Chapter 3

THE SCREEN OF A MAC LC 580 • TAMPA, FL,
October 3, 1996

ctober 3, 1996

One of the best parts about college is these incredible computer deals, thought Ellen. Everyone else in the world forks over a bundle for the same Macs I get for 50% off, just for being a student.

As her modem dialed InfoServe, she stretched her arm straight forward to the screen to make sure she was seated at least arm's length away. That ELF radiation gives you cancer, that's what Mike O'Massey says. I'm not getting any of that stuff.

Her Mac beeped three times. Aha—connected, she said to herself. The InfoServe welcoming screen rolled up her monitor. Yes indeed. At fourteen bucks an hour, you'd better welcome me.

Of course, it was only the biggest, most popular dial-up computer network/database in the universe. She could send and receive elec-tronic mail (E-mail, Mike O'Massey called it), download cool programs, look up movie re-views…actually, Ellen was aware that there was a whole lot of other stuff you could do, but she never bothered to do much exploring. Her monthly bills were scary enough as it was.

She went to the Macintosh Games forum to see what new stuff had been posted there. Cool…three new games were listed. The magic of the modem, she thought; you see something you want, you just use the Download command to transfer it over the phone wires to your hard drive. She read their descriptions.

llen's roommate Jo threw a Poli-Sci book onto the floor and flicked off her bedstand light. "I can't read anymore, El. I'm beat. G'night," she said, and flopped back onto her pillow.

"Dream sweetly," Ellen said absent-mindedly. She read over the listing of the new games again. Well, I'm certainly not going to download any multi-player games. If I get hooked on playing some game against other people on InfoServe, I'll never get off the line!

Looks like that AirAttack thing is the one to get—if 1169 people have already downloaded it, it must be pretty good. She pressed the D key. InfoServe told her:

llen chose the Receive MacBinary command from her File Transfer menu, and picked up the copy of Cosmo that Jo had left on the desk.

When the transfer was finished, Ellen logged off the network. There, on her hard drive, was her new prize: AirAttack. She glanced at her clock radio—1:33 am. What the heck, she thought; I can play with this for another half hour and then go to bed.

She discovered that AirAttack was actually pretty good. "Hit the Space bar to launch rockets at the incoming choppers; they appear from behind the moun-tains," read the onscreen instructions. "The more you play, the faster they come. You, hiding up in the oak tree at the right side of the screen, are the last line of defense for your city!"

As gently as Ellen pressed her Space bar, she could tell it was still clacking loudly enough to keep Jo from sleeping. She decided to call it a night; even so, it was ten of two by the time she shut down her Mac and went to brush her teeth. She couldn't wait to show AirAttack to Mike O'Massey.

ctober 5, 1996

"I don't really give a crap!"

On Danny's first Monday morning in the R & D lab, those were the first words he heard from Gam's mouth. They floated in from around the corner and down the hall—Danny heard the storm long before he saw it.

Then a carefully modulated voice, also coming closer. Arnie's.

"Gam. Gam please. Don't make this difficult. Look, it's nearly noon—the new hirees have been sitting waiting for almost two hours. Please, Gam. You just can't go making little flights when you know how tight the situation is here. OK?"

There was no response, but the quick footsteps approached. Charles, sitting next to Danny, swung his feet off the desk and sat up.

Gam burst into the room. Arnie was hot on his heels, fighting for self-control, his face almost the color of his carroty beard.

"I need to know that you're hearing me, Gam. This can't keep happening. I

need you to stay out of the airplane business on company time.”

Gam stopped short, took a glance at the other programmers, and turned to face Arnie, towering almost a foot above him. He spoke quietly, levelly.

“Arnie. Say one more word to me, and I walk out of here and that’s the end of this project. It’s that simple. Not one more word.”

With that, Gam unslung his blue gym bag from his shoulder and moved over to his computer. Arnie stared, helpless, impotent, breathing hard.

At last he turned. “Good morning, gentlemen,” he managed between clenched teeth. He moved toward the door. “Please excuse the disturbance.” He left.

So this, Danny thought, is my New Career.

He’d expected a somewhat more formal introduction to the Master Voice project. Between bouts of apartment-hunting and looking at crummy used cars, Danny had spent the weekend reading the Func Spec, the 400-page blueprint for the new program. In typical programmerese—a language something like English but without the distracting intrusion of syntax, spelling, and grammar—the Functional Specifications described how Master Voice would work when completed. For the programmers who would be writing the software, it was The Bible. Danny had hoped that perhaps Gam would spend Monday morning clarifying the program’s structure.

But with Mr. Star Programmer in continual P.O.’ed mode, Danny didn’t see how they’d all be able to operate as a team. As Gam began to explain, they weren’t.

“So you each get one of these cubicles. You each work on the piece of the puzzle I give you, and I fit it into place. I give you the routine I want you to work on. You write it, you send it back to me on the network.”

Skinner, eyes darting, voiced the question they all were thinking. “OK—Gam, OK? So you’re the only one working on the big picture, right? I mean who’s going to keep the Func Spec updated if you change how the thing’s going to work, y’know?”

Gam stared. Skinner petered out, cowed.

“Looky here, little fella. If we’re supposed to get this thing out the door by February, you boys are going to have to play ball with me. If you have a problem with that, you can go to Bob Stroman with it.”

