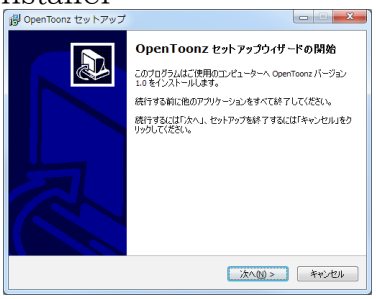
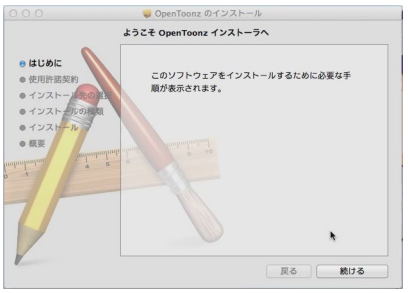
OpenToonz
Startup Manual
Introduction

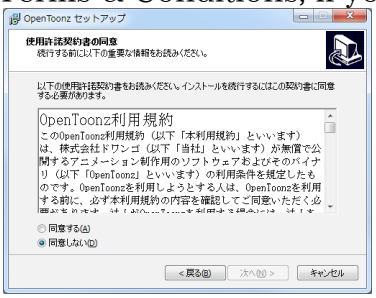
☐ Installation Procedure

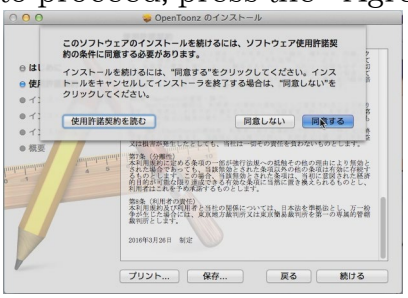
① Start the installer



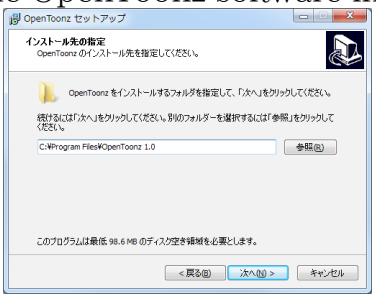


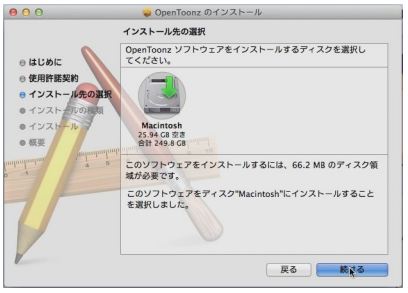
② Read the Terms & Conditions, if you want to proceed, press the “Agree” button.





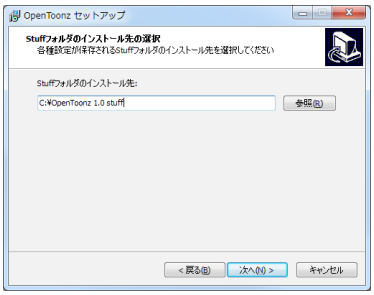
③ Specify the OpenToonz software installation destination



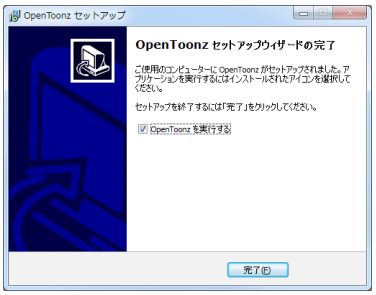


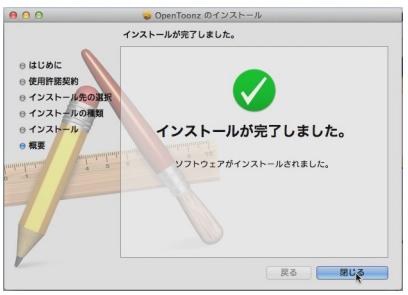
④ (Windows only) Specify the Stuff destination folder.

In the case of OS X, Stuff folder location will be pre-determined. You can change the location of this folder (described later on). Also in the case of Windows, the Start menu and desktop icons will be added automatically.



⑤ Once the files have been copied, the installation is complete.





☐ Stuff Folder Information

The Stuff folder houses various settings of OpenToonz. If more than one user is working on the same project, creating a shared Stuff folder in the data directory, can unify project settings and work from a common color sample data set.

