

# Caligari Pioneer *Readme File*

## Overview

"Pioneer" (previously Fountain) includes 3D shape creation tools such as 3D primitives, 2D polygons, face editing, lathing, sweeping and tips as well as the extrusion of TrueType fonts. You can choose between infinite and local light sources, and you can paint not only entire objects, but also on individual faces and vertices.

Existing 3D geometry can be imported via DXF, 3D Studio, Wavefront, LightWave and Imagine filters, and the following 2D formats are supported: PostScript, BMP and JPG. While "Pioneer" is primarily an authoring tool, the ability to read VRML files allows you to take advantage of existing 3D resources on the Internet and to test VRML-specific features such as levels of detail, in-lining and hyperlinks.

**Note:** This is the Windows 95/NT version of Caligari Pioneer. If you have Windows 3.11, please check Caligari's Web site for a version that will work for you.

## Requirements

The minimum requirements for "Pioneer" are a fast 486 with 8MB of RAM. To access VRML worlds on the Web, a SLIP/PPP connection and a 14.4k modem is also required. To comfortably navigate through worlds with over a thousand polygons, we recommend a Pentium with a 64-bit graphics card (preferably with 3D acceleration). A 28.8k modem or ISDN connection is also recommended for accessing larger worlds.

## Using with Netscape

While you do not need an HTML browser to access VRML files across the Web, you will need one to display 2D formats such as HTML. Currently, only Netscape is supported. Here is how you configure Netscape for recognizing what to do with VRML files:

Step 1: Select the "Options/Preferences" menu item.

Step 2: Select the "Helper Applications" item in the pulldown.

Step 3: Click the "New Type" button.

Step 4: In the Configure New Mime type dialog enter:  
For Mime Type: x-world  
For Mime Subtype: x-vrml

Step 5: In the "Extensions" field enter: .wrl

While "Pioneer" may be freely downloaded for non-commercial use, it may only be resold in any form or included as part of other applications with the written consent of Caligari Corporation.

## Installation Instructions

### WEB Installation

1. Download the appropriate executable file. This is a self-extracting zip file.
2. Place the executable into a directory where you wish to extract temporary files into.
3. Run the executable. This will place all the setup files in the same directory as the executable.
4. Run SETUP.EXE in the directory where the files were extracted.
5. Follow the on screen instructions to install the "Pioneer" program.
6. After setup, "Pioneer" is ready to go! You may wish to clean up the temporary setup files after the installation is complete.

### Disk Setup

1. Place Disk 1 into the appropriate floppy drive.
2. Run SETUP.EXE on this drive.
  - Windows NT 3.51:  
Choose the Run... option from the File menu. Type D:SETUP.EXE where D is the letter of the drive containing the "Pioneer" setup disk.
  - Windows 95 or Windows NT 4.0:  
Choose the Run.. option from the Start menu. Type D:SETUP.EXE where D is the letter of the drive containing the "Pioneer" setup disk.
3. Follow the on screen instructions to install "Pioneer".
4. After setup, "Pioneer" is ready to go!

## Resolved Bugs and New Features

### Version 1.0 of Pioneer

Support for two new navigation modes -- encircling an object and flying to an object. An object can be selected in browse mode with the right mouse button (left mouse button jumps to a URL). Then the modes work as follows:

**Point mode:** Holding the left or right mouse button down and moving up/down gives flying movement towards or away from the selected object.

**Encircle Mode:** Holding right mouse button down and moving the mouse gives horizontal

rotation around the selected object. Holding left mouse button down and moving left/right gives left/right rotation around the selected object. Holding left mouse button down and moving up/down gives up/down rotation around the selected object.

When no object is selected the center of rotation and movement is (0,0,0).

Support for Timelock trialware tool. Currently, Pioneer (regular) is free for use for 14 days with the publish option disabled. Pioneer PRO can only be used to play tutorials.

Support for resetting the view when going to a new world.

The LOD grouping tool will now, by default, generate geometric distances (i.e. 10, 20, 40, 80, ...) instead of uniform distances (i.e. 10, 20, 30, 40, ...).

