Tomlinson and Daniel L. Murphy (Bolt Beranek and Newman Inc., Cambridge, Massachusetts).

February 1972. separately paged.

183

(A9468) EDMS, An Experimental Data Management System in LISP.

Bolt Beranek and Newman Inc.

Janu 67. separately paged.

184

(A9467) PREP ... Presentation Evolution Program.

Robert E. Perry (Consulting in Technical/Marketing/Executive Communications, Fullerton, California).

1970. 1p.

Card with wheels showing words through slots, for planning a presentation.

185

(A9466) PAL ... Presentation Aid Layout Frame.

Robert E. Perry (Consulting in Technical/Marketing/Executive Communications, Fullerton, California).

1970. 1p.

Template for design of visual presentation.

186

(A9465) Audience Requirements for Technical Speakers.

Robert E. Perry (American Federation of Information Processing Societies, Joint Computer Conference Technical Program Committee).

1971. 16p.

187

(A9464) FJCC Requirements for Visual Aids.

[FJCC Technical Program Committee].

28 September 1971. 2p.

188

(A9463) Total Package Presentation Improvement Program: Seminar One.

Robert E. Perry (Robert E. Perry, Consulting in Technical/Marketing/Executive Communications, Fullerton, California).

1971. 2p.

189

(A9462) Training Quiz for 1971 Fall Joint Computer Conference (Participant Preparation Program Seminar in Persuasive Communication through Effective Presentation Design).

Robert E. Perry (Robert E. Perry, Consulting in Technical Marketing Communications, Fullerton, California).

1970. 18p.

190

(A9442) SUR Note No. 30 (SUR Note Index).

Jeanne B. North (SRI-ARC).

7 April 72. 1p.

191

(A9441) SUR Note No. 29 (The Necessity for Standardizing Speech Recording Environments).

Ron DeCrescent (SDC).

3 April 72. 4p.

192

(A9429) SUR Note No. 28 (Working Papers in Speech Recognition -- 1).

Richard Neely (CMU).

28 March 1971. separately paged.

A collection of papers from various proceedings, processed by PDP-10 document generation system.

193

(A9421) SUR Note 27 (Lincoln Laboratory Speech Bibliography).

A. N. Stowe (LINC).

3 April 72. 2p.

194

(A9415) SUR Note No. 26 (Speech Understanding Meeting, March 28-31, 1972).

Jerry Wolf (BBN).

1972. 1p.

195

(A9413) Subject: Growth.

Bruce A. Dolan (ARPA, Arlington, Virginia).

3 March 1972. 7p.

196

(A9412) SUR Note No. 25 (Data Base Working Group Meeting: March 27-28, 1972, Lincoln Laboratory Show and Tell: March 29, 1972).

J. W. Forgie (LINC).

14 March 72. 1p.

197

(A9409) [Letter Expressing Interest in the Network Library Information System], Letter to Ernest Forman (MITRE Corporation, McLean, Virginia).

Don Cantor (Computer Corporation of America, Cambridge, Massachusetts).

18 February 1972. 1p.

198

(A9403) Bibliography [for] Network Graphics Meeting.

[Al Vezza] (MIT-DMCG).

1971. 2p.

199

(A9402) JICST Services and Publications.

The Japan Information Center of Science and Technology, Tokyo, Japan.

[estimated 1957]. 3p.

200

(A9401) The JICST Computer System.

The Japan Information Center of Science and Technology, Nagatatyo, Tiyoda-ku, Tokyo, Japan.

May 1969. 20p.

201

(A9400) Cybernetic Society in the USSR.

Victor Zorza (Washington Post Service).

The San Francisco Chronicle, p.26. 20 September 1971.

202

(A9399) Some Aspects of Mathematics and Computer Science in Japan.

Richard L. Lau (Office of Naval Research, Arlington, Virginia).

Office of Naval Research, Arlington, Virginia, Report Number ONR-30. 31 January 1972. 15p.

A technical summary of the Japanese capabilities and resources in mathematics and computer science.

203

(A9393) Of Lever and Electrons and Learning and Enlightnment: Technological Augmentation of Cognition in the United States Since 1776.

Uta C. Merzbach (Smithsonian Institution).

[Undated]. 56p.

204

(A9392) Technological Augmentation of Human Cognition: An Interdisciplinary Review.

Smithsonian Institute, Interdisciplinary Communications Program, Washington, D.C.

15 June 1971. 46p.

Five Interaction-discussion conferences were held and two independent task forces were created to explore new teaching and training concepts and methodologies, particularly as new technologies provide potentially powerful, symbiotic means of augmenting human cognition.

205

(A9390) Managing Computer System Projects.

