beispielvonvorlesung

February 3, 2017

0.1 Example DCT low-pass filter:

In analogy to the FFT, we can implement a low-pass filter in the DCT domain using a suitable mask. Let's make the mask design even easier. We now use vectors consisting of zeros at the beginning, in the passband, and then, in the bounding range, from zeros. In Python

```python
In [1]: import numpy as np
        import matplotlib.pyplot as plt

        r = 480
        c = 640

        # For rows
        Mr = np.ones((r,1))
        Mr[(r/4.0):r,0] = np.zeros((3.0/4.0*r))

        #For columns
        Mc = np.ones((1,c))
        Mc[0, (c/4.0):c] = np.zeros((3.0/4.0*c))

        #Together
        M = np.dot(Mr, Mc)

        plt.imshow(M)
        plt.title("Tiefpass Masske fuer die 2D-DCT")
        plt.show()
```

Tiefpass Masske fuer die 2D-DCT