Ubisoft Shot Manager

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CONTENTS

Manage the cameras of your scenes inside Blender. **and edit your sequence in real time and with great simplicity.**

Current version is 2.1. The currently supported Blender versions are 3.3 LTS and 2.93 LTS . . . and the documentation is still in development :D

Check all the new features in *What's new in 2.0*

ONE
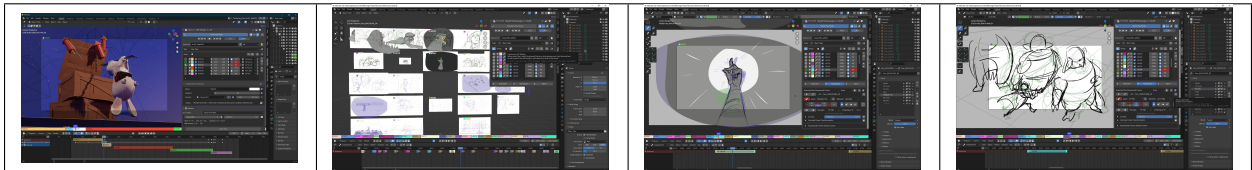
DISCLAIMER

In spite of all our efforts to make it reliable some troubles may occur in use cases we have not faced. Be aware that neither Ubisoft nor Ubisoft employees can be taken as responsible in case of data loss. Use it at your own risks.

This said, we will do our best to listen to your feedback and improve this add-on accordingly in order to provide a robust and flexible production tool. Please report your requests and issues you may face to the Issues page. **Have fun !**

GETTING STARTED

It is highly recommended to start by reading the *Shot Manager General Philosophy* to clearly understand the purpose of this tool !

Then:

- *Download* the Shot Manager zip file,

- *Install* Shot Manager as a Blender addon,

- Mind the *features* and the *vocabulary*,

- . . . And at last *try out* your installation !

HISTORY

Shot Manager is a pre-production tool that was initialy developed to support the previz of an animated TV series we did at Ubisoft between January 2020 and February 2021. From the very beginning we knew we wanted to share it with the Blender community so we released it as part of an open source project on GitHub during summer 2021. Since that time it is used internaly at Ubisoft as well as by several animation production companies and individuals, and we keep supporting it.

Read this article to see how we used this tool on the TV production of Rabbids Invasion: Mission to Mars: User Stories - Blender and the Rabbids.

3.1 — General philosophy – READ ME —

Before starting to use Shot Manager it is very important to understand what this add-on is about and what you will be able to achieve with it.

Basically it is based around **2 very simple concepts**. Many tools and features have been added around them to push their logic to something incredibly powerful for storytelling and animation though, which can make Shot Manager appear complex.

3.1.1 1 - Making the edit in the 3D scene

In order to let the director experiment and concretize his vision in a short amount of time it is crucial to iterate fast in the way an action is edited. And is there a better way to so so than directly in the 3D scene?

So the key idea lies in the analogy with shooting a continuous live action from several real cameras:

- In a Blender scene we create an action, usually corresponding to what would be a sequence in terms of narration, this with a plausible timing;

- Next we introduce several cameras and we define from the tool when the cameras are recording and in which order they appear in the edit;

- Then by playing the edit and iterating on the tweaks on the action, the record timings and the order of apparition of the point of views we polish it and finalize the way we want the whole sequence to appear on the scene.

Notion of "Shot"

A [Shot] is the basic entity manipulated by the Shot Manager user interface. As for a live footage it is made of a point of view, thanks to a camera, and a "record duration", defined by a start time and an end time.

Notion of "Take"

A [Take] is an ordered list of shots. Basicaly **a take is an edit** where shots are played one after the other, in the order set in the take and independently from the time at which they start in the time of the 3D scene.

In practice - or in a production context - a take would generaly refert to what is commonly called a sequence, that's to say a small edit of shots that are tied together in the narration.

3.1.2 2 - Playing the edit in real-time

To view this edit in real-time we introduced a new play mode. When this mode is activated doing a play in the viewport will play the scene animation from shot to shot, switching the point of view from one camera to another according to the one associated to the current shot.

With camera binding the time is played linearly, so the point of view simply changes from one specified camera to another.

This new play mode goes far beyond that since it allows time jumps (called ellipses) and jumps back into time, to play the scene action again from another camera. And that's the essence of Shot Manager!

3.2 What's New in 2.1

- *Shots Stack*
- *UX/UI*
- *Rendering*
- *Bug fixes*
- *Code and architecture*

3.2.1 Shots Stack UI

Added a new manipulation mode for the shot clips: the keys of the camera and of the Storyboard Frames can now be offset when the clip is moved and scaled when a clip handle is manipulated with the modifier key Shift pressed.

- Added an info component
- Added a Preferences setting to make the shots stack starts at the specified lane
- Set the first lane to 1 instead of 0 to see the keys of the Summary lane

3.2.2 UX/UI

- Improvements on the Continuous Draw Mode
- Revamped the UI of the Animated Frame Transformation to minimize UI ambiguities
- Added shot name in the Render panel, near Current Shot label
- Refactored the Duplicate Shot dialog box and added a checkbox for color variation
- Added a button to set the time range to shot or take range in the Frame Range toolbar
- Improved the Storyboard Frame Editing Mode button
- Separated key mappings per category
- Added a Preferences parameter to toggle the vertical arrows used to navigate from shot to shot
- Made the up arrow go to next shots by default instead of previous ones
- Added a key map for activating the draw mode on a current shot

3.2.3 Rendering

- Made the playblast temp directories different from the rendering directories

3.2.4 Bug fixes

See the change log on GitHub for an exhaustive list.

- Fixed occasional bug in duplicate cameras and duplicate takes
- **Fixed rendering issues on Mac OS due to backslash character conflicts in path names:**
    - Shot videos where not rendered
    - Playblast was all black
    - Open in File Explorer buttons were not working

3.2.5 Code and architecture

- Improvement of the API code, samples and documentation

3.3 What's New in 2.0

- *Concept changes*
- *Installation*
- *Storyboarding*
- *UX/UI*
- *Project settings*
- *Bug fixes*
- *Code and architecture*

3.3.1 Concept changes

With the introduction of storyboarding in Shot Manager the notion of shot and its relationship to the content of the 3D scene evolved a bit.

A property **Type** has been added to the shots to differenciate the shots that are containing purely 2D content - they are called the *Storyboard Shots* - from those that are shooting 3D elements or are associated to a camera that is moving in space - they are called *Camera Shots*.

More here: *Shot Type*

On the workflow side we introduced a notion of "layout" to distinguish the context for creating a storyboard from the one to do the previz. Indeed in the first one most of the work lays in drawing the frames reprensenting what will be shot later in the process. In the previz context though we need to create the interactions thenselves between the cameras and the action (or in other words we place the cameras to shoot the action as we would like).

It is then now possible to switch from one layout to the other according to what we want to achieve in the scene.

3.3.2 Installation

As usual, and since the code relies on some external Python dependencies, it is necessary to run Blender in Administator mode to install it (** but just for the install !**). It is also required to be connected to Internet.

But with Shot Manager V2 it is not needed anymore to install the add-on named Ubisoft Stamp Info. This add-on was handeling the writting of the metadata information directly onto the rendered images. It has now been completely integrated into Shot Manager.

A visual feedback has also been added at the top right side of the main panel to inform the user of a new available version.

3.3.3 Storyboarding

A whole new world here to express your creativity! Just draw and play the sequence and you will see your movie becoming a reality!

- Added a feature to detach a storyboard frame from a shot in order to create a free 3D object
- Continuous drawing mode while changing storyboard frames
- Added a frame grid to order the storyboard frames in space
- and many more…

See more here: *Storyboard*

3.3.4 UX/UI

A lot of improvements here since version 1.7:

- Previz and Storyboard layouts
- Interactive Shots Stack completely rewritten: faster, more intuitive, pleasant to use
- More settings exposed in the add-on Preferences panel
- Added a warning and reset button for pixel aspect, fps, resolution
- Added a Reset to Default button for all the usage presets
- Turned off the Use Best Play Performances mode by default

- Added a button to disable the Blender metadata burning in the warnings
- Added a Shift modifier key on shot creation and deletion to skip the dialog box
- Added an add-on preference to store the Delete Cameras of the Remove Shots operator
- Added a button in Features to toggle the display of Stamp Info in the 3D view tab list
- Added a Resolution Percentage parameter for each render preset
- Added an Open in Player button for Render Current
- Moved the render warning UI component below in the panel to make it more visible
- Display the shots names over the storyboard frames when the camera is hidden
- …

3.3.5 Project settings

The "projects settings" are a set of properties defining the configuration of your project. This is really handy to ensure some settings such as the render resolution, framerate, output directories… are not changed by error during the manipulations done in the scene.

Although this feature is not new (it was introduced with the very first version of Shot Manager because it is just a life-saver when in production), it has been improved in this release.

- More flexible support for production naming conventions
- Template to use for the cameras created with new shots

3.3.6 Bug fixes

A lot of work here too. See the change log on GitHub for an exhaustive list.

