

Getting started with Embedded Windows

An introduction into WinKitLE

<http://www.consultingwerk.de/winkitle/>

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Consultingwerk Ltd.

- Independent IT consulting organization
- Focusing on **OpenEdge** and **.NET**
- Located in Cologne, Germany
- Vendor of tools and consulting programs
- 21 years of Progress experience (V5 ... V10)
- GUI for .NET early adaptor (since 10/2006)
- Just started with iPhone/iPad app development

Consultingwerk Ltd.

- Customers in Germany, Europe, USA
- Working with small to large Progress Partners and direct end users
- Supporting some of the largest Progress Partners in Germany, Belgium, The Netherlands, Austria and UK with application modernization and user interface technologies
- Network of partnering consultants, like ic4b for Web UI's, Whitestar Software, DBAppraise

Solutions for the OpenEdge GUI for .NET

- WinKit
- SmartComponent Library
- Dynamics4.NET

- Tools can be used together or separately
- Share common code base

Agenda

- Overview OpenEdge GUI for .NET
- Adoption challenges
- Adoption strategies using WinKit
- WinKit Features
- Customer Examples
- Hands-On Labs

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OpenEdge GUI for .NET

A Microsoft® .NET™ based Windows graphical user interface that can replace or be integrated into an existing OpenEdge GUI application

OpenEdge GUI for .NET

- State-of-the-art UI on the Windows desktop
- Integrated feature of OpenEdge 10.2A and 10.2B
- Supported by both GUI clients
 - fat client, prowin32.exe
 - WebClient
- No separate license required
 - Deployment
 - Development
- Access and use any .NET control

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- WinKit Features
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- Hands-On Labs

Adoption Challenges

- Need to support pre-10.2A users as well
- Not every Progress partner has SCM strategy that supports parallel development on two versions of the same application
- Thousands of existing screens
 - Progress isn't used to build small applications
- Many Progress applications haven't adopted latest language features at all

Adoption Challenges

- Training requirements
 - OO fundamentals (new programming paradigm)
 - .NET fundamentals
 - Infragistics controls (or any other vendor)
 - OpenEdge 10.0: ProDatasets etc.
- New tool: OpenEdge Architect

Adoption Challenges

- How much modernization is possible without a rewrite?
- What are our architecture requirements?
- Where's a reference implementation of that new target architecture?
- Our application depends on a tailored framework and templates – how can we migrate that framework?

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GUI for .NET adoption using WinKit

- Consultingwerk's best practice approach to GUI for .NET adoption
- WinKit is based on Embedded Windows
- ABL Windows embedded into .NET Forms
- Core feature of OpenEdge 10.2A and 10.2B
- Contents of Window will be embedded into a .NET control

GUI for .NET adoption using WinKit

- Original source code used in the context of GUI for .NET
- Just minor modifications that typically remain code compatibility with previous Progress releases
- **No architectural change required**
- **Existing application framework or templates used**
- Developers may continue to use AppBuilder for maintenance of existing screens

GUI for .NET adoption using WinKit

- Original intention was mixed mode MDI
- Upgrading the appearance of ABL application by using .NET controls (menu, toolbar, Explorer bars, dockable panes, lookups with UltraGrid, ...)
- Step-by-step introduction of additional (Infragistics) controls to increase users productivity
- Active X controls contained on the window are well supported (documented in K-Base)

GUI for .NET adoption using WinKit

- WinKit simplifies the integration of ABL windows into the OpenEdge GUI for .NET using
 - Enhancements to existing programs, templates and the framework using include files
 - An API / SDK that simplifies embedding and enhancing existing windows
 - Templates for GUI for .NET designs that can be adjusted to a customers demand

Demo

- WinKit Sample MDI container showing various embedding scenarios
 - AppBuilder view
 - Embedded view (runtime)
 - MDI Childs with Toolbar
 - Independent Windows with ribbons
 - Turning ADM2 Tabfolder into dockable panes
 - Overlaying ABL Browse Widget with UltraGrid control

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- **WinKit Features**
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WinKit Features

