NAME

CCIFSG – CUTEr tool to evaluate a single constraint function value and possibly gradient in sparse format.

SYNOPSIS

CALL CCIFSG(N, ICON, X, CI, NNZSGC, LSGCI, SGCI, IVSGCI, GRAD)

DESCRIPTION

The CCIFSG subroutine evaluates the value of a particular constraint function of the problem decoded into OUTSDIF.d at the point X, and possibly its gradient in the constrained minimization case. The gradient is stored in sparse format.

ARGUMENTS

The arguments of CCIFSG are as follows

N [in] - integer
the number of variables for the problem,

ICON [in] - integer
the index of the constraint function to be evaluated,

X [in] - real/double precision
an array which gives the current estimate of the solution of the problem,

CI [out] - real/double precision
the value of constraint function ICON at X,

NNZSGC [out] - integer
the number of nonzeros in SGCI,

LSGCI [in] - integer
the declared length of SGCI,

SGCI [out] - real/double precision
an array which gives the nonzeros of the gradient of constraint function ICON evaluated at X. The i-th entry of SGCI gives the value of the derivative with respect to variable IVSGCI(i) of function ICON.

IVSGCI [out] - integer
an array whose i-th component is the index of the variable with respect to which SGCI(i) is the derivative,

GRAD [in] - logical
a logical variable which should be set .TRUE. if the gradient of the constraint functions are required and .FALSE. otherwise.

AUTHORS

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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.