- Fixed overlay state that wasn't restored correctly
- Fixed Sequence Timeline that wasn't interactive anymore when the overlay was off
- Fixed bug on Render Playblast, intermediate files are now deleted
- Fixed issue in the offset of camera background video
- …

3.3.7 Code and architecture

- Changed the name of the add-on in the bl_info from "Shot Manager" to "Ubisoft Shot Manager": This was done to allow another Blender add-on - also named Shot Manager and currently available on the market - to be installed in the same Blender instance.
- Support for Blender 3.1 and Python 3.10

3.4 Release Change Logs

3.4.1 Release v2.0.225 Change Log

Retimer, markers

- Retimer UI and structure refactored and simplified
- Added support for markers in Retimer

Features

- Integrated the tool Markers Nav Bar from the add-on Ubisoft Video Tracks

UX/UI

- In the Shots Global Settings the Passepartout has been moved out of the Overlays box since it is not an overlay property
- Improved the message displayed in the 3D views to identify the target viewport
- Added a dropdown property to be able to change the Overlays for every viewport, not only the target one

Code

- Big refactor in files to introduce a function to get the add-on preferences

Fixes

- Fixed header title display when add-on has a warning
- Fixed error message at install time when internet connection is not available
- Fixed Overlays Layer Opacity that wasn't working every time
- Fixed error message when material was not available for the drawing preset
- Small fix on the storyboard shot type icon
- *v2.0.225 Change Log*

3.5 Installation

3.5.1 Supported versions

Shot Manager is developed and actively tested on Windows 10. Community users reported successful usage on Linux platform.

The currently supported Blender versions are 3.1, 3.0 and 2.93 LTS.

3.5.2 Download

Open the latest release page from the Shot Manager Gihub and download the zip file listed in **Assets** that has the package

icon: .

In very specific cases you may want to give a try to a pre-release or experimental build. Get more information about those versions here: *Pre-Releases and Experimental*

3.5.3 Install of Shot Manager

Note: Shot Manager needs to download some external Python dependencies in order to be fully functional. Hence, when launching the installation of this add-on, be sure to match these conditions:

- **Run Blender with elevated privileges (or in Administrator mode)**
- **Be connected to the internet**
- **Be sure the firewall is not blocking the requests (use OpenVPN or equivalent if needed)**

Launch Blender, open the **Preferences** panel and go to the **Add-ons** section. Press the **Install** button located at the top of the panel. A dialog box opens, pick the Shot Manager zip file you previously downloaded and validate. The add-on will be installed. Click on the checkbox at the left side of its name to enable it.

Once the addon is enabled, a Shot Manager tab is displayed in the 3D viewport N-Panel.

Close Blender and restart it in normal mode.

3.5.4 Install of complementary add-ons

Since Shot Manager 2.0 there is no need to install the aditional add-ons that where required with the previous versions.

Indeed Ubisoft Stamp Info has been integrated directly into Shot Manager, and Video Tracks will follow the same path in a near future.

3.6 First steps and tutorials

If you haven't done it yet, it is time to read the *Shot Manager General Philosophy* to clearly understand the purpose of this tool.

Shot Manager doesn't have official video tutorials at the moment. Nevertheless it is still possible to get all the concepts and basics thanks to the involvement of soem users who greatly appreciate this tool.

Paul Coulthard (Spitfire Storyboards) is one of them. Skilled storyboarder, very enthusiastic about the potential of Blender, he did a very complete introduction to Shot Manager and his own way of working in a livestream in October.

3.7 Glossary

3.7.1 General terminology

3.7.2 Storyboard entites

3.8 Features and limitations

3.8.1 Overview

- Creation of shots from scene cameras and of sequences from those shots
- Non-linear real-time play of the sequences
- *Action and edit global retime*
- Global control on camera video backgrounds
- Global control on camera sound backgrounds
- Sequence batch rendering, with Eevee, Cycle and custom playblast
- Edit file import and export based on OpenTimelineIO
- Grease pencil sketching per shot (experimental)
- Edit forth and back with VSE (experimental)
- …

3.8.2 Limitations

> **Warning:**
>
> - Shot Manager is not compatible with camera binding. Indeed the *Shots Play Mode* overrides the standant play mode and has its own way of changing the viewport camera. Good news is this mode is far more powerfull than the camera binding approach :)
>
>   Use the convertion tools available in the Warning area of the add-on panel to convert the bound markers to shots.
> - Actions are not supported by the Retimer tool.

3.9 Shot Manager Main Panel
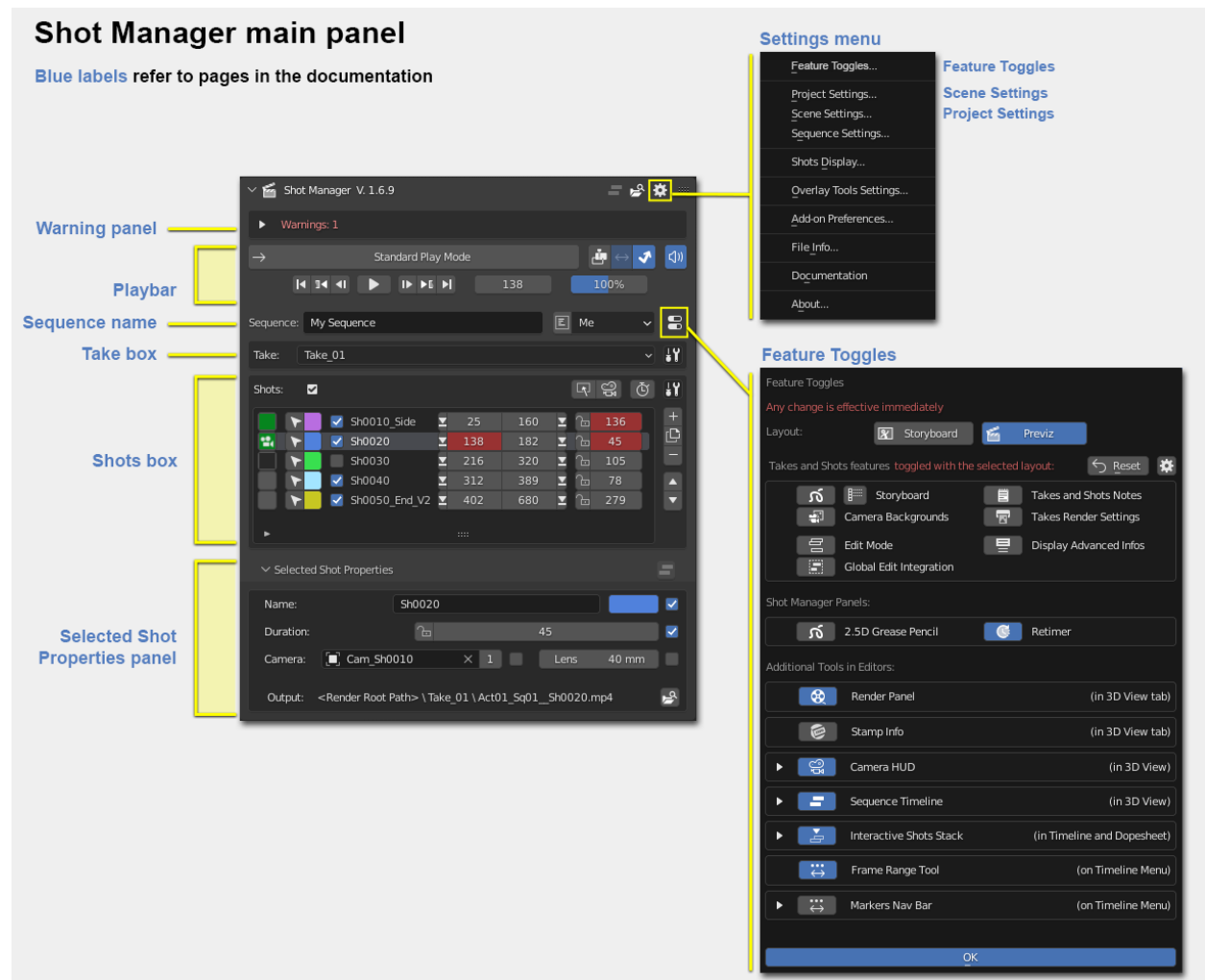
- *Feature Toggles panel*

3.10 Storyboard

3.10.1 Storyboard - Detach

When a storyboard frame is detached from a shot of type Storyboard here is what happens:

- the grease pencil object used for the storyboard frame gets unparented from the camera hierarchy (technically speaking it is in fact parented to an Empty object that is itself parented to the camera),

- the transformation animation of the storyboard frame is cleared. This is because now the grease pencil is part of the 3D world.

- the shot type is changed to "Camera Shot" because now it is shooting content from the 3D world.

Creating a full 2D storyboard can be very handy to prepare a 3D sequence. Thanks to Shot Manager it is a fast process, done in the same application and environment than the previz or 3D layout that will follow, and the transition to 3D shots is very smooth and natural in the workflow.

At the moment the best material to illustrate how a storyboard is done is the teaser of Shot Manager V2.0. Some tutorials are being recorded and should be available soon.

