

Access FAME 4GL from R

The FAME HLI has an easy command for sending instructions to a FAME 4GL session, `cfmfame()`. To access this function, we include the *rhli* package.

```
library(qoma.smuggler)
library(rhli)

if(!open_hli())knitr::knit_exit()
```

Linux 4.9.0-4-amd64 #1 SMP Debian 4.9.65-3+deb9u1 (2017-12-23) GNU/Linux

R version 3.5.0 (2018-04-23)

Joy in Playing

x86_64-redhat-linux-gnu

lubridate	1.7.4
qoma.smuggler	0.0.1
rhli	0.0.2.9000
tibble	1.4.2
FAME HLI	11.63000

We use FAME 4GL to generate uniform random numbers for a specified date range — the most business days of the prior quarter.

We demonstrate FAME timescale conversion and reporting.

```
txtfile <- file.path(tempdir(),"tmp.txt")
dbfile <- file.path(tempdir(),"tmp.db")
cmd <- Character(paste(
  "date thisday(q)-1; ",
  "freq b; ",
  "open<acc over>\"",dbfile,"\" as db; ",
  "series x : precision by date; ",
  "desc(x) = \"U[0,1]\"; ",
  "docu(x) = \"Uniformly distributed U[0,1] time-series.\"; ",
  "set x = uniform(date); ",
  "output<acc over>\"",txtfile,"\"; ",
  "whats x; ",
  "show vert; length full; conv on;",
  "freq b; title text \"Frequency \"+@freq; repo x; ",
  "freq w(fri); title text \"Frequency \"+@freq; repo x; ",
  "freq m; title text \"Frequency \"+@freq; repo x; ",
  "freq q; title text \"Frequency \"+@freq; repo x; ",
  "output terminal; ",
  "close db", sep=""))
cfmfame(Integer(-1), cmd)
cat(readLines(txtfile), sep = '\n')
```

X

U[0,1]

Class: SERIES
Type: PRECISION
Index: DATE:BUSINESS

DB name: DB
Created: 20-Aug-18
Updated: 20-Aug-18

First Value at: 2-Apr-18
Last Value at: 29-Jun-18

Observed: SUMMED
Basis: BUSINESS

Uniformly distributed U[0,1] time-series.

Frequency BUSINESS

	X

2-Apr-18	0.95
3-Apr-18	0.38
4-Apr-18	0.36
5-Apr-18	0.69
6-Apr-18	0.65
9-Apr-18	0.99
10-Apr-18	0.11
11-Apr-18	0.63
12-Apr-18	0.80
13-Apr-18	0.82
16-Apr-18	0.13
17-Apr-18	0.37
18-Apr-18	0.26
19-Apr-18	0.52
20-Apr-18	0.88
23-Apr-18	0.47
24-Apr-18	0.26
25-Apr-18	0.01
26-Apr-18	0.30
27-Apr-18	0.33
30-Apr-18	0.36
1-May-18	0.26
2-May-18	0.63
3-May-18	0.95
4-May-18	0.21
7-May-18	0.55
8-May-18	0.00
9-May-18	0.84
10-May-18	0.57
11-May-18	0.50
14-May-18	0.30
15-May-18	0.89
16-May-18	0.09
17-May-18	0.22
18-May-18	0.20
21-May-18	0.70
22-May-18	0.94
23-May-18	0.05

24-May-18	0.18
25-May-18	0.91
28-May-18	0.55
29-May-18	0.22
30-May-18	0.94
31-May-18	0.37
1-Jun-18	0.58
4-Jun-18	1.00
5-Jun-18	0.09
6-Jun-18	0.36
7-Jun-18	0.76
8-Jun-18	0.23
11-Jun-18	0.74
12-Jun-18	0.12
13-Jun-18	0.91
14-Jun-18	0.81
15-Jun-18	0.60
18-Jun-18	0.46
19-Jun-18	0.56
20-Jun-18	0.40
21-Jun-18	0.53
22-Jun-18	0.78
25-Jun-18	0.54
26-Jun-18	0.15
27-Jun-18	0.36
28-Jun-18	0.18
29-Jun-18	0.79

Frequency WEEKLY(FRIDAY)

X

13-Apr-18	3.35
20-Apr-18	2.16
27-Apr-18	1.37
4-May-18	2.40
11-May-18	2.46
18-May-18	1.70
25-May-18	2.77
1-Jun-18	2.67
8-Jun-18	2.44
15-Jun-18	3.19
22-Jun-18	2.72
29-Jun-18	2.02

Frequency MONTHLY

X

Apr 18 10.27
May 18 11.06
Jun 18 10.95

Frequency QUARTERLY

X

18:2 32.28

When finished accessing FAME,

```
close_hli()
```

```
[1] TRUE
```

```
file.remove(txtfile)
```

```
[1] TRUE
```

```
file.remove(dbfile)
```

```
[1] TRUE
```