The "Thold" jog button has been moved from the preferences box to the render options box.

Addition of a "LodScl" jog button in the render options box. This allows LOD distances to be stretched and contracted during navigation.

Addition of object saving in Pioneer (regular).

Fix of font size selection for horizontal and vertical text – previously the font used was incorrect.

Fix for prompting to save current scene, before going to neighborhood.

Fix for handling for cameras -- previously, selecting camera and manipulating them was resulting in incorrect behavior.

Fix for incorrect behavior with polygon selection and QuadDivide.

Fix for handling missing 3DR installation -- now allowed to work in wireframe if 3dr is missing.

Inlining of LOD children and textures is now turned off by default.

Reformatting of the mesh optimization box (Pioneer PRO only).

Reformatting of the spline tool preference boxes (Pioneer PRO only).

Reformatting of the Constant Frame Rate advanced options box.

Renamed default materials library basic.mlb – previously it was called simple.mlb.

### Beta 9 Version of Pioneer

Addition of Boolean operations to Pioneer.

Addition of the "Axes" tool.

Addition of "Save Object"/ "Save Object As" menu items to Pioneer.

Addition of saving files in \*.scn format using menu (File->World->Save As).

Addition of small Orthographic views to Pioneer.

Support for handling multiple nodes in top level of VRML file.

Fix for bug in Constant Frame Rate (CFR) option -- it caused the scene to occasionally disappear.  
Addition of a "sub object" option to CFR. This allows objects to be simplified at the sub-object level during navigation.

Addition of a new pop-up containing "Show Neighborhood" and "Add to Neighborhood" buttons.  
"Show Neighborhood" item has been removed from the File menu.

Addition of the "Dock All" panels button.

Addition of the "LookAt" tool to Pioneer.

Addition of the "Task Tutorials" menu item to Pioneer.

Improvement of "Object List" -- the name string display cutoff has been increased.

Addition of "Render Options" menu item (same as "right click" on 3DR button).

Addition of the "right click" option for Boolean operations in Pioneer PRO.

Addition of the "right click" option for the move/rotate/scale object pop-up.

The "Object List" button has been moved to between the move/rotate/scale object and move up/down object hierarchy buttons.

The term "Scene" has been changed to "World" throughout the application.

The menu item "Replay Tutorial" has been renamed "Play Tutorial".

The "Glue as Child" button has been removed from Pioneer.

The "Path Library" tool has been removed from Pioneer.

The "right click" option for Switching to Edit/Navigation mode has been removed.

Fix for "Publish" option -- previously, when transferring images, a few trailing bytes would be omitted.

The default extension has been changed to ".wrl" -- previously it was ".scn".

Support for broken textures -- if texture is not available (or it is not in a readable format) a predefined bitmap is used as the texture.

Fix for Material Preview -- previously, with some video cards, the 3DR material preview was not being properly refreshed.

The neighborhood scene is now maintained in the history. Previously it was not, causing the back/forward buttons to ignore loading of the neighborhood.

Improved Audio dialog -- addition of field for typing of a URL or filename. The "enable" checkbox has been renamed "play". Addition of a "loop" checkbox which can be changed if the play checkbox is currently not selected. Addition of informative help strings for all fields.

Fixed bug in using the "SmallBrowse" checkbox from the Preferences box.

Support for MFString for AsciiText node (last version only SFString).

Support for FontStyle (different font styles and families for AsciiText).

Fix for loading gzip VRML files from dialog box -- previously files were not displayed in the list and were not being recognized as a gzip files.

Fix for switching between full screen and browse screen when starting a recording.

Fix for opening material preview when left clicking on material tools.

Fix for IsA node parsing.

Fix for materialIndex field parsing and writing.

Fix for open edit mode panels on startup.

Fix for auto facet constant for VRML primitives -- previously cone and cylinder looked flat shaded because of wrong parameter setting.

Fix for bug of loading 3DStudio project (\*.prj) files.