Read the following topics to get a better underdstanding of how the entities of Shot Manager intervene in the scene and UI:

- *Shot Type*
- Frame Visibility

See also:

- *Detaching a Storyboard Frame*

3.11 Toggling Features

3.11.1 Feature Toggles panel

Feature toggles are a set of toggles that can be triggered to display additional features extending the capabilities of Shot Manager. When activated a module and its related graphics components will become visible in the main panel, at various places according to its way of working.

Modules are not enabled by default because they can add a significant complexity to the genereal interface of Shot Manager. It is then strongly advised to activate only the ones you need, at the time you need. You can reactivate them at will.

Modules are just UI components. Disabling a module will not change anything in the scene or in the current configuration of Shot Manager.

Opening the Feature Toggles panel

There are 2 ways to open the Feature Toggles panel:

- Click on the panel Settings button to open the Settings menu and choose *Feature Toggles*:
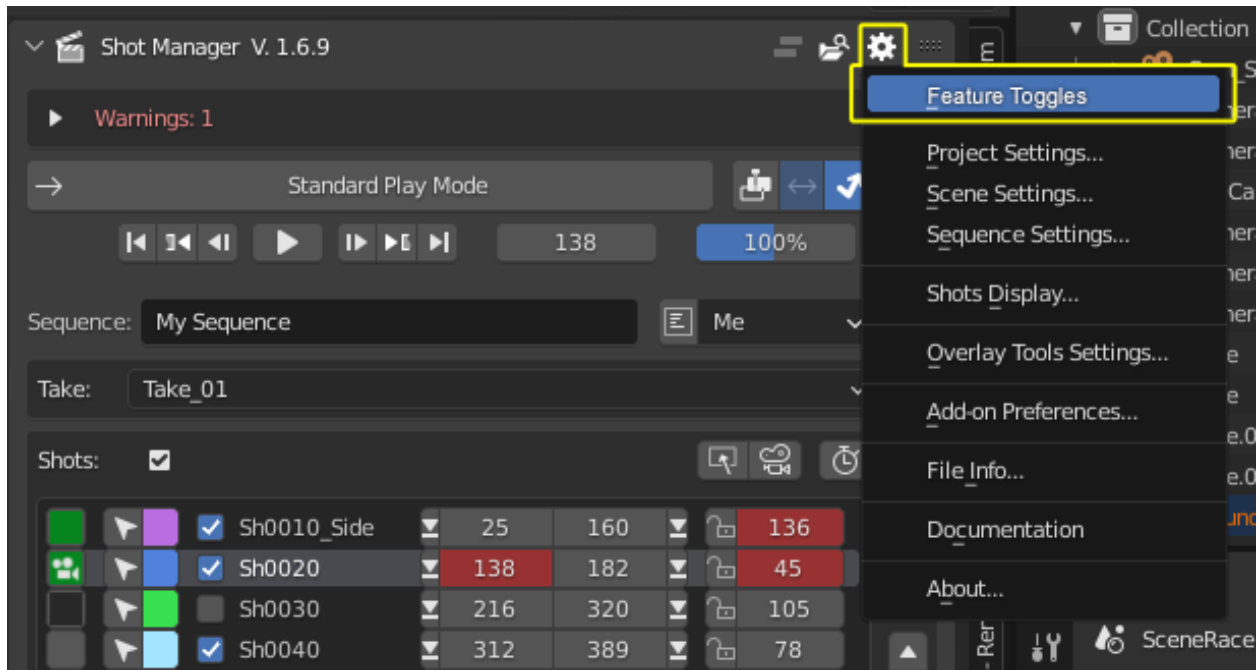
- Or directly click on the *Feature Toggles* button.

This button offers a quick access to the Features dialog box, which you may find convenient when you often toggle some features in order to keep the UI light.

The Feature Toggles panel gets opened. It allows the listed featuers to be toggled by a simple click on they associated button.

Feature Toggles

Any change is effective immediately

Layout: Storyboard   Previz

Takes and Shots features toggled with the selected layout: Reset   ⚙

Storyboard   Takes and Shots Notes

Camera Backgrounds   Takes Render Settings

Edit Mode   Display Advanced Infos

Global Edit Integration

Shot Manager Panels:
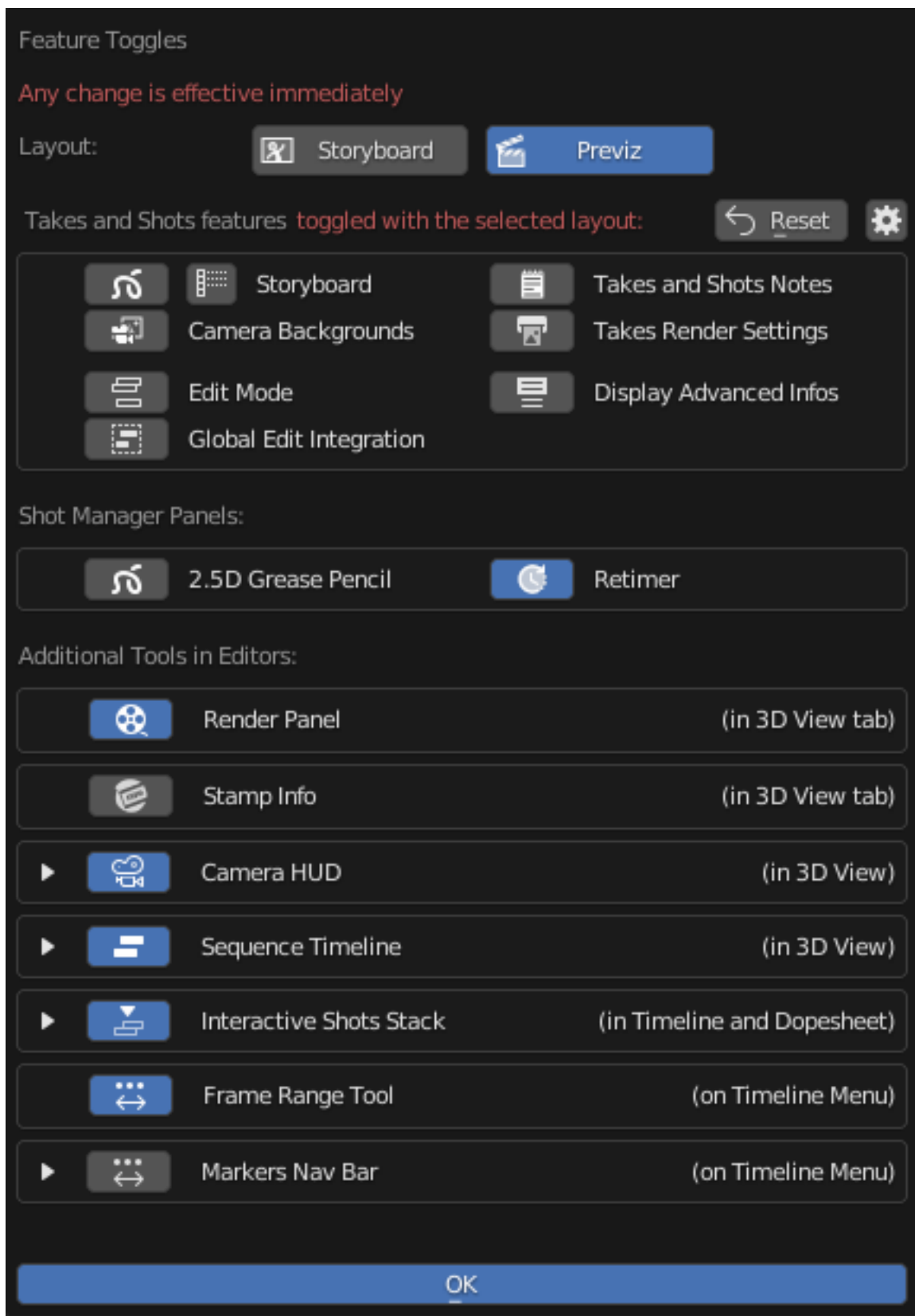
2.5D Grease Pencil   Retimer

Additional Tools in Editors:

Render Panel   (in 3D View tab)

Stamp Info   (in 3D View tab)

▶   Camera HUD   (in 3D View)

▶   Sequence Timeline   (in 3D View)

▶   Interactive Shots Stack   (in Timeline and Dopesheet)

Frame Range Tool   (on Timeline Menu)

▶   Markers Nav Bar   (on Timeline Menu)

OK

3.11.2 Retimer

See also *How to retime the edit or the action* for a practical use of the retiming tools.

