

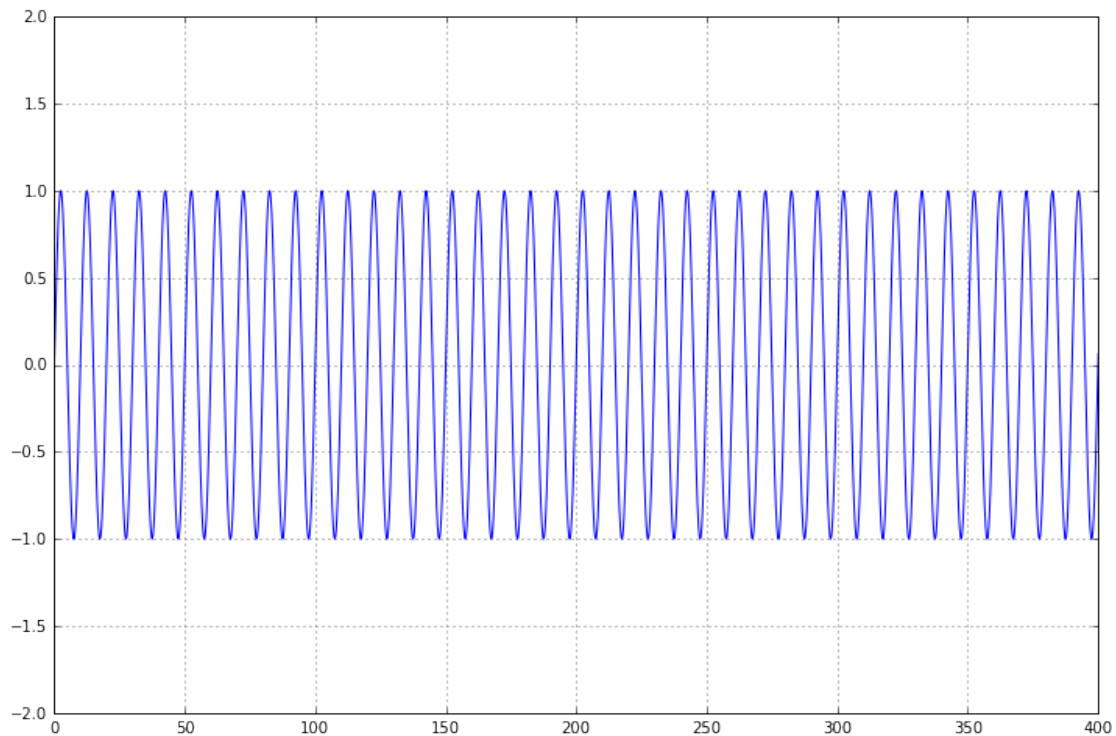
monochrom

February 2, 2016

```
In [78]: %pylab inline
```

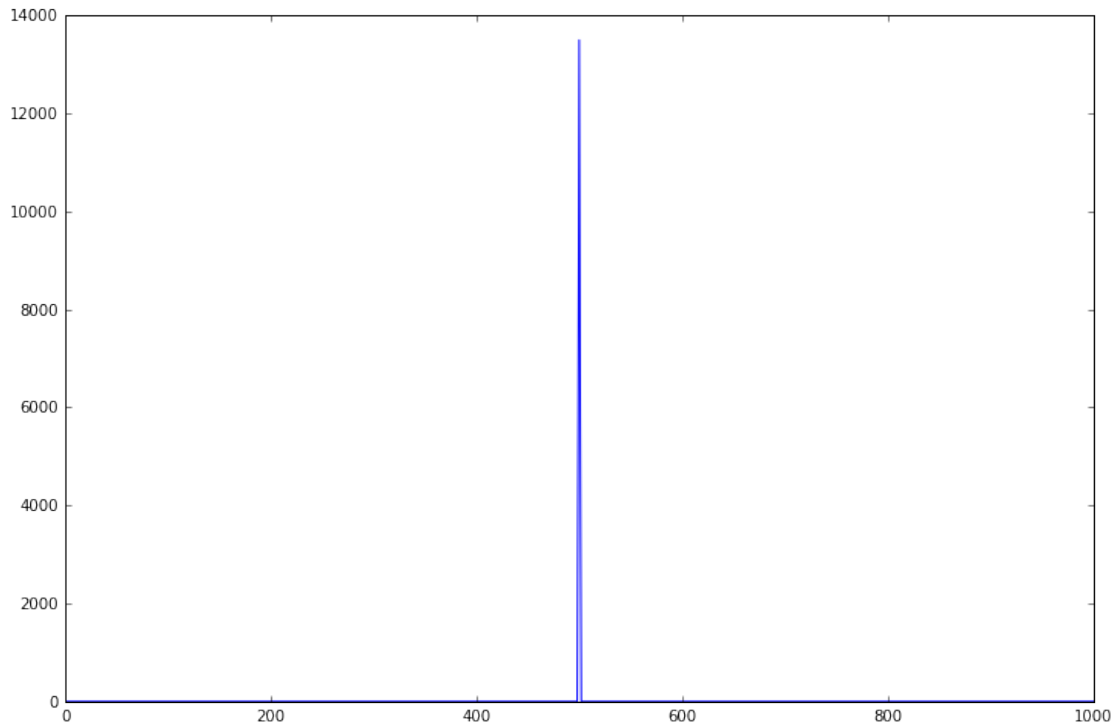
Populating the interactive namespace from numpy and matplotlib

