```
   Help
#if defined(PremiaCurrentVersion) && PremiaCurrentVersion <
     (2008+2) //The "#else" part of the code will be freely av
    ailable after the (year of creation of this file + 2)
#else
/*************************************************************
    ******************/
/*                                     rtc.c
                     */
/*************************************************************
    ******************/
/*
                     */
/* Residual Termination Control
                     */
/*
                     */
/* Copyright (C) 1992-1995 Tomas Skalicky. All rights res
    erved.              */
/*
                     */
/*************************************************************
    ******************/
/*
                     */
/*        ANY USE OF THIS CODE CONSTITUTES ACCEPTANCE OF TH
    E TERMS           */
/*               OF THE COPYRIGHT NOTICE (SEE FILE copyrght.h
    )                */
/*
                     */
/*************************************************************
    ******************/

#include <stddef.h>

#include "laspack/rtc.h"
#include "laspack/errhandl.h"
#include "laspack/elcmp.h"
#include "laspack/operats.h"
#include "laspack/copyrght.h"
```

```
/* accuracy for Residual Termination Control */
static double RTCEps = 1e-8;

/* auxiliary procedure to be performed by Residual Termina
    tion Control */
static RTCAuxProcType RTCAuxProc = NULL;

/* number of iterations performed during last call of a
    iteration method */
static int LastNoIter = 0;

/* accuracy reached during last call of a iteration method
    */
static double LastAcc = 0.0;

void SetRTCAccuracy(double Eps)
/* set accuracy for the RTC */
{
    RTCEps = Eps;
}

void SetRTCAuxProc(RTCAuxProcType AuxProc)
/* set auxiliary procedure of RTC */
{
    RTCAuxProc = AuxProc;
}

Boolean RTCResult(int Iter, double rNorm, double bNorm,
    IterIdType IterId)
/* get result of RTC */
{
    Boolean Result;

    if (LASResult() == LASOK) {
        if (rNorm < RTCEps * bNorm || (IsZero(bNorm) && Is
    One(1.0 + rNorm)))
            Result = True;
        else
            Result = False;
```

```
        LastNoIter = Iter;
        if (!IsZero(bNorm))
            LastAcc = rNorm / bNorm;
        else
            LastAcc = 1.0;

        if (RTCAuxProc != NULL)
            (*RTCAuxProc)(Iter, rNorm, bNorm, IterId);
    } else {
        Result = True;
    }

    return(Result);
}

int GetLastNoIter()
/* get number of iterations performed during last call of
    a iteration method */
{
    return(LastNoIter);
}

double GetLastAccuracy()
/* get accuracy reached during last call of a iteration
    method */
{
    return(LastAcc);
}

#endif //PremiaCurrentVersion
```

# References