Retimer is a set of tools that can be used independently from the use of the shots in the scene. This allows you to change the time of the action, either globaly or on selected objects, without having to creaste a set of chots.
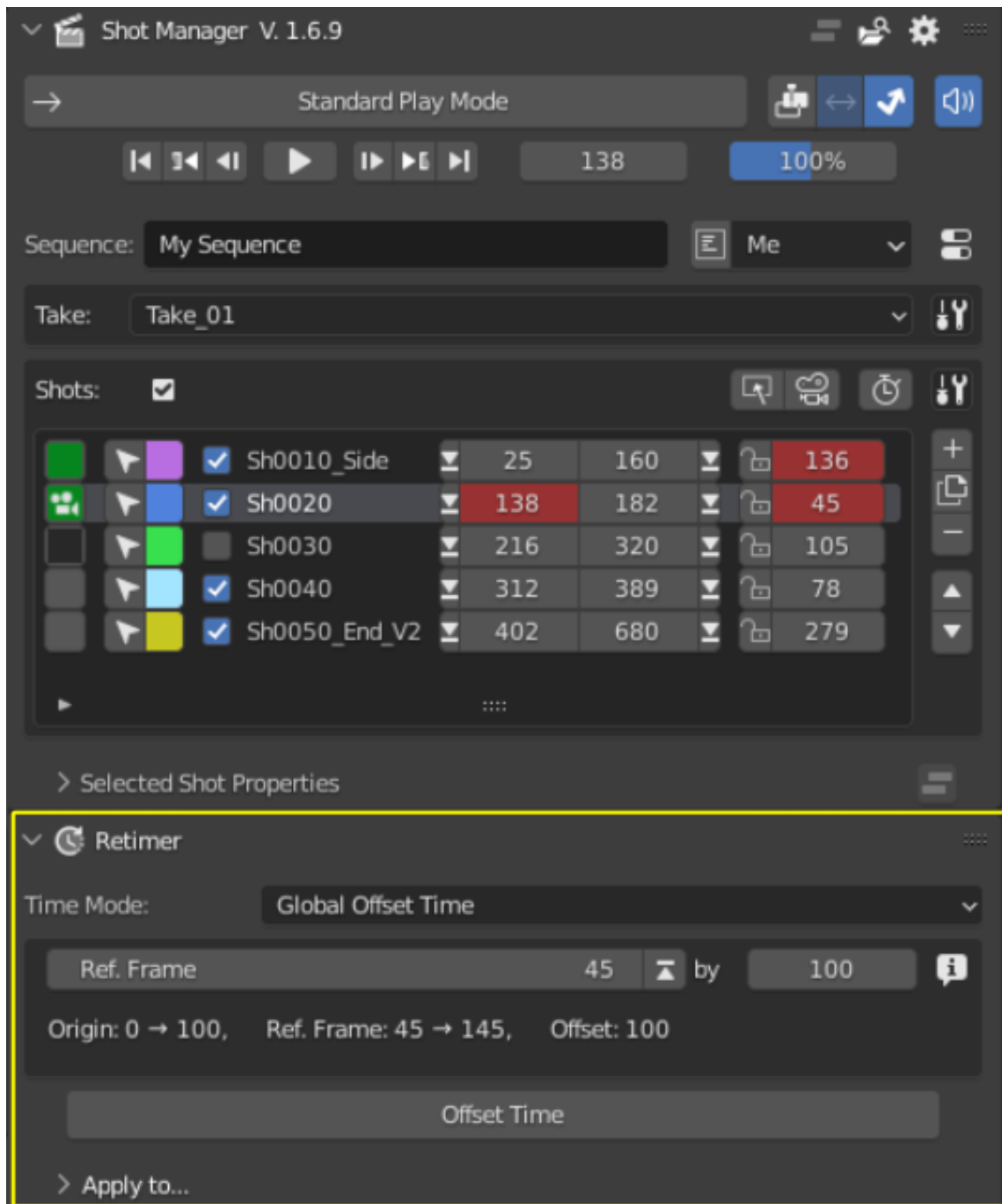
The Retimer panel

To display the Retimer panel open the *Feature Toggles panel* and click on *Retimer*.
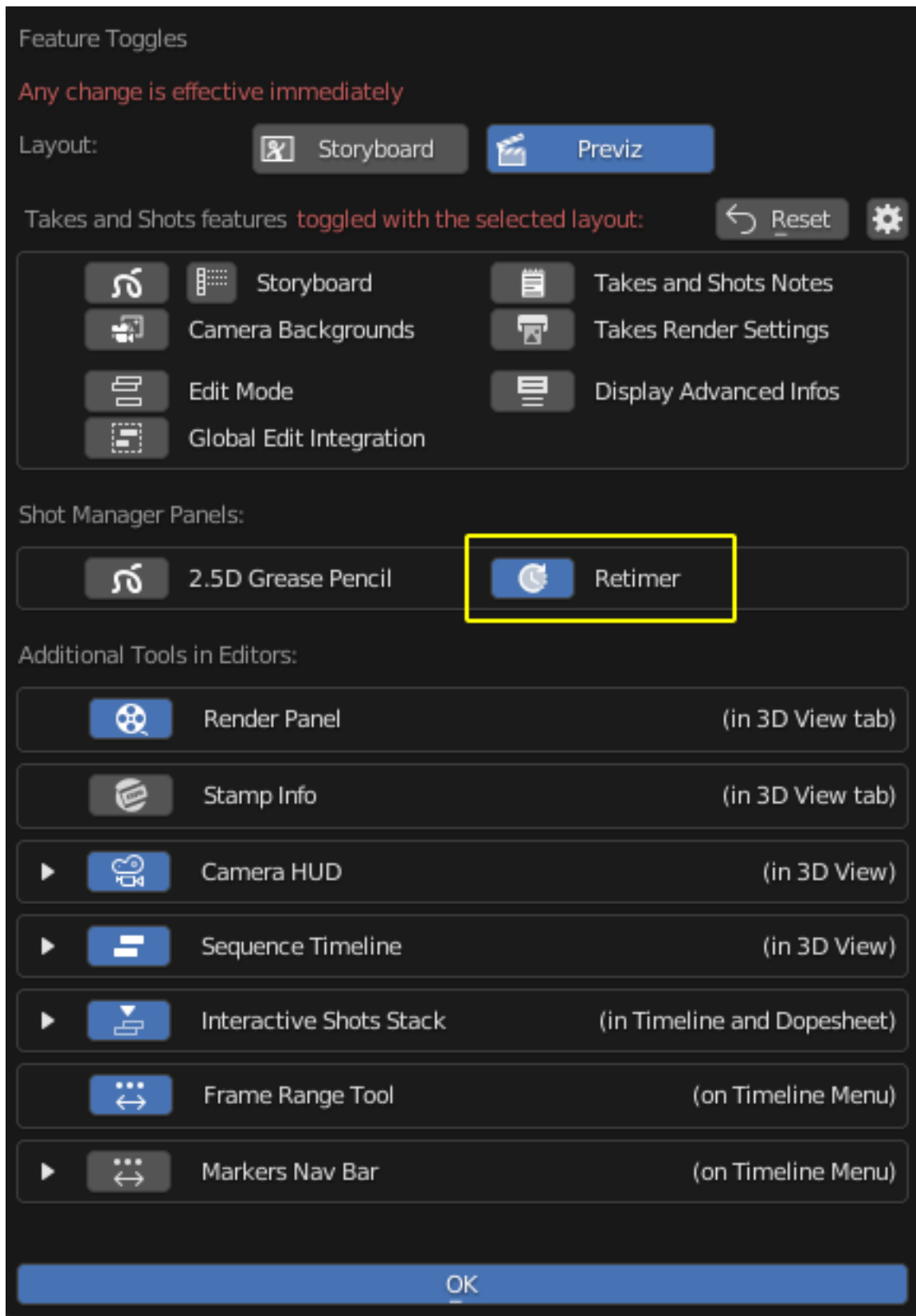
The panel then appears below the Shot Manager main panel.

Insert, scale or delete time

In the Retimer panel choose the action you want to do by specifying it in the *Time Mode* dropdown component.

Then set the start time, either in the panel itself or by moving the Current Time main cursor and then pressing on the up arrow near the time component.

A text line will inform you of the changes that are about to be made, anticipating the new time values.

Then press the button to apply the changes in the scene.

For some reasons this may create several Undos in the Blender Undo stack. Be cautious when undoing things then.

Working on the whole scene timing

By default, or in other words if all the checkboxes of the panel *Apply to* are checked except the checkbox *Selection Only*, time modifications affects the whole scene. This concerns every animated objects, materials, entity having an animation track. It also concerns the Video Sequence Editor content (if you use sound clips for example) and the Grease Pencil animations.

Actions are not supported: If the scene contains some actions they will not be retimed as expected and it will very likely break the animation

Working of a selection of objects or on some entities only

Expand the *Apply to. . .* panel to get access to the proerties to control the scope of the time change.

Selection only

If checked only selected objects or entities will be affected by the change. This is very useful to modify the animation onto only some objects of the scene for example.

If not checked then the change will concern all the entities of the scene, even if they are hidden. It will then be a global time change.

Filter checkboxes

Each checkbox correspond to a category of entity on which the change will be applied to. It is then possible to change the animation only on shots, or on objects, on Grease Pencil. . .

### Limitations

> **Warning:**
>
> - **Actions are not supported:** Changing time in the scene will not affect the Blender animation clips named "actions", if the scene contains some. This is because retiming these entities (as well as VSE clips by the way) is a difficult paradigm. It raises a lot of questions that we haven't tackled.

3.11.3 Markers Navigation Toolbar

The Markers Navigation Toolbar, also called Markers Nav Bar, is a set of buttons allowing a quick navigation in time by jumping from marker to marker, based on some filtering criteras.

