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# *flash* v2.1 Release Notes

This document describes the most significant improvements that were made to the *flash* modeling and painting software between versions 2.0.1 and 2.1.

The first section of this document, "Main Improvements", describes the most significant improvements made to *flash*. The second section, "Other Improvements", lists and describes other features that are not as important. Finally, section "Contacting Digits 'n Art" lists the coordinates of Digits 'n Art, which you may contact if you have questions concerning *flash*.

## MAIN IMPROVEMENTS

### **Compatibility with Windows NT and Windows 2000**

The most remarkable improvement brought with this version is that *flash* may now be installed on the Windows NT and Windows 2000 platforms. *flash* is identical on both IRIX and Windows platforms except for minor differences. One of these differences is that the File Manager is replaced by the windows that Windows usually displays when opening, saving, and closing files.

### **Faster display of prepared models**

The display of high resolution prepared models (Paint module) is now dramatically faster.

### **Opening and closing of scenes radically improved**

The way that scenes are opened, saved, and closed was redesigned. The most noticeable improvement is that *flash* now makes it a lot easier to save the contents of a scene through the command File > Save Scene. (Scenes that belong to the image file format .mod may be opened using File > Copy Into Scene and saved using File > Save Selection As).

### **Faster File Manager**

On the IRIX platform, the File Manager opens at a much greater speed than in the previous versions.

### **Greater Usability of Magnet and Relax**

The tool Magnet was taken out of the ToolBox and is now available as an option of the Control Panel for the tools Move, Rotate, and Scale in both the Model and Unfold modules. Relax is now available in both the Control Panel

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and in the ToolBox, as before. These improved versions of Magnet and Relax offer very interesting possibilities. By using Magnet in the Model module, it is now much easier to create models that have smoother surfaces. As for the Relax feature, since it moves the points in a fashion that tends to equilibrate the distance between the selected points and the ones that surround them, you may very well bring a model that was already painted back into the Model module and modify its geometry without stretching its texture, which is something that could not be done before. Also, note that the behavior of Magnet is much more stable and predictable than before. Finally, using Magnet and Relax together produces interesting effects. See the documents *Model Tools* and *Unfold Tools*.

#### **Creation of models in Model, Unfold, and Paint**

It is now possible to create models in any one of the Model, Unfold, and Paint modules using the command Edit > Create.

#### **New selection of directories for new layers**

It is now possible to select the location where new layers are saved from a complete set of directories. You may select the current directory of the other layers, the directory of the scene, the directory of the model, or a custom directory of your choice. See section "Layers > New" in the document *Layers Menu*.

#### **New image saving commands in the File menu**

New commands of the File menu allow you to save the image displayed in the current view in a Tiff file. The command File > Save Snapshot of Current View saves the exact content of the current view, while File > Save Image of Current View saves the image as it is represented in the memory.

#### **New options in the Wavefront translator**

Two options were added to the Wavefront translator: Keep Informations on Import, which records the information of the model's original format, and Write Normals Informations, which records the information related to the model's normals.

## **OTHER IMPROVEMENTS**

These improvements are grouped as follows:

- Global improvements;
- Model module;
- Unfold module;

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- Paint module.

## Global Improvements

The improvements described here apply to all the modules of *fl e s h* (Model, Unfold, and Paint).



### Content of the Layers & Surface Panel relocated

The Layers & Surface Panel no longer exists. Its content was separated and moved at the following locations of the interface:

- in the Placement tool, which now allows to select and define parameters that relate to the type, surface, and texture of a model in all three Model, Unfold, and Paint modules. See the description of the Placement tool in the document *Tools Generalities*;
- in the Layers menu of Paint (see item "New menu Layers" on page 8).

### ToolBox commands of the WorkSpace menu in the Preferences

On the IRIX platform, the commands WorkSpace > Standard ToolBox and WorkSpace > Volatile ToolBox were redesigned and moved to the WorkSpace sheet of the Preferences dialog box (which opens using the command WorkSpace > Preferences). On the Windows platforms, only the Standard ToolBox is available.

### New menu Select

The menu bar now includes the menu Select which contains all the selection commands formerly located in the menu Edit (some commands were renamed in the process), as well as new selection commands. The content of this new menu, which is slightly different in every one of the Model, Unfold, and Paint modules, is as follows (see the document *Select Menu* for details):

- Back Primitive Selection;
- Edge Selection;
- Flip Selection > Horizontal;
- Flip Selection > Vertical;
- Move Selection Content;
- Move Selection Outline;
- Primitive Selection;
- Print Selection;
- Select;

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- Select All;
  - Select Inverse;
  - Select Nothing;
  - Select Surrounding.