Inside the Stuff folder, there are several additional sub-folders as follows:

- cache: Image cache data is temporarily stored here
- config: Contains the style sheet, various configuration files, such as the translation file
- fxs: This is where the effect preset parameters are saved
- library: Pre-prepared material such as video content or audio samples imorted into OpenToonz
- profiles: Work environment settings, etc. will be saved here for each user
- projects: Project configuration files are saved here
- studiopalette: Global color swatch palette, shared by the entire project will be saved here

These folders can be moved in the following way even after installation.

● To change the path of the Stuff folder, etc. (Windows) Advanced Level

※ With administrator privileges do the following.

① Press the Windows key + R, type “regedit” in the “Run” dialog, & then run it.

② The Registry Editor will now open.

③ In HKEY_LOCAL_MACHINE\SOFTWARE\OpenToonz\OpenToonz\1.0, the path to each folder is stored, rewrite the one you want to change using the following key:

“TOONZROOT” : Stuff folder
“TOONZPROJECTS” : projects
“TOONZCACHEROOT”: cache
“TOONZCONFIG” : config
“TOONZPROFILES” : profiles
“TOONZFXPRESETS” : fxs
“TOONZLIBRARY” : library
“TOONZSTUDIOPALETTE”: studiopalette

● To change the path of the Stuff folder, etc. (OS X) Advanced Level

In the case of OS X, the Stuff folder has been saved to /Applications/OpenToonz/OpenToonz_1.0_stuff/ as the default location after the installation.

① From the context menu of the OpenToonz 1.0.app, select “Show Package Contents”.

② Open SystemVar.ini from Contents/Resources in a text editor.

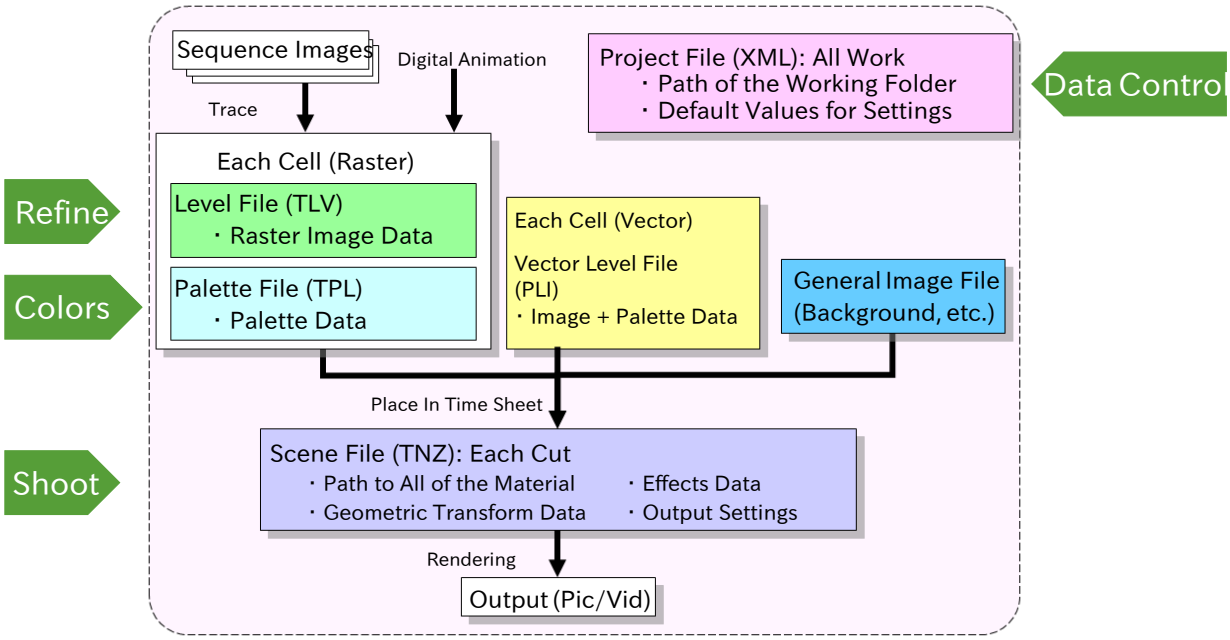
③ As in the above case of Windows, edit the value corresponding to each folder, & then Save.