Display toggle

The widget can be displayed from the *Features panel*. According to the settings it can appear in the Timeline editor toolbar, the Dopesheet toolbar or on the Video Sequence Editor.
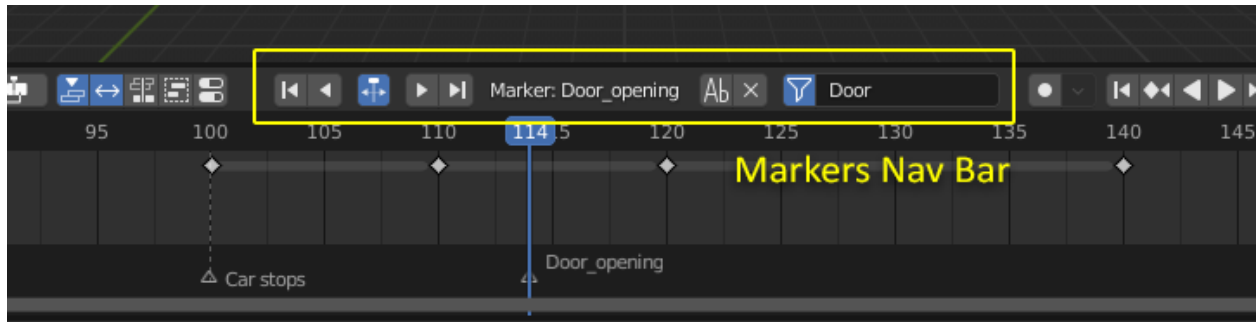
As for the rest of Shot Manager, refer to the tooltips of the buttons for a description of their purpose.

Retimer is a tool on its own. When turned on a new panel named *Retimer* will appear below the Shots panel.

- *Retimer*: Insert, delete or scale time globally or on selected entities of the scene.

- *Markers Navigation Toolbar*: Navigate in time from marker to marker.

3.12 Overlay tools

These tools are based on openGl. There are displayed over some editors such as the 3D viewports, the timeline or the dopesheets.

There are 3 ovelay tools:

- *Sequence Timeline*: Add notes on shots and takes to better manage your scene content.

- *Interactive Shots Stack*: Use and toggle camera backgrounds.

3.12.1 Sequence timeline
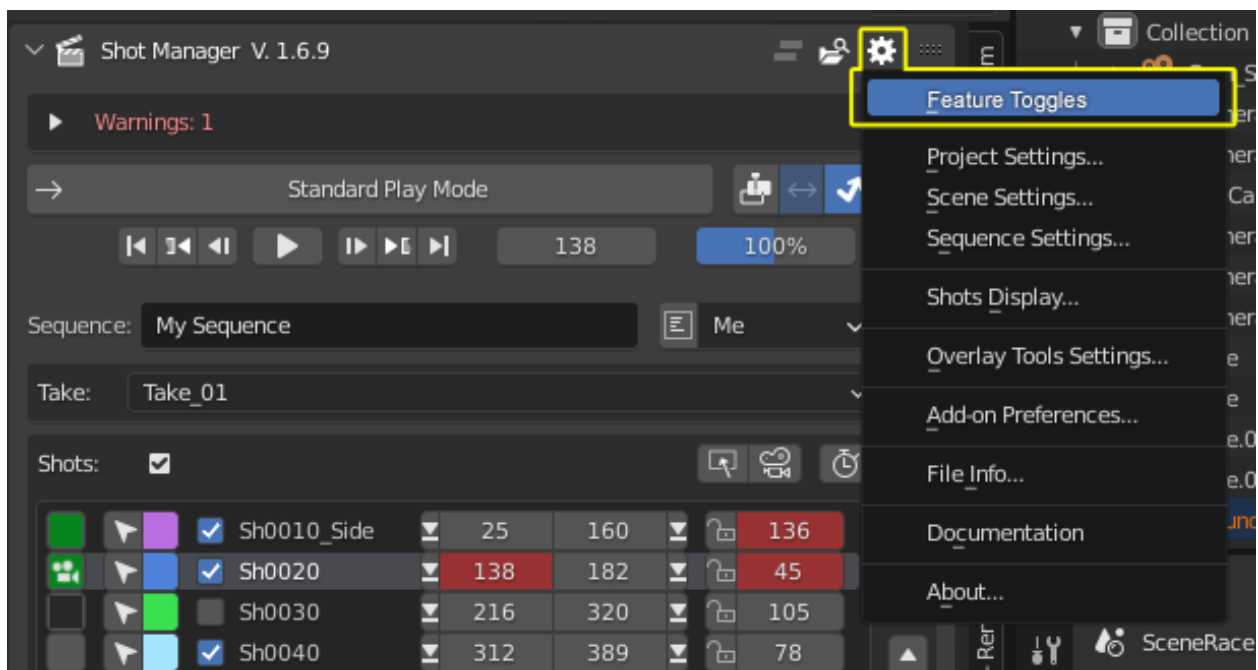
To do

3.12.2 Interactive Shots Stack

To do

3.12.3 Camera HUD

To do
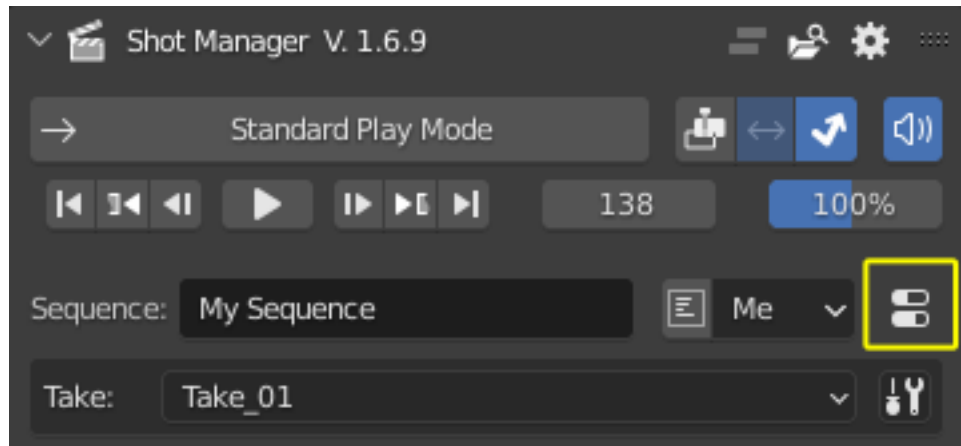
3.12.4 Displaying the overlay tools

There are 2 ways to open the Feature Toggles panel:

- Click on the panel Settings button to open the Settings menu and choose *Features*:
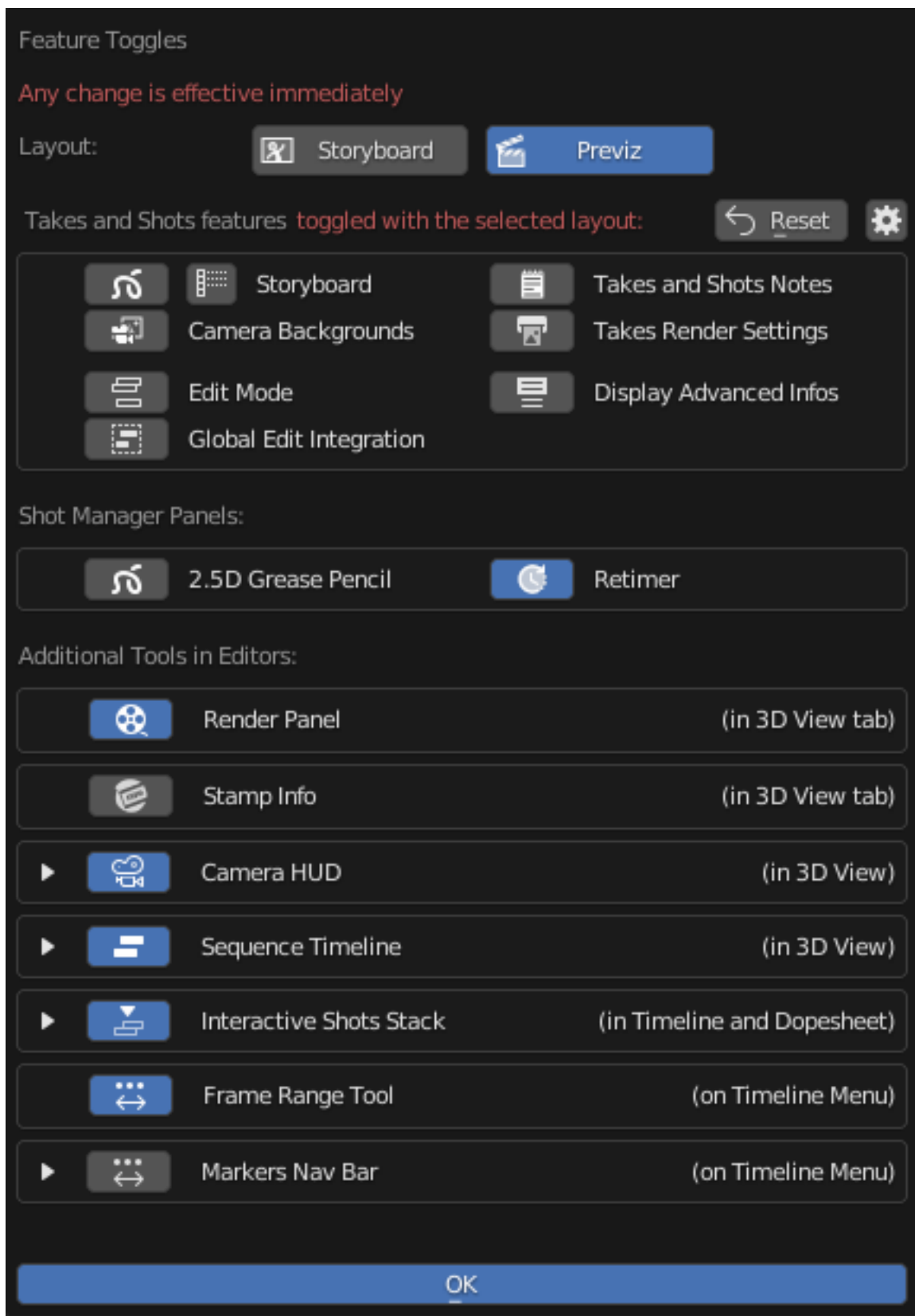

- Or directly click on the *Features* button.

