

It goes without saying that AT&T Bell Laboratories provides a competitive edge for every business unit and division of AT&T. Jack Bucster has frequently commented on the subject. "The advanced technology we get from Bell Labs is a clear differentiator for us in a tough marketplace," says the outgoing BCSYSTEMS head. "With the DEFINITY System we increased our lead in the PBX industry; now we're looking for Bell Labs work in voice processing to continually enhance our position in that high-growth end of the industry." ■ There doesn't appear to be any philosophical gap between Bucster's view on R&D and that of incoming President Jerre Stead. "One of the key factors that led me to AT&T," says Stead, "is the strength of R&D at Bell Labs." ■ Some 2,000 R&D folks work on BCSYSTEMS products in disciplines such as systems engineering, software and hardware development, systems test, field support, and quality analysis. Work locations vary from Denver to Columbus, Ohio, to Holmdel, Lincroft and Middletown, N.J. Fourteen patents were awarded last year to Bell Labs people working on behalf of BCSYSTEMS. ■ But the Bell Labs partnership extends beyond patents and products into

Lewis, Feiner Talk About Their New Roles

On June 1, BCSYSTEMS Labs Executive Directors Gordon Lewis and Alec Feiner took on new roles designed to strengthen the Labs' across-the-board product management oversight, as well as long-term planning. Lewis assumed responsibility for all BCSYSTEMS product development, while Feiner was named chief scientist, and will oversee forward-looking development activities and architectural aspects of BCSYSTEMS products. Both are supported by Don Hirsch, vice president, Product Management and Development. Here's what Lewis and Feiner have to say about the change.

Gordon Lewis



"I don't foresee any major changes in our strategic direction. What's important is that I'll have a chance to focus my attention on day-to-day issues across the product line, while Alec

takes the longer-term view.

"I see our organization's role being to fully support product improvements and enhancements requested by the customers through product managers. At the same time, we need to reduce expenses and increase quality, creating a line of products that will help BCSYSTEMS domestically and internationally."

Alec Feiner



"This change should help improve the efficiency of the overall operation, while also giving greater support to all of our functions. I see my role as being both to investigate new

opportunities, as well as to nurture other members of the team.

"In understanding the competitive market and planning for long-term success, I think it's not only important to pay attention to what the customers are telling you they want, but also to explore what advanced technology is capable of giving them—things they may never even have dreamed would be possible."

Bell Labs Technology Contributions

Working closely with their Product Management and Manufacturing colleagues, BCSYSTEMS developers have made significant contributions to the business unit across the board. Here's a rundown of just some of the major areas:

International Marketing Thrust

Development has been moving ahead rapidly with international releases of the DEFINITY® Communications System and the AUDIX™ Voice Power System. We're in 22 countries now with our PBXs and expect to be in 40 by 1993.

Voice Processing

Since the beginning of this year, BCSYSTEMS has introduced three state-of-the-art voice processing products that have helped push AT&T to the forefront of the market:

- (1) a speech recognition option for the CONVERSANT® Voice Information System (VIS) that understands "yes," "no," "oh" and the digits "zero" through "nine," making it much easier for users to take advantage of information access and retrieval.
- (2) Home Agent, another CONVERSANT VIS option that enables call center operators to work at home, and
- (3) Fax Attendant, a new option for the AUDIX Voice Messaging System (VMS) that enables users to retrieve, transmit, and broadcast stored facsimile messages anywhere in the world.

Wideband Switching

Last year, BCSYSTEMS introduced standard dial-up access for 112 kbps video conferencing. This means PBX customers can create point-to-point video connections simply by dialing with their video systems—without need for any special operator assistance or provisioning. This was an industry first.

Terminals

Five new Digital Communications Protocol (DCP) terminals introduced this year offer more customer-requested features and the most advanced speakerphone ever available. In addition, re-engineered processes have achieved major reductions in manufacturing costs.

The People of R&D

Across the country, the people at AT&T Bell Laboratories are dedicated to helping BCSYSTEMS win in the marketplace. Here are brief profiles of seven of the people of R&D. You won't find every Labs organization or specialty represented here. What you will find is a sample of R&D employees. You'll learn their priorities, challenges and accomplishments. You'll get a look at the perspective they bring to the BCSYSTEMS team. And you'll see just how closely together we're all working to the benefit of our customers, our business unit and ourselves.

STA Joseph Masi, Customer Systems Lab, Holmdel, N.J. Masi has been with Bell Labs for 7 years. Prior to supporting BCSYSTEMS he held a variety of telephone design support roles with the Labs. Now he performs actual design work. Masi holds an associate's degree in mechanical engineering from Penn State University.

Best Project Ever Worked on for BCSYSTEMS: "Physical design of the 7407 and 7444 phone sets has been challenging. It requires developing one set of plastic to house both phone sets, with the main difference being the type of display each would have. I worked with some top-notch people, helping to cut production costs... We've been very serious about driving down costs. This is making us much more competitive and positions us well for the future."

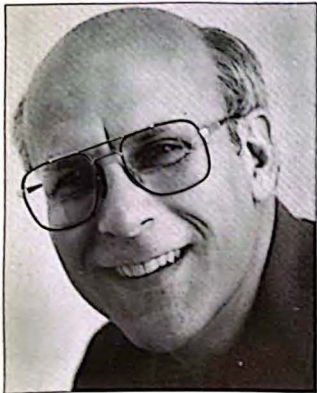


MTS Weiming Wong, Common Base Software and System Management, Middletown, N.J. Wong has been with Bell Labs for 5 years. Prior to supporting BCSYSTEMS, she supported the StarLAN project and Datakit® II VCS product. Her current assignment is on the DEFINITY System. Prior to AT&T, she was with Philon, a software company in Manhattan.