#### **New content of the File menu**

The content of the File menu was significantly modified. For example, importing and exporting commands were replaced by commands that allow to open, save, and close scenes. The commands of the File menu that were added or modified are as follows (see the document *File Menu* for details):

- Copy Into Scene;
- Library;
- Open Scene;
- Save All Modified Layers (Paint module only);
- Save Image of Current View;
- Save Scene;
- Save Scene As;
- Save Selection As;
- Save Snapshot.

#### **New command WorkSpace > Select Previous Tool**

This new command reactivates the tool that you activated last.

#### **New display of selected models**

The new option menu Style of the Preferences dialog box (sheet WorkSpace) allows you to select one of the following styles to display the selected models: Surround (which allows to view textures without interferences), Mesh, and Bounding Box. See the document *WorkSpace Menu*.

#### **New command Rendering > Background Grid**

The new command Rendering > Background Grid activates or deactivates the display of the grid in the background of 3D views. This command operates exactly like the toggle Grid of the Rendering dialog box.

#### **New command Rendering > Polypatch Refinement**

The new command Rendering > Polypatch Refinement activates or deactivates the display of the models using the refinement value that is selected in the Refinement option menu of the Rendering dialog box.

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### Spatial measuring units

The documentation now provides a description of the spatial reference unit of the current scene. It states that the numeric fields that relate to spatial references are relative and are based on a unique measuring unit that the users mutually define as their own. See section "Spatial Measuring Units" in the document *flesh Basics*.

### Moving Orthographic Cameras

You may move an orthographic camera at a rate that is proportional to the movement of the mouse by clicking and dragging the middle button of the mouse.

### Vertices changed to points

In the interface (and in the documentation), all the references to "vertex" were changed to "point" and all the references to "vertices" were changed to "points".

## Model

The improvements described here apply to the Model module of *flesh*.

### New construction tool: Symmetry

The new construction tool Symmetry creates primitives that are symmetric to a selected set of primitives. Primitives are created based on a plan of reflection that is perpendicular to either one of the X, Y, or Z axis. This construction tool allows to create separate models with the new set of primitives and also to flip the textures coordinates. Refer to section "Edit > Construction Tools" of the document *Edit Menu*.

### Commands of the Edit menu renamed

The following commands of the Edit menu have been renamed:

Previous name	New name
Delete Primitives	Delete
Delete Vertices	Delete Points
Insert Primitives (Linear)	Subdivide (Flat)
Insert Primitives (Smooth)	Subdivide (Curve)
Insert Vertices (Linear)	Insert Points (Linear)

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Previous name	New name
Insert Vertices (Smooth)	Insert Points (Smooth)
Interpolate Vertices	Smooth Points
Invert Primitives	Flip
New	Create
New > Model	Create > Empty Model
Primitives Attributes	Attributes
Refine Primitives	Extrude In
Seam Vertices	Create Discontinuity
Separate Vertices	Split Points
Smooth Vertices	Remove Discontinuity
Snap Vertices To Grid	Snap Points To Grid
Snap Vertices Together	Snap Points Together
Unite	Merge

#### **Command Edit > Model Description moved to the Control Panel**

The dialog box that was displayed upon selecting the command Edit > Model Description now displays when clicking the new button Info in the Display section of the Control Panel (not available with tools Placement and Camera). The title of this dialog box is now Model Information and now it also displays the name of the current model.

#### **Command Edit > Default Attributes moved to the Control Panel**

The content of the dialog box that displayed upon selecting the command Edit > Default Attributes was moved to the Primitive Type option menu of the Control Panel for the Freehand Primitives tool.

#### **Automatic creation of texture coordinates with creation of models**

The toggle Unfold Upon Creation was taken out of the Model sheet of the Preferences dialog box. It was replaced by a toggle named Create Unfolded Texture Coordinates which is included in the dialog box that displays upon creating models using one of the commands located in the submenu Edit > Create.

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**Click and drag to create predefined primitives**

The creation of primitives using the tool Predefined Primitives is now done by clicking and dragging the mouse.

