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## AIM Technical Note #51

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### EASI

### Editing and Animation Sound Interface

Rusty Mills

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EASI is a movieola-style CD-I editing system that allows you to edit sound to exact frames. By dispensing with the need to use real-time files, EASI dramatically reduces the time required to edit.

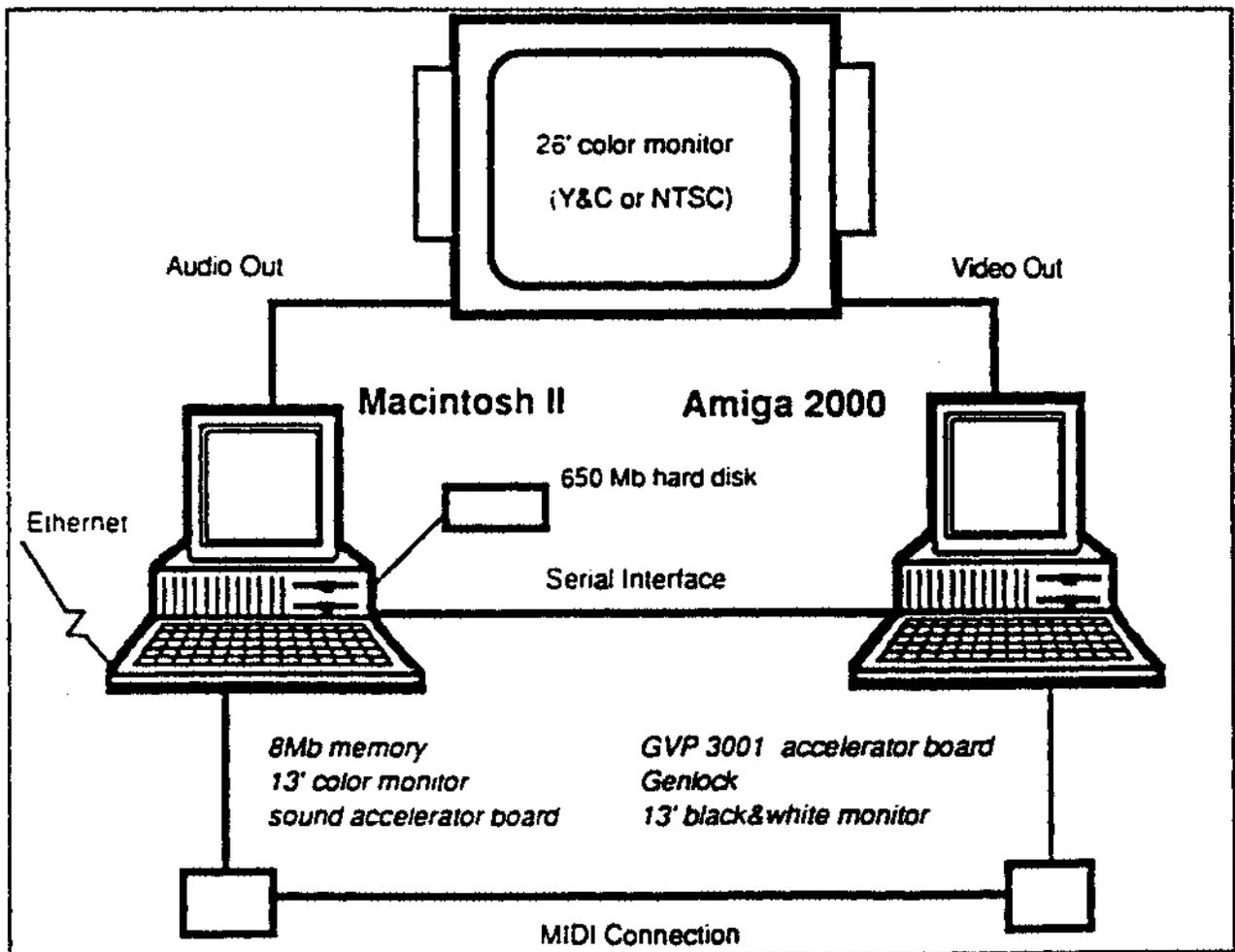
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## Description

The Editing and Animation Sound Interface (EASI) provides a movieola-style editing system that drastically reduces the time and labor required to edit sound and images using real-time files.

EASI enables us to play sound and images in synch and to edit sounds to specific image frames. Thus, EASI is an excellent tool for editing sequences that use synchronized dialogue.

EASI eliminates the trial and error required when editing real-time files under OS-9. For example, a typical edit of an animated sequence using real-time files can take as much as 20 minutes. The same edit using EASI would require as little as 30 seconds.



*EASI Configuration*

## Configuration

EASI uses a Macintosh II™ system to play sound and an Amiga 2000™ system to play images. These systems are linked through a standard MIDI (musical instrument digital interface) connection. The previous figure shows the EASI hardware configuration.

The Macintosh II is configured with 8 megabytes of internal memory and a 650 megabyte external hard disk drive. The Amiga 2000 is configured with a GVP™ 3001 upgrade and a hard disk (80-120 megabytes). At present, only the Macintosh is configured with an ethernet connection; however, there is a serial connection between the Macintosh and the Amiga.

The Macintosh II runs two applications: LiveList™ and SoundDesigner II™. The Amiga runs the EASI program (a customized The Director™ application) and DPaint III™.

## Operations

The Macintosh runs LiveList and SoundDesigner II under MultiFinder™. We start the play of a sequence with the Amiga. This causes a MIDI signal to be sent to the Macintosh. The MIDI signal is received by LiveList on the Macintosh, which in turn begins the play of the audio sequence. There is no noticeable lag time or delay between audio and image play.

We can stop play at any time by aborting the play through EASI. Edits can be made to sound files (for example, adding or deleting sound or silence) through SoundDesigner. We use SoundDesigner to create the sound play list; SoundDesigner allows us to grab any portion (called a region) of a sound file and to place these regions in a play list in any order. We use LiveList to run this play list.

We edit image sequences through DPaint III, which runs in the background on the Amiga. DPaint III is accessible through the EASI program. In DPaint III, we can add or delete frames. It is then necessary to rebuild the play list.

This entire process can be performed quickly and as many times as necessary.

## Input Files

Sound files must be in one of the following formats:

- P3M format
- Audio IFF format
- SoundDesigner I or II format

To create the sound play list in SoundDesigner, we must have a copy of 3PM format or audio IFF format files in SoundDesigner I or II format.

Image files must be in the following format:

- Amiga IFF format for single images
- *.anim* file format for animation (this is a delta-compressed file standard for the Amiga)

We can convert GIF (graphic interchange format) files to Amiga IFF files (using a public domain image conversion utility). Currently, there are no other file conversions available.

Image files are brought into EASI through DPaint III. Note that all images in a single *.anim* file must use the same palette.

## Enhancements

If there is enough interest in using EASI, we would like to invest the time to make numerous enhancements. These include:

- Other file conversions (for example, MacroMind Director™ files to *.anim* files, CD-I IFF files to Amiga IFF files, Autodesk Animator™ flic files to Amiga IFF files, as well as conversions from any other widely used file formats).
- Writing the program in C to increase performance and allow us to convert files to Amiga IFF format.
- Run file conversions on a Sun™ platform to increase performance.
- Connect the Amiga 2000 system to ethernet.

## Demos and Details

If you would like to see a demonstration of EASI, or you would like more details on this system, please contact Rebecca Newman or Rusty Mills at Kidspace, AIM Studio, Los Angeles.

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