

**WIMBA Voice Management System Version 4.0**  
**Robert J. Blake – University of California at Davis**

**Product at a Glance**

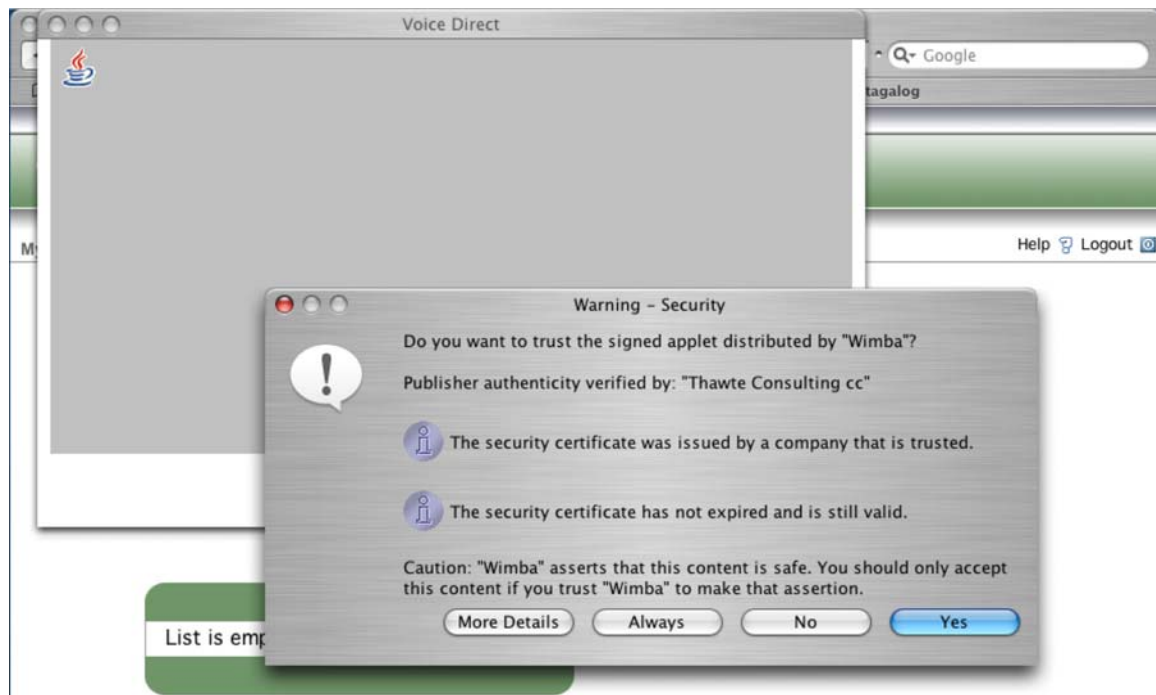
<b>Product Type</b>	<b>Web-based voice tools:</b> <ul style="list-style-type: none"> <li>• Synchronous chat half-duplex (<i>Voice Direct</i>)</li> <li>• Asynchronous bulletin boards with sound (<i>Voice Board</i>)</li> <li>• Streamed voice attached to e-mails (<i>Voice E-mail</i>)</li> <li>• Voice-annotated Web pages (<i>Voice Presentation</i>)</li> <li>• Web-based <i>Oral Assessment</i> templates</li> <li>• Voice comparison template.</li> </ul>
<b>Operating system</b>	<ul style="list-style-type: none"> <li>• PC Windows 98+</li> <li>• MAC OS-X+ only</li> </ul>
<b>Network and Software Requirements</b>	<ul style="list-style-type: none"> <li>• For PCs, Windows 98 or later and one of the following browsers: Netscape 6.1+ or Internet Explorer 5.0+ with Java plug-in (v. 1.3.1+) required.</li> <li>• For Mac (OS X only): Safari (Java 1.4.2) or Mozilla (Java 1.3.1)</li> </ul>
<b>Hardware Requirements CPU</b>	<ul style="list-style-type: none"> <li>• PC: Pentium II/750MHz+ RAM 32 MB</li> <li>• Mac: 750 MHz G4+</li> <li>• 28K+ (dial-up)</li> <li>• Installed locally or hosted by <i>Wimba</i></li> </ul>
<b>Languages supported</b>	<ul style="list-style-type: none"> <li>• Unicode compliant on PC side through standard IME output/input (all languages)</li> <li>• Mac side not yet totally Unicode compliant</li> </ul>
<b>Documentation</b>	<ul style="list-style-type: none"> <li>• On-line User's Guide</li> <li>• PDF or zipped HTML download</li> </ul>
<b>Customer Support</b>	<ul style="list-style-type: none"> <li>• On-line hardware and software diagnostics</li> <li>• After purchase e-mail/phone support</li> <li>• Compatible with WebCT and Blackboard (<i>EduVoice, WebLab</i>)</li> </ul>
<b>Cost for local installation only</b>	<p>Calculated by number of simultaneous streams/users:</p> <ul style="list-style-type: none"> <li>• 20 simultaneous users, \$5,200</li> <li>• 50 simultaneous users, \$6,200</li> <li>• 100 simultaneous users, \$7,200</li> </ul> <p>-----</p> <p>Calculated by numbers of total users:</p> <ul style="list-style-type: none"> <li>• &lt; 500 users, \$4,500</li> <li>• &gt;500 &lt; 2,000 users, \$6,000</li> <li>• &gt;2,000 &lt; 4,000 users, \$7,500</li> </ul>