Fix for Point Editing & Sweep -- selecting a face, move, rotate, and scale an object, scale, rotate, and move the face, sweep the face no longer lose any of the previous operations.

Fix for Camera zoom during Camera view -- Scale with Left or Right mouse button changes a zoom of both the camera and the view looking through this camera. Scale with both mouse buttons changes a size of the camera and does not affect the view.

Fix for Camera LookAt + Camera view -- if the camera is constrained to look at an object and it is moved around, then the view looking through the camera follows exactly a changed orientation and position of the camera.

Fix for bug which destroyed title if scene is reloaded after playing a recording.

Fix for bug that caused a jump to a URL attached to the selected object when going from edit to browse mode.

Application window now pops to front when a VRML link is clicked in the HTML browser.

Improved "scene changed" detection -- the message only appears if the scene has been edited.

Previously, navigating in a browse mode (resulting in change of camera location) was being consider a change in the scene.

### Beta 8 Version of Pioneer

Addition of the Publish tool -- this tool allows files to be transferred via ftp to directories on remote machines. This facilitates exchanging wrl files in a common shared space. A few publishing locations are reachable via the neighborhood scene.

Addition of Path Library and LookAt tools (from trueSpace2).

Support for specifying a description for a url link. The Attach URL dialog has been extended to allow entering of a description string. This string is output as the description field of the VRML anchor node.

Support for displaying link descriptions. The description appears in tool help bar when mouse is moved over a link.

Support for fetching ftp urls. The url may contain userid and password thru the syntax  
ftp://[[userid[:password]@]machine/dir/file.wrl  
Missing userid's default to "anonymous."

Support for preserving current scene when replaying a recording.

Improved help strings for tools/fields.

Attaching of url/description and Attaching of 3D Sound have been combined in one popup menu.

Default startup scene is now the neighborhood scene (instead of main.wrl). This can be changed in the preferences box.

Improved VRML 1.1 compatability. Support for Text, Ascii text, and Fontstyle.

Improved reporting of parsing errors -- reports line number and file name upon parse error.

Improved byte counter during communication -- shows Kbytes information for large files.

Addition of error message for missing modem/network connection.

A recent bug affected several modelling tools -- specifically sweep, deform, and spline polygon. These tools should now be fully functional.

Fix for UV texture offsets.

Fix for navigation in orthographic views.

Fix for "Look at Current Object" and "Reset View" in the case of missing cameras.

Fix for file locking -- previously the application left files locked upon encountering a bad wrl files.

Fix for memory leak which occurred when reading bad wrl files.

Fix for unexpected link jump when switching from edit to browse mode -- previously if an object with a link was selected in edit mode, switching to browse mode would cause a jump to that link.

Beta 7 Version of Fountain

[Beta 3 Version of Fountain Pro](#)

Installation script now allows the user the choice of updating the 3DR drivers. This is of particular use on Windows 3.1 systems running the Matrox Millennium. This configuration is a little finicky with respect to the 3DR drivers, so having the option of leaving the current 3DR configuration alone is a big bonus.

The Material sphere in the materials property window now shows the current material drawn in 3DR.

Addition of more constant frame rate features. A constant frame rate parameter has been added on the render options control panel. Simply right-click on the 3DR button to bring this panel up. The parameter given is the time for each frame to display in milliseconds. Increasing the value will slow the display of each frame, while decreasing the value will increase the frame rate. If the display cannot keep up to the frame rate, then simplifications to the scene will be made, such as drawing distant or large objects in wireframe or boxes.

Beta 6 Version of Fountain

[Beta 2 Version of Fountain Pro](#)

Brand new installation script. The installation procedure has been greatly improved, and now conforms to Windows 3.1, Windows 95 and Windows NT installation requirements.

Addition of constant frame rate when navigating. This feature attempts to fix the navigation through the scene at a constant frame rate. An attempt is made to assign a cost to rendering objects, such that objects which are not important may be simplified to allow navigation at the constant frame rate.