John C. Shaw and William Atkins (Touche Ross & Co.).

McGraw-Hill Book Company, 1970. 286p.

206

(A9389) Semantic Information Processing.

Edited by Marvin Minsky (Massachusetts Institute of Technology).

The M.I.T. Press, Cambridge, Massachusetts, 1968. 440p.

A collection of studies in artificial intelligence; most of the chapters are slightly edited Ph.D. theses.

207

(A9388) The Sciences of the Artificial.

Herbert A. Simon.

The M.I.T. Press, Cambridge, Massachusetts, 1969. 123p.

208

(A9387) GPS: A Case Study in General and Problem Solving.

George W. Ernst (Case Western Reserve University, Cleveland, Ohio) and Allen Newell (Carnegie-Mellon University, Pittsburgh, Pennsylvania).

Academic Press, Inc., New York, New York, 1969. 297p.

209

(A9386) Compiler Construction for Digital Computers.

David Gries (Cornell University).

John Wiley & Sons, Inc., 1971. 493p.

210

(A9385) A Program for Research on Information Systems for Naval Management.

Jack Goldberg and Marshall C. Pease (Stanford Research Institute, Computer Science Group, Menlo Park, California).

25 September 1970. 22+p.

Proposal research project in development of techniques for realization of desirable properties of future Navy management support systems.

211

(A9384) QA4 Programming Concepts.

Johns F. Rulifson (Stanford Research Institute, AI Group, Menlo Park, California).

Stanford Research Institute, AI Group, Menlo Park, California, Report Number Technical Note 60. August 1971. 24p.

212

(A9350) NWG/RFC 320 (Workshop on Hard Copy Line Graphics).

Raj Reddy (CMU).

27 March 72. 4p.

213

(A9349) NWG/RFC 319 (Network Host Status).

Ellen Westheimer (BBN).

21 March 72. 3p.

Updates 9345.

Status of HOSTS from February 28 to March 10, giving Site and Site address, computer, and status as server or user.

214

(A9347) NWG/RFC 317 (Official Host-Host Protocol Modification: Assigned Link Numbers).

Jon Postel (UCLA-NMC).

20 March 72. 1p.

215

(A9345) NWG/RFC 315 (Network Host Status).

Ellen Westheimer (BBN).

8 March 72. 3p.

Updates 9257; Updated by 9349.

Status of HOSTS from February 14 to February 25, indicating computers at sites, and status of server or user.

216

(A9344) NWG/RFC 314 (Network Graphics Working Group Meeting).

Ira Cotton (MITRE).

14 March 72. 1p.

Announcement of meeting to be held at MITRE on April 16-18, 1972.

217

(A9343) NWG/RFC 313 (Computer Based Instruction).

Tom O'Sullivan (RAY).

6 March 72. 9+p.

Several areas are discussed: 1) using the communications network to support access for CBI applications. 2) Using a general purpose network central data base to reduce the sizing of the CBI support system. 3) Using both the diversity of machines (and languages) available, and advanced language tools, to provide greater flexibility and application transportably.

218

(A9342) NWG/RFC 312 (Proposed Change in IMP-to-Host Protocol).

Alex McKenzie (BBN).

22 March 72. 2p.

219

(A9341) NWG/RFC 311 (New Console Attachments to the UCSB Host).

Roland F. Bryan (UCSB).

29 February 72. 2p.

220

(A9299) A Language for Writing Problem-Solving Programs.

Johns F. Rulifson, Richard J. Waldinger, and Jan A. Derksen (Stanford Research Institute, AI Group, Menlo Park, California).

Stanford Research Institute, AI Group, Menlo Park, California, Report Number Technical Note 48. April 1971. 5p.

221

(A9298) Guidelines for Submission of Unsolicited Proposals.

John S. Foster, Jr. (Defense Research and Engineering).

Defense Industry Bulletin, p.1-17. Winter 1972.

222

(A9297) Needed: A New Planning Framework.

Mr. Cosgrove.

Datamation, p.37-39. 1 December 1971.

The art of managing programming - a random environment operation - will progress only if there is a change in the basic decision-making structure.

223

(A9296) Subject: ILLIAC IV Programming Symposium, Letter to [D. C. Engelbart].

David C. Russell (ARPA, Arlington, Virginia).

10 December 1971. 2p.

224

(A9295) High Speed Components for Digital Computers (Quarterly Engineering Report 4 -- Part A).

Douglas Engelbart (Stanford Research Institute, Menlo Park, California).

August 1969. 59p.

225

(A9294) Letter Thanking ARC for Innovation Group Demonstration, Letter to Douglas Engelbart (Stanford Research Institute, Augmentation Research Center, Menlo Park, California).