## General Description

*Wimba* offers a series of Web-based tools for Internet voice recording in both a synchronous (*Voice Direct*) and asynchronous mode (*Voice Board*). At the heart of these recording tools lie *Wimba*'s open source sound compression technology named *Speex* and the respective applets, which capitalize on an advanced algorithm (variable bit rate CODEC) geared towards saving bandwidth while maintaining excellent voice sound quality. The *Wimba* applets are written in Java and use HTTP as their communication medium and, therefore, are capable of passing through most firewalls. All of the *Wimba* products—*Voice E-mail*, *Voice Presentation*, *Voice Authoring*, *Voice Pronunciation*, and *Voice Direct*--derive from this basic Java applet and run in a 28K modem environment or better.

Administrators and Power Users (see below) can choose six recording levels from 4 kbps to 44kbps, with the default norm for modem use being set at 12 kbps. All *Wimba* audio is streamed (not cached), regardless of the tool, both to and from the server. Users record in real time and play back in real time. Audio files reside on the server as *jspeex* files. On average, they are one-tenth the size of a WAV file. For example, a one MB WAV file becomes a 100 KB *jspeex* file. Each audio file can be downloaded and saved off the server to a personal computer. The audio files are saved as encoded WAV files. Most media players (e.g., Windows Media Player, QuickTime) can then play them.

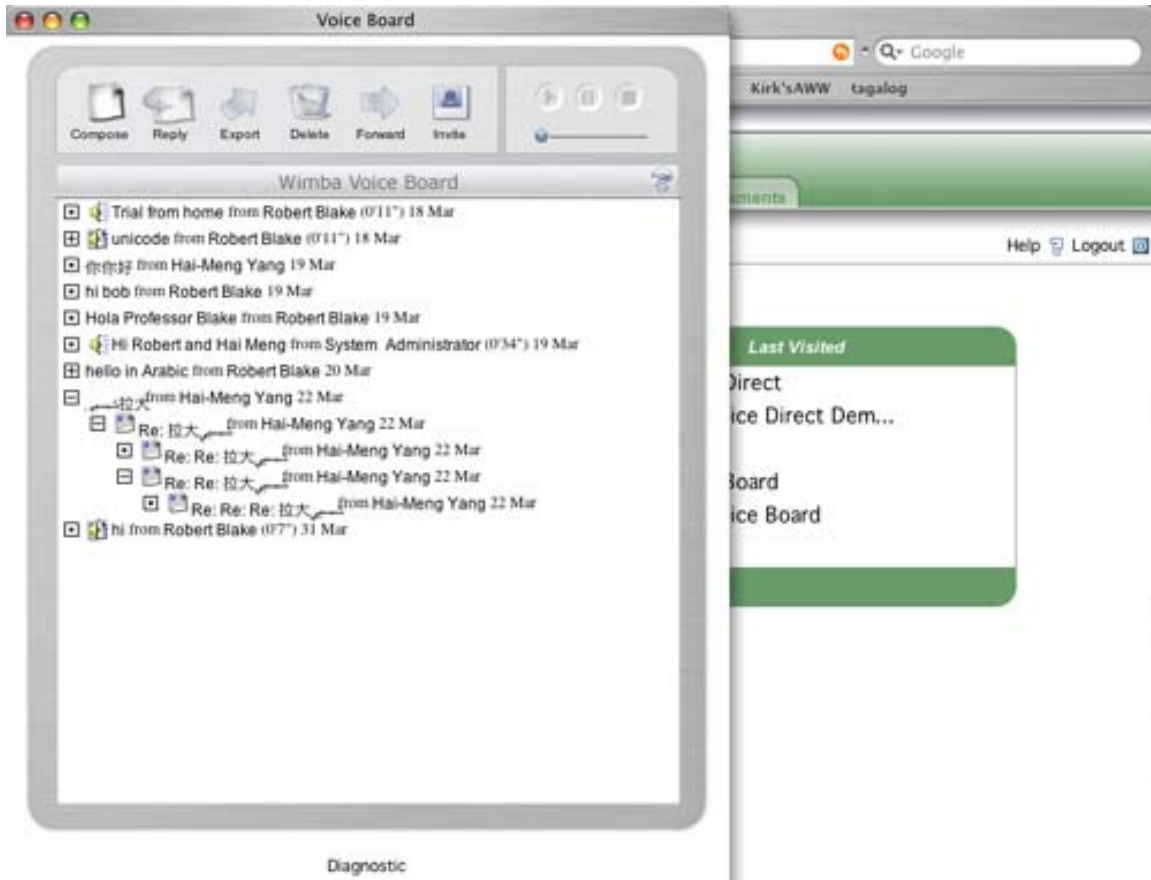
When users access a Web page with links to the *Wimba* applet, they must first grant permission for the applet to be downloaded onto their computer (Figure 1). The number of users is limited only by the site license purchased.



