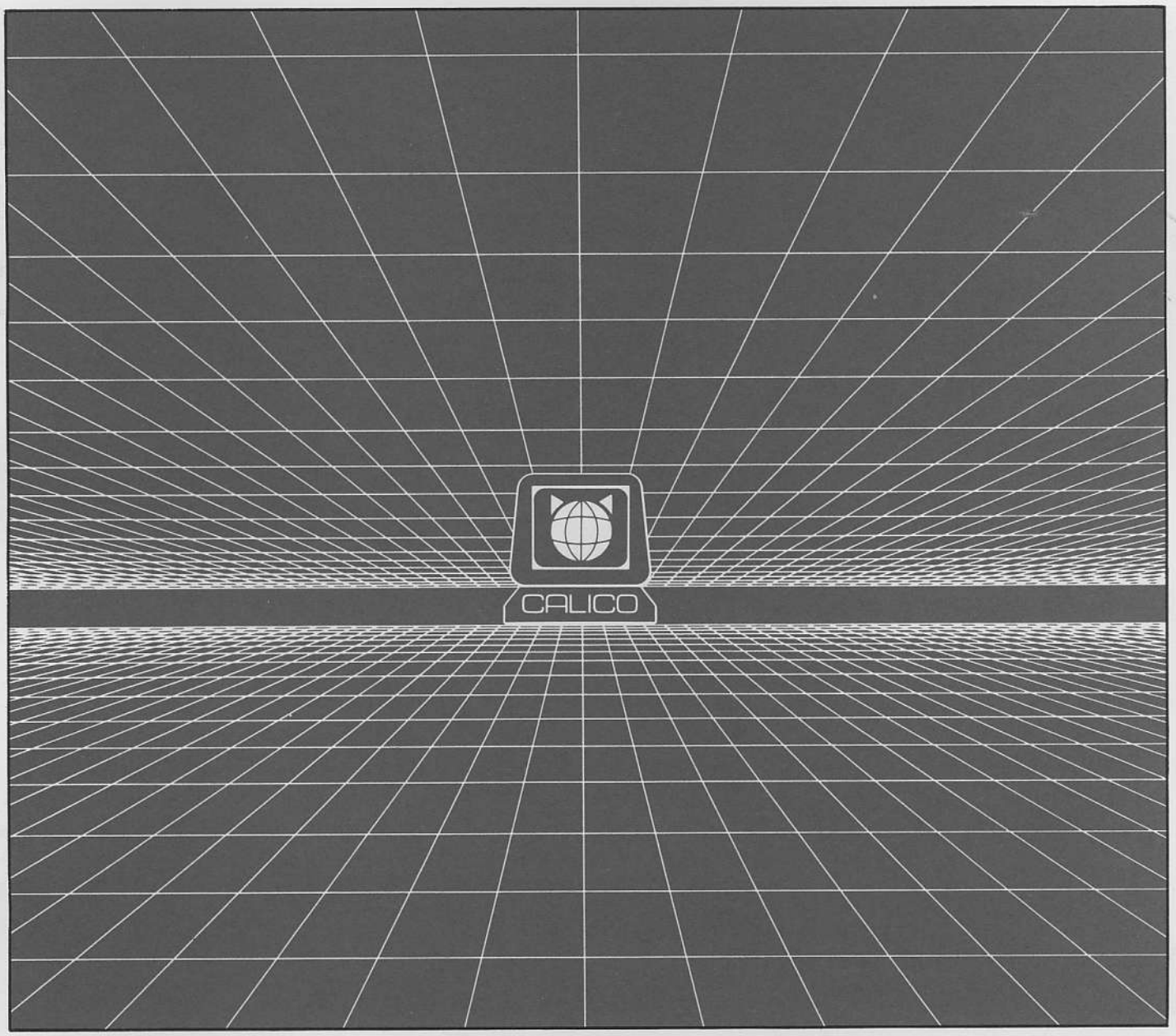
COMPUTER ASSISTED LANGUAGE LEARNING & INSTRUCTION CONSORTIUM

CALICO JOURNAL



VOLUME 3, NO. 4

JUNE 1986

MASTER(')S VOICE: THE VICTOR 9000 AND HIGH-FIDELITY VOICE REPRODUCTION FOR CALI

William B. Fischer

ABSTRACT

Computerized speech can be incorporated into proficiency-oriented language instruction. The most suitable form is not voice synthesis or linear predictive coding, but rather direct digitization. This article discusses speech digitization with the Victor 9000 computer, including recording procedures, programming techniques, and pedagogical strategies and concerns.

