

# INTERACTIVE *traveler*

**malady: fear of flying. prescription: virtual reality**

BY AL WEISEL



What you see when you strap on the headgear: the cabin, LEFT, and another plane waiting at the gate, ABOVE.

As the plane taxis down the runway, Bill grips his armrest nervously. Not having flown for 20 years, he has turned to the Center for Anxiety and Related Disorders at Boston University for help in overcoming his fear. The plane takes off. Bill glances out the window at the ground rushing by; his breathing becomes noticeably shallow. His therapist asks him, on a scale of one to eight, how anxious he is. "About seven and three-quarters," Bill says.

Bill, however, hasn't left his therapist's office. He's being treated with Virtually Better, a software system designed by Larry Hodges of Georgia Tech and Barbara Rothbaum of Emory University. It allows aerophobes to feel as if they're flying without actually getting on a plane.

Exposure therapy—based on the theory that phobias are best conquered by facing them head-on—has generally proven extraordinarily successful. But for patients with a fear of flying, that would entail buying a ticket, going to the airport, and boarding a plane. Virtual reality is more convenient, private, and economical—Boston University has a sliding scale that tops out at \$90 a session.

It remains to be seen, though, whether the virtual approach does the trick. "Is it real enough to make the patient anxious?" asks Markus Wiegel, who's testing the software at Boston University. "And once they're not afraid of the virtual plane, can they get on a real one?"

"We're trying to figure out how realistic is realistic enough," says Hodges, "and which visual and audio cues are most important, given the limited power of the PC."

Except for the headset, the cartoony graphics, and a slight lag in the image when you move your head, the simulation does make you feel as if you're on an airplane. Your chair feels like a plane seat; there's a newspaper lying next to you; the carpeting has a particularly ugly pattern; and outside there's a realistic city skyline (Atlanta's, although the view is better than the one from the real airport). Not only do you hear the plane's engines, but you feel the vibrations channeled through the seat. The software simulates takeoffs, turbulence, and landings—any of which can be lengthened or run in loops, depending on the patient's particular terrors.

Virtually Better has had some success in making the skies friendlier. "During our first case study," reports Hodges, "a woman flew from Atlanta to Seattle two days after finishing the therapy—and then she flew to China."

*The software is being used on patients or being tested at five locations: the Center for Anxiety and Related Disorders (617/353-9610); Virtually Better, Atlanta (404/873-4404); the Center for Advanced Multimedia Psychotherapy, San Diego (619/623-2777, ext. 704); the Phobia Clinic at Hillside Hospital, Glen Oaks, N.Y. (718/470-8120); and the Phobia Center in Cleveland (216/464-4101).*