**Figure 1**  
Java applet permission

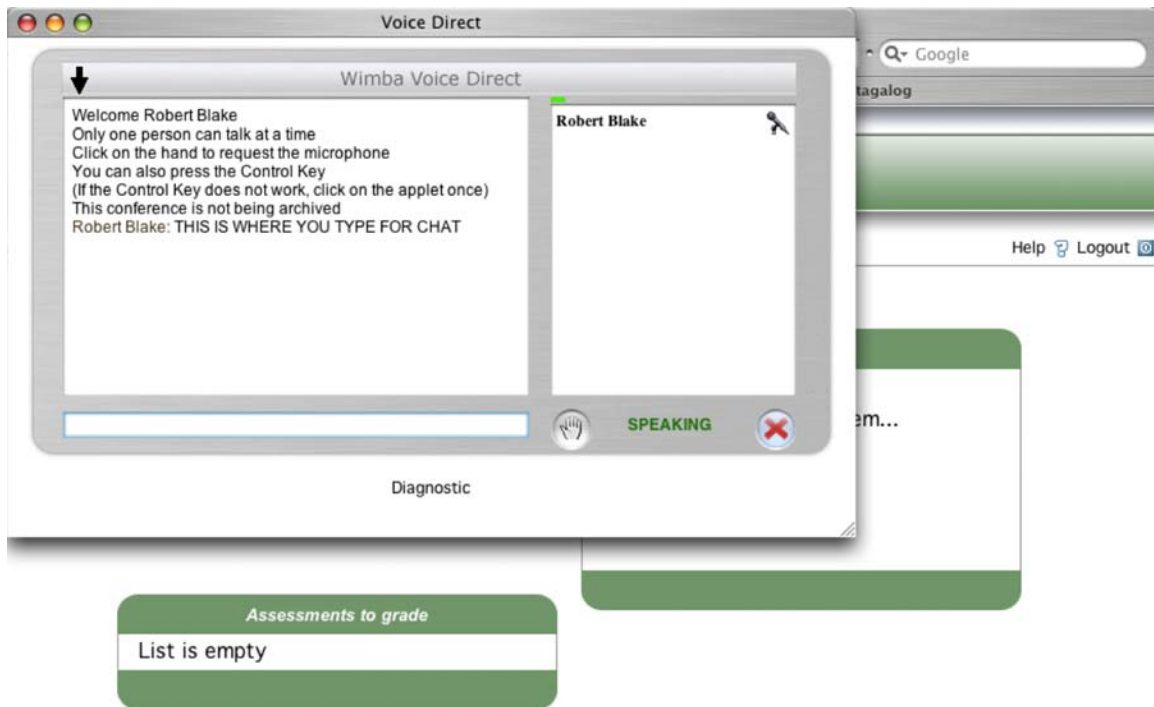
*Wimba* has taken great pains to customize their products for the education market by making them compatible with WebCT and Blackboard and by adding specific features to enhance on-line L2 language instruction (e.g., *WebLab*, *Oral assessment tools*). The *Wimba* Server (v. 4.0) allows an administrator to set up a system of accounts and then guides users through the use of *Wimba*'s products. For instance, an administrator for a foreign language department could install the management software on a local server (*Wimba* will provide hosting as well, but it's more expensive) and then designate all the instructors as *Power Users*. Each of these *Power Users*/instructors would be able, in turn, to set up any number of *Wimba Voice Boards*, *Voice Presentations* (i.e., web-page presentations annotated with voice), *Voice Direct* chat rooms, or *Oral Assessment* exercises and then invite their students to join in. Each instructor has complete control over who may access these tools and exercises. In order to use these tools, students need only comply with *Wimba*'s hardware requirements and have a current Java plug-in installed on their PC or Mac OS X.

