

## Module 7: Animation Assignment



### The Ability to Undo

A part that is just as important as doing completing animation is the ability to undo the animation.

Anything that is completed in the Python SDK is not added to the MotionBuilder undo stack automatically, we must use the class `FBUndoManager` to personally add to the Undo Stack.

You have the possibility of undoing and redoing actions performed using the GUI, and interacting with the undo and redo stacks with custom actions. All undo/redo related functions should only be called inside a UI event callback. You should call `TransactionBegin()` and `TransactionEnd()` in pairs.

For example:

```
from pyfb SDK import *

#Find Model
ICube=FBFindModelByLabelName("Cube")
if not ICube.Visibility.IsAnimated():
    ICube.Visibility.SetAnimated(True)

if not ICube.Visibility.IsFocused():
    ICube.Visibility.SetFocus(True)

IUndo = FBUndoManager()

# Important to open our transaction
IUndo.TransactionBegin("cube vis")
IUndo.TransactionAddModelTRS(ICube)

#Key 1
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(3,3,3,0),True)
#Key 2
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,10),True)
#Key 3
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,11),False)
```

```
#Key 4
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,20),False)
#Key 5
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,21),True)
#Key 6
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,30),True)
#Key 7
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,31),False)
#Key 8
ICube.Visibility.GetAnimationNode ().KeyAdd(FBTime(0,0,0,40),False)

IUndo.TransactionEnd()

# undo last operation
#mgr.Undo()
#mgr.Redo()
```

## Creating Undo and Re-do per Key that is added

Following the above example create an undo and re-do call every time a key is added, this way a user can undo and re-do 8 times.