Roy J. Lahr (Xerox Corporation, Pasadena, California).

14 December 1971. 1p.

226

(A9293) MADAM: A User-Oriented Information Processing System for the IBM 1401.

William O. Crossley and Kendall A. Hinman (System Development Corporation, Santa Monica, California).

System Development Corporation, Santa Monica, California, Report Number TM-2198/000/00. 8 January 1965. 39p.

MADAM (Moderately Advanced DAta Management) is a program which builds and manipulates files, and generates reports. This document describes the system -- its rationale, utilization, grammar and vocabulary.

227

(A9292) Implementation of a Higher Level Language on an Array Machine.

Maniel B. Vineberg (UCLA, Computer Science Department, School of Engineering and Applied Science, Los Angeles, California).

UCLA, Computer Science Department, School of Engineering and Applied Science, Los Angeles, California, Report Number UCLA-10P14-103; UCLA-ENG-7157. September 1971. 331p.

228

(A9291) The META 7 Translator Writing System.

A. R. Tyrrill (UCLA, Computer Science Department, School of Engineering and Applied Science, Los Angeles, California).

UCLA, Computer Science Department, School of Engineering and Applied Science, Los Angeles, California, Report Number UCLA-10P14-102; UCLA-ENG-7122. September 1971. 167p.

229

(A9290) Visible Surface Algotirhms for Quadric Patches.

Robert Mahl (University of Utah, Computer Science Department, Salt Lake City, Utah).

University of Utah, Computer Science Department, Salt Lake City, Utah, Report Number UTEC-CSc-70-111. December 1970. 23p.

230

(A9289) Publication Directory, 1968-1970 (Third Edition, 1971).

IBM San Jose Research Laboratory.

1971. separately paged.

This is the third annual directory listing all publications and presentations, both internal and external of Research Staff Members of the past three years. The Directory is organized by year of publication, by laboratory department, and alphabetical by author within a department.

231

(A9288) Interactive Graphics.

System Development Corporation, Santa Monica, California.

System Development Corporation, Santa Monica, California, Report Number TM-4690. February 1971. 5p.

232

(A9287) A Guide to Computer System Measurement.

System Development Corporation, Santa Monica, California.

System Development Corporation, Santa Monica, California, Report Number TM-4639. [Undated]. 20p.

233

(A9286) CONVERSE: A Natural Language Data Management System.

System Development Corporation, Santa Monica, California.

System Development Corporation, Santa Monica, California, Report Number TM-4720(4/71). April 1970. 22p.

234

(A9285) CWIC: A Compiler for Writing and Implementing Compilers.

System Development Corporation, Santa Monica, California.

System Development Corporation, Santa Monica, California, Report Number SDC TM-4662(12/70). December 1970. 19p.

235

(A9284) A User's Guide to LISTAR for the National Library of Medicine.

Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts.

Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts, Report Number DS-8896. 3 March 1970. unpaged.

Lincoln Information Storage and Associative Retrieval System (LISTAR) is an on-line interactive storage and retrieval system which permits a user to define, search, modify and cross associative data files. LISTAR users communicate to the system by way of a keyboard terminal. The User's Guide describes procedures relating to CP/CMS and LISTAR operations. For further information, call (617) 862-5500, ext 7374.

236

(A9283) Transmittal of 9284, Letter to Bruce Parsley (Stanford Research Institute, Menlo Park, California).

Amedio Armenti (Massachusetts Institute of Technology, Lincoln Laboratory, Lexington, Massachusetts).

3 June 1970. 1p.

237

(A9282) LISTAR - Lincoln Information Storage and Associative Retrieval System.

A. Armenti, S. Galley, R. Goldberg, J. Nolan, and A. Sholl (Massachusetts Institute of Technology, [Lincoln Laboratory], Lexington, Massachusetts).

Spring Joint Computer Conference, 1970, p.313-322. (American Federation of Information Processing Societies, Spring Joint Computer Conference). 1970.

238

(A9261) NWG/RFC 310 (Another Look at Data and File Transfer Protocols).

Abhay Bhushan (MIT-MAC).

3 April 72. 7p.

239

(A9260) NWG/RFC 309 (Data and File Transfer Workshop Announcement).

Abhay Bhushan (MIT-MAC).

17 March 72. 5p.

Announcement and agenda of meeting to be held at MIT, April 14-15, 1972.

240

(A9259) NWG/RFC 308 (ARPANET Host Availability Data).

Marc Seriff (MIT-DMCG).

13 March 72. 3p.

Gives results of SURVEY Program implemented on MIT-DMCG ITS PDP-10 system for gathering information on availability of various HOSTS on the ARPANET.