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In [118]: plt.figure(figsize=(12, 8))  
x = np.arange(0, 5000, 0.1)  
signal = np.sin(x*2*np.pi/10)  
plt.plot(x, signal)  
plt.xlim(0, 400)  
plt.ylim(-2, 2)  
plt.grid()
```

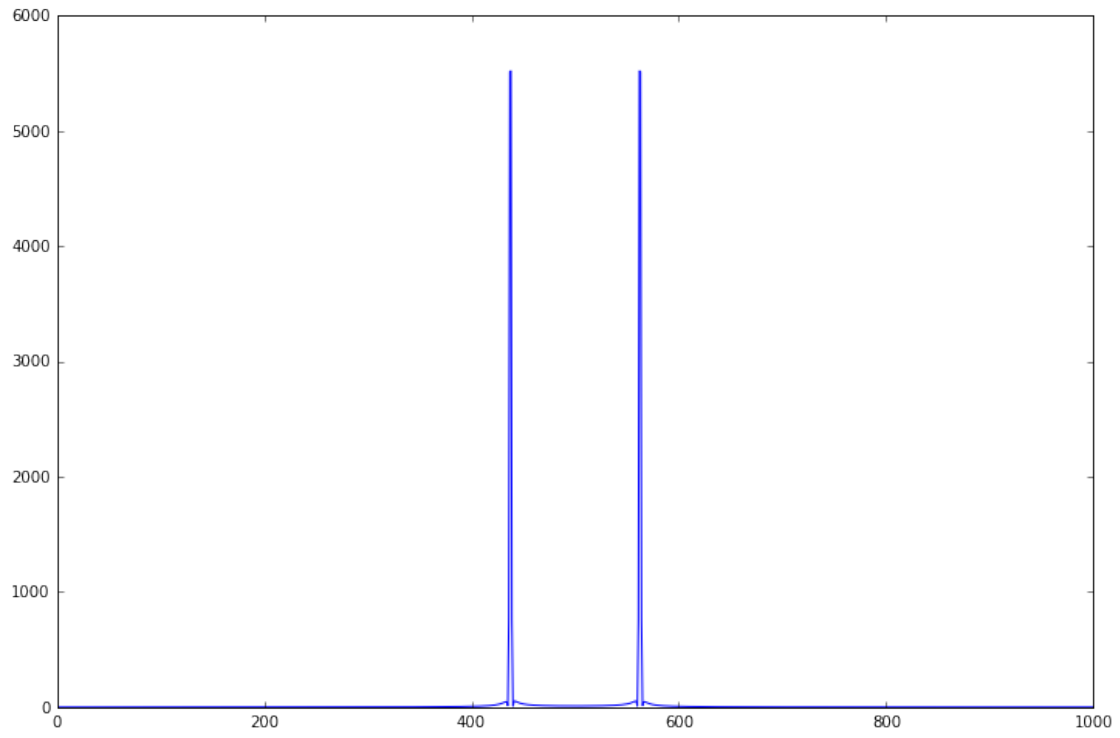


```
In [119]: # Das Spektrum.  
plt.figure(figsize=(12, 8))  
window = np.hamming(signal.shape[0])  
plt.plot(np.abs(np.fft.rfft(signal*window)))  
plt.xlim(0, 1000)
```

Out [119]: (0, 1000)



```
In [120]: # Ooooh, eine Modulation. Die Nullstellen bleiben wo sie waren
plt.figure(figsize=(12, 8))
signal_mod = signal * np.sin(x*2*np.pi/80)
plt.plot(signal_mod)
plt.xlim(0, 1000)
plt.ylim(-2, 2)
plt.grid()
```

In []: