# gui4dispel4py

A dispel4py GUI for visual workflow design

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# what is gui4dispel4py?

dispel4py simplifies cluster computing, but a user still needs to do some non-trivial coding.

With gui4dispel4py, the user visually constructs a workflow in a browser, then hits "submit"...

# gui4dispel4py example

Users can drag and drop processing elements

Multiple processing elements yield compound elements

Users can choose from pre-existing library of functions in the Toolbox, or upload their own

**Toolbox**

Add a PE

Choose File | No file chosen
Add

Plus 2    Minus 4    Mod 8    Compound 2

**Workflow**

Input:

1

Power 3    Compound 1    Times 6

Submit

**Output goes here**

# dispel4py with even less coding

...and a Python file is created, which the user can then run with dispel4py.

```python
    x = data/2
    print "Square: " + str(x)
    return x


def subtract(data):
    x = data - 1
    print "Subtract 1: " + str(x)
    return x


functions = [ addTwo, multiplyByFour, square, subtract ]
composite = create_iterative_chain(functions)
producer = TestProducer()

graph = WorkflowGraph()
graph.connect(producer, 'output', composite, 'input')
```

# next steps

- Have built-in library of functions the user can add to their workflow
- Enable users to save functions they have created for future use (including creating composite functions)
- Automatically launch dispel4py after generating the .py file
- Enable file parsing: users can load functions made by themselves/others and add them to toolbox