- prebuild GUI for .NET Templates that simply embedding and enhancing of ABL Windows
- functional .NET MDI container
- integration into GUI for .NET by adding 3 include files into program windows
- very often these include files can be added to existing framework without modification of .w files
- menu and toolbar rendering to Infragistics UltraToolbarsManager

WinKit Features

- all program logic remains in the .w file (procedural code)
- .NET event handlers execute ABL triggers as needed
- ABL triggers enabled to cancel processing of .NET events like Form- or Window-Closing

Toolbar- and Ribbon Designer

- Developer utility that allows to modify the generated Infragistics menu and toolbar structures using a Visual Studio like UI Designer
- Add Images, change menu structure, use additional UltraToolbarsManager controls
- **Turn Menu and Toolbar into a Ribbon!**

WinKit Features

- Further enhancements of ABL windows, like
 - integration of DatePopups
 - replacement of selected ABL Widgets with .NET Controls
 - replacement of ABL Browse with UltraGrid
 - integration of SplitContainer, UltraTabFolder or Dockable Panes
 - changes to colors and fonts used
 - ...

WinKit Migration Tool

- automated migration of ABL Windows
- based on AppBuilder, AppBuilder API
- integration of required include files
- integration of hooks into existing program logic to refresh .NET UI when required
- removes Windows Icon
- process a single file at a time or a list of files

Demo

- Order maintenance
 - ABL UI
 - Embedded, basic features
 - Toolbar and menu rendered
 - Browser replaced with UltraGrid
 - Embedded, advanced features
 - SplitContainer, UltraTab
 - Ribbon

Agenda

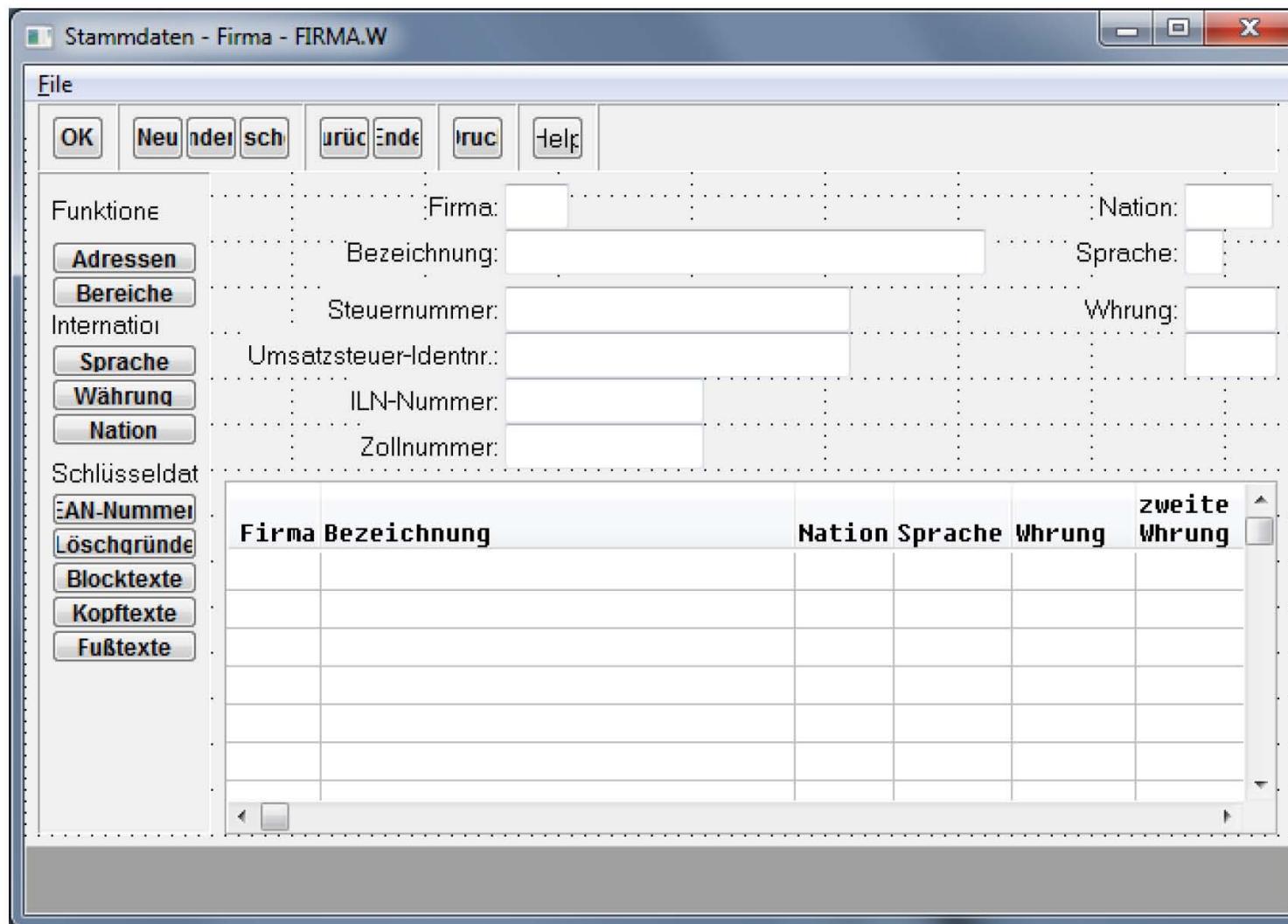
- Overview OpenEdge GUI for .NET
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Reference I: Update Texware / Germany