***Wimba Voice Board:*** this tool consists of a threaded bulletin board where users click on message titles to read text messages, to hear voice recordings, and to speak into a microphone to post new messages and enjoy replies. Text input appears to be fully Unicode compliant on the PC platform though not so on a Mac. A new release by summer of 2004 promises to be Unicode compliant on both platforms. Voice Boards can be inserted into any Web page with a few lines of JavaScript that invoke the *Wimba* applet and point to the server where the requested sounds are stored. Each thread will indicate if there exist other associated threads by means of a “+/-“ sign (Figure 2). Double-clicking on a main thread will expand it and double-clicking, again, on an individual entry will pop up an interface that displays any previously posted text along with sound controls to play the recorded sound. Users can then respond to any previous reply or return to the main board to compose a new thread with or without attached voice following the standard protocol used by any bulletin board. The recording interface consists of the options “record/stop/play”. *Wimba* does not support an audio-loop, i.e., users cannot hear the output of their microphone while recording. There is no limit to the numbers of threads or responses that can be added. Any students with the correct URL to a Web page with an embedded *Wimba* applet can access a *Voice Board*. Once the instructor has given out the URL for the Web page(s) with the embedded *Wimba* JavaScript, students have free reign in creating and/or responding to the threads found on the discussion board from any computer with Internet access. In theory, all posted text/sound messages are accessible to everyone who has access to that Web page. Voice Board does, however, allow access to be restricted in the standard fashion. Voice boards, as well as the other *Wimba* voice tools (see below), can be delivered through WebCT or Blackboard in such a way as to restrict access only to members of a particular course and/or institution.



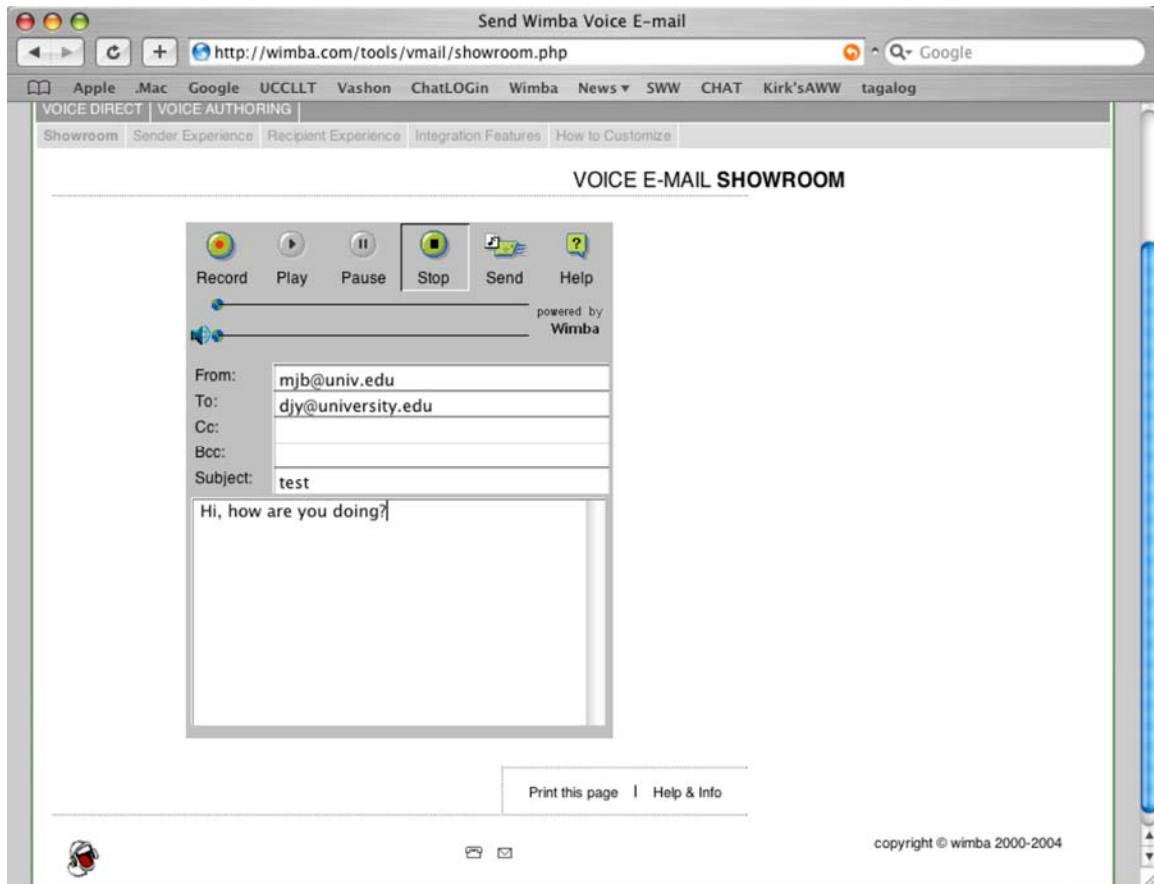
**Figure 2**  
Voice Board Interface

***Voice Direct:*** This tool provides users with a synchronous chat forum for both keyboard and half-duplex (i.e., sequential talk/listen) voice exchanges. Users enter text into a chat field and then press *<Return>* to post a written message or press the *<Control>* key to send telephonic sound (Figure 3). If someone is already talking, the user may press the *<Control>* key to enter automatically a priority cue. As soon as the current speaker gives up the floor, Voice Direct passes control to the next user in line. Power Users can pass the microphone to a particular student whose hand is up by right/control clicking on the student's name and then selecting "Give Microphone." All exchanges, textual or voice, are fully archived by year, month, day, and session. Because sound capacity is only half duplex, dialup users are not limited by their bandwidth.