Best Project Ever Worked on for BCSYSTEMS: "My current project involves development of wideband switching capability, giving me an opportunity to work as the developer of a new design, which is more technically challenging than what I've done before within BCSYSTEMS... Under the current turnaround plan, I've seen a great deal of emphasis on quality improvement, which gives me confidence that we can enhance the reputation of our products and boost our share of the market."

LABS PARTNERSHIP

virtually every aspect of the business, most notably the turnaround effort. ■ "Without a doubt the development organization has been instrumental in the improved performance of our business unit," says Don Hirsch, vice president of Product Management & Development. "They've done an excellent job of improving processes and increasing their efficiency." In fact, Hirsch notes that R&D has cut its budget by 30 percent while maintaining a full work program. ■ R&D has also made its mark on customer satisfaction. "In recent surveys, our products have rated higher than our competitors'," says Hirsch, "and our ratings have shown impressive improvement." ■ At the same time, R&D is working more closely than ever with the Customer Service organization to provide testing and remote diagnostic capabilities. R&D has helped Sales develop new metrics for tracking asset management, installation, customer satisfaction, and billing. R&D has helped lower Manufacturing product costs more than \$30 million while improving quality and reducing production intervals. ■ Here is a closer look at BCSYSTEMS' R&D organization: its people, its leadership, its contributions.



MTS Steve Riederer, Systems Peripherals Development Lab, Columbus, Ohio. Riederer has been with Bell Labs for 13 years. Prior to supporting BCSYSTEMS he worked for more than 10 years at Bell Labs, doing both Human Factors and Systems Engineering work on several Operations Support Systems. Before joining Bell Labs, he taught psychology and computer science at Wellesley College and the University of Texas (Austin).

Best Project Ever Worked on for BCSYSTEMS: "The design and development of 'Script Builder' remains a keystone in our CONVERSANT VIS product line. I found this stimulating because it was a brand-new product with lots of new capabilities. We had to make many good design choices to meet customer needs...I believe voice processing has a great future, with most market studies projecting strong, steady growth. That means high potential for innovative and rewarding technical work."

MTS Lydia Castanon-Flores, Software Development Lab, Denver, Colo. Castanon-Flores has been with Bell Labs for 7 years. Prior to supporting BCSYSTEMS she earned a bachelor's degree in computer science from the University of Southern California, and a master's degree in computer science from Stanford University.

Best Project Ever Worked on for BCSYSTEMS: "Software development for the DEFINITY System has allowed me to recognize the importance of making a system grow with our customers. I worked with our customers and account teams through a one-year rotation to Sales Support. It also gave me the chance to learn from experienced switch developers...I have a positive feeling overall about our organization and the product. We have a strong development team, and I'm confident that regardless of the application, we'll be able to adapt and do a good job with it."



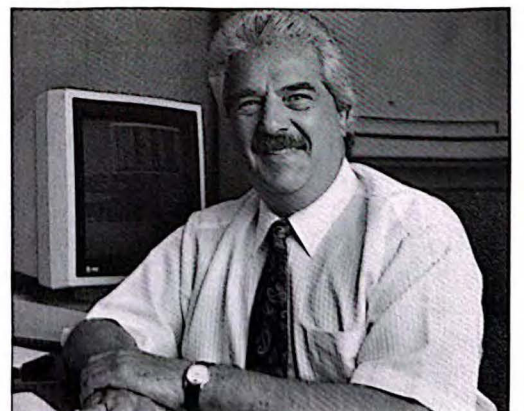
DMTS Mary Warren, Systems Engineering Center, Lincroft, N.J. Warren has been with Bell Labs for 11 years. Prior to supporting BCSYSTEMS she earned a bachelor's degree in statistics and economics from Virginia Tech and a master's degree in operations research from Stanford University in Bell Labs' One Year On Campus (OYOC) Program.

Best Project Ever Worked on for BCSYSTEMS: "Voice processing...from AUDIX VMS to cross-product applications of the CONVERSANT VIS, AUDIX VMS and the DEFINITY System. I really enjoyed teaming with other experts in the business unit. My role in establishing customer requirements is critical in bringing products to market when customers need them...We want to continue building products that customers will find useful and attractive. We need to continue providing applications that help them run their businesses efficiently in a global marketplace."



MTS Mike Hancock, Customer Switching Lab, Denver, Colo. Hancock has been with Bell Labs for 7 years. Prior to supporting BCSYSTEMS he was with IBM Federal Systems, where he helped perform quality assessment of the Space Shuttle system software.

Best Project Ever Worked on for BCSYSTEMS: "Working as a system test coordinator for the RISC-based processor release of the DEFINITY Switch involves developing and implementing strategies for assessing product quality and monitoring test progress. There has been a team approach to assure that R&D delivers high-quality products...We must maintain a commitment to research that advances technology and an equal commitment to product development processes that ensure rapid introduction of technology at superior levels of quality."



MTS Tom Duchlinski, Field Support Group, Customer Switching Lab, Denver, Colo. Duchlinski has been with Bell Labs for 23 years, developing software for call processing applications on the System 85 and the DEFINITY System. Duchlinski has been with Field Support for the past 6 years. Before joining Bell Labs, he earned an associate's degree in applied science from Trinidad State College.

Best Project Ever Worked on for BCSYSTEMS: "In Field Support, I'm a member of a development group responsible for training and supporting the System 85 and the DEFINITY System. It's a great pool of talent that helped set the stage for a solid product...The future of BCSYSTEMS depends on product quality...from the moment a product is installed, it should meet customer expectations."