241

(A9258) NWG/RFC 307 (Using Network Remote Job Entry).

E. Harslem (RAND).

24 February 72. 6p.

Demonstrates mode of accessing the Remote Job Service at UCLA via RAND's new PDP-10.

242

(A9106) SUR Note No. 21 (Revised SUR Note Distribution List).

Jeanne B. North (SRI-ARC).

10 March 72. 2p.

243

(A9087) SUR Note No. 20 (Carnegie-Mellon University, Computer Science Department, Speech Group Bibliography).

Lee Erman (CMU).

24 February 72. 2p.

244

(A9084) SUR Note No. 19 (Sentence Recognition from Visual Examination of Spectrograms and Machine Aided-Lexical Searching).

J. Makhoul (BBN).

[No Title for more Inclusive Document](, 1972 International Conference on Speech Communication and Processing). 22 February 72. 4p.

Entire contents is a paper by D. H. Klatt and K N. Stevens entitled Sentence Recognition from Visual Examination of Spectrograms and Machine-Aided Lexical Searching.

245

(A9078) NWG/RFC 305 (Unknown Host Numbers).

Ralph Alter (BBN-NET).

23 February 72. 1p.

246

(A9077) NWG/RFC 304 (A Data Management System Proposal for the ARPA Network).

D. B. McKay (IBMW).

17 February 72. 12p.

247

(A9075) NWG/RFC 303 (ARPA Network Mailing Lists).

[ARPA Network Working Group].

23 February 72. 6p.

Obsoletes 8488.

all.

248

(A8015) [Letter Transmitting Final NAS Study Report].

Ronald L. Wigington (Chemical Abstracts Service, Columbus, Ohio).

20 October 1971. 1p.

249

(A7559) Statistical Package for the Social Sciences: Update Manual.

Norman H. Nie and C. Hadlai Hull.

April 1971. separately paged.

Updates 7558.

250

(A7529) The Discrete, Logical Design, Simulation System.

J. R. Guskin and T. J. Dingwall (University of Michigan, COMCOMP Project).

University of Michigan, COMCOMP Project, Report Number Memorandum 26. April 1970. 15p.

Describes a system simulating combinatorial and delay logic, to provide a relatively quick way for the logic designer to determine any flaws in his network.

251

(A7073) The Great Gas Bubble Prick't; or, Computers Revealed -- by a Gentleman of Quality.

Ellsworth Mason.

College & Research Libraries, p.183-196. May 1971.

252

(A5846) [Letter enclosing biliographies, reprints and preprints of new works].

P.A.D. deMaine (Pennsylvania State University, Computer Science Department, University Park, Pennsylvania).

6 April 1971. 1p.

253

(A5666) [Letter enclosing 5628 and 5629].

Judith C. Needham (System Development Corporation, Santa Monica, California).

17 December 1970. 1p.

254

(A5501) Spinoza II: Conceptual Case-Based Natural Language Analysis.

Roger C. Schank, Larry Tesler, and Sylvia Weber (Stanford University, Stanford AI Project, Stanford, California).

Stanford University, Stanford AI Project, Stanford, California, Report Number Memo AIM-109. January 1970. 107p.

255

(A2991) Automatic Data Compression.

B. A. Marron and P.A.D. deMaine (National Bureau of Standards, Center for Computer Sciences and Technology).

Communications of the ACM, Vol. 10, No. 11, p.711-715. November 1967.

Information explosion makes it essential that storage requirements for all information be kept to a minimum. A fully automatic and rapid three-part compressor which can be used with "any" body of information to greatly reduce slow external storage requirements and to increase the rate of information transmission through a computer is described in this paper.

256

DUMMY 257

NLS internal map

This survey reflects the internal structure of NLS as of 27-APR-72. Sizes are given in 1024 word units. 1

NLS internal map

(J10281) 28-APR-72 15:23; Title: Author(s): William H. Paxton/WHP; Distribution: James G. Mitchell, L. Peter Deutsch, Diane S. Kaye, Don I. Andrews, Walt Bass, William S. Duvall, Mary S. Church, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L. Parsley, William H. Paxton/NPG; Sub-Collections: SRI-ARC NPG; Clerk: WHP; Origin: <PAXTON>NLSSURVEY.NLS;3, 28-APR-72 15:17 WHP ;

Development Coordination

Responsibilities of the development coordination team 1

(This is an evolving definition and as such represents only the current understanding of what might be involved in development coordination.) 1a

monitoring baseline record 1b

for consistency 1b1

development activity will be based on a set of assumptions about environment 1b1a

for example: will need to use certain other pieces of software, or will need time from a particular person to be implemented 1b1a1