    This button offers a quick access to the Feature Toggles panel, which you may find convenient when you often toggle some features in order to keep the UI light.

The Feature Toggles panel gets opened. It allows the listed featuers to be toggled by a simple click on they associated button.

Feature Toggles

Any change is effective immediately

Layout: Storyboard   Previz

Takes and Shots features toggled with the selected layout: ↩ Reset   ⚙

Storyboard   Takes and Shots Notes

Camera Backgrounds   Takes Render Settings

Edit Mode   Display Advanced Infos

Global Edit Integration

Shot Manager Panels:

2.5D Grease Pencil   Retimer

Additional Tools in Editors:

Render Panel   (in 3D View tab)

Stamp Info   (in 3D View tab)

▶   Camera HUD   (in 3D View)

▶   Sequence Timeline   (in 3D View)

▶   Interactive Shots Stack   (in Timeline and Dopesheet)

Frame Range Tool   (on Timeline Menu)

▶   Markers Nav Bar   (on Timeline Menu)

OK

3.12.5 Overlay tools settings

The settings can be accessed from here:

3.13 Add-on Preferences

To do

3.14 Project

To do

3.15 Shots

As defined in the *Glossary*, a [Shot] is the basic entity manipulated by the Shot Manager user interface. As for a live footage it is made of a point of view, thanks to a camera, and a "record duration", defined by a start time and an end time.

A shot has one and one only camera. When it is not associated to a camera, or if this camera is missing, the shot is considered as invalid and cannot be used in the [Take].

Since Shot Manager V 2.0 we make the disctinction between shots that are used purely for a 2D purpose, the *Storyboard Shots*, from thoses associated to a 3D camera, the *Camera Shots*. Because their purpose is different we also treat them differently in the UI.

3.15.1 Shot type

A shot can be of one of the following types. The type defines how the shot - and in particular its storyboard frame if it has one - will behave in the scene. The type can be changed in the Properties panel of the selected shot, it is identified by a specific icon.

Storyboard Shot

This shot is a 2D shot, meaning it contains only 2D drawings and objects such as text.

It is treated as part of the shots belonging to the storyboard shots grid. Its camera location and orientation will then be changed to place the camera in the grid everytime the grid is updated.

All the shots created when the Storyboard layout is active are of type Storyboard Shot.

Camera Shot

This shot is a "3D" shot, meaning that either the camera is moving or it records an action taking place into the scene.

It is the type of shot to use everytime the camera is shooting content from the 3D space - which is most of the cases basically.

All the shots created when the Previz layout is active are of type Camera Shot.

See also Frame Visibility

3.16 Keymap

Shot Manager currently exposes several key maps. To see all of them and possibly change some to adapt them to your way of working, open the Blender Preferences panel, go to the Keymap tab and in the field dedicated to search type "shot".
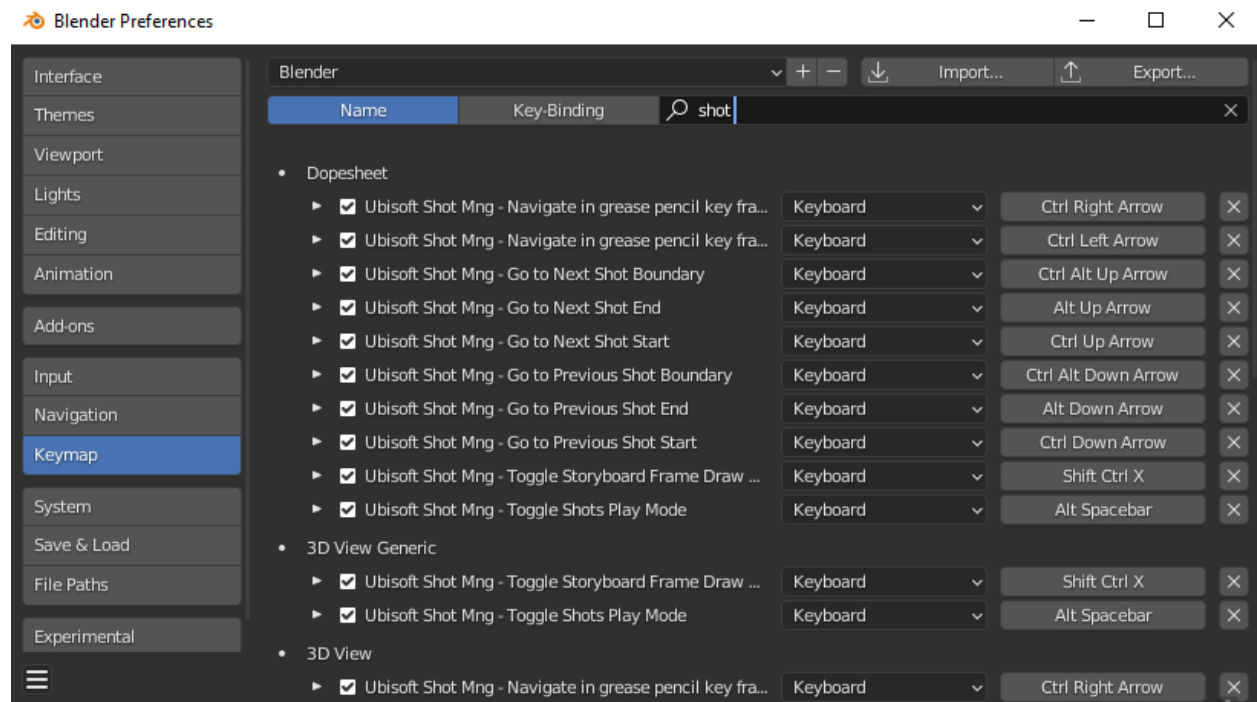

3.17 Rendering

The Render panel is separated from the main Shot Manager panel, for convenience. Note that it is nevertheless possible to make it a sub-panel (see Rendering Settings in the add-on Preferences)
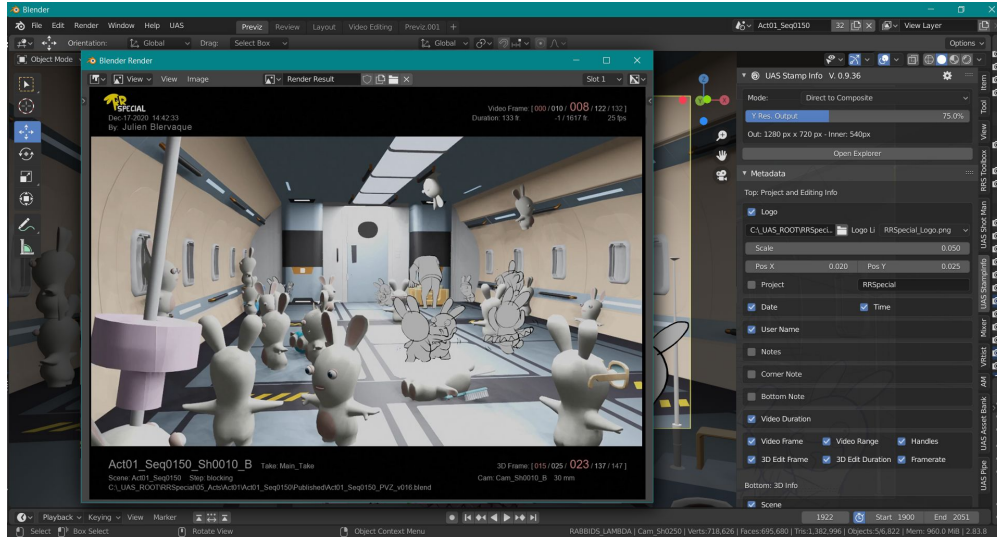
3.18 Stamp Info

