NAME

filma – CUTEr FILTER test driver

SYNOPSIS

filma

DESCRIPTION

The *filma* main program test drives FILTER on SIF problems from the CUTEr distribution.

FILTER is a code for solving large-scale nonlinear programs with bounds and inequality constraints, based on a trust-region SQP approach and globalized by means of a filter.

FILTER was written by R. Fletcher (University of Dundee) and S. Leyffer (Argonne National Laboratory).

The object module *filma.o* is stored in $MYCUTER/*precision*/bin, where *precision* is either "single" or "double", according to your local installation.

USAGE

Following the instructions in $CUTER/common/src/pkg/filter/README.filter, create a static library called libfilter.a, to be placed in your library path. Launch using fil(1) or sdfil(1).

NOTE

If no spec.par file is present in the current directory, the default version is copied from $CUTER/common/src/pkg/filter/. The default specification file is of the form

keyword *value*

and is as follows:

keyword	default	meaning
iprint	1	controls printing
maxiter	1000	max number of iterations
nout	6	output channel
eps	1.0E-6	tolerance
infty	1.0E+20	infinity
rho	10.0	initial trust-region radius
tt	0.125	param f. upper bound on filter
ubd	100.0	a synonym for tt

The reader is referred to the paper quoted below and the code itself if they wish to modify these parameters.

ENVIRONMENT

CUTER

Parent directory for CUTEr

MYCUTER

Home directory of the installed CUTEr distribution.

AUTHORS

I. Bongartz, A.R. Conn, N.I.M. Gould, D. Orban and Ph.L. Toint

SEE ALSO

CUTEr (and SifDec): A Constrained and Unconstrained Testing Environment, revisited,
N.I.M. Gould, D. Orban and Ph.L. Toint,
ACM TOMS, **29**:4, pp.373-394, 2003.

CUTE: Constrained and Unconstrained Testing Environment, I. Bongartz, A.R. Conn, N.I.M. Gould and Ph.L. Toint, TOMS, **21**:1, pp.123-160, 1995.

Nonlinear programming without a penalty function, R. Fletcher and S. Leyffer, Mathematical Programming vol.91 Issue 2, pp.239-269, 2001.