

IT2002: Graphics & MULTIMEDIA

Multimedia Software Tools

Multimedia Software Tools

- A fully functional multimedia project utilized different tools and programming language
 - Digital Audio
 - Music Sequencing & notation
 - Graphics & Image editing
 - Video Editing
 - Animation
 - Multimedia Authoring

Multimedia Software Tools

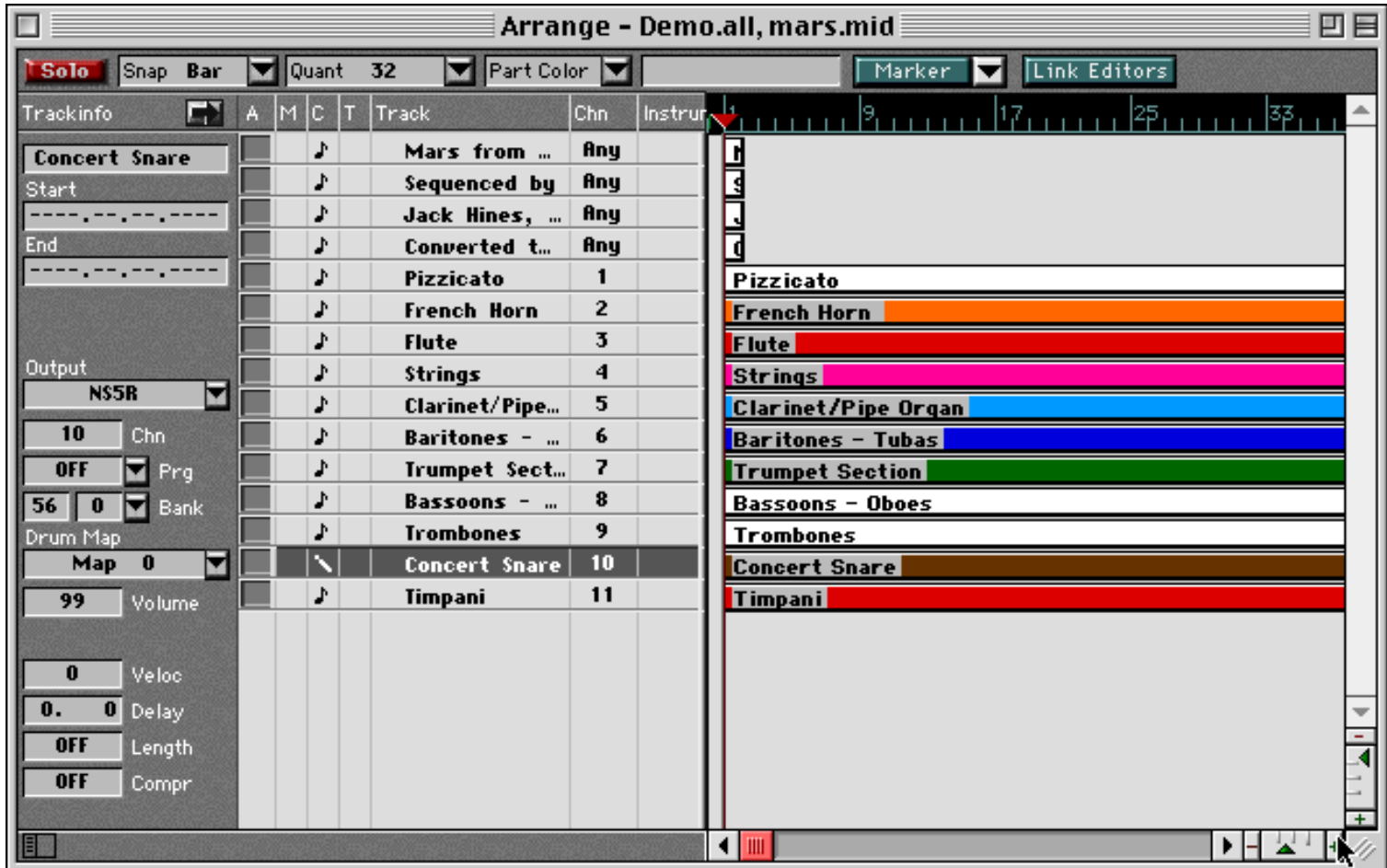
- Digital Audio
 - **Macromedia Sound edit** -- Edits a variety of different format audio files, apply a variety of effects
 - **CoolEdit Pro/Audition** - Edits a variety of different format audio files-Used for wav file editing with a variety of filters and functions such as reverb, normalizing, noise reduction and amplification
 - Many Public domain tools on the



Multimedia Software Tools

- Music Sequencing and Notation
 - **Cakewalk**
 - Supports General MIDI
 - Provides several editing views (staff, piano roll, event list) and Virtual Piano
 - Can insert WAV files and Windows MCI commands (animation and video) into tracks
 - **Cubase**
 - A better software than Cakewalk Express
 - Intuitive Interface to arrange and play Music
 - Wide Variety of editing tools including Audio