**Figure 3**  
Voice Direct Interface

***Voice E-mail:*** This tool enables the sender to distribute e-mail messages with an attached streamed voice message (<http://Wimba.com/tools/vmail.php>) to one or more recipients (Figure 4). Recipients can then respond with their own voice e-mail messages. Users need only have a recent version of Java installed on their OS.



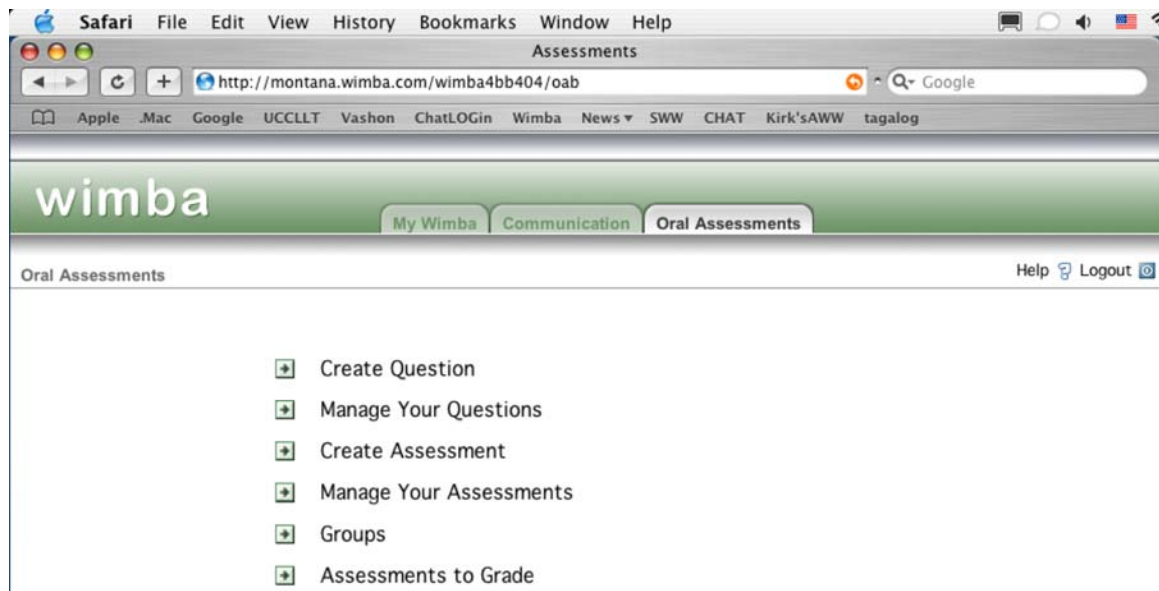
**Figure 4**  
Voice E-mail interface

***Voice Presentations:*** This tool is a modified *Voice Board* within a *frames* web environment that can be used to voice-annotate web presentations. Users record a voice message and link it to the URL of the specific web page to be annotated. This information is displayed in the left frame. When anyone clicks on this posted message, the corresponding web page loads in the right frame and the audio that was associated with this URL automatically plays back. Voice presentations are ideal for instructors to make their notes and explanation come *alive* with voice.

***Voice Authoring:*** This tool is similar to *Voice Presentations* and affords users an easy way to add vocal commentary to web pages. Power Users record the audio with the record applet and then can place a playback applet directly into a web page or course management system. As always, the playback applet plays the audio from the server.

***Oral Assessment:*** This tool was designed to allow teachers to create, manage, assign, and grade asynchronous listening and speaking tests. The server administrator must create user accounts for each student and put them into groups before the instructor can assign assessments to them. As shown below in Figure 5, the exercises options include: *Voice Dialog* (students listen to voice recording and transcribe what they hear or type answers to questions), *Multiple-Choice Quiz* (listen and then choose the correct answer),