DC alert for conflicting assumptions 1b1b

bring to the attention of the relevant parties and try to help in negotiation of compromise 1b1b1

Plan considered for consistency (1) when first entered into baseline, and (2) when changed. DC is not responsible for constantly verifying the consistency of the baseline -- it should instead be viewed as a service to be used by planners. 1b1c

for completeness 1b2

all planning and delevopment activities of ARC should be represented in the baseline 1b2a

this should include some representation of the interrelationships, links to design documents, etc. 1b2a1

DC alert for incomplete entries 1b2b

The individual project leaders (with help from PSO) will maintain their parts of the baseline and use it to guide their planning. Thus the responsibility of keeping complete entries still lies with the project leaders -- not with DC. 1b2b1

design coordination and review 1c

coordinate designs so as to 1c1

maintain consistency with existing plans in baseline 1c1a

make effective use of existing facilities	1c1b
review designs so as to	1c2
maintain consistency with existing principles and plans	1c2a
produce facilities which can be effectively used by other activites	1c2b
people coordination	1d
who's available to do some task	1d1
who's getting overcommitted	1d2
who has necessary background to do the task	1d3
capability coordination	1e
make sure the group has people providing the capabilities needed	1e1
if someone is leaving, make sure there won't be a serious capability-gap (by capability we mean the actual knowledge and skill required to do something -- not just a potential ability)	1e2

Development Coordination

(J10282) 28-APR-72 15:36; Title: Author(s): William H. Paxton/WHP; Distribution: Douglas C. Engelbart, Walt Bass, Charles H. Irby, Michael D. Kudlick, James C. Norton, William H. Paxton, Paul Rech, Richard W. Watson/PERC; Sub-Collections: SRI-ARC PERC; Clerk: WHP;
Origin: <PAXTON>DEVCOORD.NLS;5, 28-APR-72 15:32 WHP ;

Note on splitting NLS into high and loow seg parts

On loading part of NLS in the high segment 1

Divide NLS so that a number of files exist which reference only symbols among themsellves, or in files in the other segment. Files in the other segment may not erference files in this segment. 1a

Then 1b

(1) Write a program which dumps DDT's symbol table onto a symbolic sequential file of the following format 1b1

FILE junk 1b1a

SET EXTERNAL 1b1b

symbol1=1234B,symbol2=123345B,symbol3=124B, 1b1c

symbol4=1234B,symbol5=123345B,symbol6=124B, 1b1d

. 1b1e

. 1b1f

. 1b1g

FINISH 1b1h

(2)load first part of NLS 1b2

(3) run the programaam and produce an L10 file named junk 1b3

(4) Compile it to junk.rel 1b4

(5) Load the result in the high segment. 1b5

(6) Load the appropriate parts of NLS in the high segment.. 1b6

WSD 28-APR-72 15:45 10283

Note on splitting NLS into high and loow seg parts

(J10283) 28-APR-72 15:45; Title: Author(s): William S. Duvall/WSD; Distribution: James G. Mitchell, L. Peter Deutsch, Diane S. Kaye, Don I. Andrews, Walt Bass, William S. Duvall, Mary S. Church, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L. Parsley, William H. Paxton, Kenneth E. Victor/NPG KEV; Sub-Collections: SRI-ARC NPG; Clerk: WSD;

RWW 1-MAY-72 9:29 10285

Recommendation to Proceed with Basic and Intermediate NLS

Charles, as you are integrating the comments received on your NLS Command Language proposal (10081,) and are preparing a recommendation for an order of implemenatation, I would like to strongly urge you to consider those changes required to implement the proposed Basic and Intermediate NLS in(10234,) as the first changes to be made. The major changes required are , print forever, otional fields require CDOT, filter capability, deferred renumbering, file privacy. Thanks 1

RWW 1-MAY-72 9:29 10285

Recommendation to Proceed with Basic and Intermediate NLS

(J10285) 1-MAY-72 9:29; Title: Author(s): Richard W. Watson/RWW;
Distribution: Charles H. Irby, Jacques F. Vallee/CHI JFV;
Sub-Collections: SRI-ARC; Clerk: RWW;

WSD 1-MAY-72 10:05 10287

Historical Comment on Command Grouping [10246].

Dick... 1

With regard to your memo on Command Grouping: 1a

There was a facility on the SDS-940 which essentially allowed the feature you describe, of subsystems calling subsystems, using a call stack for this, returning, etc. 1a1

The feature was somewhat facetiously called the 'Super-Processor' feature. 1a2

One of the aspects of this organisition was that it allowed a user to go from DNLS to TNLS (and vice versa) without returning to the Exec. 1a3

In addition to any aid it gave the user by providing a more modular command language, it was beneficial to the programmer, insofar as it modularised the system making debugging much easier and relatively independent of other parts of the system. 1a4

If you are interested Journal Document 4888 (940 collection) describes the system in brief. 1a5

WSD 1-MAY-72 10:05 10287

Historical Comment on Command Grouping [10246].