Cubase Arrange Window (Main)



Cubase Score Editing Window



Multimedia Software Tools

- Image/Graphics Editing
 - Adobe Photoshop
 - An image & graphics editing tool.
 - Supports many bitmap formats, e.g., GIF, PNG, JPEG, and BMP
 - Many filters and effects for photo enhancement
 - Supports multiple layers -Allows layers of images, graphics and text
 - Includes many graphics drawing and painting tools
 - Sophisticate lighting effects filter
 - A good graphics, image processing and manipulation tool
 - Adobe Premiere
 - Provides large number (up to 99) of video and audio tracks, superimpositions and virtual clips
 - Supports various transitions, filters and motions for clips
 - A reasonable desktop video editing tool

Multimedia Software Tools

- Image/Graphics Editing
 - Macromedia Freehand
 - Graphics drawing editing package
 - *Adobe Illustrator*
 - Powerful publishing tool for creating and editing vector graphics
 - Easily exported to use on the web
 - *Macromedia Fireworks*
 - Making graphics for the web (bitmap & vector editor, JavaScript generator)
 - Many other editors in public domain and commercially

Multimedia Software Tools

- Animation
 - Macromedia/adobe flash
 - Avid SoftImage
 - Animated Gif building packages *e.g. GifBuilder*
- **Multimedia APIs**
 - ▣ **Java3D** – used by Java to construct and render 3D graphics
 - ▣ **DirectX** – windows API supports video, images, audio and 3D animation → for computer games
 - ▣ **OpenGL** – 1992, highly portable and multiplatform

Multimedia Software Tools

3D Animation

□ Rendering Tools

- ▣ **3D Studio Max** – high-end pro tools for character animation, game development, visual effects production.
- ▣ **Softimage XSI** – modelling, animation, rendering package for special effects in films and games
- ▣ **Maya** – complete modelling package.
- ▣ **RenderMan** – by Pixar, excels in creating complex surface appearances (Monsters Inc., Final Fantasy : The spirit within)

Multimedia Software Tools

Video Editing

☐ **Adobe Premiere**

- ☐ Provides large number (up to 99) of video and audio tracks, superimpositions and virtual clips.
- ☐ Supports various transitions, filters and motions for clips.
- ☐ A reasonable desktop video editing tool.

☐ **VirtualDub**

- ☐ Freeware
- ☐ Flexible and expandable video editing software
- ☐ Many features, filters and effects
- ☐ Supports several of the latest video and audio codecs

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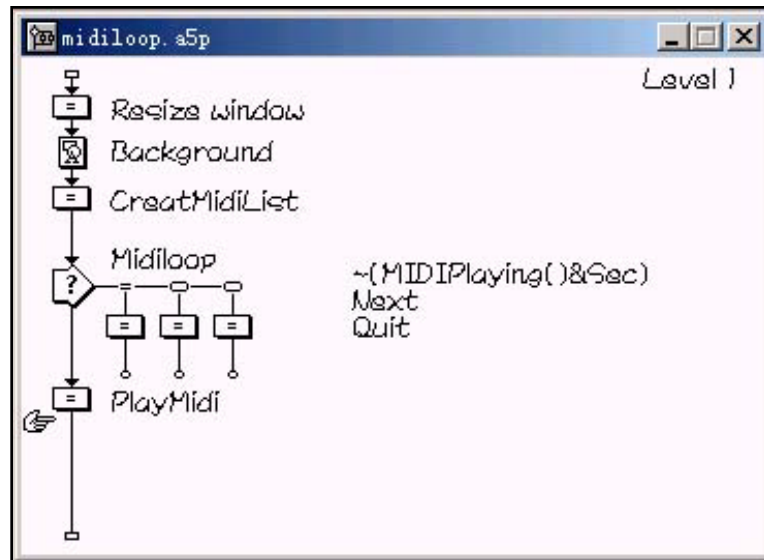
Multimedia Authoring -Tools for making a complete multimedia presentation, including animations, where users usually have a lot of interactive controls.

- ***Macromedia Flash***
 - Create interactive movies or games for the web
- ***Macromedia Director***
 - Movie metaphor (the cast includes bitmapped sprites, scripts, music, sounds, and palettes, etc).
 - Can accept almost any bitmapped file formats.
 - Lingo script language with own debugger allows more control including external devices, e.g., VCRs and video disk players.
 - Web authoring features available for fully interactive Shockwave movies over the Web.

Multimedia Software Tools

- **Macromedia Authorware**

- Iconic/Flow-control metaphor, drag-and-drop interface.
- Hyperlinks to link text, digital movies, graphics, and sound.
- Compatibility between files produced from PC version and MAC version.
- Used mainly for developing courseware



The iconic/flow-control metaphor used by Authorware makes developing courseware easy