Subject: Layout files versus embedded code
Posted by MrAndreas on Fri, 17 Feb 2023 13:25:04 GMT
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I just came across U++ and soon found the following example...

```
#include <CtrlLib/CtrlLib.h>

#define LAYOUTFILE <Days/Days.lay>
#include <CtrlCore/lay.h>

class Days : public WithDaysLayout<TopWindow> {
public:

   typedef Days CLASSNAME;
   Days();
};

Days::Days()
{
   CtrlLayout(*this, "Days");
   date1 ^= date2 ^= [=] {
      result = IsNull(date1) || IsNull(date2) ? "" :
            Format("There is %d day(s) between %` and %`", abs(Date(~date1) - Date(~date2)),
~date1, ~date2);
   };
}

GUI_APP_MAIN
{
   Days().Run();
}
```

Source: U++ Overview / 1. Whetting your appetite

Based on this example it appears U++ makes use of external data files that describe the GUI similar to how Delphi and C++ Builder uses DFM files for the same purpose. If this is the case then why was this paradigm chosen when it has been proven to be a source of many errors and in general flawed? Note that Anders, the original architect of Delphi/C++ Builder, recognised and rectified these flaws when he designed C# and made the GUI definitions as plain C# code embedded in standard C# source files.

Cheers,
-Andreas

Subject: Re: Layout files versus embedded code
Posted by mirek on Sun, 19 Feb 2023 09:12:57 GMT
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Nope. See this:

```
#define LAYOUTFILE <Days/Days.lay>
#include <CtrlCore/lay.h>
```

This is actually the layout definition and it is embedded directly to sources.

AFAIK, this is very similar to C# does. The one difference is that while C# dialog designer produces complex C# code with multiple warning in comments "do not edit by hand", in U++, thanks to macros, we have a bit nicer "format"

```
LAYOUT(DaysLayout, 320, 64)
 ITEM(Upp::EditDate, date1, LeftPosZ(52, 100).TopPosZ(8, 19))
 ITEM(Upp::Label, dv___1, SetLabel(t_("Date 1")).LeftPosZ(8, 40).TopPosZ(8, 19))
 ITEM(Upp::EditDate, date2, LeftPosZ(212, 100).TopPosZ(8, 19))
 ITEM(Upp::Label, dv___3, SetLabel(t_("Date 2")).LeftPosZ(168, 40).TopPosZ(8, 19))
 ITEM(Upp::Label, result, LeftPosZ(8, 304).TopPosZ(36, 19))
END_LAYOUT
```

which definitely can be and often is edited as text, but with a bit of macro trickery is actually possible input for C++ compiler.

So no, no external files, layouts are C++ code.

Subject: Re: Layout files versus embedded code
Posted by MrAndreas on Sun, 19 Feb 2023 16:39:14 GMT
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Thank you for clarifying this.

The fact that U++ uses C++ code for layout definitions is a huge advantage over most other solutions.

Subject: Re: Layout files versus embedded code
Posted by mirek on Sun, 19 Feb 2023 17:57:07 GMT
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MrAndreas wrote on Sun, 19 February 2023 17:39Thank you for clarifying this.

The fact that U++ uses C++ code for layout definitions is a huge advantage over most other solutions.

It gets even better - same is true for images (icons) These are simply embedded as C++ code as well.

Mirek
