A Package of Subroutines for NLP and LCP

The tar file that you have received contains a package of Fortran 77 subroutines for solving Nonlinear Programming Problems and Linearly Constrained Problems in continuous optimization, together with descriptive matter and example programs.

The user needs to choose whether to use a sparse matrix or dense matrix data structure. To solve an NLP using a sparse matrix data structure, the subroutines in the following files are required

`filterSD.f`, `checkd.f`, `glcpd.f`, `l1sold.f`, `schurQR.f`, `sparseA.f`, `util.f`

together with a user supplied driver program.

To solve an NLP using a dense matrix data structure, the subroutines in the following files are required

`filterSD.f`, `checkd.f`, `glcpd.f`, `l1sold.f`, `denseL.f`, `denseA.f`, `util.f`

together with a user supplied driver program.

To solve an LCP using a sparse matrix data structure, the subroutines in the following files are required

`glcpd.f`, `checkg.f`, `schurQR.f`, `sparseA.f`, `util.f`

together with a user supplied driver program.

To solve an LCP using a dense matrix data structure, the subroutines in the following files are required

`glcpd.f`, `checkg.f`, `denseL.f`, `denseA.f`, `util.f`

together with a user supplied driver program.

To solve a QP or LP, replace `glcpd.f` by `qlcpd.f` in the above.

Information on how to set up the driver program is contained in the files `filterSD.pdf` and `glcpd.pdf`. Examples of driver programs are provided in the files `hs106.f`, `hs106d.f`, `hs72.f` and `hs72d.f`.

To facilitate access to CUTEr test problems, a driver program `driver.f` and associated subroutines in the file `user.f` is provided.