

Augmentative Communication: A Review of Available Resources and Approaches

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This report will review current organizations, publications and teleconferencing developments relative to the field of augmentative and alternative communication. Future articles in this area will focus on more specific areas. What follows is a review of some of these developments as well as a brief introduction to the impact of technology on this field.

BACKGROUND

Organizations

The International Society for Augmentative and Alternative Communication (ISAAC) is a new organization dedicated to advancing the transdisciplinary field of augmentative and alternative communication. ISAAC has just hosted its first conference — the Third International Conference on Augmentative and Alternative Communication held at the Massachusetts Institute of Technology in Cambridge. Details of the conference are available through the abstracts of the conference which served as the proceedings. They are available from ISAAC. ISAAC also has two official publications: a newsletter "Communication Outlook"; and a new journal "Augmentative and Alternative Communication" (AAC). Details of both publications are found in the following section. ISAAC currently is active in the areas of advocacy and international developments in addition to the areas of conferences and publications. For further information: ISAAC, P.O. Box 1762 Station R, Toronto, Ontario, Canada, M4G 4A3.

The Rehabilitation Engineering Society of North America (RESNA) is an organization dedicated not just to rehabilitation engineering but more generally to the concept of the interdisciplinary advancement of rehabilitation through technology. The organization puts out a quarterly newsletter entitled "Rehabilitation Technology Review" and hosts an annual conference. The next conference is entitled "Technology — A Bridge to Independence" and is scheduled for June 24-28 in Memphis. For further information: RESNA, Suite 402, 4405 East-West Highway, Bethesda, MD. 20814.

The International Project on Communication Aids for the Speech Impaired (IPCAS) is a coalition of four member countries to promote government support of the needs of the speech impaired. Countries which currently comprise IPCAS membership are Canada, the United States, Sweden and the United Kingdom. Major activities include information sharing, publications (see following section) an annual fellowship for study in the field and cooperative ventures in areas such as standardization of assessment protocols. The secretariat of IPCAS is currently in Canada. Details are available from: IPCAS, Canadian Rehabilitation Council for the Disabled, 1 Yonge Street, Suite 2110, Toronto, Ontario, M5E 1E5.

Publications

Communication Outlook is a quarterly newsletter which is the official publication of ISAAC. The publication originates at the Artificial Language Laboratory in East Lansing, Michigan. The format is relatively informal with regular features on new technical developments both experimental and commercial, advocacy updates, letters to the editor, a "tips" column to help clinicians in implementing "easy" technology themselves. *Communication Outlook's* upcoming events column is probably the most comprehensive in the field. Subscriptions are available at a reduced rate for ISAAC members or

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can be obtained directly by writing to: Communication Outlook, Artificial Language Laboratory, Computer Science Dept., Michigan State University, East Lansing, Michigan, U.S.A. 48824.

Communicating Together is a quarterly magazine published by the Blissymbolics Communication Institute, Toronto, Canada. It is another relatively informal publication featuring information about Blissymbolics as well as other augmentative communication systems. Regular features include: updates on research and publications, interviews with noted authorities in the field, a column dealing with the application of technology, Blissymbol updates and a question and answer format authored by a clinician in the field. Reduced subscriptions are available to ISAAC members or can be obtained directly from: Communicating Together, Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario M4G 1R8.

Augmentative and Alternative Communication is the official journal of ISAAC. AAC is edited by Dr. David Yoder and an extensive group of associate editors. It is being published by Williams and Wilkins with the inaugural issue scheduled for January 1985. This new quarterly journal is dedicated to the in-depth examination of systems and devices for communicatively impaired individuals. The journal is available at a reduced cost for ISAAC members or can be ordered directly from: Williams & Wilkins, 428 East Preston Street, Baltimore, Maryland, U.S.A. 21202.

IPCAS Publications. IPCAS currently has several publications available, including:

Johnathan. The story of a young Swedish child integrated into a pre-primary school system while using his Blissymbol communication system.

Conversations. A collection of interviews with non-speaking adults who are participating in the work force while using augmentative communication devices.

Fellowship Report. A report of the 1983 IPCAS fellow, Arlene Kraat. This reports her findings relative to the international state of the art on research and implementation of interaction techniques in augmentative communication.