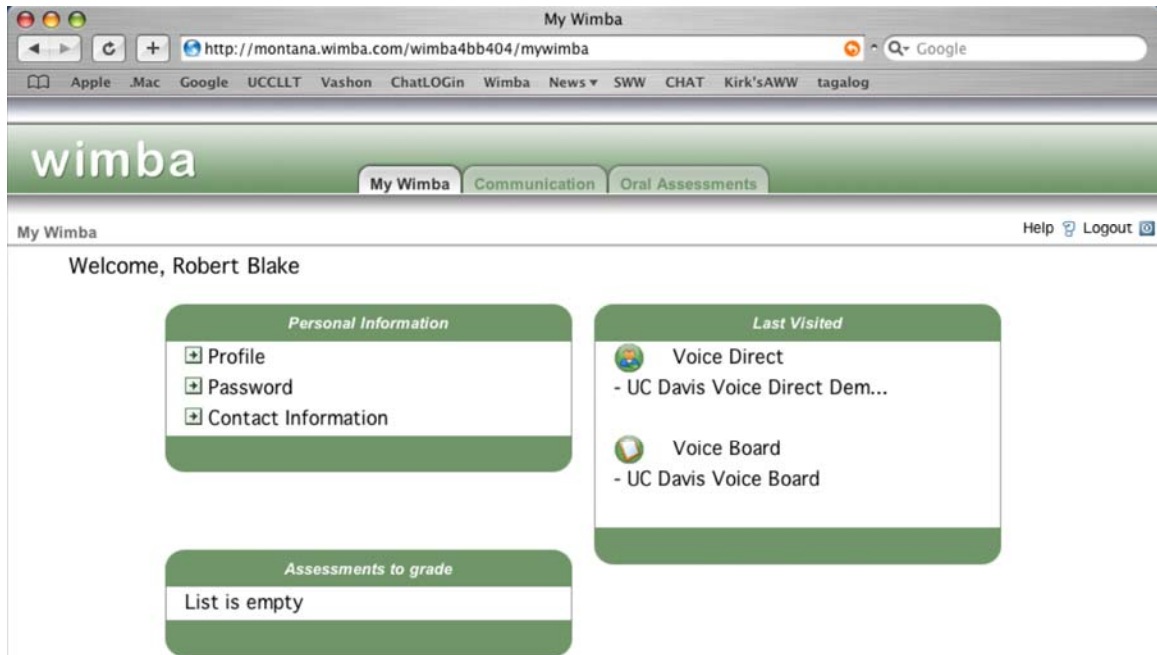
*Fill-in-the-Blank* (listen and then supply the missing word in context), and *Vocal Pairing* (match one recording with the appropriate other).



**Figure 5**  
*Oral Assessment tool*

### **Administrative Functions for the *Power User/Instructor***

Individual instructors (i.e., *Power Users*) are able to create and manage their own respective boards, although one administrator may still exercise control over all of the boards stored on the server. All boards are identified both by name and unique ID numbers that serve as a pointer to their location on the *Wimba* Server. When *Power Users* first login, they are directed to the *My Wimba* area (Figure 6). This interface consists of each instructor's personal area. At the top left, users have access to personal information and may change their account password. At the bottom left, users will find any completed *Oral Assessment* exercise to be graded. On the right, a list of the Voice Boards and Voice Direct conferences most recently visited will appear.