● Other sub-folders inside Stuff folder

- doc: Contains Help files of some of the effects that are mounted in OpenToonz
- plugins: Copy the plug-in effects files (.plugin) to this folder
- sandbox: Contains the set of sandbox projects that are provided by default

☐ OpenToonz Data Handling

OpenToonz proprietary data formats & their relationships, are shown in the figure below.



① Toonz Raster Level File

The data of the Raster Image Cell. Each file contains 1 of the Image Cell data Frames. The extension is .tlv. (It is referenced by Toonz & OpenToonz as a Level cell in English.)

② Palette File

Describes the data of the Pallet from the Cell. The extension is .tpl. As it is written in text, you can see the contents in a text editor such as Notepad.

★ 1 per Cell, there is a paired TLV file with the same name as the TPL file.

③ Toonz Vector Level File

The data of the drawn Vector Cell. Each file contains 1 of the Image Cell data Frames, it also contains the Palette data in the same file. The extension is .pli.

④ Scene File

Describes text data of each Cut. File paths & material (Toonz Level, Background Image, etc.), Effects data, geometric transforms, & entries such as output settings. The extension is .tnz.

⑤ Project File

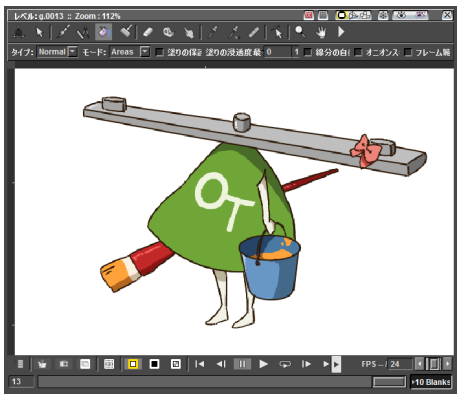
The path location of all work data (Project Folder), & describes the default value of the scene settings. It is written in the form of an XML script.

Roughly speaking, refine Image data & Color Palette file (TPL), to complete the Level file (TLV), combine the data of each Cell & the background material, to complete Scene file (TNZ), it is then ready for the final shooting process.

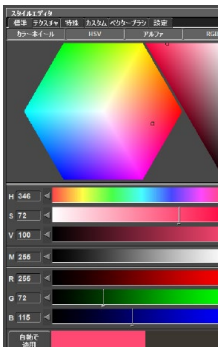
☐ OpenToonz Interface

OpenToonz interface contains a variety of “panels” that have been prepared for each function. Users can use a combination of these panels freely in the workspace (Room).

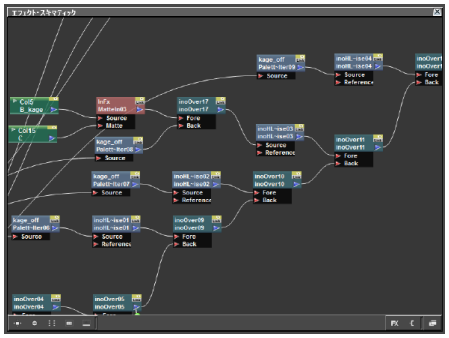
Xsheet (Time Sheet)



Combo Viewer (Main Viewer)



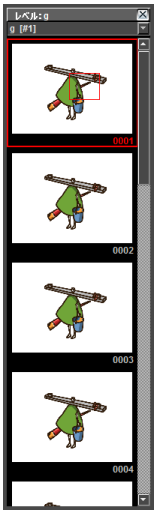
Style Editor
(ColorWheel,HSV,RGB)



Schematic (Nodes Editor)

Palette (Colors)

Level Strip (Thumbnail View) →



● Xsheet

Time Sheet interface (is called the Exposure Sheet = Xsheet in English). Place material into the Scene, & the timing of each material in the Video ID, you can determine a simple stacking order.

● Combo Viewer

It is used to preview all of the work you are doing by displaying the output picture.

● Style Editor

Used when editing the Color Palette. Color Wheel, HSV & RGB values can be edited.

● Level Strip

A Thumbnail of each Cell Frame that is being edited are displayed in a row.

● Schematic

How Scene Effects are applied, tree structure of parent-child relationship geometric transforms.

