Control Structures

When a macro is called, all its steps are executed sequentially.

However, you can define conditional steps - steps which are only executed if a condition is met. In order to do this, simply give the step a condition property, like in Chase - Double speed:

```
<step condition="Math.IsEqual(Playbacks.Editor.Times.ChaseSpeed, 0.0)">
  ActionScript.SetProperty.Float("Playbacks.Editor.Times.ChaseSpeed", 1.0)
</step>
```

At the moment (version 10.0 and 10.1) it looks like such conditions are stripped when a macro is copied in Titan. Hence, always move macros with conditions (which has the backdraw that you can have a macro only on one handle.

This step is only executed if its condition is met - and the condition is a function written in double quotes: Math.IsEqual takes two values as arguments and returns true if both values are equal. In total, if the property `Playbacks.Editor.Times.ChaseSpeed` equals 0.0 then this step is performed and sets this property to 1.0.

Another mechanism is also related to control structures albeit strictly it is just juggling with booleans: simple toggle logic, see Timecode - Enable/Disable:

```
<step>ActionScript.SetProperty.Boolean("Timecode.Enabled",
!Timecode.Enabled)</step>
```

This simply negates a variable, effectively turning it into its reciprocal value: if the variable 'Timecode.Enabled' is true it will be set to false, and vice versa.

There are also some other syntax versions:

```
<step>
  {
    if(Math.IsNotEqual(Playbacks.Editor.Times.ChaseSpeed, 0.0)) {
      ** Do Something **
    } else {
      ActionScript.SetProperty.Float("Playbacks.Editor.Times.ChaseSpeed",
1.0);
    }
  }
</step>
```

and as of version 10, it is possible to write conditions in a more modern way:

```
<step>
  {
    if(Playbacks.Editor.Times.ChaseSpeed == 0.0) {
       ActionScript.SetProperty.Float("Playbacks.Editor.Times.ChaseSpeed",
1.0);
```

```
    }
  }
</step>
```

It appears that the else hive must not be empty. If it is empty then Titan doesn't start, and the Log Viewer complains “Compliation of action script failed:… Unexpected token '' found.” (The typo is courtesy of the Log Viewer )

If you only need the if hive, then omit the else altogether.

Also see an example here: Dummy speed as condition

further readings

- Introduction to macros
- Console and simulator - how actions on the consoles are described
- Recorded vs. coded macros - both kinds: Country, AND Western
- Macro file format - what to observe when creating macro files
- Macro Folders - where exactly are the macro files stored
- Deploying macros - how to import a macro file into Titan
- XML format - a veeeery basic introduction into the format macro files are written in
- Macro Variables - defining and using variables in macros
- The Syntax of Functions - understanding how functions are described in general
- Control Structures - conditions and other means to control the flow
- Action and Menus - when a menu needs to be toggled in addition to the action
- Step Pause - a little delay might sometimes be helpful
- Active Binding - highlighting a macro handle as active
- Namespaces - a way to keep order of the functions, properties and other stuff
- Datatypes - numbers, words, yes & no: the various types of values
- Properties list - the affected system variables of Titan
- Function list - the functions mentioned in this wiki
- Examples list - all the contributed macros. And where is yours?

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