



Forms in KCML 6.0

User editable Forms

★ User editable forms

- ★ Import() called during .Create() event
- ★ Form stored as a string, passed as SYM
- ★ EditForm() also called from .Create()
 - ★ Invokes forms editor
 - ★ COM interface controls functionality

Subforms

- ★ Specialist use I suspect...
- ★ Child forms that are integral
 - Placement value of subform
 - Open() does not block
 - Needs explicit .Terminate()
- ★ Allows OCX to stay active on parent

Resizable forms

- ✦ `Resize()` event
- ✦ You can then check the new size and move controls, adjust grids or whatever

Changes to controls

☀ Changed

- ☀ Grids
- ☀ Trees
- ☀ OCXs
- ☀ Menus
- ☀ Dbedit

☀ New

- ☀ Toolbars
- ☀ Graphs
- ☀ Arrows

Grid enhancements

- ✦ OBJECT notation for cells
- ✦ Finer control in Reset()
- ✦ CopyToClipboard()
- ✦ LastKey as a VK key

Grids (continued)

- ✦ Updated by `ChangeRowCol()`
- ✦ Server-side storage now always enabled
- ✦ Row oriented editing
 - ✦ Tab through mode
 - ✦ `EditRowNotify` event
- ✦ Autoedit
 - ✦ Go into edit mode when it gets focus
- ✦ Colsize
 - ✦ *Default, Type, Header, Largest, Stretch, Automatic*
- ✦ Dropdown variants using `DropAdjust`

Tabs

- ☀ Appearance

- ☀ *(Default, Invisible, LikeGroup, Wizard)*

- ☀ Demo

Trees

- ✦ Partial implementation in 5.02
- ✦ OBJECT notation
 - ✦ All props of node available this way
- ✦ Can set the images
- ✦ Edit() for labels
- ✦ Select() for items

OCX support

- ✦ Original model was VBX based
- ✦ Now support nested objects, events
- ✦ KFORM just inserts the object reference
- ✦ Use OBJECT handle in code
- ✦ Type information discovered at runtime
- ✦ Use WB object browser
- ✦ Not backward compatible to 5.02
- ✦ Watch the .Enter() event - OCX does not yet exist

Dbedits

- ✦ Label\$ for static text
- ✦ EditGroup for alignment, translation
- ✦ Description\$
- ✦ CanConvert now a currency indicator

Menus

- ✦ Shortcuts using Key\$ property
- ✦ Support toolbars
- ✦ ActiveControl object property
 - ✦ E.g. paste button

Toolbars

- ✦ Graphical view of the menu
 - ✦ No events of their own
- ✦ Associate bitmap with a menu option
- ✦ Enhanced stock pictures
- ✦ Big (with text) or small set in preferences

Graphs

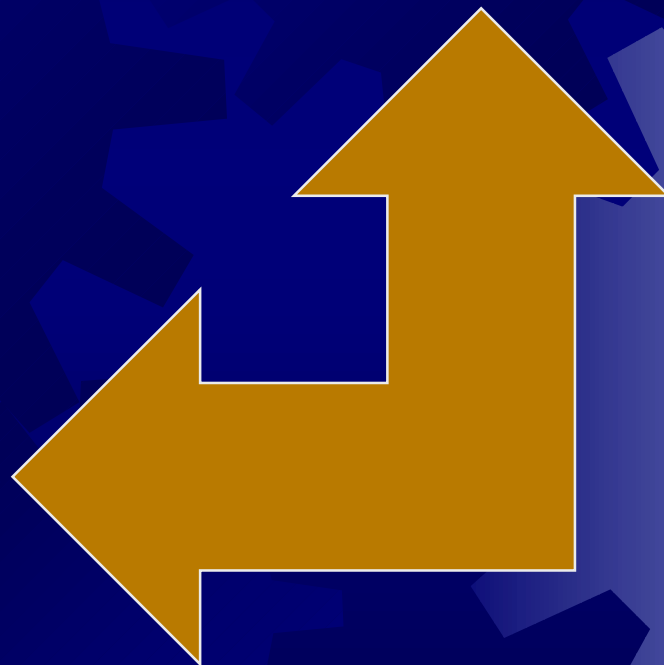
- ✦ Intended to replace the BPS GraphServer
 - ✦ Slow to start
 - ✦ Not available on CE
 - ✦ Separate install
 - ✦ Not part of the thin client philosophy

KCML Graphs

- ✦ Can spoof the OCX so no code change
 - ✦ Supports only what we use in Rev8
- ✦ Or can be control in its own right
- ✦ Supports 2D/3D pie, bars and line
- ✦ Click events for drill down
- ✦ No rotation

Arrows

- ★ Static controls



RTF control

- ✦ Rich text
- ✦ No longer strategic to Microsoft
- ✦ Slow
- ✦ Consider RTF functionality in Kprint
- ✦ We will be offering HTML replacement



Appendix



KCML 5 client

- ✱ 2 tier client-server on NT and Unix
- ✱ NT kserver replaces Unix inetd
- ✱ Uses telnet protocol over a TCP/IP stream
- ✱ All traffic is serialised and bursty
- ✱ Cache form templates and bitmaps

Life history of a form

```
-DEFFORM form1()  
  DIM Title$="My form"  
- DEFEVENT Form1.Show()  
  .form.Text$ = Title$  
END EVENT  
- DEFEVENT Form1.help.Click()  
  .form.Text$ = "whose form?"  
END EVENT  
FORM END Form1  
Form1.Open()
```

sequence

- ☀ server executes `.Open()` method
 - ✿ and all code before first event handler
- ☀ asks client to open form by token
 - ✿ if not in cache client errors and server sends form template
- ☀ server executes any show event handler
 - ✿ sends props and data aware text
 - ✿ tells client to display form

event handlers

- ✱ data is buffered during the execution of an event handler
- ✱ only sent to client at END EVENT

sequence

- ✦ Server then executes any Enter() event
 - ✦ sends any properties
- ✦ waits reading socket looking for form events
 - ✦ idle timer may trigger .Idle() event

Client events

- ✦ clicking a button will send packet containing control id and event id to server
- ✦ server looks for handler
 - ✦ if finds one it executes it
- ✦ If none or if TRUE then does default action