● Palette

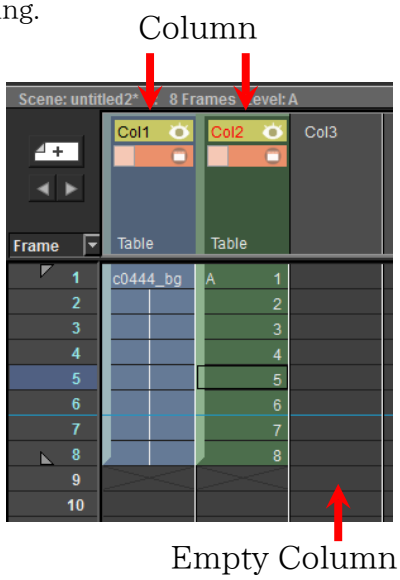
Displays the contents of the Palette file.

The “Flipbook” panel is used for playing a sequence of images & movies, & “Color Model” panel is for Color Picking on the Color Swatch Display when refining work, there are a variety of panels. They can either be docked in each Room of the Main Window, or you can use them as a Floating Window.

☐ Column & Level

Various materials (Cells, such as background material) can be arranged on the Xsheet (Time Sheet), which are collectively known in OpenToonz as “Level”. Level is stored in the Column on the Xsheet. In each of the Cell (Frame) of the Column, no more than 1 Level / Video Number can be entered. As Column is a data structure unit of OpenToonz, it has an important meaning.

① Column Level Container



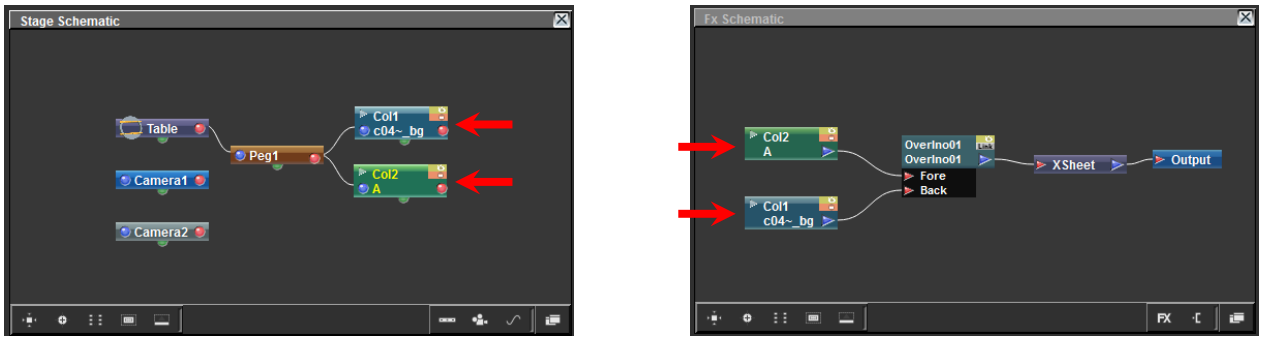
- 1 Cell in the Column can be, A) Empty, B) A non-sequence Level Frame C) A Frame Level with a sequence numbered image. In the case of C), the video sequence Frame Number is displayed on the Xsheet.
- Dealing with scenes in OpenToonz shooting, load material (Level) can not be used to place over the Xsheet. The same applies to refining, it doesn’t matter as you don’t want to display Xsheet panel, Level read in LoadLevel is located in one of the Columns on the Xsheet.

② Moving, Resizing Performed on the Column

- Move, geometric transform data such as Resizing, Camera, Table, can be given to Pegbar (Tap) or to each Column, we have a parent-child relationship with the table as the parent. (Stage Schematic)
- The geometric conversion data for Level Images contained in each Column, will be deformed

③ Effects Synthesis Applied to the Column

- Effects synthesis, will also be performed for each Column. Each Column Node contains the Level material connected to the Effect Node, Effect processing is performed according to the flow from the Left that leads into the Output Node on the Right. (Fx Schematic)
- Each of the Column Nodes, can output the image data of the Level contained within it



Stage Schematic (Left) & FxSchematic (Right). Column Nodes (Red Arrows) (Empty Columns are not displayed)

※ Xsheet Can Process Nested Structures

As a special case, in 1 Level, you have the ability to summarize data of a plurality of Columns as Xsheet of child (= SubXsheet). When selecting multiple Columns, the use of Collapse (Fold In Sub-Sheet) command, you can put together the Column of selection to one Level of the SubXsheet.

