Subject: How to load your GridCtrl in background thread
Posted by alendar on Tue, 16 Feb 2010 13:31:14 GMT
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Hopefully helpful to someone:

I use the ArrayCtrl and/or GridCtrl for very large data sets, so I have to have them load in background so the user (me) doesn't get restless. Plus the I can filter the list before it finishes loading the massive list, interrupting it smoothly. Plus I update the row counter display.

Here's the pseudo code since the real code is rather twisted:

In my layout:

```
  ITEM(EditField, filterList, LeftPosZ(164, 89).TopPosZ(5, 15))
  ITEM(GridCtrl, grid, HSizePosZ(9, 3).VSizePosZ(21, 18))
  ITEM(Label, gridrowcount,
    SetLabel(t_("...")).SetAlign(ALIGN_RIGHT).SetFont(StdFontZ( 8 )).SetInk(Color(101,
    101, 101)).RightPosZ(4, 73).BottomPosZ(3, 13))
```

In my main window:

```
StaticMutex loadListLock;
enum ListLoaderEnum {LL_RESET, LL_LOADING, LL_DONELOADING};

class X : public WithMainLayout<TopWindow> {

  Thread listLoaderThread;
  volatile Atomic stoploadinglistandgrabnewfilter;
  WString filter;

public:
  X() : stoploadinglistandgrabnewfilter(0) {
    grid.AddColumn("name");
    filter = "";
    listLoaderThread.Run(THISBACK(LoadFileList));
    filterList.WhenAction = THISBACK(FilterListEdit);
    filterList.NullText("Filter list for...");

  ~X() {
    Thread::ShutdownThreads();
    listLoaderThread.Wait();
  }

  void FilterListEdit() {
    loadListLock.Enter();
```

```
    filter = filterList.GetData();
    stoploadinglistandgrabnewlist = LL_RESET;
    loadListLock.Leave();
  }

  void LoadFileList() {
    FindFile flist;
    stoploadinglistandgrabnewfilter = LL_RESET;

    while (!Thread::IsShutdownThreads()) {

      if (stoploadinglistandgrabnewfilter == LL_RESET) {
        stoploadinglistandgrabnewfilter = LL_LOADING;
        loadListLock.Enter();
        flist.Search(String().Cat() << "F:\\Music\\" << "*" << filter <<"*.mp3");
        loadListLock.Leave();
        GuiLock() __;
        grid.Clear();
        gridrowcount.SetText("...");
      }

      while (stoploadinglistandgrabnewfilter == LL_LOADING) {
        while (stoploadinglistandgrabnewfilter == LL_LOADING) {
          GuiLock __;
          if (!flist.Next()) {
            stoploadinglistandgrabnewfilter = LL_DONELOADING;
            break;
          } else {
            grid.Add(flist.GetName());
            if(Thread::IsShutdownThreads()) {
              break;
            }
          }
        }

        gridrowcount.SetText(Format("%C", grid.GetCount()));
      }

      Sleep(1); // CRITICAL: Prevents app from taking 50% CPU.  Brings it down to 0-1%
    }
  }
};
```

There's probably a better way, but I couldn't find it. This doesn't lock up.