You can now attach sounds to objects. The attached sounds will "move" between speakers and change volume as you move around in the scene. Simply select the Audio tool (the green wave button) while in Edit mode. Then select a .WAV file from the Audio dialog by selecting the button at the top of the dialog. Then "attach" the sound to the currently selected object.

Support for asynchronous communication. Fountain remains in a non-blocked state during network communication -- this allows the application window to be moved, resized, etc. and for communication to be interrupted by hitting the stop button. Also, asynchronous communication should, in future versions, lead to the ability to navigate during the loading process.

Simplification of loading VRML files -- all inlines are loaded immediately. This allows network communication to be faster.

Improved detection and recovery from out-of-memory failure when uncompressing gzip files.

Also, previously, files created by gunzip'ing were not being deleted from the TEMP directory. This has now been fixed.

Improved support for HTTP. Detects and handles missing/misspelt fields in http file headers served by different http servers.

Improved handling of messages from html browser -- if Fountain is loading a file, load requests for the html browser do not interrupt the existing loading process.

**Fountain Pro:** A fix was made so that the Quad Divide now works correctly. Previously, this had caused Fountain Pro to crash.

**Fountain Pro:** A bug that caused a crash when a camera was selected while the Sculpt Surface tool was active has been fixed.

Beta 4 and Beta 5 Versions of Fountain

Beta 1 Version of Fountain Pro

Increased timeout value for DDE transactions; Fountain is more tolerant in communicating with Netscape and other instances of Fountain. Previously this was causing multiple instances of Fountain to be initiated.

Support of missing "http://" prefix in URLs. This means that you don't have to type this in when entering a URL.

Fountain now registers itself with Netscape as the handler of both x-world/x-vrml and application/x-gzip mime types.

Fixed unregistering as handler of above mime types. Previously, Netscape would not know of a Fountain that had been shut down, and the user needed to click on vrml links twice. Now, this condition is recognized and handled properly.

Navigation has been changed. The walk/fly modes are now selected from a pop-up. There are similar pop-ups in both Edit and Browse modes. In Edit mode, the object navigation icon also appears in this popup. The object navigation move/rotate/scale icons have also been moved into a single popup. Since the walk/fly icons are now present in the Editing interface, the old eye move/rotate/zoom icons have been removed from both the large view and the small view.

A toolhelp icon has been added. This icon functions the same as the toolhelp menu item.

All of the modeling tools are now "LOD aware." This means that they will all allow for proper editing of LOD objects.

Fountain now has the ability to use a window that is 1/4 the size of the normal full screen window (but never less than 640x480) when browsing. This new "SmallBrowse" mode can be selected from the Preferences panel accessed through the "File" menu. If this is enabled, Fountain will automatically resize itself when switching in and out of Browse/Edit mode. When using SmallBrowse mode, higher frame rates can be achieved which improves the ability to navigate through VRML worlds.



The handling of cameras and the small view window has been changed. In previous versions, whenever a camera was selected, the small view window became a view from the camera into the scene. Now, it will only become a camera view if you select a camera when the small view is the active view window.

The Copy and Erase icons (available in Edit mode) have been merged into a single popup.

Fountain now only supports .JPG textures.

We've added a new feature called "place marks" or "my neighborhood". This is the 3D version of 2D HTML bookmarks. Here's how it works. First you'll notice that there are two new menu options under the "File" menu: "Show Neighborhood" and "Save Neighborhood". Also to the right of the stop button on the "browse mode" button bar is a new icon that looks like a building. When you're in a world that you want to add to your neighborhood you click the building icon and select an object from the current scene to represent that world. Fountain will then add this object to your neighborhood. When you want to go to your neighborhood go to the "File" menu and select "Show Neighborhood". Fountain will then display your neighborhood. Clicking on the object in this world will take you to the corresponding world.

Customizing your "Neighborhood" world:

Change into "Edit mode", by clicking on the far left icon on the "browse mode" tool bar, select the "Show Neighborhood" option from the "File" menu and you can edit your world. After editing your neighborhood select "Save Neighborhood" from the "File" menu.