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MAE 2.0: Using the Sound Manager (3/95)

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TOPIC -----

This article describes the Sound Manager in Macintosh Application Environment (MAE) version 2.

DISCUSSION -----

The Sound Manager in MAE version 2 acts transparently, much like the sound manager on the Macintosh. However, there are some setup issues and concerns for the different platforms. In addition, MAE is constrained by the host resources, which add performance issues.

Most current Macintosh programs that utilize sound use a sampling rate of 22kHz or less. The MAE Sound control panel allows you to set the audio output resolution to whatever the hardware allows. For best performance, set the sampling rate to 11 or 22kHz.

When executing multiple instances of MAE on a single workstation, only the first MAE instance will be able to use sound.

Hewlett Packard (HP) workstations

The Hewlett Packard sound implementation uses the Audio Server that is available on all sound-enabled HP platforms. The Audio Server should be updated with HP's patches to the latest level in order to make sound work correctly. The patch PHSS_4341 is currently necessary for correct operation. See the Read Me file (README.TXT) on the MAE CD-ROM for the latest information on patches.

Sound is not supported in HP-UX releases earlier than 9.03.

To determine if the patch has been installed, check for the file /usr/audio/bin/asecure. If this file is present, it is likely that the patch has been installed and MAE should function correctly.

HP audio will work only locally on the host Audio Server, by default. To enable a remote Audio Server, set the AUDIO environment variable to the Audio Server to which you want to send sound output.

There are a number of useful environment variables for sound.

- AUDIO specifies the Audio Server to send data to; for example, set the AUDIO environment variable to <hostname>:0.
- SPEAKER specifies destination for the sound. Set the SPEAKER variable to INTERNAL (which is the default) to use the internal speaker. Set it to EXTERNAL to send the sound to an output jack.

Troubleshooting for HP workstations

A list of potential problems and their solutions follows.

- Problem: Audio Server has been updated but no sound is produced.

Solution 1: Audio security may be enabled. Refer to the man page for the asecure command to enable sound output. The default configuration for the audio security is to disable sound output for all users. The asecure program enables access for any or all users of the target machine.

Solution 2: Increase the system volume. Use the program /usr/audio/bin/acontrol and increase the playback volume.

- Problem: MAE is running remotely, but no sound is produced.

Solution: If the display server is not equipped with an Audio Server (that is, it is not an HP workstation) you cannot get sound on it. If it is, before launching MAE set the AUDIO environment variable to the name of your display (that is, export AUDIO=<hostname>:0) on the machine that will run the MAE process.

- Problem: MAE sound hesitates; that is, there are intermittent silent portions in the sound output.

Solution: Run MAE on a faster machine or turn down the sampling rate in the Sound control panel. The higher the resolution of the sound, the more resources are necessary to produce the sound. Reduce the resources necessary by lowering the sampling rate.

Sun workstations

If the Sun workstation is sound capable, MAE sound will work with it. If the user who is running MAE is different from the one logged into the console, you must change the permissions of the audio devices with the following command line:

```
ls -la /dev/audio
```

Then follow the links to find the actual device (there are three or four levels of symbolic links). As superuser, you will need to change the permissions of the audio device to read/write access in order to enable sound.

NOTE: You must change the permissions for both /dev/audio and /dev/audioctl for sound to operate.

Troubleshooting for Sun workstations

- Problem: MAE does not produce sound.

Solution 1: Make sure you are logged into the console or have the permissions on /dev/audio and /dev/audioctl set correctly for your user. See the first two paragraphs under "Sun Workstations," above, for details about permissions on added devices.

Solution 2: Press the mute button on the speaker box (if available). If the speaker box is muted, no sound is available.

Solution 3: Turn up the volume on the speaker box or in the Sound control panel.

- Problem: MAE sound hesitates.

Solution: Run MAE on a faster machine or turn down the sampling rate in the Sound control panel. The higher the resolution of the sound, the more resources are necessary to produce the sound. Reduce the resources necessary by lowering the sampling rate.

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