(J10287) 1-MAY-72 10:05; Title: Author(s): William S. Duvall/WSD; Distribution: Richard W. Watson, James G. Mitchell, L. Peter Deutsch, Diane S. Kaye, Don I. Andrews, Walt Bass, William S. Duvall, Mary S. Church, J. D. Hopper, Charles H. Irby, Harvey G. Lehtman, John T. Melvin, Bruce L. Parsley, William H. Paxton, Paul Rech, Jacques F. Vallee, James C. Norton, Douglas C. Engelbart, Marilyn F. Auerbach, Dirk H. van Nouhuys/RWW NPG PR JFV JCN DCE MFA DVN; Sub-Collections: SRI-ARC NPG; Clerk: WSD;

DVN 1-MAY-72 10:17 10288

(Nic,Locator) locked by NBS-TIP

This journal item is to let your know that I have ben monkeying around in your directory. 1

Last week some one discovered that (nic,locator) was locked by the existance of a partial copy in your directory. 2

It is nominally impossible for some one logged in through the NET to lock up files in the directory <NIC>. Never the less it happened. 2a

When I went to unlock it, I discovered that all the files in the directory <NBS-TIP> were pending archiving, hence I could not unlock (nic,locator). I assumed that no one would actually want to archive his whole directory. so I reset your archive condition. No files are now pending deletion. 3

If you want more information on what happened, please, call, link, or send a journal message to me, (DvN, Dirk van Nouhuys). 4

DVN 1-MAY-72 10:17 10288

(Nic,Locator) locked by NBS-TIP

(J10288) 1-MAY-72 10:17; Title: Author(s): Dirk H. van Nouhuys/DVN;
Distribution: Ronald M. Rutledge, Richard W. Watson, Donald C.
Wallace/RMR RWW(for your information) DCW(for your information);
Sub-Collections: SRI-ARC; Clerk: DVN;
Origin: <VANNOUHUYS>JD2.NLS;1, 1-MAY-72 10:02 DVN ;

DCE 1-MAY-72 14:18 10291

Visit log: Mike Wooton, USC, regarding Delphi study on effects of multi-national computer systems.

Mr. Michael Wooton, Department of Public Administration, University of Southern California, Los Angels, Calif 90013 -- (213) 746-2205. 1

Mike is working on a study sponsored by AFIPS, doing a Delphi type of study on the social implications of multi-national computer systems (for basic description of the study, see XDOC -- 10269,). He came and lunched with Don Walker, Lou Fein, and me; he gave us some tentative designs for his Delphi questionairre (XDOC -- 10268,), and for the list of Delphi panel who (tentatively) are being considered for paticipation (XDOC -- 10270,). 2

DCE 1-MAY-72 14:18 10291

Visit log: Mike Wooton, USC, regarding Delphi study on effects of multi-national computer systems.

(J10291) 1-MAY-72 14:18; Title: Author(s): Douglas C. Engelbart/DCE; Sub-Collections: SRI-ARC; Clerk: DCE;

JCN 1-MAY-72 14:26 10292
RADC is a Journal Subcollection

As we agreed, we have set the ARC Journal entry process up so that RADC users' Journal entries will have automatic entry into a new subcollection: RADC 1

We have also retroactively changed previous RADC (and some JCN and SRI-ARC) entries to have RADC in the *z2 subcollection field in the ARC Master catalog. 2

Using these changes, I produced a trial RADC Special Journal Index - by Number through 28 April 1972. 2a

It is presently located in: (norton,radcindex,) 2b

If you think of any items that are missing, please let me know - also any other ideas on the subject. 2c

RADC is a Journal Subcollection

(J10292) 1-MAY-72 14:26; Title: Author(s): James C. Norton/JCN; Distribution: Duane L. Stone, Thomas F. Lawrence, Rome Air Development Center (ISIM)/DLS TFL RADC; Sub-Collections: SRI-ARC RADC; Clerk: JCN; Origin: <NORTON>RADCSUB.NLS;1, 1-MAY-72 14:10 JCN ;
HJOURNAL="*** DRAFT *** JCN 17 MAY 72 3:21AM xxxx";