Stamp Info is a module that creates a frame and write meta information on the rendered images. It used to be a standalone add-on but since Shot Manager V2.0 it is now integrated in this package, which considerably facilitate the installation and the improvements.
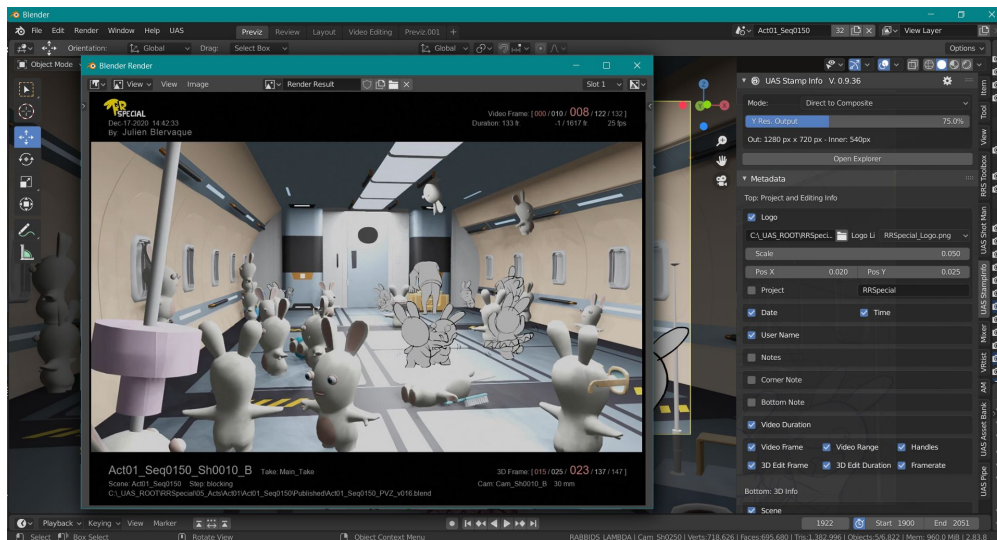
3.18.1 Stamp Info general philosophy

Before starting to use Stamp Info it worths understanding what this add-on is about and what you will be able to achieve with it.

The aim of Stamp Info is to write information onto the rendered images. Those pieces of information can be:

- **elements from the scene content:** the name of the scene, of the camera, the output resolution...

- **information related to the use of the image:** frame number, sequence range, custom notes...

- **information related to the edit:** sequence and shot names...

- **information about your project:** name, logo...

- **metadata:** user name, date of rendering, file path...

All this is very useful in production to understand the context of creation of any image and to track the related Blender files used to generate it.

How it works

When a rendering is done with Stamp Info the stamped information is collected and written on an image that is saved on disk and then composited with the actual rendered image from the scene in a custom post-process step to create the final output. Technicaly speaking this blending is done is the Video Sequence Editor of the same Blender file as the one opened for the rendering. Temporary scene and files are then cleaned in order to make all that as transparent as possible for the user.

A previous implementation was based on the Compositing editor but the approach appeared to be not very reliable and complex to maintain in the case where a post-process compositing graph was already used in the scene.

Currently no information is visible in real-time directly in the viewport. This may be a good possible improvement for the add-on.

Features and settings

Stamping the output images is pretty simple: check the "Use Stamp Info" checkbox to enable it, check the metadata you want to print on the image and press the Render button located at the top of the panel. The images are then computed, composited and displayed (for a still image).

If the "Use Stamp Info" checkbox is not checked then the Blender usual rendering process is launched.

Printable data are sorted in several panels, gathered by theme. The list is available in the *Stamp Info Features page*

One setting is very different from the others though, it is the *Final Resolution Mode*. Basically it allows you to define if you want the data to be written over the rendered image, hiding a part of it at the top and bottom, or outside the rendered image, making the final composited image higher than the rendered output. Both have advantages and inconvenients. We suggest to use the mode "Outside Rendered Images" when in a production context, it saves rendering time while preserving the same aspect ratio for the cameras in the viewports.

Help and feedback

If you have any question or feedback please enter an issue on the add-on GitHub.

3.18.2 First steps

If you haven't done it yet, it is time to read the *Stamp Info General Philosophy* to clearly understand the purpose of this tool.

Once the add-on is installed open the Stamp Info panel. You will have to explicitely display it from the *Features Toggle Panel*

The first thing to do, for each new scene, is to define how the stamped information will be written onto the rendered image. To do so choose between the 2 avalable modes of the *Final Resolution Mode* dropdown list.

Check the information you want to see displayed in the rendered images in the various category rollouts.

Then when calling a rendering from the Shot Manager Render Panel the final image(s) will be computed according to the render settings of the scene.

3.18.3 Features and limitations

Information categories

- *Time and frames information*
- *Shot and camera information*
- *Metadata information*

Time and frame information

Information related to the frame index, animation range and framerate...

Animation Duration

The **Animation Duration** is the exact number of frames contained in the image sequence.
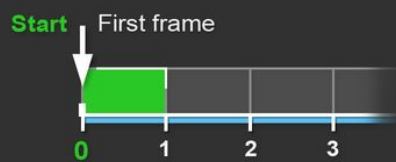
Frame Range

Handles

The **Handles** are defining a set of frames at the begining and at the end of the image sequence that are used as additional in and out frames at edit time. When the frame index of the image is in the "in" set it is displayed in green. When it is in the "out" set it is displayed in orange. When inbetween it is displayed in the color defined for the text.

Handles - things to know

- The handle duration is the same for the beginning and the end
  of the animation

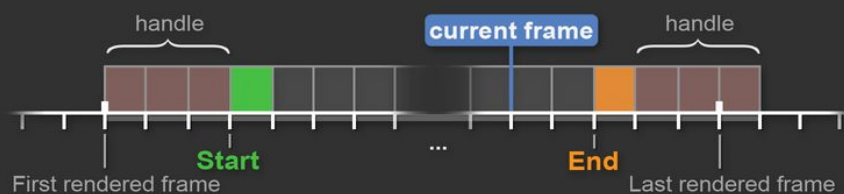- Frame indices of handles must not be negative

- A red color is used for the stamping when the current frame
  is in a handle:

[110 / 120 / 116 / 250 / 260]

Handles - things to know

- Setting up handles manually can lead to a confusion between the
  Start and End values of the scene and the range of the animation
  intended to be used

- When using **Ubisoft Shot Manager** handles are automatically
  and transparently taken care for you, all along in the pipeline !

Setting up the final resolution

The Final Resolution Mode defines how the metadata will be arranged over the rendered image.

- **Over Rendered images:**

In this mode the black bands on which metadata text will be written directly on the image. It will then hide a part of it at the top and bottom. The final image still have the same resolution than the rendering output image.
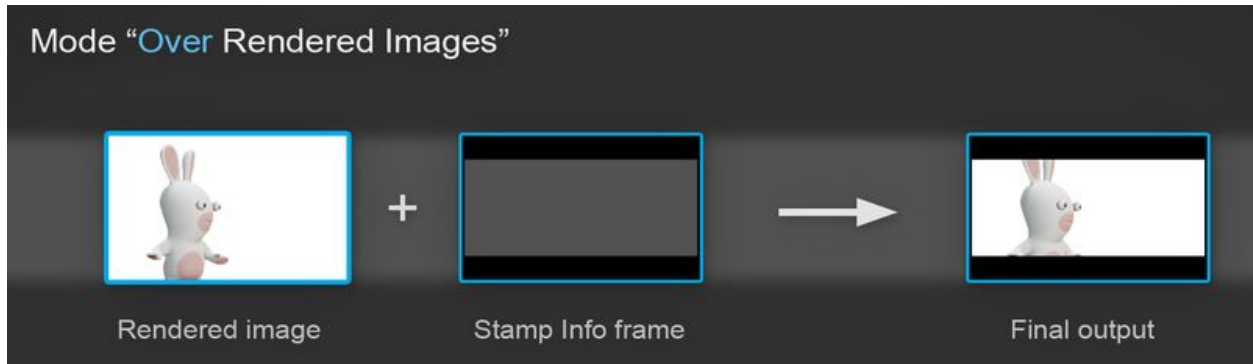
* **Outside Rendered images:**

In this second mode the metadata are written outside the rendering output image, making the final composited image higher than the resolution specified in the Blender Rendering panel.
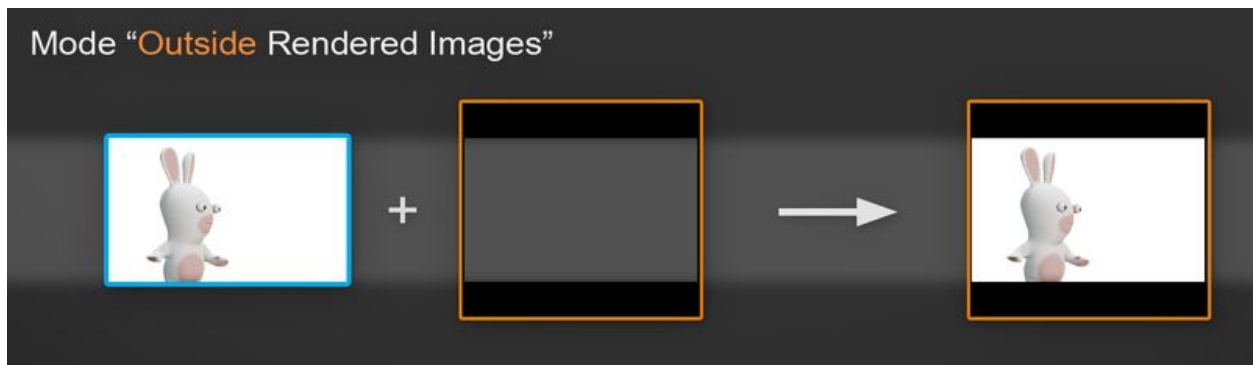
Both have advantages and inconvenients. We suggest to use the mode "Outside Rendered Images" when in a production context, it saves rendering time while preserving the same aspect ratio for the cameras in the viewports.