**Last point of freehand primitives created upon double-clicking**

When creating freehand primitives, the location of the last point is defined by double-clicking.

**Lattice Color in the Preferences**

You may now select a color for a lattice using the color pick field Lattice Color in the Preferences dialog box (sheet Model).

**Snap options modified**

The number of Snap options available has been modified, as well as their functionality. See section "Movement Functions" of the *Model Tools*.

## Unfold

The improvements described here apply to the Unfold module of *flash*.

**Texture coordinates initialization buttons in the 2D view**

When no texture coordinates exist for the current model, *flash* now displays in the 2D view a series of buttons that allow to initialize texture coordinates using either the spherical, cylindrical, or planar projection. See section "Initialize" in the document *Unfold Tools*.

**Automatic creation of texture coordinates**

*flash* now may automatically create texture coordinates. In the dialog box that displays upon selecting the command Edit > Create Model, activating the toggle Create Unfolded Texture Coordinates automatically creates texture coordinates for models that you create.

**Buttons Create Seam and Remove Seam relocated in the Control Panel**

The buttons Create Seam and Remove Seam were relocated in section Texture Coordinates of the Control Panel (not available with tools Placement and Camera).

**Buttons Group and Ungroup relocated in the Control Panel**

The buttons Group and Ungroup were relocated in the new section Selection of the Control Panel (not available with tools Placement and Camera).

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### **Real time feedback on unfolded or straightened texture coordinates**

*flash* now displays in real time in the 2D view the textures coordinates as they are unfolded or straightened. *flash* also displays in real time the number of Repeat actions to perform.

### **New command Edit > Initialize Texture Coordinates**

The new command Edit > Initialize Texture Coordinates opens a submenu that contains commands that allow to initialize texture coordinates for the current model using either the planar, cylindrical, or spherical projection mode.

### **Command Edit > Undefine Texture Coordinates renamed to Edit > Delete Texture Coordinates**

The command Edit > Undefine Texture Coordinates was renamed to Edit > Delete Texture Coordinates to better reflect its function.

## **Paint**

The improvements described here apply to the Paint module of *flash*.

### **New menu Layers**

The menu bar now includes the menu Layers which contains commands that relate to the creation and management of painting layers. Some of these commands existed in the previous version of *flash*, while others were modified or added. The content of this new menu is as follows (see the document *Layers Menu* for details):

- Duplicate;
- Merge;
- New;
- Open;
- Reformat;
- Remove;
- Revert;
- Save;
- Save All Modified;
- Save As;
- Save Version.



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### **Faster display of remote models in the 3D view**

The new toggle "Reduce display precision on remote models" (in the dialog box Preferences) allows to displays the remote models with less precision, thus reducing the processing time.

### **Format and pathname of layer displayed in the Thumbnails View**

When only one layer thumbnail is selected, *flash* displays the format properties of this layer next to it, and its complete pathname at the bottom of the view.

### **Renaming layer thumbnails in the Thumbnails View**

You may now edit the name of the layers directly in the Thumbnails View by clicking the name displayed in the thumbnail and by pressing Enter.

### **Commands Rendering > Prepare Models and Rendering > Unprepare Models renamed**

The command Rendering > Prepare Models was renamed to Edit > Prepare Selection for 3D Painting. Also, the command Rendering > Unprepare Models was renamed to Edit > Unprepare Selection for 3D Painting.

### **3D painting preparation button in the 3D view removed**

The Prepare button that was located in the lower-right corner of the 3D view was removed. You may use the command Edit > Prepare Selection for 3D Painting.

### **Command WorkSpace > Thumbnails View replaced by a button in the 2D view**

Activating the 2D painting view is now done by clicking the button located in the lower-right corner of the 2D view. See section "Painting View and Thumbnails View" in the document *Paint Tools*.

### **New compatibility to Mipmap Tiff image format**

*flash* now supports mipmap Tiff image files. Such Tiff files contain an original image at full resolution followed by downsampled versions of this image (for example, if the original image has resolution 64 x 64, the downsampled versions will have resolutions 32 x 32, 16 x 16, 8 x 8, 4 x 4, and 2 x 2). Moreover, the images written in a mipmap Tiff file are written upside-down (i.e. flipped vertically) to be directly compatible with most renderers.

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## CONTACTING DIGITS 'N ART

You may contact Digits 'n Art for more information. Digits 'n Art's coordinates are as follows:

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