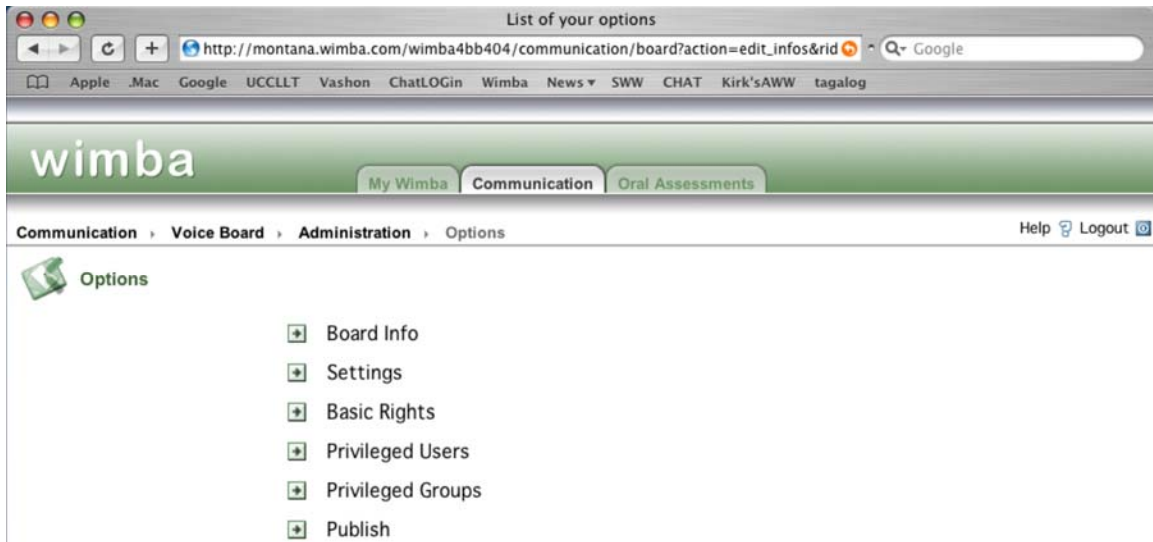


**Figure 6**  
Interface for *My Wimba*

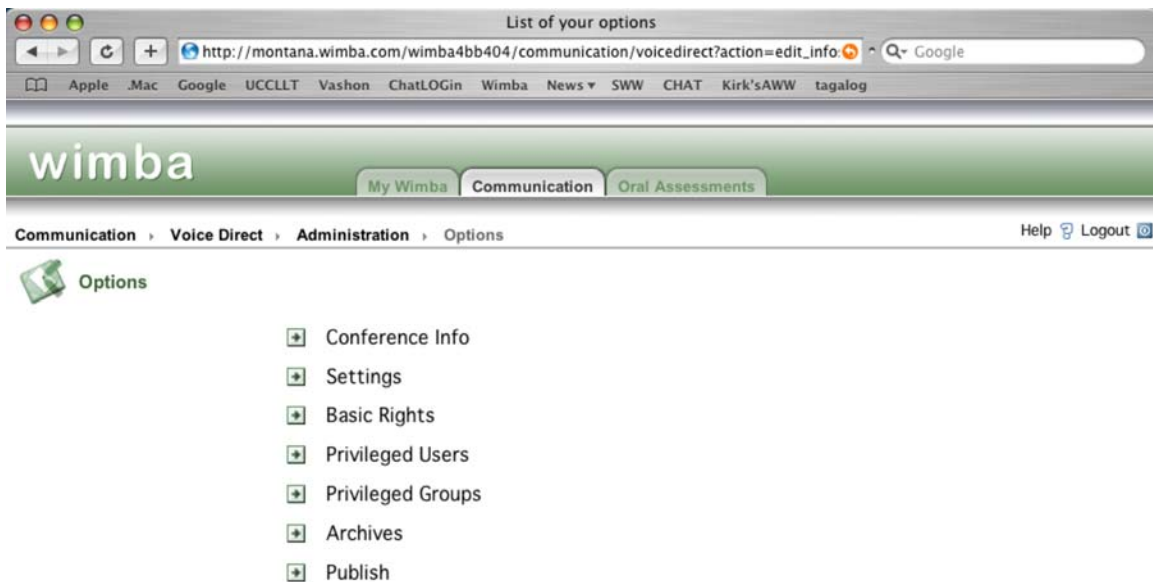
Instructors use the communication interface shown in Figure 7 and Figure 8 to manage and edit their exercises. *Publish* is one of the options listed in Figure 8. Clicking on this option allows the instructor to choose how to direct students to locate a particular *Wimba* conference on the server by creating:

- (1) a URL that points to it on the server;
- (2) a link on a web page;
- (3) a popup window link; or
- (4) the JavaScript source code needed to invoke the conference when a web page is opened.

The instructor can then distribute the web page with links to the specific *Wimba* conference in the most convenient manner for the academic course in question (e.g., on a home web server, a department web server, a ISP web server, etc.). The applet will know where to find the conference and instantiate it for the students when they open the web page or click on the links found on that web page.



**Figure 7**  
Management Interface for Power User/Instructor



**Figure 8**  
Management Options

Using the *Settings* option, instructors can modify the appearance of a Voice board to display short message titles, to display messages in chronological order, to allow users to start a new thread, forward messages, or view each other's messages. The instructor can also set the maximal recording length allowed for users to post messages.

## Program Evaluation

### *Strengths*

Given the importance of input, language teachers are constantly looking for ways to augment the curriculum with out-of-class opportunities for contact with the target language. Since 1999 when *Wimba* was first released, its *Voice Boards* have constituted just about the only way to record voice directly on the fly from a web page. It makes the *Wimba Voice Boards* an ideal tool for enabling voice exchanges in the foreign-language curriculum within an asynchronous learning environment. The fact that an instructor can embed the call for their voice applet directly into the source code of any web page makes *Wimba*'s Voice Boards especially appealing to language teachers who are beginning to take full advantage of web materials to stimulate individual and pair-group tasks. As a set of Web-based voice tools, *Wimba* allows the creative teacher to get students working with other students, native speakers, and/or the instructor outside of the time and space limitations of the classroom.

Earlier versions of the *Wimba* management system, however, relied excessively on one central administrator, failing to provide mid-level users (i.e., the instructors) with the necessary tools to shape their own curricular space. The present Voice Management System (v. 4.0) has resolved this shortcoming and, in addition, offers an expanded range of tools aptly suited to purposes of teaching/learning a second language. In particular, the new *Voice Direct* synchronous chatting tool has significantly improved the overall *Wimba* communication package, especially since all chat sessions are archived for both text and sound—an extremely useful feature for research purposes and assessing students' oral progress over time.

Another new feature that strikes this reviewer as particularly welcome is the *Oral Assessment* templates for creating listening comprehension and oral production exercises. Again, the new Management System provides an excellent way to monitor asynchronously student progress in the target language. The fact that the entire package can be delivered through the WebCT or Blackboard course management system makes the Oral Assessment Templates that much more useful and competitive in the educational marketplace.