KEYWORDS: computerized speech, voice synthesis, LPC, digitization, proficiency, ILR, ACTFL, ETS, Victor 9000, interactive audio, German, BASIC.

Language teaching in the 1980s has been invigorated by the promise of CALI and by the insistence on practical proficiency as the basis for teaching and testing. There has been some mutual enrichment between the two pursuits, disparate though they may seem initially. Computer-assisted testing of reading and listening proficiency has been discussed by Wyatt (1984). Kossuth (1984) has described interactive, contextual exercise of lower-level writing skills with a German version of *ELIZA*. Quite different but equally appealing is some commercial software, such as that which now accompanies *Allons-y!* and *Puntos de Partida*. Reviewers like Hirsch (1985) are also helping to guide creators of software away from the all-too-tempting concentration on mechanical vocabulary and form drills.

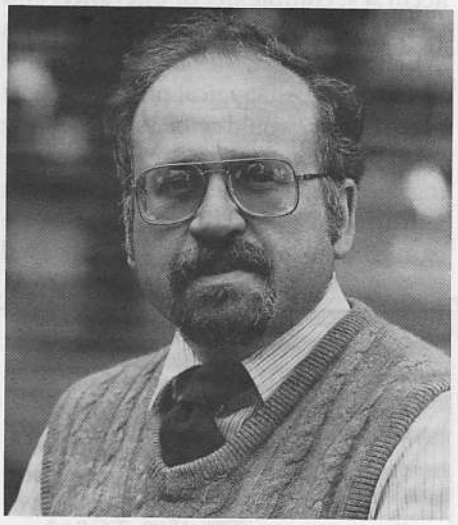
There remains, of course, a troubling discrepancy between common CALI facilities and the ideals of proficiency-oriented teaching and testing. To put the matter more positively, we face a major cybernetic, technological, and pedagogical challenge. In the customary CALI environment, the student views a computer screen and responds through a keyboard; the student reads and writes, but does not need to hear or talk. How—if at all—can and should computers be used to encourage, exercise, and evaluate proficiency in listening and speaking? While the spoken language has been the chief focus of proficiency advocates, it remains by far the most refractory area of CALI development.

Some admirable work has been done. Audio and video cassette-players interfacing with computers is indeed possible, and might well aid in reinforcing and testing certain features of language proficiency. But the sequential storage inherent in tape recording introduces unacceptable delays when pedagogical considerations dictate playback in some other order. Moreover, it has not been possible, at least until recently, to access short segments of linguistic material with the precision and the facility for analysis and interactive response which are taken for granted in programs that display on screen the printed language.[1]

Voice-recognition equipment is also available now. Computers with appropriate peripherals can be used in "voice-based learning systems" as, so to speak, voice coaches that examine and correct pronunciation (Baker 1984; Wagers 1984; Wohlert 1984). But since the sound manipulation is limited to a few short, discrete utterances, such facilities still do not satisfy the insistence on realistic, contextual language which, for advocates of proficiency, is paramount.

Voice synthesizers, now becoming readily available and often touted as spectacular enhancements, are presently a disappointment and are likely to remain so, at least for many years to come. Synthetic speech which is but "reasonably understandable" (Neudecker 1985, 144), though that is a wondrous feat of computerization, simply will not do for language instruction.

To better understand what we might dream of in CALI materials for the modalities of listening and speaking we need only contemplate three popular models of interaction between language learners and language teachers or testers: Krachen's helpful "i + 1" conversant, the ILR/ACTFL/ETS oral proficiency interview, and the *ELIZA* program in its various CALI versions (Kossuth 1984; Kramsch 1985). The three share several features whose



William B. Fischer (Ph.D. Yale, 1979) is Associate Professor of German at Portland State University. His chief teaching interests are lower-level language instruction and proficiency testing; his general research field is the interaction of science and technology with language and literature. Publications include an article on large-scale oral testing (*Unterrichtspraxis*, Fall 1984) and a book about German science fiction. He is presently preparing a proficiency-oriented first-year German text for publication with John Wiley and Sons, Inc.