☐ Scene Editing Mode & Level Editing Mode

OpenToonz animation software, handles the time series (= Frame). OpenToonz has a mode where you can select the 2 types of Frame, respectively, & the Level of the Frame, called the Scene Frame.

○ Level Frame

When editing a single Level, the Frame will follow the Video Number you have in that Level. When refining work, on a single one of each of the Video Number Levels, switch OpenToonz to the Level Editing Mode. When in Level Editing Mode, regardless of the arrangement on the Xsheet, the main viewer displays only the picture of the selected current Frame of the Level (= Video Number).

※ To Switch to the Level Editing Mode

In LevelStrip navigate to where Thumbnails of the current Level are displayed, then left-click on one of the Thumbnails.

○ Scene Frame

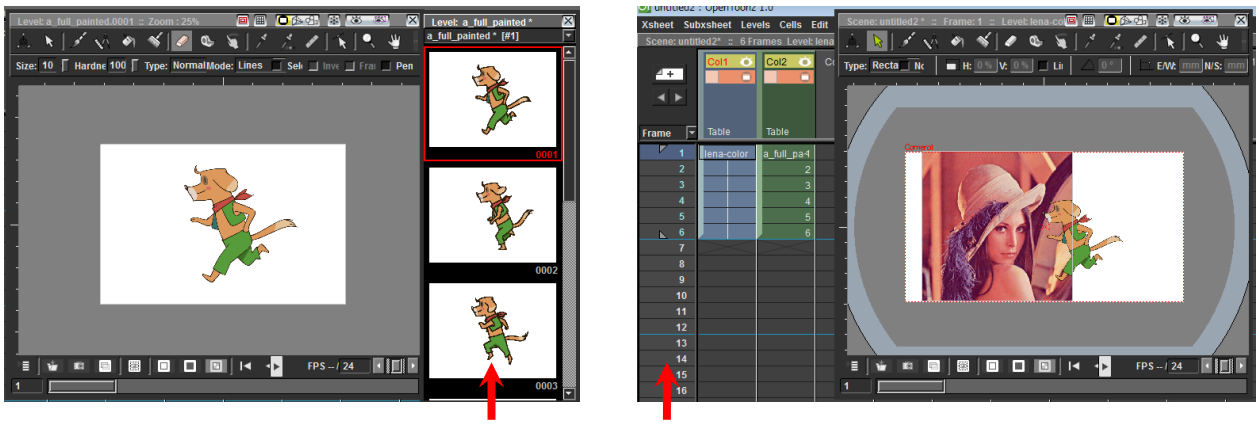
When you are editing a Scene, the Frame will follow the Row Number in Xsheet. Mainly when shooting, while displaying a combination of all material that has been placed on the Xsheet, Please Switch to the OpenToonz Scene Edit Mode. When in Scene Editing Mode, CamStandVisibility on Xsheet (Camera Stand Display) will be displayed on all of the Columns that are ON.

※ Rendering Time & CameraStandDisplay Column stacking uses the following order of priority

① Fx Schematic up & down relationship between the Layer Synthesis Effects (Rendering Only)
② Z Depth Value
③ SO (Stacking Order) Value
④ Xsheet Order (Bottom Left, overlaps going to the Right)

※ To Switch to the Scene Editing Mode

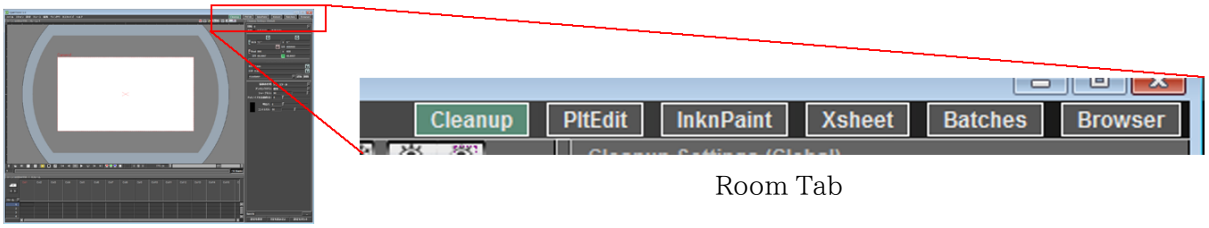
Left-click on the left side of the Xsheet, Line Number & the Area (= Scene Frame) is displayed.