On the purely technical side, the ability to manipulate the sound quality from 4 kbps to 44 kbps, depending on the available infrastructure (from old modems to broad band), is also a significant improvement to earlier versions. The 12 kbps setting appeared to be more than adequate for most oral work even when recording from built-in microphones.

The online and downloadable PDF documentation is more than adequate for instructors and administrators, and complements the overall elegant and uncluttered look of the *Wimba* tool interfaces. The online diagnostic tool is extremely useful in determining if students have correctly installed the necessary Java plug-in for their particular hardware configuration. In this reviewer's experience, both the U.S. and France customer service representatives respond to questions and troublesome issues in a helpful and timely fashion.

Once again, earlier versions of the Voice Management System did not run under OS X, another shortcoming that version 4.0 has solved. Previous versions of the Mac OS (8- 9) are no longer supported by *Wimba*, which is probably a wise decision since Apple itself has discontinued support for any OS before system X as well. The main problem on the Mac side has been the implementation of the Java plug-in, whose recent release of JVM (v. 1.42) shipped with all new Macs has finally made possible a viable product. The Safari browser is recommended for use with *Wimba* since Netscape and Mozilla still use the old 1.3.1 plug-in. On the PC side, *Wimba* now uses the Java plug-in from SUN, which, if not installed, is automatically downloaded and installed on the end-user's machine.

### ***Shortcomings***

While English may play a role as a *lingua franca* in business and research circles, all people wish to use technology in ways compatible with their own cultures and native writing systems. That means all of today's software needs to be Unicode compliant. At the time of this review, the PC side appears to be Unicode compliant, but Unicode is still not working correctly on the Mac side. The prospects look bright at least for the Safari browser with the 1.4.2 plug-in, but *Wimba* still cites some storage problems in the database. It is hoped that this limitation can be remedied quickly.

On the Mac side, again, the equipment requirements are very high. For instance, although G3 machines minimally meet the stated 750 MHz requirements, the processing demands of the applet necessitate the use of a G4.

Although hosting through *Wimba* is possible, the costs are prohibitive for most institutions and departments. The pricing structure for running *Wimba* on a local server, although not exorbitant, still requires institutions rather than departments to make the investment in the *Wimba* Voice Management System as part of their computer infrastructure (e.g., server, administrator, maintenance). Fortunately, the present *Wimba* package offers an impressive range of tools that would be of use to many university disciplines, including language teaching, so that the costs can be distributed over several units.

### **Conclusion**

*Wimba*'s stated goal is to bring "voice to the Internet," and they have accomplished that with an extremely easy-to-use and attractive set of voice tools. The *Wimba* applets have an established track record of reliability and high audio quality running on both PC and Mac, not a trivial achievement by any means. The Voice Management System (4.0) empowers teachers to design their own implementations of *Wimba* for the foreign-language curriculum without incessant consultations with a technical administrator. The new Oral Assessment templates are a welcomed addition since they were designed with the language teacher in mind. The archiving function available for the Voice Direct chat tool makes it particularly useful for the language curriculum. Together with the pre-existing Voice Boards and Voice Presentation, these features make the *Wimba* package extremely attractive to the education environment, especially those teachers entering into

the distance-learning field as a supplement to the classroom or the sole medium of instruction. From this reviewer's perspective, it's the best Internet voice package presently on the market and the most attuned to the type of tasks language teachers face.

**Scaled rating** (1= Low 5=High)

Range of features 5.0

Usefulness of features 4.8

Ease of operation 4.8

Reliability of operation 4.5

Adequacy of documentation 4.5

Customer support 4.5

Value for money 4.5

Over-all 4.7

**Producer Details**

Horizon Wimba Headquarters

520 8th Avenue, Suite 2300

New York, NY 10018

Phone: +1 (212) 533-1775

Fax: +1 (212) 533-6041

Email: sales@horizonwimba.com

Technical support: support@horizonwimba.com

General information or feedback: info@horizonwimba.com

**Reviewer Information**

**Robert J. Blake** (Ph.D. University of Texas, Austin) is Professor of Spanish at UC Davis and founding Director of the UC Consortium for Language Learning & Teaching (<http://uccllt.ucdavis.edu>). He has published widely in the fields of Spanish linguistics, second language acquisition, and computer-assisted language learning. He was the academic consultant for *Nuevos Destinos* (Annenberg/CPB Project, WGBH, and McGraw-Hill Companies) and co-author for *Tesoros* (BeM, McGraw-Hill Companies), a multimedia CD-ROM program for introductory Spanish. He has co-authored with María Victoria González Pagani both *Al corriente: Curso intermedio de español, 4th Edition* (McGraw-Hill Companies) and *Spanish Without Walls*, a distance-learning course offered through the UC Davis Extension. In May of 2004, Prof. Blake was inducted into the North American Academy of the Spanish Language, making him a corresponding member of the Royal Spanish Academy as well.