When working with complex projects or when dealing with clients that like to change their minds, a good practice is to have a Null object in your project (usually at the top or at the bottom of the hierarchy for fast access) where you can place intermediate or initial states of your objects. This is specially useful if you are dealing with parametric objects that need to be converted to polygonal objects at some stage since it is always safer to keep the parametric state stored. The Null that stores those initial stages needs to have their semaphores set to Off both in the Editor Display and in the Render.

But having the parametric objects hidden doesn't prevent them from still being calculated. So, besides placing them inside the Null, it is also required that they are turned off.

Also, each time an object is placed inside the Null, the Null unfolds, requiring manual intervention in order to fold it again, keeping the Object Manager neat and clean.
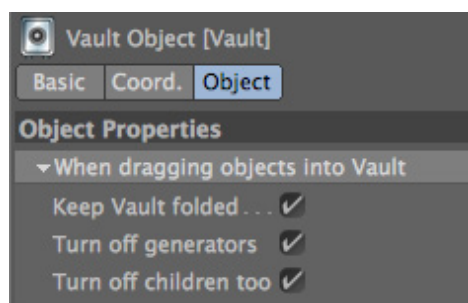
The Vault object takes care of all this.
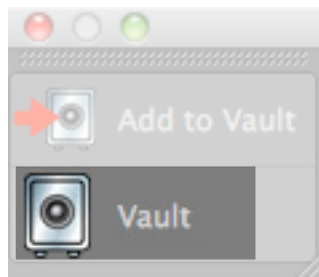
When you create a Vault object, it has the Editor and Render display semaphores turned off by default.
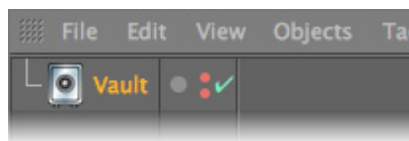
Also, all its options are turned on, by default. They are:

Keep Vault folded - With this option on, when an object is dragged into the Vault, the Vault stays folded. If this option is off, the Vault behaves like any normal object, unfolding when something is dragged into it.
You can always unfold the Vault object manually.

Turn off generators - With this option on, all generator objects (the ones with a green check mark at the right of the semaphores) are turned off when dragged into the Vault.
If this option is off, all generator objects dragged into the Vault keep their state.
Changing the state of this option only affects the objects that are dragged into the Vault afterwards, so all objects already inside the Vault are not affected.
The state of all the objects dragged into the Vault is stored and is restored when the objects are dragged outside the Vault.

Turn off children too - With this option on, besides turning off the generators that are dragged into the Vault, if these generators also have children that are generators, those children are turned off too.
If this option is off, only the parent generators are turned off. This option is specially useful when dragging ExtrudeNURBS, LatheNURBS, LoftNURBS, SweepNURBS, Array, AtomArray, Bool, etc, objects into the Vault.
All behaviours described for the **Turn off generators** option also apply to this option.

Along with the Vault object itself, a **Add to Vault** command is provided.
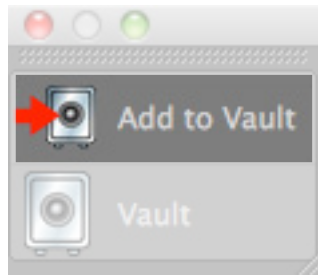
Evoking this command will move all selected objects to the first Vault object in the scene.

If the scene contains no Vault object, a new Vault object is created to allocate all the selected objects.

If the scene already contained a Vault object, the objects are moved into that Vault object respecting the options that are set for that Vault.

If a new Vault object is created, all the options are turned on, by default. All selected objects are moved into this Vault respecting these options.

When evoking the **Add to Vault** command, if the **SHIFT** key is pressed, all selected objects are **COPIED** into the first Vault object in the scene (or a new one, if there was none).

If, besides pressing **SHIFT** key, if the **ALT** key is also pressed, the original selected objects are converted into editable objects (a **Current State to Object** command is performed for each object).

If dragging objects into a Vault becomes a recurrent action, maybe it is a good idea to set a keyboard shortcut for the **Add to Vault** command.

If the **SHIFT** key was pressed when choosing the **Add to Vault** command, the original objects will get a new tag attached. This tag is named **Vault Link** tag.
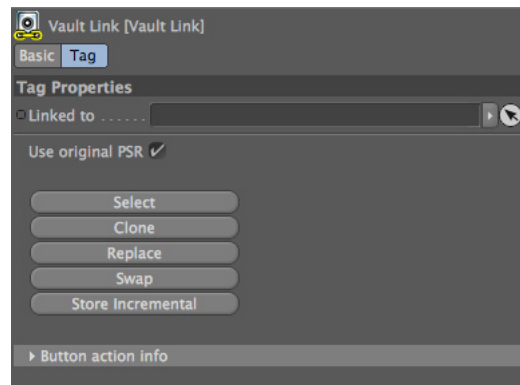
The **Linked to** field holds a link to the object inside the Vault that is a copy of object that holds the Vault Link tag.

This tag has five buttons that produce the following tasks:

SELECT
Selects the linked object stored in the Vault. The Vault object will unfold to show the object.

CLONE
Creates a copy of the linked object stored inside the Vault. The cloned object is placed after the object that holds the **Vault Link** tag. If the **Use original PSR** option is turned ON, the cloned object will be placed, scaled and oriented as it was when it was copied to the Vault. If the **Use original PSR** option is turned OFF, the cloned object will be placed, scaled and oriented the same way as the object that holds the **Vault Link** tag.

REPLACE
Replaces the current object with the linked object stored inside the Vault.
If the **Use original PSR** option is turned ON, the cloned object will be placed, scaled and oriented as it was when it was copied to the Vault. If the **Use original PSR** option is turned OFF, the cloned object will be placed, scaled and oriented the same way as the object that holds the **Vault Link** tag.

SWAP
Swap the current object with the linked object stored inside the Vault.
If the **Use original PSR** option is turned ON, the cloned object will be placed, scaled and oriented as it was when it was copied to the Vault. If the **Use original PSR** option is turned OFF, the cloned object will be placed, scaled and oriented the same way as the object that holds the **Vault Link** tag.

STORE INCREMENTAL
Store the current object (the one that holds the **Vault Link** tag) in the Vault with an incremental number added.
If the original copy inside the Vault has no number suffix, a suffix of 0000 (four zeros) is added to the name and the first incremental storage will receive the suffix of 0001. Additional incremental storages will receive the suffixes 0002, 0003, 0004, etc.
The **Linked to** field of the **Vault Link** tag will always be updated to point to the last incrementally stored object.

The **Button Action Info** bar, when disclosed, will display a brief description of what each button does.

Vault, Add to Vault and Vault Link are coded in Python, following all the directives from Maxon SDK.
A registration file is required for them to work. If you have any issues, comments or suggestions, please contact me at: rui_mac@ruimac.com