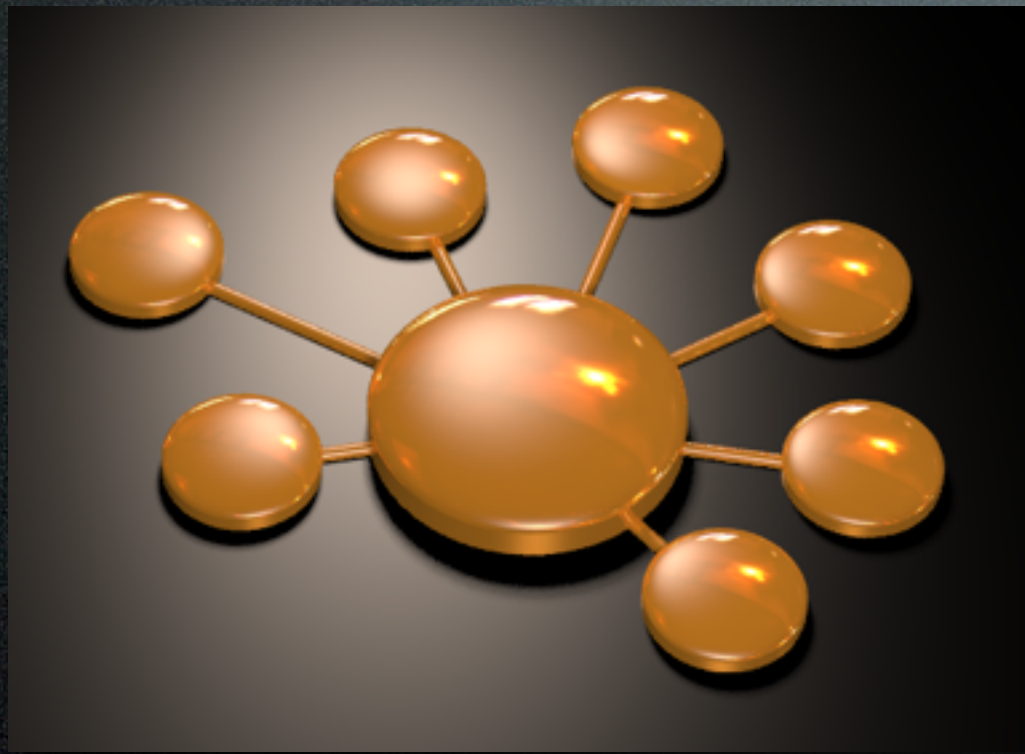


SofaPython plugin



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Why ?

- Scene-specific code stored with scene data
- Fast prototyping
- Sofa build = «coffee break»
- C++ skill not necessary

Example 1:

PythonScriptController

- SofaPython basics
- interactively stop simulation

Example 2: NodeCreator

- tree creation
- interactive node creation
- split code in several modules

Example 3: OneParticle

- simplest object ever: .
- use of factory to create unbound objects
- use of object datas to configure even unbound objects

about incomplete bindings...

Example: <MechanicalObject
template=»Rigid»>

Bound as a BaseMechanicalState, not a
MechanicalObject3

How to set a speed ?

Example 4: ObjectCreator

- creation of more complex objects
- creation attributes
- MeshLoader, Topology, MechanicalObject, ...

Example 5:

ScriptEvents

- communication between PythonScriptControllers
- object creation / destruction at runtime
- Same script file used in several instances, and for two distinct classes

Example 6: Visitors

- custom visitors written in python

Example 7: box canon

- spawn armadillos = targets
- FIRE ! (ctrl-arrows)

Example 8: python scene files

- no XML file
- procedural scene creation

Future work areas

- More Sofa Python API !
- global variables seen as Datas in the GUI
- Other components (collision response, forcefields, ...)
- (bugfixes...)
- Deeper Python integration (GUI, ...)

To go further...

- Tons of Python tutorials available on the web...
- example scenes
- Sofa API in python: applications/
plugins/SofaPython/doc/
SofaPython.pdf
- sofa-users@lists.gforge.inria.fr

Thank you!

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