

'The Voice' says everything is secure

By JEWEL BRADSTREET

He is known only as "The Voice."

Four or more times a day, "The Voice" echoes across the large, high-ceilinged workplace in Boston Digital. His message varies, but failure to obey often means sirens and a visit from local police. At Boston Digital, you comply with "The Voice's" demands, or pay the consequences.

However, unlike George Orwell's famous "Big Brother," the police summoned are just from Milford, not the thought police. And "The Voice" is there to make Boston Digital less restrictive, not more so.

He is the voice of Boston Digital's security network.

"We needed a security system which was secure, but would let people come and go," said Colin Stearman, systems engineering manager for the company. "We have a lot of people who might have brainstorms at 3 a.m., and who want to come in and work at odd hours."

Thus, the development of this particular entity.

To make the system's voice distinct from the human voices which also broadcast over the public address system, Stearman created a microchip which synthesizes speech. "The computer chip can recreate 64 phonemes of the human voice," Stearman said. "Of course, the human voice makes many more than that."

Each phoneme is a different speech sound, and, since the computer reproduces only a limited number, some words are more intelligible than others when spoken by the machine.

"You've heard of a word processor?, Well, I have a speech processor," Stearman said. "I have it speak the messages, and if it's hard to understand, I reword it. Every message is 80 percent intelligible the first time you hear it, and 95 percent on the second try."

"The hardware that does the speaking is not a commercially made product," Stearman continued. "It took maybe a weekend to make it."

While Stearman was responsible for the speaking mechanism, it was Joe Fitzpatrick of New England Security and Communications, Inc. who designed the system. "We took the requirements and made a system incorporating them," he said. "Unlimited access to authorized people, no one person being able to disarm the entire system, those were our concerns. This system uses five separate computerized systems," he explained.

Due to the complexity of the security network, some means of telling people what to do and when to do it was needed. Signals, such as beeps or bells, could have been used, Stearman said, but visitors would have to be aware of the signal system. This could be difficult, he said.

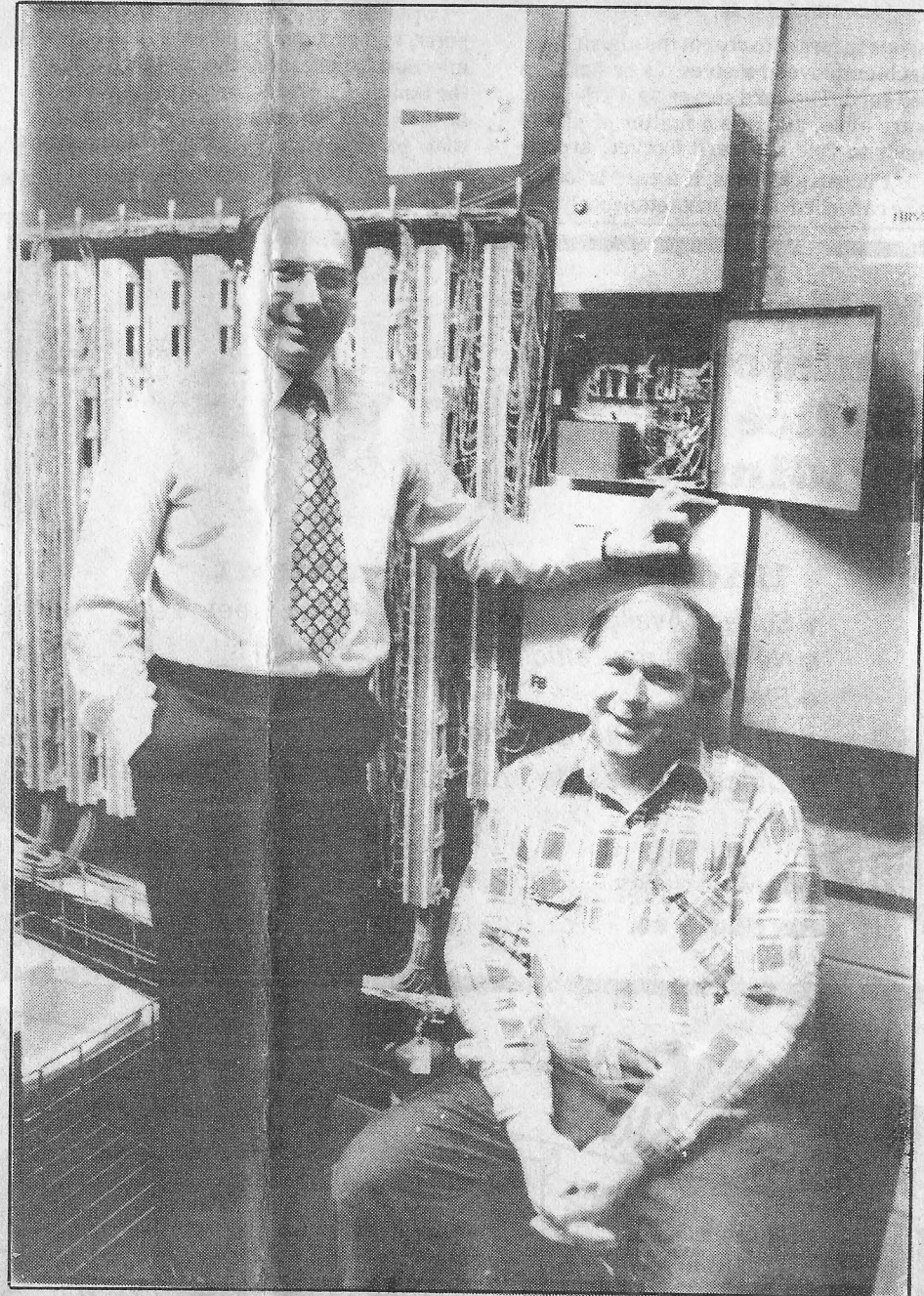
So, "The Voice" was born.

'You've heard of a word processor? Well, I have a speech processor.'

---Colin Stearman

Most of the messages are activated after hours, unless there is a disturbance such as a fire or a break in. After hours, employees are warned in advance when they must either leave the building or punch in a special access card, which will prevent buzzers, alarms and the arrival of the police.

"A record is kept, automatically telling what time employee A disarmed the system, and when he rearmed it," Fitzpatrick said. "There is a risk someone might not remember to turn the alarm back on when leaving, and that would create a breach of security, but we would know who did it. We have incorporated protection and accountability. It's bound to be embarrassing for



Colin Stearman (left) and Joe Fitzpatrick

'Talking system' keeps Boston Digital secure

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someone to forget to rearm the alarm."

Each employee receives his or her own coded card. The card serves as a key — no two are alike, and it is a matter of just 10 seconds to void any card forever, according to Fitzpatrick. Thus, if a card is lost, it can be cancelled almost instantaneously.

Cards are programmed into the computer, and each one is given access only to appropriate areas of the building. Inside the building, devices can detect movement or body heat when the system is armed in that particular area. While authorized employees can gain access to the building at any time, they may only disarm the

security system in a few sections of the interior. This is accomplished by sliding the card through a fixture on the wall.

If all goes well, "The Voice" will only speak four times in a day, and all after hours, Stearman said.

And what does the voice sound like? Fitzpatrick and Stearman liken it to "Darth

Vader with an East London accent." Other employees think it sounds a little like some Haitian zombies seen on a T.V. special. As for the guys in the machine shop, they have trouble hearing it during working hours.

But whatever it sounds like, you'd better not talk back.

Computers

Video Notes

Victoria Ogden



I am the voice of Boston Digital security. I will try to speak slowly and clearly despite the pressure of the moment. ... Attention. The fire alarm system has been activated.

"The Voice," as it is

'The Voice' is offering a few 'friendly' warnings

affectionately called by employees at Boston Digital in Milford, is being touted as one of the first speaking security systems in the country.

It is the brainchild of Boston Digital employee Colin Stearman, who worked on his home computer to create a synthesized voice that could be activated by the company's more traditional electronic alarm system.

Joe Fitzpatrick of New

England Security and Communication Inc, also of Milford, which installed the original system, said "The Voice" has helped solve some problems — mainly employees ignoring or not recognizing warning lights or buzzers.

In operation since December, "The Voice" has almost eliminated false alarms tripped by people working late in the office.

Ten minutes before it's time

to close shop, "The Voice" comes on and says: "Your attention please. The office alarm will turn on automatically in 10 minutes."

It later warns over-timers that the alarm is on and they should leave by a special exit.

So friendly. So warm.

Actually, you have to get used to "The Voice's" voice, which drones out over the company's intercom system.

Fitzpatrick described it as a Darth Vader with an East London accent — a joke on Stearman, who comes from England. Stearman says it speaks with a Canadian accent.

"The Voice" is capable of speaking 16 messages such as warning of a breach of security in the computer, office or manufacturing areas.

As for warning employees about a fire, Fitzpatrick said it

is programmed to do so, but most agree it is impractical.

The voice would probably be drowned out by the regular fire alarm, Fitzpatrick said, and when it goes off, "there's only one thing to do. Get out."

The system has worked perfectly except for one time when the power went out. "The Voice" apparently got confused and started saying things out of turn.