

Voice and Audio Processing Center of Excellence Created to Assure AT&T of . . .

# A 'Sound' Future

BY DAN VAN ATTA

Listen up. A new and unusual cross-business-group organization, designed to exploit AT&T's voice and audio processing core competencies and speed the transfer of these technologies into advanced products and services — was announced Jan. 1.

Called the Voice and Audio Processing Center of Excellence, the organization will become a focal point for linking Bell Labs' broad research expertise in these emerging technologies with the development plans of business units throughout the corporation.

The center's mission is to help establish a competitive advantage that will enable AT&T to be a global leader in voice and related audio products and services. This advantage will come from applying signal processing platforms to improve the quality and efficiency of the current product line — which will stimulate the growth of new businesses — and from creating powerful, easy-to-use, human-to-machine interfaces. Jerre Stead, president, Global Business Communications Systems (GBCS) will support the center.

The Center of Excellence concept emerged from the executive-level Voice and Audio Processing Steering Committee created last year to implement AT&T's Voice and Audio Processing Strategic Initiative and its underlying core platforms. The center's structure is unusual, Stead says, because most of its member

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components, which are located throughout AT&T, will continue to reside in — and remain a part of — their respective business units.

"We could have simply created a Voice Processing strategic business unit to get on with business as usual," comments Stead, "but that's not the answer. What's needed is a new way for the existing business units to work together to better meet their customers' needs. Cross-business-unit teaming is, itself, the first product of the Voice and Audio Processing Center of Excellence."

## Other Centers Planned

Voice and audio processing is one of six strategic initiatives being undertaken by AT&T. The others are in wireless, visual communications, data networking, scalable microprocessors, and messaging. Communications Products Group Technical Officer Joe Timko, a member of the Steering Committee, says additional centers of excellence also may be created to eliminate duplication and to speed technology transfer in some of these areas.



Producing prototype products that both "speak" and "listen" is one of the challenges that currently has Randy Pilc's hands full.

"These technologies are important because they're strategic to the success of the business, they're moving very rapidly, and there's a lot of competition out there," says Timko. "We must more fully apply our technical know-how to business unit products." Although centers of excellence may not be created for each strategic area, Timko says a Video Terminal Center of Excellence will soon be announced in the Consumer Products business unit and a wireless center is likely.

Randy Pilc, former director of Information Applications Architecture, has been named managing director, Voice and Audio Processing Center of Excellence. Pilc will be supported by Stead, with continuing direction from the 15-member executive Steering Committee.

That charter includes responsibility for advancing the core competency in voice and related audio processing; for speeding the transfer of voice and audio processing technology; and for developing and delivering the core products from which other products will evolve.

The Voice and Audio Center of Excellence will support a new Technical Marketing Division that will be responsible for cross-business-unit market analysis, business analysis, strategic planning, and competitive analysis. This division will be headed by Chester Anderson, former head, Core Product Architecture Department. Anderson will support Dave Basore, who was named district manager for market and business analysis. A district manager for strategic

planning and competitive analysis is yet to be named.

According to Basore, the center will have the special challenge of pursuing the market potential of voice and audio products for which the AT&T business units do not now have an established customer base. "We're taking a look at non-traditional markets," says Basore, "to see if we can leverage our technology to create prototype products for new, as well as existing, AT&T markets."

Anderson states, "Our major goals for 1993 are to make voice and audio processing technology available to the business units for inclusion in their products and services, to implement the AT&T Voice and Audio Processing corporate strategy, to help the business units grow the voice and

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audio processing business for AT&T, and to make a major breakthrough in a non-traditional marketplace."

Information Principles Research Lab Director Larry Rabiner will work closely with the Center of Excellence and the Steering Committee to strongly couple voice and audio technology Research activities with the work of the center.

Pilc also will support Judy Tschirgi, acting head, Services and Speech Technology Department, responsible for accelerating speech technology by developing advanced product prototypes. Tschirgi will remain a part of Network Systems' Switching Systems unit at Indian Hill. Her existing organization, which includes the User Interface, Services Technology, and Speech Processing Groups, will be in the Center of Excellence.

In addition, Tschirgi will directly support the forward-looking work of the GBCS Core Technology Group in Columbus, and of the Consumer Products' Forward-Looking Work Group in Indianapolis.

## A Catalyst

While the Center of Excellence will be a focal point for technical expertise, Pilc says its role will go beyond serving as an internal-consultant group. "Our function will be that of a catalyst. We'll be doing prototyping and technology-feasibility trials. We're establishing technology acceleration teams with the goal of advancing these technologies to the point where they are ready for inclusion in product development."

These teams are currently focused on improving speech recognition and verification systems, as well as on designing the flexible platforms that will be needed for full-duplex communications systems to be used in consumer products, business speakerphones, and in audio/video teleconferencing.

Tschirgi will support these team efforts, which will work with Research to find ways of improving speech recognition capabilities by making algorithms more efficient and by expanding the vocabularies of existing speech recognition systems.

Pilc also will support the Voice and Audio Processing Department in AT&T Architecture, which includes the Voice Processing Architecture Group, supported by Richard Rosinski, and the Messaging Architecture Group, supported by Marian Croak.

To further coordinate the efforts, a cross-business-unit User Interface Team, led by Jim Farber in the AT&T Architecture area, has been formed. This team has as its charter the development of a common AT&T voice interface that is easy to use, attractive and distinctive, and which can be integrated into a variety of AT&T products and services. This interface will facilitate AT&T's vision of providing a natural and continuous two-way communications capability between machines and humans — in any language. The goal: giving people easier access to each other, anywhere and at any time.

"In terms of organization, this is a groundbreaking approach to achieving the technology-transfer function," Pilc maintains. "We're a group comprising people from several business units who all will be working toward mutually established priorities." ■