NAME

pdsma – CUTEr PDS test driver

SYNOPSIS

pdsma

DESCRIPTION

The *pdsma* main program test drives PDS on SIF problems from the CUTEr distribution.

PDS is a nonlinear programming code for unconstrained problems, which only uses function values (no derivatives needed). It is especially intended to be used in a parallel computing environment.

DISCLAIMER

PDS was written by V. Torczon (email: va@cs.wm.edu). The following notice goes with the PDS distribution:

PDS, the collection of sofware for executing the parallel direct search methods, was written by Dr. Virginia Torczon, Department of Mathematical Sciences, Rice University, Houston, Texas. The two versions of Quicksort included in this release were written by Dr. Robert Michael Lewis, Department of Mathematical Sciences, Rice University, Houston, Texas. This software is distributed by CITI, the Computer and Information Technology Institute of Rice University. CITI Catalog Number PD92005, released for distribution March 16, 1992.

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USAGE

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

Concatenate the files

create.f	scaled.f	pds.f	fcn.f
init.f	depth.f	shrink.f	reads.f
right.f	order.f	equal.f	writes.f
define.f	search.f	quick.f	getss.f
maxlen.f	done.f	sort.f	result.f

from the PDS distribution in a single new file named pds.f.

Compile (but do not link) the PDS source code and copy the resulting object file pds.o in the directory $MYCUTER/*precision*/bin. Launch using pds(1) or sdpds(1).

NOTE

If no PDS.SPC file is present in the current directory, the default version is copied from $CUTER/common/src/pkg/pds/. The default specifications are as follows

0.00001	TOL	stopping tolerance for the step size
500	MAXITR	maximum number of iterations allowed
2	TYPE	0 given 1 right 2 regular 3 scaled rt (1,2 & 3 constructed)
1.0	SCALE	if type not 0 scale contains base length (and orientation)
4	DEBUG	flag 0 (none) 1 2 3 and 4 give progressively more info.
256	SSS	number of points used in the search.

PDS is not available in single precision.

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.