

Client-side speech synthesis is now a viable proposition in multimedia presentations on both the PC and Macintosh platforms, and has several advantages over presenting a written text.

- It permits the simultaneous presentation of a narration coupled to the display of visual data (see the RCSB Protein Documentary Project speech synthesis demonstration at: <http://franklin.ljcrf.edu/rcsb/p3/CPK.htm>).
- The bandwidth requirement for the dissemination of such a presentation is significantly lower than if a streamed audio track was included.
- It is much simpler to integrate and faster to enable than preparing a downloadable audio file, permitting the dynamic generation of narration (see <http://franklin.ljcrf.edu/> for an example of dynamically generated narration employing Microsoft Agent (requires MS Internet Explorer)).

Currently, speech synthesis engines vary greatly in their ability to realistically render speech, and consequently vary in their ability to retain the listeners attention. Great strides have recently been made in this respect, and several of the commercial speech synthesis vendor Web sites demonstrate just how far this research has progressed (see the below cited Web sites for demonstrations).

The next version of the Windows NT operating system (NT5.0) will ship with the Microsoft speech synthesis engine included and Apple computers has made available the 'PlainTalk' speech synthesis system. This means that it is now a relatively trivial matter to include a text-to-speech component within a HTML page:

1. For the Windows platform, by embedding an activeX control or plugin which references the speech synthesis engine via the MS Speech API or by referencing the Microsoft Agent plugin.
2. For the Macintosh, by embedding the Netscape 'Talker' plugin from MVP Solutions Inc.

References:

1. Microsoft speech engine:  
<http://research.microsoft.com/srg/>
2. Microsoft Agent:  
<http://www.microsoft.com/msagent>
3. Lucent speech synthesis applications platform  
<http://www.lucent.com>
4. MBROLA project:  
<http://tcts.fpms.ac.be/synthesis/>
5. Festival Speech synthesis project:  
<http://www.cstr.ed.ac.uk/projects/festival.html>
6. Apple speech technology  
<http://www.speech.apple.com/ptk/>
7. MVP Solutions Talker plugin for Netscape  
<http://www.mvpsolutions.com/PlugInSite/Talker.html>