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Technical Evaluation Report

18. Internet Audio Products (Update)

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Abstract

The benefits in distance education of collaborative interaction via online, synchronous audio methods have been discussed in previous reports in this series. As the months go by, new software products are continually introduced to the market and existing products updated. In addition, the effect of increased traffic on the software servers is noted. The current report updates some of the series' previous reviews of online audio-conferencing products (i.e., *iVisit*, *NetMeeting*, *PalTalk*, and *Yahoo Messenger*), selected because they permit conferencing (i.e., interaction between three or more people), are free/ cost-effective, and operate on PC systems of limited capacity. These products are compared with two fully featured educational and commercial products (*LearnLinc* and *VoiceCafé*) that provide benchmarks in terms of reliability, technical features, and ease of use.

Trials of Free or Nominal Cost Products

1. *iVisit* (version. 2.8b11). This product is easy to install after downloading the 1 Mb installation file. The initial use of the product is confusing due to the presentation of many icons; but after becoming acquainted with its layout, it is fairly straightforward to use with little or no service interruptions. Online help is in real-time, provided by other *iVisit* users, and is valuable in that it can clear up concerns in 15 minutes or so. The product features multi-party video, text chat, messaging, browser sharing, multiple simultaneous connections, call screening, and a built-in directory to seek other users, and voice with "full duplex" – i.e., two way, hands-free communication).. Permanent conference rooms can be set up and password protected to restrict access. Total disk storage is 16 Mb of hard drive space.

2. *NetMeeting* (version. 3.01). This *Microsoft* product is integrated with most versions of the *Windows* operating system (e.g., *Windows 98* and *2000*). Features include audio- and video-conferencing, whiteboard, text chat, file transfer, and file and program sharing. File and program-sharing facilities allow a user to grant control of a shared file displayed on the screen to another user, thus increasing the collaborative nature of the conference. The greatest potential of *NetMeeting* appears to be for many features of audio-conferencing, but the product's general value is limited owing to connectivity issues. Calls are placed from one user to another through their IP addresses, which must be known and communicated to callers before a connection can be made. In addition, discussions between more than two people are impeded by the fact that only the first caller can share an audio connection with the conference host. In order to accommodate a true conference with audio capabilities for all, one user must be set up as a server, which requires the installation of additional server software. Our tests did not include this process and consequently cannot shed light on the ease of the server's installation and configuration.

Other *NetMeeting* connection problems were noted by the members of the evaluation team situated behind a router/ firewall, which may allow outgoing but not incoming calls – though such problems are not restricted to this product alone. The software requires 16 Mb RAM for *Windows 95, 98 and ME*, and 24 Mb RAM for *Windows NT v. 4.0*. Of these totals, 10 Mb of disk space are required for the initial installation and another 4 Mb for storage.

3. ***PalTalk*** (version 5.0). *PalTalk* offers an easily installed and used audio communications software, with a modest 873 KB download file. Its features include audio-conferencing, text chats (both public and private), help chats, file transfer, and video display. (Note: the freeware version allows viewing of a still picture only). Users can easily be added to a directory of ‘friends,’ and user IDs can be edited to more accurately indicate the contact’s identity. Participants can ask to speak by clicking on a ‘raised hand’ icon, which facilitates the management of speakers by a moderator. Chat rooms are easily set up, either as needed (free) or permanently (with a monthly charge) and can be password-protected to restrict access. Access to the server can be delayed during peak traffic periods; and loss of audio transmission is occasionally experienced, sometimes triggered by the frequent and unwanted pop-up advertisements featured in the freeware version. Pop-up advertisements can be eliminated, by purchasing the product’s basic, semi-annual version for \$30.00 US. Installing the software behind a firewall may necessitate a manual configuration of port settings. Total disk storage is approximately 1.2 Mb.

4. ***Yahoo Messenger*** (version 5.5.0.1246). *Yahoo Messenger* is easy to install and use with a 195 KB download file. Its features include audio-conferencing, text chat (both public and private), file transfer, video display, and multilingual versions (e.g., Spanish). Users are easily added to one’s directory, with an option to be alerted when they log in. User names can be edited to reflect a name other than the *Yahoo* ID. Conferences can be password-protected, and unwanted visitors in the non-protected conferences can be ignored and/ or muted. Browser-based chat rooms can be set up on the *Yahoo* website, though our evaluation team encountered problems accessing the site for this purpose – notably if using an operating system other than *Windows 2000* or higher. Occasional loss of audio transmission may be experienced, but is usually corrected by clicking the ‘Voice’ icon off and on again without leaving the conference. If this tactic fails, completely leaving and re-entering the conference re-establishes the audio connection. Other features include the use of ‘emoticons’ in the text-chat modes (e.g., as the happy face :)), instant, editable ‘themed messages’ (IMVironments), and a rudimentary whiteboard. Total disk storage is approximately 8.7 Mb.