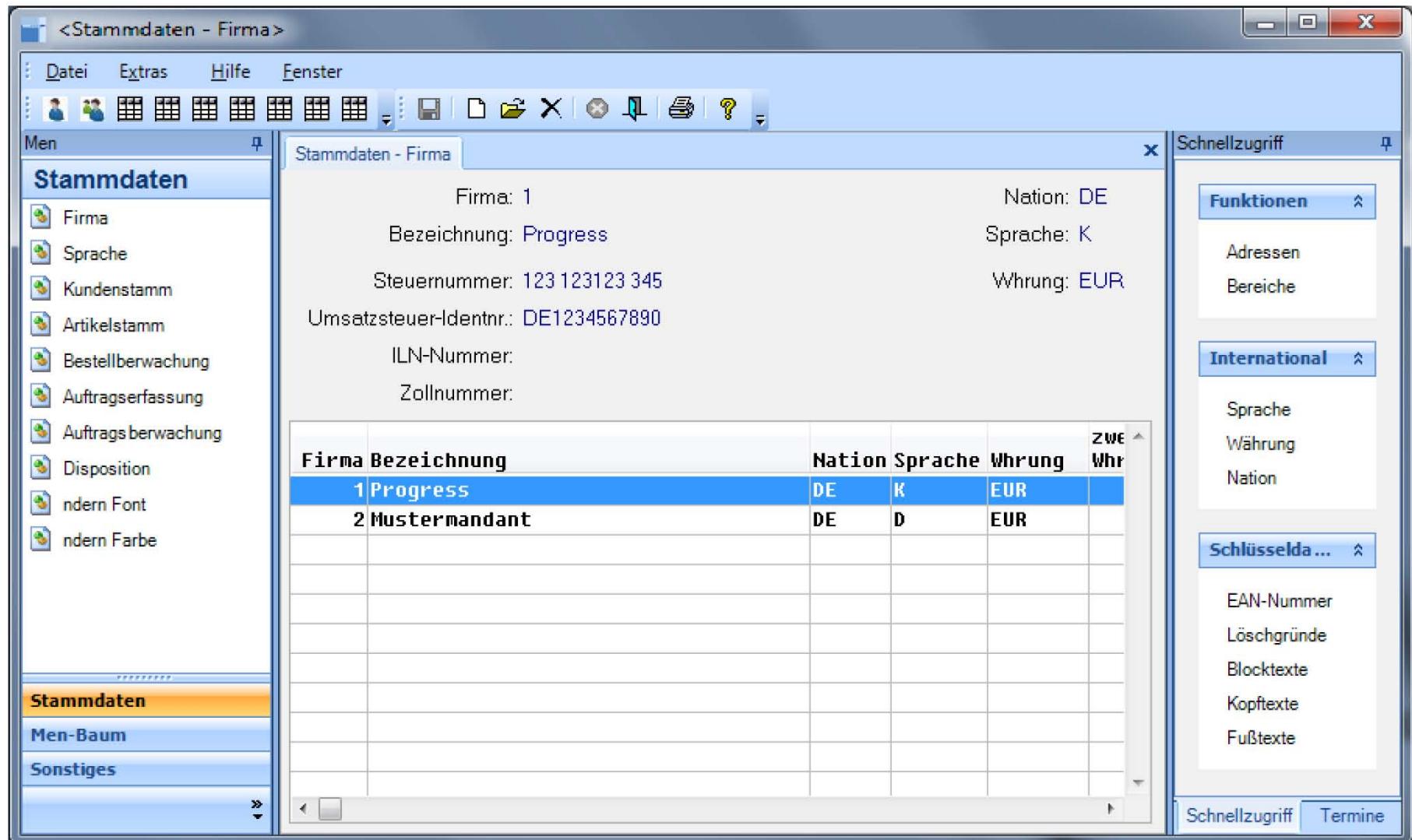
- ERP for textile producers of a German Progress partner
 - AppBuilder view
 - Runtime GUI for .NET
- Own framework, developed in V7/V8
- Transition to multi-window application
- Challenge with pessimistic locking and large transactions
- 10 days of research, customization of customers framework and WinKit