Level Editing Mode (Left) & Scene Editing Mode (Right). Left-click area to Switch Modes (Red Arrows).

☐ Room (Workspace)

In OpenToonz, trace, color designation, drawing & refinement, photography, batch processing, are inside a Room which combines panels to suit each type of data prepared in advance. You can switch from the upper-right corner of the Room tab of the OpenToonz main window. When you switch the Room, the contents of the menu bar is also switched to suit it. Each Rooms panel arrangement, can be freely changed by the user, profile data is stored for each user, which loads on startup.



Room Tab

● To Start a Minimal Required Room Intermediate Level

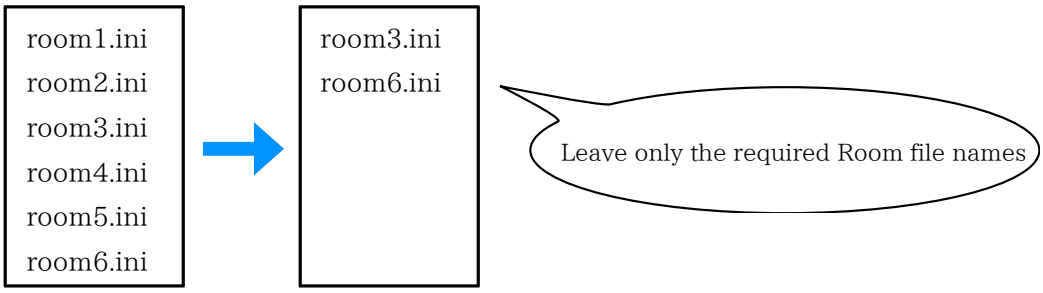
If you want to work with shared users for each step of the animation, a good idea is to provide a shortcut to start with the minimal Room necessary, to start-up faster.

Example: If you want to start with only a minimal open Room with “InknPaint” & “Browser”

① [$TOONZPROFILES]/layouts/OpenToonz.[User Name] You work in the [User Name] folder.
(By default, OpenToonz Stuff/profiles/layouts/OpenToonz.[User Name])

② Copy the layouts.txt, & change it to an appropriate name. (Example: shiage_layout.txt)

③ Open shiage_layout.txt in e.g. WordPad, & line up the Room config file names, as shown below, leave only the corresponding Room lines (“InknPaint” is room3.ini, “Browser” is room6.ini), deleting any other lines, & save it.

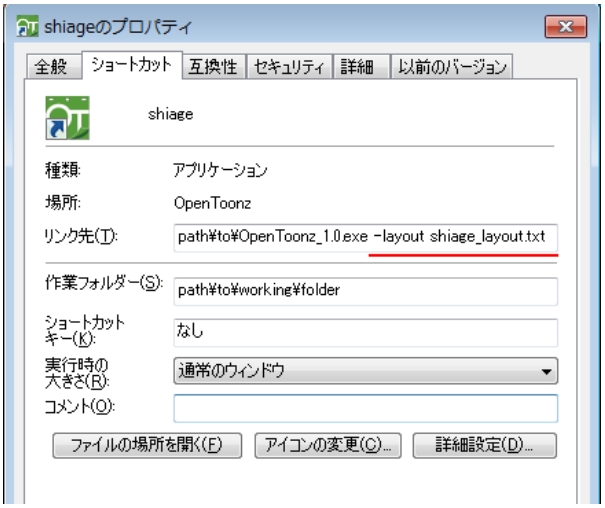


④ Create a shortcut to the OpenToonz executable file

⑤ Right-click the shortcut, & open the properties

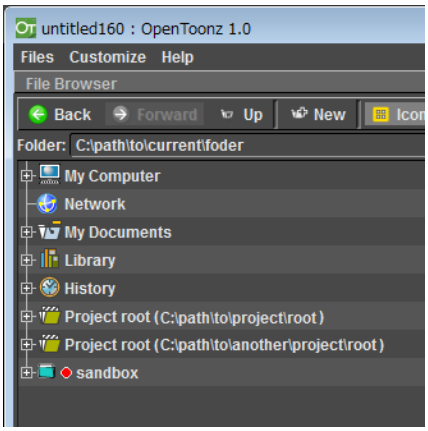
⑥ Add the end of the string, written in the “link”,
-layout shiage_layout.txt
& then click OK.

