Help

```
#if defined(PremiaCurrentVersion) && PremiaCurrentVersion < (2008+2) //The "#els
#else
/*****************************************************************************/
/*                                  mlsolv.h                                 */
/*****************************************************************************/
/*                                                                           */
/* Multi-Level SOLVers                                                       */
/*                                                                           */
/* Copyright (C) 1992-1995 Tomas Skalicky. All rights reserved.              */
/*                                                                           */
/*****************************************************************************/
/*                                                                           */
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/*                                                                           */
/*****************************************************************************/

#ifndef MLSOLV_H
#define MLSOLV_H

#include "highdim_vector.h"
#include "highdim_matrix.h"
#include "qmatrix.h"
#include "itersolv.h"
#include "copyrght.h"

Vector *MGStep(int NoLevels, QMatrix *A, Vector *x, Vector *b,
               Matrix *R, Matrix *P, int Level, int Gamma,
               IterProcType SmoothProc, int Nu1, int Nu2,
               PrecondProcType PrecondProc, double Omega,
               IterProcType SolvProc, int NuC,
               PrecondProcType PrecondProcC, double OmegaC);
Vector *MGIter(int NoLevels, QMatrix *A, Vector *x, Vector *b,
               Matrix *R, Matrix *P, int MaxIter, int Gamma,
               IterProcType SmoothProc, int Nu1, int Nu2,
               PrecondProcType PrecondProc, double Omega,
               IterProcType SolvProc, int NuC,
               PrecondProcType PrecondProcC, double OmegaC);
Vector *NestedMGIter(int NoLevels, QMatrix *A, Vector *x, Vector *b,
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                    Matrix *R, Matrix *P, int Gamma,
                    IterProcType SmoothProc, int Nu1, int Nu2,
                    PrecondProcType PrecondProc, double Omega,
                    IterProcType SolvProc, int NuC,
                    PrecondProcType PrecondProcC, double OmegaC);
Vector *MGPCGIter(int NoLevels, QMatrix *A, Vector *x, Vector *b,
                  Matrix *R, Matrix *P, int MaxIter, int NoMGIter, int Gamma,
                  IterProcType SmoothProc, int Nu1, int Nu2,
                  PrecondProcType PrecondProc, double Omega,
                  IterProcType SolvProc, int NuC,
                  PrecondProcType PrecondProcC, double OmegaC);
Vector *BPXPrecond(int NoLevels, QMatrix *A, Vector *y, Vector *c,
                   Matrix *R, Matrix *P, int Level,
                   IterProcType SmoothProc, int Nu,
                   PrecondProcType PrecondProc, double Omega,
                   IterProcType SmoothProcC, int NuC,
                   PrecondProcType PrecondProcC, double OmegaC);
Vector *BPXPCGIter(int NoLevels, QMatrix *A, Vector *x, Vector *b,
                   Matrix *R, Matrix *P, int MaxIter,
                   IterProcType SmoothProc, int Nu,
                   PrecondProcType PrecondProc, double Omega,
                   IterProcType SmoothProcC, int NuC,
                   PrecondProcType PrecondProcC, double OmegaC);

#endif /* MLSOLV_H */

#endif //PremiaCurrentVersion
```