

qgate_image_gen

March 18, 2016

```
In [1]: %matplotlib inline
```

```
In [2]: from numpy import pi
```

```
In [3]: from IPython.display import Image
```

```
In [4]: from qutip import *
```

Does not work when using format exemplified at (would like to use this format):
<http://nbviewer.jupyter.org/github/qutip/qutip-notebooks/blob/master/examples/example-quantum-gates.ipynb>

```
In [5]: toffoli()
```

```
Out[5]:
```

Quantum object: dims = [[2, 2, 2], [2, 2, 2]], shape = [8, 8], type = oper, isherm = True

$$\begin{pmatrix} 1.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 \\ 0.0 & 1.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 \\ 0.0 & 0.0 & 1.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 \\ 0.0 & 0.0 & 0.0 & 1.0 & 0.0 & 0.0 & 0.0 & 0.0 \\ 0.0 & 0.0 & 0.0 & 0.0 & 1.0 & 0.0 & 0.0 & 0.0 \\ 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 1.0 & 0.0 & 0.0 \\ 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 1.0 \\ 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 0.0 & 1.0 & 0.0 \end{pmatrix}$$

```
In [6]: Image(filename='images/toffoli.png')
```

FileNotFoundError

Traceback (most recent call last)

```
<ipython-input-6-323b6873a6ed> in <module>()
----> 1 Image(filename='images/toffoli.png')
```

```
/Volumes/Terra/Users/eustace/anaconda3/lib/python3.5/site-packages/IPython/core/display.py in ...
737     self.unconfined = unconfined
738     self.metadata = metadata
--> 739     super(Image, self).__init__(data=data, url=url, filename=filename)
740
741     if retina:
```

```

/Volumes/Terra/Users/eustace/anaconda3/lib/python3.5/site-packages/IPython/core/display.py in r
384         self.filename = None if filename is None else unicode_type(filename)
385
--> 386         self.reload()
387         self._check_data()
388

```

```

/Volumes/Terra/Users/eustace/anaconda3/lib/python3.5/site-packages/IPython/core/display.py in r
759         """Reload the raw data from file or URL."""
760         if self.embed:
--> 761             super(Image,self).reload()
762             if self.retina:
763                 self._retina_shape()

```

```

/Volumes/Terra/Users/eustace/anaconda3/lib/python3.5/site-packages/IPython/core/display.py in r
402         """Reload the raw data from file or URL."""
403         if self.filename is not None:
--> 404             with open(self.filename, self._read_flags) as f:
405                 self.data = f.read()
406         elif self.url is not None:

```

FileNotFoundError: [Errno 2] No such file or directory: 'images/toffoli.png'

Works when using format exemplified in: <http://nbviewer.jupyter.org/github/qutip/qutip-notebooks/blob/master/examples/example-qip-toffoli-cnot.ipynb>

```

In [7]: q = QubitCircuit(3, reverse_states=False)
        q.add_gate("TOFFOLI", controls=[0, 2], targets=[1])

```

```

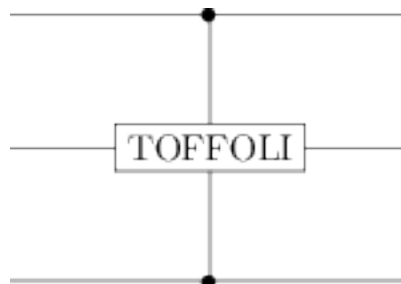
In [8]: q.png

```

```

Out[8]:

```



```

In [9]: about()

```

QuTiP: Quantum Toolbox in Python
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 Paul D. Nation & Robert J. Johansson

QuTiP Version: 3.1.0
Numpy Version: 1.10.4
Scipy Version: 0.17.0
Cython Version: 0.23.4
Matplotlib Version: 1.5.1
Fortran mcsolver: False
scikits.umfpack: False
Python Version: 3.5.1
Platform Info: Darwin (x86_64)
Installation path: /Volumes/Terra/Users/eustace/anaconda3/lib/python3.5/site-packages/qutip