⑦ When you start-up OpenToonz using this shortcut, only the specified Room will be created.



☐ Project Data Management

In OpenToonz, the path & default values of the Project Settings, such as Scene Settings, any work which is newly created within the Project, is referred to as a “project”, you can save into the Working Folder of each Project (Project Folder) to store your material.

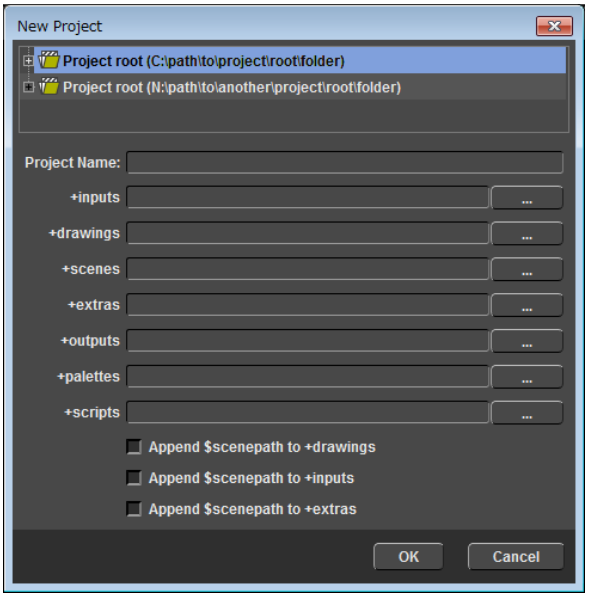


● sandbox Project

When starting OpenToonz for the first time, the Current Project is called sandbox, it is the default Project. Looking at the FileBrowser panel on the Folder Tree, the Circle Node on the Left side of “sandbox” is turned Red. This is a sign that the Current sandbox Project has been Selected.

● To Create a Project

① Browse using the Menu Bar in the Workspace, select File > New Project, & in the following input boxes, specify the path to each of the Project Folders.



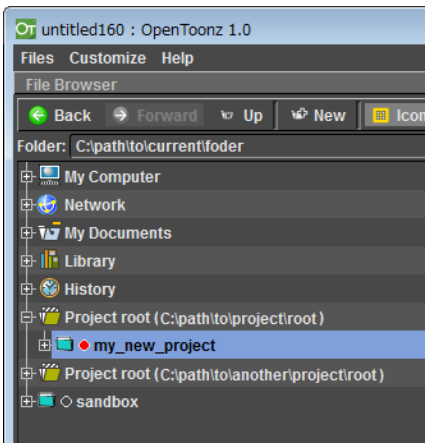
← To select storage location of the Project Settings

← Project Name

Enter the path to each of the Project Folders.
Assumed to store the files in the following manner.
+inputs: Scanned Images (Such as TIFF)
+drawings: Toonz Level Material (TLV + PLT & PLI)
+scenes: Scene File (TNZ)
+extras: Background Image Files, Audio Files, etc.
+outputs: Rendered Image Output
+palettes: Color Swatch (PLT). Studio Palette Panel also referred to as the Project Palette.
+scripts: Script Files

※ The path string in $scenepath is the current scene name, it is assigned when a file is saved.

② Press OK, & the project is created, it becomes the current project.
A new Project Node is added To FileBrowser panel on the Left side of the Folder Tree, & you will see that the Red marker has moved accordingly.



● To Switch the Project

When you click the Circle Node to the Left of a Project Name, the Circle will be marked Red, & will switch the current project.

● To Change the Project Folder

In the Browser Room, run Files > Project Settings... Edit the Project Folder path, & close the dialog.

● To Set the Current Scene to the Specified Values of the Project

In the Browser Room, run Files > Save Default Settings.

● To Work Without Creating a Project

Project based Data Management, can shorten the workload, such as with the stored material inside the file path “+drawings”, it is possible to simplify the data management, also there is a big advantage to having default project values set for a common scene.

On the other hand, in case of use such as when performing finished outsourced work, such as dealing with small amounts of data from a variety of scenes, the advantage of summarized data for each piece is small, it would be inconvenient to create a project for each one. In such a case, without creating a project, please work by using the Default Project “sandbox”. The User Project Folder of the project that was created & any Scene Files stored outside of the sub-folders, are recognized as belonging to the sandbox Project, the user can also proceed without using a project.