Trials of Commercial Products

5. ***LearnLinc*** (version 6.0). This learning environment package features high-quality audio communication, and offers a stable service with a quick and easy download. Its educational tools include group-based and private text messaging, internal group emailing, an internal browser, shared whiteboard and pointer, audio and video recording, and integration with *PowerPoint* presentations. First time users may be confused by all of the icon options, but most options are easy to use with a little practice. A ‘hand-raising’ feature allows the instructor to pass classroom control to highlighted student names. An ‘assistant instructor’ option enables a second person to help the instructor with class interactions. There are two floor-control options: single user (e.g., instructor), and open discussion (i.e., ‘Meeting Floor’). Breakout groups can be created at any time during the instruction, with random or instructor-selected teaming. These groups return to the main session via an automatic timing system. *LearnLinc* class interaction can be personalized with *LearnLinc Picture ID*. The instructor also has a ‘Glimpse’ option that shows the status of student work for immediate feedback purposes. A class agenda enables automatic launching of course content. The *LearnLinc* screen can be split for applications sharing. Record and playback options allow users to archive classes, which can be downloaded and/or edited at any time. Multiple-choice and true/false feedback (e.g., faster, slower, please review) is available. *Testlinc* is a separate product that allows a variety of tests to be posted and

graded in a standard browser window. *LearnLinc* is multilingual (i.e., available in English, German, Japanese, Spanish and Portuguese). It uses HTTP bridging and offers Web-based browser diagnostics for firewall configurations, although the evaluation team cannot comment on these features, not being situated behind firewalls during the evaluation. *LearnLinc* requires 2 Mb of disk space.

LearnLinc's pricing varies according to the number of concurrent users, the length of the contract commitment, and whether the software is purchased outright or leased. A 25 per cent discount is offered to educational users. A sales representative was reluctant to discuss costs "because of the competitive space we are in." However, a review article by Katz and Rezaei (CJC-Online, 1999) states the following: "A server license for 120 students is approximately \$50,000 US with mandatory maintenance and technical support costing an additional 20 per cent of the total cost per annum. Furthermore, video capabilities are not included in the server license cost. An additional \$500 is charged per student video link." These authors go on to point out that because 15 Kbs per-client bandwidth is required, a T1 line should be available to transmit *LearnLinc* materials effectively across the Internet. These specifications provide a benchmark for more up-to-date comparisons.

6. *VoiceCafé* (version OpTecs MLM tourmasterdemoLITE). This product is currently available to the users of *Pentium II* systems and above. Audio is clear and transmission is reliable. *VoiceCafé* is a 'full-duplex' product (e.g., two way, hands free communication), allowing three or more people to talk simultaneously. Two versions are currently available: full or 'lite' (the latter being useful for computers with lesser RAM memory). Both versions contain three options: *Classmaster* (for groups of up to 10 or 25 people per room); *Officemaster* (for group collaboration); and *Tourmaster* (for 50-500 people per room). The vendors invite interested parties to a live demo before giving them access to use the software independently. However, the software is user-friendly, so minimal assistance is required (with the exception of router/ firewall configurations, which prevented one of our testers from participating).

VoiceCafé also includes such features as 'follow me' polling, voice and text communication, customized interface template (e.g., for a corporate banner), personalized opening page, moderator/ host console, transparency window slider, boot and banish function, interactive whiteboard, an internal browser (capable of holding up to 20 pre-selected URLs), page 'push,' built-in video 'uploader,' various levels of password protection and 'auto-modulation' (i.e., automatic microphone and sound card settings). The software has a high security system (i.e., 1024 bit encryption). If a user attempts to access options to which they do not have access privileges, they are booted out of the program and must re-enter.

Conclusion

The selection of effective audio-conferencing software depends largely on the situations in which it is used. If cost is not an issue, and technical support is available to assist with firewall connection problems, *VoiceCafé* provides exceptionally good product and service. For financially restricted institutions and students with lower-end equipment, *PalTalk* and *Yahoo Messenger* are useful possibilities. Another product, *iVisit*, is another freeware option, although it requires higher-end computer capabilities than *PalTalk* and *Yahoo*. If an online community has extensive experience with one such product, it is recommended that it develop experience with a second program, which can be used as a backup to the first. The advantage of such strategy includes protection against the sudden demise of a product, as well as against suddenly introduced service charges. If the learning community has little previous experience, however, and is generally satisfied with the product it is currently using, the advantages of introducing a new product are often not worth the effort of switching the entire community to its use. Because it is the simplest to install, has multi-language support, minimal advertising, and easy to install upgrades available at no cost, of the products reviewed in this report, *Yahoo Messenger* is recommended for the DE user.

[Since the fees of the commercial products reviewed in this report are negotiable for the different situations in which they are applied, the reader is invited to seek private quotations directly from the vendors. *JPB, Series Editor.*]

References

Katz, L., and Rezaei, A. (1999). The Potential of Modern Telelearning Tools for Collaborative Learning. *Canadian Journal of Communication* 24(3), Retrieved March 31, 2003 from: http://www.cjc-online.ca/title.php3?page=8&journal_id

The next report in the series includes an updated review of integrated course delivery packages.

N.B. Owing to the speed with which Web addresses are changed, the online references cited in this report may be outdated. They can be checked at the Athabasca University software evaluation site: <http://cde.athabascau.ca/softeval/>. Italicised product names in this report are assumed to be registered trademarks.

JPB. Technical Notes, Series Editor