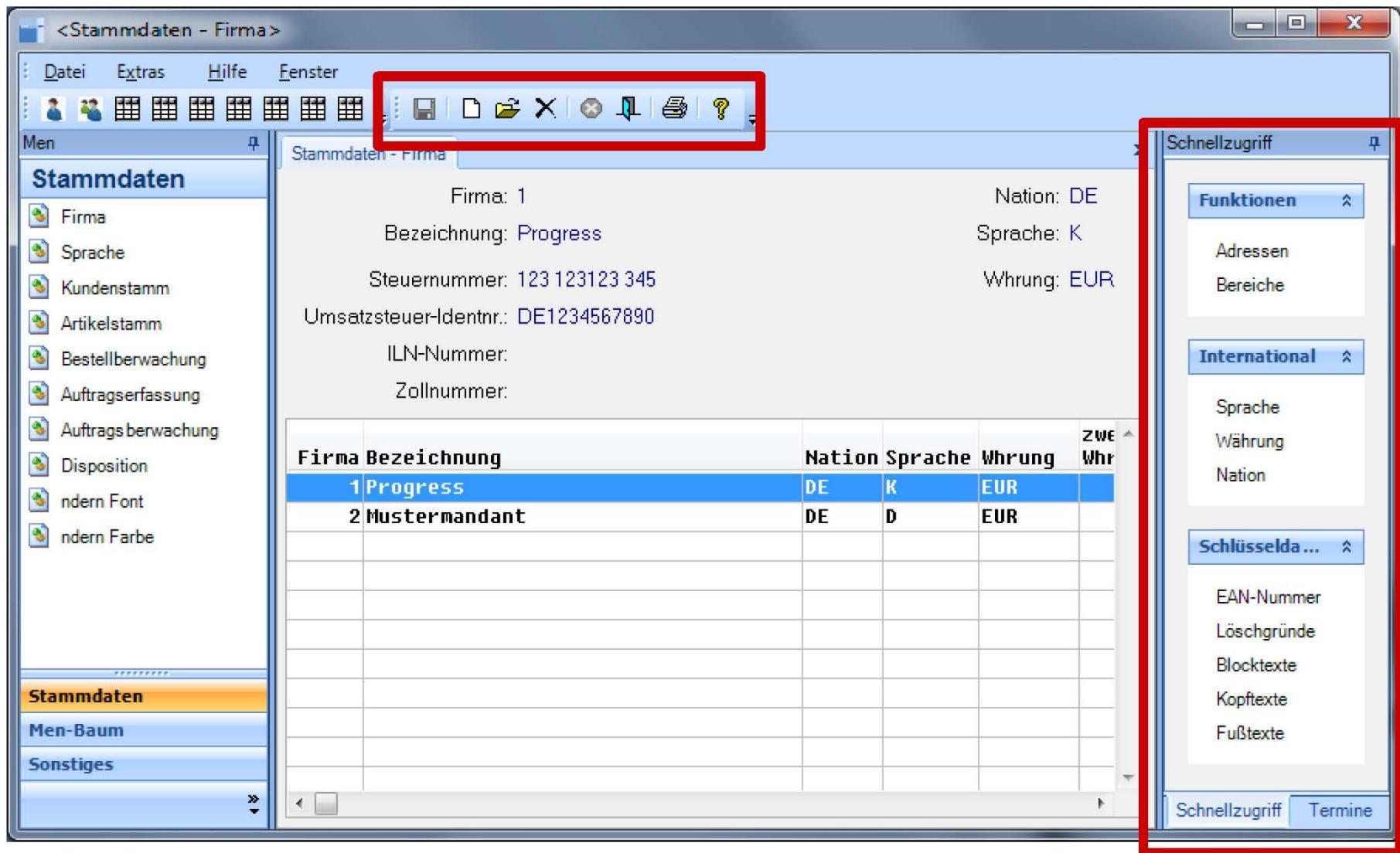
Reference I : Update Texware / Germany



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Reference I: Update Texware / Germany

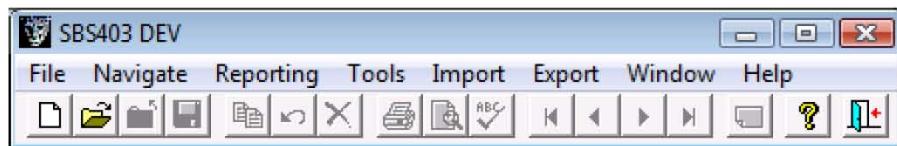
- Case study available at:
- <http://www.consultingwerk.de/update-texware/>

Reference II: Shuttleworth / UK

- UK-based Progress Partner
- Huge ERP system for printing industry
- V8 style framework (ADM1-like)
- Clear vision of Outlook look-and-feel
- Browse windows as MDI children
- Data windows as separate windows
 - Similar to Outlook where Emails and Appointments are opened separately
- Majority of changes in existing framework
- Minor changes to existing screens



Menu Toolbar & Browse Window



A screenshot of a "Selector - Company" window. The window title is "Selector - Company". It features a "Company Filter:" input field and three checked checkboxes: "Prospective Customers", "Customers", and "Suppliers". The main area is a grid table with columns: Company, Sales Ledger Code, Purchase Ledger Code, Prospect Customer, Supplier, Active Customer, and Active Supplier. The "Company" column lists various company names, and the "Sales Ledger Code" column lists ledger codes. The "Prospect Customer" and "Supplier" columns contain "Yes" or "No" values. The "Active Customer" and "Active Supplier" columns also contain "Yes" or "No" values. At the bottom right are "New" and "Open" buttons.

Company	Sales Ledger Code	Purchase Ledger Code	Prospect Customer	Supplier	Active Customer	Active Supplier
OH097000	TEST01		Yes	Yes	Yes	Yes
