Alarm clock with custom sound

Introduction

This article shows you how to set your own song to clock alarm and play when the alarm expires. Most of the code are common and are taken from the Wiki, but the extra thing that is being added is setting own audio file to the alarm server. This code has been tested on 5th edition and S^3 devices, but also expected to work on 3rd edition too.

MMP

```
LIBRARY        centralrepository.lib alarmclient.lib alarmshared.lib apgrfx.lib
CAPABILITY   WriteDeviceData
```

Header Files

If the header files are not in the SDK , then get it from API Plug-in

```
#include <clockdomaincrkeys.h>
#include <centralrepository.h> // Headers Used for CRepository
#include <ASShdDefs.h>
#include <calendarinternalcrkeys.h>
//check clock alarm
#include <almconst.h>
#include <ASCliSession.h>    // For RASCliSession.
#include <ASShdAlarm.h>      // For TASShdAlarm.
// System Includes
#include <apgcli.h> // for RApaLsSession
#include <apacmdln.h> // for CApaCommandLine
class CRepository;
class RASCliSession;

const TInt KWakeupAlarmFlagIndex = 0;   // wakeup alarm
            CRepository* iRepository;// = CRepository::NewL( KCRUidClockApp );
     TInt iErrCode;
     TInt iVal;
     TBuf<200> iDispVal;
             RASCliSession iCliSession;
      TASShdAlarm alarm;
```

ConstructL()

```
          iCliSession.Connect();
   iRepository = CRepository::NewL( KCRUidClockApp );// alarm clock
```

Destructor

```
if(iRepository)
  {
 delete iRepository;
 iRepository =NULL;

  }

 iCliSession.Close();
```

Check Alarm Type

check the alarm type with the UID because it could be a clock or a calendar alarm

```
RArray<TAlarmId> ids;
 // Get List of all alarm
 iCliSession.GetAlarmIdListL(ids);
 TASShdAlarm alarm;
 for (TInt i = 0; i < ids.Count(); i++)
  {
  TInt err(KErrNone);
  err = iCliSession.GetAlarmDetails(ids[i], alarm);
  if ((!err))
   {
   if (alarm.Category().iUid == KAlarmClockOne.iUid)
    {
```


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```
     CEikonEnv::InfoWinL(_L("Clock Alarm"), alarm.Message());
     }
    else
     {
     CEikonEnv::InfoWinL(_L("Not Clock Alarm"), alarm.Message());
     }
    }
   }
```

Check Active Song of the Alarm

you can check the song that is being set in the alarm server

```
iErrCode = iRepository->Get(KClockAppSoundFile, iDispVal);
   if (iErrCode == KErrNone)
    {
   iEikonEnv->AlertWin(_L("Song: "), iDispVal);
    }
   else
    {
    iDispVal.Num(iErrCode);
    iEikonEnv->AlertWin(_L("error"), iDispVal);
    }
```

Set Own song to Alarm

This code helps you to add your own audio file to the alarm server.

```
_LIT(KSampleAudio,"C:\\system\\E829D5AB\\sample.wav");
iErrCode = iRepository->Get(KClockAppSoundFile, iDispVal);
   if (iErrCode == KErrNone)
    {
    iRepository->Set(KClockAppSoundFile, KSampleAudio);
    }
   else
    {
    iDispVal.Num(iErrCode);
    iEikonEnv->AlertWin(_L("error"), iDispVal);
    }
```

Add Aalrm to the Alarm Server

Now add alarm to the alarm server and this is a wakeup alarm.

```
TAlarmCategory alarmCategory = KAlarmClockOne;//KASCliCategoryClock;
 alarm.Category()=alarmCategory;
 _LIT(KAlarmMessage, "RingingAlarm");
 alarm.Message() = KAlarmMessage;

 alarm.RepeatDefinition() = EAlarmRepeatDefintionRepeatDaily; // alarm daily
 alarm.ClientFlags().Set(KWakeupAlarmFlagIndex);// wake up alarm
 alarm.NextDueTime().HomeTime();
 //EAlarmRepeatDefintionRepeatDailyOnGivenDays
 alarm.NextDueTime() += TTimeIntervalMinutes(1);//Seconds(61);
 iCliSession.AlarmAdd(alarm);
```

Update alarm time

We have updated the alarm time but need to find Alarm Message in the alarm server. This is to be done so that we don't delete any other alarm of same or different type from the server.

```
RArray<TAlarmId> ids;
  // Get List of all alarm
  iCliSession.GetAlarmIdListL(ids);
  TASShdAlarm alarm;
  for (TInt i = 0; i < ids.Count(); i++)
   {
   TInt err(KErrNone);
   err = iCliSession.GetAlarmDetails(ids[i], alarm);
   if ((!err))
    {
    if (alarm.Category().iUid == KAlarmClockOne.iUid)
     {
    iCliSession.AlarmDeleteByCategory(alarm.Category(),EAllAlarms);
     //CEikonEnv::InfoWinL(_L("Clock Alarm"), alarm.Message());
     if(alarm.Message().Compare(_L("RingingAlarm"))==0)
      {

              //iCliSession.AlarmDeleteByCategory(alarm.Category(),EAllAlarms);
              iCliSession.AlarmDelete(alarm.Id()); // delete clock alarm by its ID
              CEikonEnv::InfoWinL(_L("Clock Alarm"),_L("Set"));
      }
     }
    else
     {

     //CEikonEnv::InfoWinL(_L("Not Clock Alarm"), alarm.Message());
    //iCliSession.AlarmDeleteByCategory(alarm.Category(),EAllAlarms);  //delete other alarm
     }
    }
   }
```

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