MFA 1-MAY-72 14:30 10294

OD LIBRARY

The following materials were recommended by Gus Matzorkis as basic Organization Development sources. For some of the books I've included Gus' commentary. These should provide a start on an ARC OD library which will hopefully be of use to individuals for general reading as well as to PODs as topics for group discussions and practical exercises. I will submit a request for ARC acquisition of these materials as soon as possible. 1

BOOKS 1a

Bell, D., "Work and Its Discontents", Boston: Beacon Press, 1956 1a1

Comments: fundamental OD text written from the worker's point of view - deals with special contemporary problems 1a1a

Beckhard, R., "Organization Development: Strategies & Models," Addison-Wesley Publishing Co., 1969 1a2

Comments: recommended handbook containing a history of OD and casebook studies of OD methodology 1a2a

Bennis, W. G., "Changing Organizations", New York: McGraw Hill, 1966 1a3

Comments: very theoretical 1a3a

Blake, R. R. & Mouton, J. S., "The Managerial Grid", Houston: Gulf Publishing Co., 1964 1a4

Comments: OD field standard -- the (9119? or 1991?) Blake grid model as a way to evaluate organization 1a4a

Brown, N. O., "Life Against Death", Weslyan University Press, 1959 1a5

Comments: beyond OD and heavy on psychology - neo-freudian interpretation of history of man and struggle between pleasure vs. reality principles 1a5a

Fordyce, J. C. & Weil, R., "Managing WITH People", Addison-Wesley Publishing Co., 1971 1a6

Comments: Excellent basic text providing many how-to-do-it techniques 1a6a

Koestler, A., "The Ghost In The Machine", New York: Macmillan, 1967 1a7

Comments: on shortcomings of technocratic approaches 1a7a

Kohler, W., "Gestalt Psychology", New York: Liveright Publishing Corporation, 1947 1a8

Comments: included because of importance in OD 1a8a

Likert, R., "The Human Organization", New York: McGraw Hill, 1967 1a9

Comments: similar to Blake's approach -- contains techniques and quizes -- OD emphasis on how to unlock creativy 1a9a

Maslow, A. H., "Motivation & Personality", New Harper & Brothers, 1954 1a10

Comments: pyramid analysis of man's needs 1a10a

McGregor, D., "The Human Side of Enterprise", New York: McGraw Hill, 1960 1a11

Comments: fundamental OD source -- emphasis on management -- theory x vs. theory y stuff 1a11a

Mills, C. W., "White Collar", New York: Oxford University Press, 1953 1a12

Comments: broad social science view of management 1a12a

Mumford, L., "The Myth of The Machine", New York; Harcourt, Brace & World, 1967 1a13

Comments social science based -- deals with technocrization (sic??): 1a13a

Reich, C. A., "The Greening of America", New York: Random House, 1970 1a14

Comments: interesting but not accepted/respected by OD 1a14a

Riesman, D. & Glazer, N. & Denney, R., "The Lonely Crowd", Garden City, Doubleday Anchor Books, 1950 1a15

Rogers, C. R., "On Becoming a Person", Boston: Houghton Mifflin, 1961 1a16

Comments: sensitivity-based basics of behaviorial approach 1a16a

Roszak, T., "The Making of a Counter Culture", New York: Doubleday, 1969 1a17

Comments: like or better than "Greening of America" -- neo-mystical 1a17a

Toffler, A., "Future Shock", New York: Random House, 1970 1a18

Comments: worth looking at -- organizational change 1a18a

OD LIBRARY

OD LIBRARY

PAPERS/ARTICLES

(these are on hand; some were given to ARC by Gus Matzorkis, others are part of the ARC collection. All will be catalogued and two or more copies of each will be placed in a binder in the OD section of the ARC library. Attention will be given to finding other such articles already here and from other sources. Also, individual PODs might find some of the short articles worthwhile as a focal point for a POD meeting.) 1c

Likert, R. and Pyle, W.C., "Human Resource Accounting -- A Human Organizational Measurement Approach", Financial Analysts Journal, January February 1971 1c1

Rogers, C.R., and Roethlisberger, F.J., "Barriers and Gateways to Communication", 1c2

McGregor, D.M., "The Human Side of Enterprise", University of California 1c3

Zaleznik, A. "Power and Politics in Organizational Life", Harvard Business Review, May-June 1970 1c4

Sheldon, D., "Building More-Effective Teams, Innovation 1c5

Straus, D.A., no title: on question "Is participatory decision-making possiible?", Interaction, NoVember 10, 1971 1c6

ARC members are invited to suggest supplements to this library. 2

OD LIBRARY

(J10294) 1-MAY-72 14:30; Title: Author(s): Marilyn F. Auerbach/MFA; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: SRI-ARC PODAC; Clerk: MFA; Origin: <AUERBACH>OD.NLS;10, 1-MAY-72 14:28 MFA ;9, 1-MAY-72 11:34 MFA ; .HJournal="MFA 17 MAY 72 xxxx
OD LIBRARY";

