

[Help](#)

```

#if defined(PremiaCurrentVersion) && PremiaCurrentVersion < (2008+2) //The "#els
#else
/*****
/*                                     rtc.c                                     */
/*****
/*                                     */
/* Residual Termination Control                                     */
/*                                     */
/* Copyright (C) 1992-1995 Tomas Skalicky. All rights reserved.     */
/*                                     */
/*****
/*                                     */
/*      ANY USE OF THIS CODE CONSTITUTES ACCEPTANCE OF THE TERMS     */
/*      OF THE COPYRIGHT NOTICE (SEE FILE COPYRIGHT.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 Termination 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) && IsOne(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
```