For a more detailed description of these values watch this part of the video tutorial.

Text and layout

How information is organised on the rendered frame.

Limitations

The layout for the text and information stamped on the framed image is currenly better fitted for 16:9 ratio. Other ratios may produce unpredictable results. We have consideration for that issue for the future.

3.18.4 Shot and camera information

Information relative to what and how the scene content is filmed: sequence and shot names, camera name and lens. . .

3.18.5 Metadata information

Project name and logo, user name, rendering date and time, custom notes.

Logo

Logo path can be relative to the path of the current blender file. It must then start with //.

- *General philosophy*
- *First steps*
- *Features and limitations*
- *Time and frame information*
- *Shot and camera information*
- *Metadata information*

3.19 How to master the basics

A lot of things still to be added here. . .

3.19.1 How to create new shots

Press on the + button on the right side of the shots lists.

3.19.2 How to create take variations

Open the Take Tools menu from the Take Tools button located at the right side of the take title line and choose *Add. . . .*
This will create a new take and wou will be able to switch from one to another thanks to the take dropdown component.

Takes are completely autonomous one from each other. **Nevertheless the shots they contain may refer to the same
cameras, so modifying a camera in the scene may affect several takes!**

3.19.3 How to render the shots

In the right toolbox of the viewport you will find a tab named *Shot Mnger - Render*. This opens the Shot Manager
rendering panel.

From there you will be able to render a single image, a shot, the whole take, and to control the rendering settings.

3.20 How to toggle advanced features

3.20.1 Retime the scene content

- *How to retime the edit or the action*

How to retime the edit or the action

Note: We use here the term "action" to designate what is happening in the scene, this as an analogy to live shooting.
We do not refer here to the "action" entities used by Blender as animation clips (which are not supported).

More explanations to come soon.

Go to *Retime* for details on the Retime tool.

3.21 How to use in production

Shot Manager was designed by the production, for the production. It can be used from the scale of a simple scene to
the one of a feature film, splited in many files.

3.21.1 Project settings

For large-scale productions it is important that each instance of Shot Manager, in every scene of every file, use the same
settings, that those settings cannot be modified by mistake by a user and that they all come from the same source so
that any change is propataged all over the production easily.

To do so Shot Manager has a notion of "Project", in other words a set of settings covering the shot naming conventions,
output resolution, file formats. . . All that can be also set by a production tool when a scene is opened for example.

3.21.2 API

Shot Manager also has its own API. This would allow you to integrate it into your pipeline, or to pilot it from another add-on, by calling functions that will not change even if the architecture of the add-on is modified for whatever reason.

3.22 Tips

3.22.1 Markers, camera binding and shots

Markers bound to cameras are not compatible with the way Shot Manager works. When such markers are found in the scene most of the content of the add-on gets disabled and a warning appears, all along with a button allowing the convertion of such markers to shots.

3.22.2 Tooltips and Quick Doc

An important focus has been set to make the UI intuitive and the properties of the add-on as predictable as possible. This reduce the need for documentation as well as the user memory load.

Tooltips are everywhere! When you are wondering what a parameter is about start by reading the tooltip.

Some special and more complete documentation has been introduced also at required places of the UI. They look like buttons and their action is to open a message window with more detailed information than usual tooltips could handle.

3.22.3 Shots and cameras

A shot is an association of a point of view in space and a time range, defining when this point of view is used. It is equivalent to a Record session for a video camera.

A shot can have one and only one camera. At the contrary a camera can be used by several shots. For example if you shoot a field against field sequence, 2 persons dialoging for example, you would use 2 cameras and create a set of shots that would alternate between one and the other camera.

It is highly not advised to use the same camera for every shot. In fact Shot Manager has been developed to avoid exactly that. Indeed when you do such an approach every modification of the camera affects every shots, changing the animation must be done very carefully to avoid breaking other shots and modifying the range of a shot requires to change the animation of the camera as well as possibly to retime the whole scene after the considered shot end.

We recommend to use one camera per shot and to name it after the name of the shot. Not only this would make every shots perfectly independent one from each other but it would also create a level of abstraction between the action in the scene and the way it is shot, hence avoiding to retime the scene when a shot duration is extended.

We also recommend - in most of the cases - to use the duplicate option for the cameras when duplicating a take. This will make takes completely independent and you will avoid breaking a take silently when modifying a shared camera in another one.

The number of shots using a given camera is exposed in the UI, in the shot list as well as in the shot properties. When a camera is shared by more than a single shot this information is highlighted in red.

3.23 Frequently Asked Questions

3.23.1 General

Why are there so few questions in the FAQ?

That's because very few users ask questions. Feel free to share with us your questions, comments, feedback on this page: issue on GitHub.

3.24 Reporting an issue

Before reporting an issue, please make sure that you are using the *latest version* and check the *faq*.

If you think you have found a bug or would like to propose a new feature, please report an issue on GitHub.

3.25 Pre-releases and experimental

All the pre-releases and previous versions are available here: github.com/ubisoft/shotmanager/tags They have the label **"beta"** in their tag name.

3.25.1 Shot Manager 2.2 pre-releases

A new major version of Shot Manager is on the way. Already used in production it will soon also be available as a beta pre-release.

Latest pre-release:

- No pre-releases available at the moment

See also:

What's new in Shot Manager 2.1 What's new in Shot Manager 2.0 Release Change Logs

3.26 Source code on GitHub

The source code of the whole add-on as well as some development notes are avalable here: Shot Manager on GitHub

3.27 Other add-ons from Ubisoft

At Ubisoft we developed several other Blender add-ons that may also interest you a lot. They were designed to answer real production needs, they may well suit yours!

As this one they are free and open-source. Enjoy!

3.27.1 Stamp Info

Write scene information onto the rendered images.

In order to facilitate the installations, this tool has been completely integrated into Shot Manager 2.0. It still exists as a standalone add-on though. Stamp Info on GitHub

3.27.2 Video Tracks

Add track headers to the channels of the Video Sequence Editor, as well as tools To navigate between markers. **This add-on is experimental and maintained intermittently.** Video Tracks on GitHub

3.27.3 Mixer

Real-time collaboration between Blender users, enabling them to work together on the same data, on different computers.

This add-on is not maintained anymore. Mixer

3.27.4 Asset Bank

Manage asset banks and import or link 3D objects into Blender scenes. **This add-on is not maintained anymore.** Asset Bank on GitHub

BIBLIOGRAPHY

[Shot]   A shot is the basic entity manipulated by the Shot Manager user interface. As for a live footage it is made of a point of view, thanks to a camera, and a "record duration", defined by a start time and an end time.

A shot has one and one only camera. When it is not associated to a camera, or if this camera is missing, the shot is considered as invalid and cannot be used in the [Take].

[Take]   A take is an ordered list of shots. Basically **a take is an edit** where shots are played one after the other, in the order set in the take and independently from the time at which they start in the time of the 3D scene.

In practice - or in a production context - a take would generally refert to what is commonly called a sequence, that's to say a small edit of shots that are tied together in the narration.

In order to preserve the parallel with live shooting the take entity could probably have been named edit or sequence. The term take fits quite well nonetheless since, as for live shots, we can easily create variations of the edits, this so as to compare several ideas in the direction without having to "break" the setttings. Duplicating takes and switching from one to another is one of the major strenghts of Shot Manager to explore the narrative possibilities of the scene and offer to the director a lot of flexibility to find her final cut.

[Handles]   The handles are the amount of spare images let at the start and end of the shot when the shot is rendered. They are quite helpful for the artist doing the movie edit since she can get more time before or after each shot to polish the cuts and transitions.

Handles are not played in the viewport playback since they are not really part of the edit.

Unless you are in a production context the duration of the handles is usualy left to 0.

[Project]   A project is a set of settings defining the configuration of your production, such as the project name, image output resolution, aspect ratio, framerate, sequences naming convention. . .

These settings can be entered manually in the Project Settings dialog box of the Shot Manager panel, in which case they are set only for the current scene. In production these settings would be set by a custom script, written specifically for your own pipeline and automatically run when the Blender file is opened.

For a local use of Shot Manager it is not necessary to define a project. The settings of the scene will then be used.

[Storyboard_Shot]   We call a storyboard shot a shot of type Storyboard. Its camera has a storyboard grease pencil parented to it. It is identified by a small icon with a character in a frame.