MFA 1-MAY-72 14:43 10296

PODAC Subcollection

I've created a new subcollection called PODAC. Please remember to specify PODAC as a subcollection when submitting PODAC-related journal entries. This will save me hassling through indices to maintain a comprehensive PODAC library. Thanks. 1

PODAC Subcollection

(J10296) 1-MAY-72 14:43; Title: Author(s): Marilyn F. Auerbach/MFA; Distribution: James E. White, Augmentation Research Handbook, Jacques F. Vallee, Diane S. Kaye, Paul Rech, Michael D. Kudlick, Donald R. Cone, Don Limuti, William R. Ferguson, Priscilla Lister, Linda L. Lane, Marilyn F. Auerbach, Walt Bass, Mary S. Church, William S. Duvall, Douglas C. Engelbart, Beauregard A. Hardeman, Martin E. Hardy, J. D. Hopper, Charles H. Irby, Mil E. Jernigan, Harvey G. Lehtman, Jeanne B. North, James C. Norton, Cindy Page, William H. Paxton, Jeffrey C. Peters, Jake Ratliff, Barbara E. Row, Ed K. Van De Riet, Dirk H. van Nouhuys, Kenneth E. Victor, Donald C. Wallace, Richard W. Watson, Don I. Andrews/SRI-ARC; Sub-Collections: PODAC SRI-ARC; Clerk: MFA;

AAM 1-MAY-72 15:00 10297

WARNING regarding network use on MAY 8

Vint Cerf of UCLA Network Measurement Center has just indicated
to us a requirement to carry out certain performance experiments on the network prior to installation of the new IMP software on May 15. These experiments are designed to measure network performance under heavy traffic load to a single site, and thus may cause the network to "lock up" such that NO traffic can flow (a problem which the new IMP software is designed to prevent).
Vint has indicated to us that ARPA regards these experiments as extremely important in spite of the possibility of lockup; we have therefore agreed to assist with the experiments and scheduled them for May 8.

Although we do not know whether these experiments will cause lockup, we suggest that sites do not schedule important network work for Monday, May 8. We apologize for thelateness of this announcement.

1

AAM 1-MAY-72 15:00 10297

WARNING regarding network use on MAY 8

(J10297) 1-MAY-72 15:00; Title: Author(s): Alex A. McKenzie/AAM; Distribution: A. D. (Buz) Owen, Robert L. Fink, Karl C. Kelley, Schuyler Stevenson, Charles Holland, Jeanne B. North, Charles Holland, George N. Petregal, Steve D. Crocker, Thomas F. Lawrence, John W. McConnell, John F. Heafner, Robert E. Long, Ari A. J. Ollikainen, James E. White, A. Wayne Hathaway, Dan L. Murphy, Patrick W. Foulk, Richard A. Winter, Harold R. Van Zoeren, Alex A. McKenzie, Robert L. Sundberg, Joel M. Winett, Abhay K. Bhushan, Peggy M. Karp, Thomas N. Pyke, Abe S. Landsberg, B. Michael Wilber, James A. Moorer, Edward A. Feigenbaum, Robert T. Braden, James M. Pepin, Barry D. Wessler, John T. Melvin, Heather M. Shoub, Ann U. Kerr, Brenda Monroe, Eric R. Beals, Gennie Cederholm, Dorothy A. Reynolds, Charles Holland, Jeanne B. North, Pam J. Klotz, Charles Holland, Marcia D. Trager, Barbara Barnett, Glen Grazier, Ernest H. Forman, Cindy Page, Rilla J. Reynolds, Stan Golding, Steve G. Chipman, John P. Barden, Martha A. Ginsberg, Bradley A. Reussow, Frances Y. Knight, Snirley W. Watkins, Marcelle D. Petell, Linda M. Connelly, Janet W. Troxel, Carol J. Wilkinson, Imogen C. Beattie, Connie D. Rosewall, Linda M. Webster, Anita L. Coley, Carol J. Mostrom/NLG NSAG; Sub-Collections: NIC NLG NSAG; Clerk: AAM;

DCE 1-MAY-72 15:50 10298

ignore type message

how is everything? 1

DCE 1-MAY-72 15:50 10298

ignore type message

(J10298) 1-MAY-72 15:50; Title: Author(s): Douglas C. Engelbart/DCE; Distribution: Dirk H. van Nouhuys, Don Limuti/DVN DL; Sub-Collections: SRI-ARC; Clerk: DCE;