The publications above are available from IPCAS

Communication and Telecommunication Needs of the Speech Impaired. This is a survey of the needs of the speech impaired in Canada by Dr. D. Elaine Pressman. A good beginning to understanding some of the problems and issues of both

users and professionals. Particularly interesting is the recommendations section which concludes the publication. Available from: Extension of Services Policy Division, Broadcasting & Social Policy Branch, Department of Communications, Government of Canada, Ottawa, Canada.

Teleconferencing

Confer is a new teleconferencing system currently being employed by the field of augmentative communication in a variety of applications. Confer permits anyone with access to a computer terminal to communicate with other participants in various conferencing networks in a variety of ways — these include both private messaging (electronic mail) as well as the use of the network as a discussion format. Conferences which currently exist on confer and are being utilized by members of the augmentative communication community include:

IPC:EXEC. This is a network which allows members of the ISAAC executive committee to conduct business. This involves executive committee members from Canada, the U.S.A., Sweden, England, and France.

IPC:AC. This is a general conference open to anyone in the field. Participants in it include professionals, parents and users of augmentative systems themselves. There are currently about 30 members and discussions on this conference cover a variety of topics ranging from the suitability of early use of augmentative communication devices to the latest developments in speech synthesis.

IPC:ADP. This is a newly formed conference directed toward the clinical settings in Ontario which have been designated as approved authorizing agents for augmentative communication devices through the Ontario Ministry of Health Assistive Devices Program (ADP). Participation so far is limited to these 6 authorized clinics and the Ministry of Health central office. The focus of the conference will be ongoing discussion of clinical issues, implementation of the ADP and ongoing review of new equipment. Further details on joining Confer can be obtained from: Katherine Seybolt, c/o Blissymbolics Communication Institute, 350 Rumsey Road, Toronto, Ontario, Canada M4G 1R8.

Needless to say the preceding represents merely the highlights in terms of organizations, publications and teleconferencing, however, the selection reflects the current most active areas in the field. It is hoped through further publications in Human Communication Canada to highlight other more specific areas.

TECHNOLOGY APPLICATIONS

A brief overview of the application of technology might serve as a framework for future articles and ongoing discussion. We have largely come to the conclusion that the most logical way to approach new devices is to develop a strategy to quickly evaluate and understand these devices as they emerge and then to select those devices which would warrant further investigation if deemed appropriate. What follows is a format for approaching this initial review of technology. It is hoped that later articles will review specific devices, computer systems and peripherals following this general approach. Points to consider:

Input

In looking at the input required to operate a device one must first look at the general physical, cognitive and linguistic abilities required to operate a specific device. Physically, one looks at the type of movements required to operate the device. Specific assessment procedures for determining these characteristics have been completed at a number of centers in North America and work in this area is ongoing. Additionally one must look at the complexity of operating a device to determine its suitability for certain groups of clients who may possess specific cognitive deficits. In a similar vein, one must examine the linguistic requirements, for example, if one must type using traditional orthography to utilize a device, is the device suitable for a client with major linguistic deficits?

Memory and Expansion Capabilities

One must examine the growth potential of specific devices, particularly with young children whose communication needs are ever expanding as well as with adults whose communication potential is unknown. If they are not expandable, the clinician may be faced with having to purchase a second

device and, more importantly, train the client on a second device as the client progresses. This of course requires clinical judgement as to the rate of potential expansion of need relative to the specific client.

Programmability

Generally, devices to be used for communication must be highly programmable to reflect the client's individual communication needs and wants. Using a pre-programmed device may be appropriate in certain situations (e.g., used for social interaction only), but generally pre-programmed devices have been found to be extremely limited.

Output

In looking at various devices, one must examine the suitability of the output of the device for a specific client. Devices now have various printed outputs ranging from a letter quality printers to simple ticker tapes. Speech output is becoming increasingly available as a feature of many devices. The clinician must consider the appropriateness of the output, particularly the intelligibility of a specific synthesizer and hence its appropriateness for a specific client. Other outputs include video screens, led displays and even tactile output for communication with the deaf-blind population.

Technical Complexity

A relatively new feature to be considered with respect to technical devices is the complexity of the device. Some of the devices currently available (largely prototypes) appear to be so complex as to necessitate a resident engineer for their operation. This as well as technical compatibility of new devices is of critical interest to those prescribing devices for clients.

This framework will be utilized in future articles to review devices and comment on the applicability.