

## Developer Technical Services

**Lab 2 Handout**

**Topics Covered**

* Build Maya Custom Node with MPxNode

**simpleNode Plug-in**

* **Topics Covered**
  + Write a skeleton of a custom node “simpleNode” with MPxNode class from scratch
  + Add simple attribute using MFnNumericAttribute class
* **Overview**
  + In this exercise, we will implement a custom node simpleNode, it has two attributes: “input”, ”output”. Whenever the “input” attribute changes value, the “output” attribute will always be the “input” attribute value multiplied by 2.
* **Exercises**
  + Go to “\Maya 2012 Python API Training\Lesson\_4 \_Maya\_Custom\_Nodes\simpleNode\Exercise” folder, open simpleNode.py, the skeleton of the node is already there.
  + In simpleNode.py, adding declaration of “output” attributes and also declare your unique node ID
  + In simpleNode.py, implement functions what you want to achieve for simpleNode’s functionality.

Relevant classes and methods:

MFnNumericAttribute::create()

MPxNode::attributeAffects(), MPxNode::addAttribute()

MDataBlock::outputValue(), MDataBlock::setClean()

MDataHandle::setFloat()

* + In simpleNode.py, implement both initializePlugin() and uninitializePlugin() functions to handle registration and de-registration of the simpleNode node.

Relevant classes and methods:

MFnPlugin:: registerNode()

MFnPlugin:: deregisterNode()

* **Result**

In script editor, execute:

createNode simpleNode;

Open “Attribute Editor”, you will see there are two attributes listed, “input”, “output”. If you change “input” value, “output” value will be 2\* input.