

# Package ‘fftw’

July 2, 2014

**Version** 1.0-3

**Title** Fast FFT and DCT based on FFTW

**Description** Provides a simple and efficient wrapper around the fastest Fourier transform in the west (FFTW) library.

**Author** Sebastian Krey <skrey@statistik.tu-dortmund.de> Uwe Ligges <ligges@statistik.tu-dortmund.de> Olaf Mersmann <olafm@statistik.tu-dortmund.de>

**Maintainer** Olaf Mersmann <olafm@statistik.tu-dortmund.de>

**Depends** R (>= 2.12.0)

**SystemRequirements** fftw3 (>= 3.1.2)

**License** GPL-2

**Date**

**Repository** CRAN

**Date/Publication** 2011-04-24 07:08:12

**NeedsCompilation** yes

## R topics documented:

FFT . . . . .	2
planFFT . . . . .	3
<b>Index</b>	<b>4</b>

---

FFT

*Calculate (inverse) DFT using the FFT method*

---

### Description

see title

### Usage

```
FFT(x, ..., plan)
IFFT(x, ..., plan, scale=TRUE)
DCT(x, ..., plan, type=1)
IDCT(x, ..., plan, type=1, scale=TRUE)
```

### Arguments

x	(complex) vector to process
...	ignored
plan	FFTW plan, can be missing
scale	scale results
type	type of DCT

### Author(s)

Olaf Mersmann <olafm@statistik.uni-dortmund.de>

### See Also

[planFFT](#)

### Examples

```
n <- 2**16
x <- rnorm(n)
p <- planFFT(n)
y <- FFT(x, plan=p)
```

---

`planFFT`                      *Create FFTW plan*

---

**Description**

see title

**Usage**

```
planFFT(n, effort=0)
planDCT(n, type=1, effort=0)
```

**Arguments**

<code>n</code>	size of transform
<code>type</code>	type of DCT
<code>effort</code>	how hard fftw tries to find an optimal plan (0 to 3)

**Author(s)**

Olaf Mersmann <olafm@statistik.uni-dortmund.de>

**See Also**

[FFT](#) and [IFFT](#)

# Index

DCT (FFT), 2

FFT, 2, 3

IDCT (FFT), 2

IFFT, 3

IFFT (FFT), 2

planDCT (planFFT), 3

planFFT, 2, 3