The Telereader Terminal:
The 3D Sound Machine

The telereader will provide its user with a three-dimensional audio environment. The telereader's audio components will include two small acoustic chambers called *eardomes.*The eardomes will be suspended on flexible arms extending from the left and right sides of the telereader display unit (see illustrations on pp. 39-40 in *The Mu Primer*.) When in use, the eardomes will be placed over or near the user's ears. The eardome is a dome-shaped acoustic chamber with an interior shell of sound-dampening material mounted in a larger shell of foam rubber. The final version may differ, but the initial prototype of the eardome will contain five small speakers. Four will be mid-to-high-range speakers that will provide directionality. The fifth will be a mid-to-low-range speaker in the center of the chamber.

The telereader's ten output channels will distribute sounds collected from one, two, four, or six input sources. (A six source input might include six microphones: one pointed up, one pointed down, one pointed right, one pointed left, one pointed to the front, and one pointed to the rear. See "A Walk Through the Woods with a Telereader.") The 3D audio software and hardware developed for this purpose will take the sounds from the input sources and combine them for the appropriate distribution through the telereader's speakers. Such sound tracks prepared for the telereader sound system will not be limited to use with telereaders, however. The ten-channel sound tracks prepared for the telereader can easily be combined and presented through other audio-output systems with monophonic, stereophonic, or quadraphonic speakers.

The advantages of the telereader's audio system will include the following:

> 1. It will be small, lightweight, and highly portable.

> 2. It will have low electrical power requirements.

> 3. It will be low in cost.

> 4. It will help the user concentrate on the material being presented.

> 5. It will allow the most sophisticated and elaborate multi-channel sound tracks from the movies and other media to be presented to telereader users.

> 6. It will provide users with audio environments that more closely resembles the audio environments of the non-media world.

7. It will enable large numbers of users to work in close proximity without disturbing each other.

The telereader will provide the user with complete and precise control over a wonderful world of sound. Such control will enable the user to achieve optimal use of his or her particular and unique hearing capabilities, whether they be keen or severely limited. As computer technology advances, we are seeing greater and greater computing capabilities provided at lower and lower costs. Similarly, the telereader's sound system will, as time goes on, provide better and better audio presentations at lower and lower costs.

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