Gam, thy name is Attitude, Danny thought.

"OK, gents, let's hit the keys," continued Gam. "Look over the variable list. Learn it. I'll come around and tell you what I want you to work on."

Danny eyed Gam resentfully as he sat at the desk he'd been assigned.

Each cubicle was equipped with a Mac IIci—not top of the line, but powerful enough. Each was equipped with eight megabytes of memory—plenty of RAM—and a 265-megabyte external hard drive. Well, that ought to hold a few files, Danny thought...like the whole Library of Congress.

Next to his Mac, Danny found a laserprinted, stapled set of pages that defined the variables in the Master Voice program. He read through a little bit of it, then switched on his Mac.

His portion of the software was to be written in the C language—practically his native tongue. He found the compiler in an electronic folder on the hard drive called MV Develop, opened it, and began to look through the program.

They're going to have to explain things to me a little better than this, Danny thought. Half of the routines that had already been written made reference to an external chip—that custom arc chip, he figured—and made no sense to him.

A thick breathing entered Danny's consciousness from the right side. It was Charles, leaning over from the next cubicle.

"Hey Danny."

"What's up?"

"Did they do to your floppy drive what they did to mine?"

Danny scooted his chair back to look at Charles' workstation. The first thing he noticed was the six-pack of Swiss Miss plastic Individi-Serv pudding cups. Charles had nestled them neatly against the computer's side for later consumption. A spoon lay on top of the monitor.

But then he saw Charles' floppy-disk drive—or, rather, where it was supposed to be. Instead, there was an attractive plastic faceplate that matched the light gray color of the computer. It fit snugly in the slot, and four Phillips-head screws held it in place.

His own computer was similarly sealed.

He looked at Charles' expression—raised eyebrows and pursed lips—and he knew they'd come to the same conclusion. "Jeeez," Danny breathed. "These guys are paranoid."

"Evidently morale around here ranks just above 'Ceiling fixtures' on the priority list," Charles said acerbically under his breath. "Let me get this straight. We can't take our hard drives home from work. We can't discuss the project outside the office. And now inserting floppies is verboten? How are we supposed to get any work done?"

Danny shrugged sympathetically. "Guess we'll have to send code to each other over the network that con-nects the Macs."

"Lovely," Charles grunted. "If we all behave ourselves, they might even give us a stone tablet or two." With a disgusted look, he straightened up and disappeared around the cubicle wall.

"It so happens, friends," said a voice directly in Danny's ear, "that those drive slots were sealed for a very good reason." Danny's head whipped around to see Gam, a condescending smile on his face, put one hand on his shoulder and one on Charles'. Danny flinched at the touch.

"If you haven't gotten the picture yet, fellows, Master Voice is a big deal around here. They've pumped mounds of money into it, have a boardroom-full of nasty-looking Jap investors breathing down their necks, and they're not about to flush the whole project down the toilet because one of you boneheads gets care-less with the software. One little virus you boys walk in here with, and our whole network is corrupted." He looked di-rectly at Charles. "And they're not about to risk having somebody 'accidentally' share our code with anyone outside of our little family, either."

Danny and Charles exchanged looks. What the hell is going on around here? Danny fleetingly considered spilling the beans: So what are you, Mister Clean? I happen to know that your hard drive rides home in your that Ziplock bag of yours every night...

"Think of it as a urine test, boys," Gam continued. "A urine test for the soul, OK? You do your job and play it by the books, and the floppy drive won't bother you. You pee straight, you'll have a good ol' time. You can do that, cantcha Danny boy?" Gam patted him on the back, grinning in his face.

Danny bit his lip and turned to face the screen.

Gam moved on. "OK, Chuck. Let me show you what to start on."

Charles looked uncomfortable. "It's Charles, if you don't mind," he said.

"Chuck sounds too much like a character on 'Cheers.'"

Gam pulled up a folding chair and flicked Charles' ponytail with his index finger. "Sure thing, Chuckles. No sweat." He launched Charles' copy of the program and began explaining what he wanted done.

The nerve of this creep, Danny thought, tuning out Gam's voice. Riled, he grabbed the mouse and began rooting through the folders displayed on the screen. Yes, everything they'd need was on the hard drive. He explored the E-mail system: the cubicles were all connected to the same network—even Gam's. He pushed back in his swiveling, castered chair, far enough to look into Gam's cubi-cle at the end of the room. He smiled: Gam's floppy drive, of course, hadn't been sealed.

"OK, Danny boy. Let's see what you're made of," said Gam, pulling the fold-ing chair up next to him. "You're gonna be our interface man. Mr. Pudding here is handling some of the standard Mac Toolbox routines. But you— you're out there in front, big guy. You're going to be the voice of Master Voice; when it requests more in-formation from the user, it's going to pop up one of your dialog boxes. I want you to make everything clear and pretty to look at. Hope you like dialog boxes, 'cause you're gonna be making a million of 'em.

"But don't be a RAM hog," he said. "You use up more than 40k of memory for this code, and I give the job to someone else. Don't use three bytes if you can rewrite it in one. Write tight, tight, tight," he said, knuckling Danny's bicep on each emphasis.

Gam began to explain how he saw the interface working. Half of Danny's mind tuned in. The other half raced, trying to process all the information pouring in, and resisting the urge to rub his arm, where Gam had pounded him just a mite too hard for playfulness.