

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
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.

```
cmd <- Character(paste(
  "date thisday(q)-1; ",
  "freq b; ",
  "open<acc over>tmp; ",
  "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>tmp.txt; ",
  "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 tmp", sep=""))
cfmfame(Integer(-1), cmd)
cat(readLines("tmp.txt"), sep = '\n')
```

X

U[0,1]

Class: SERIES
Type: PRECISION

DB name: TMP
Created: 17-Aug-18

Index: DATE:BUSINESS

Updated: 17-Aug-18

First Value at: 2-Apr-18

Observed: SUMMED

Last Value at: 29-Jun-18

Basis: BUSINESS

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

Frequency BUSINESS

	X

2-Apr-18	0.45
3-Apr-18	0.67
4-Apr-18	0.38
5-Apr-18	0.26
6-Apr-18	0.32
9-Apr-18	0.94
10-Apr-18	0.13
11-Apr-18	0.38
12-Apr-18	0.36
13-Apr-18	0.37
16-Apr-18	0.78
17-Apr-18	0.39
18-Apr-18	0.30
19-Apr-18	0.86
20-Apr-18	0.73
23-Apr-18	0.65
24-Apr-18	0.03
25-Apr-18	0.44
26-Apr-18	0.72
27-Apr-18	0.18
30-Apr-18	0.92
1-May-18	0.31
2-May-18	0.97
3-May-18	0.33
4-May-18	0.35
7-May-18	0.95
8-May-18	0.38
9-May-18	0.54
10-May-18	0.69
11-May-18	0.49
14-May-18	0.58
15-May-18	0.04
16-May-18	0.48
17-May-18	0.99
18-May-18	0.75
21-May-18	0.57
22-May-18	0.08
23-May-18	0.03
24-May-18	0.45
25-May-18	0.57

28-May-18	0.17
29-May-18	0.29
30-May-18	0.51
31-May-18	0.72
1-Jun-18	0.25
4-Jun-18	0.70
5-Jun-18	0.03
6-Jun-18	0.89
7-Jun-18	0.65
8-Jun-18	0.45
11-Jun-18	0.89
12-Jun-18	0.17
13-Jun-18	0.26
14-Jun-18	0.75
15-Jun-18	0.77
18-Jun-18	0.33
19-Jun-18	0.80
20-Jun-18	0.27
21-Jun-18	0.58
22-Jun-18	0.09
25-Jun-18	0.98
26-Jun-18	0.27
27-Jun-18	0.78
28-Jun-18	0.87
29-Jun-18	0.37

Frequency WEEKLY(FRIDAY)

X

13-Apr-18	2.19
20-Apr-18	3.07
27-Apr-18	2.03
4-May-18	2.88
11-May-18	3.04
18-May-18	2.83
25-May-18	1.70
1-Jun-18	1.94
8-Jun-18	2.72
15-Jun-18	2.85
22-Jun-18	2.06
29-Jun-18	3.26

Frequency MONTHLY

```
          X
      -----
Apr 18  10.28
May 18  11.23
Jun 18  11.14
```

Frequency QUARTERLY

```
          X
      -----
18:2   32.65
```

When finished accessing FAME,

```
close_hli()
```

```
[1] TRUE
```

```
file.remove("tmp.txt")
```

```
[1] TRUE
```

```
file.remove("tmp.db")
```

```
[1] TRUE
```