Abbey	ABG01		Yes	Yes	Yes	Yes
Abbey Edi			Yes	Yes	Yes	Yes
abbey national	HEX30001		Yes		Yes	
ABC Printing & Company	Jones		Yes	Yes	Yes	Yes
aks company	aka01		Yes		Yes	
another new company	BTL1		Yes		Yes	
APS			Yes		Yes	
Bens company			Yes		Yes	
Bob the supplier				Yes		Yes

Menu Toolbar & Browse Window

The screenshot shows a software interface with a menu toolbar at the top and a browse window below it.

Menu Toolbar:

- File: New, Open, Copy, Delete, Notes
- Function: First, Previous, Next, Last
- Selector: Reports

Browse Window:

Navigation: Selector - Company

Entities: Home, Company, Event

Company Filter: Prospective Customers, Customers, Suppliers

Drag a column header here to group by that column.

Company	Pros	Activ	Acti	Main Site	Post Code
0H097000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CW7 3ALXX	
Abbey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	AB1 2BA	
Abbey Edi	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SD2 5FG	
abbey national	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
▶ ABC Printing & Company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	NG1 3MA	
aks company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NN3 44N	
another new company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
APS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	APS	
Bens company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NN9 6TT	
Bob the supplier	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LE16 7PQ	
BOS Payment Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EH12 9HP	
Bradbury and Co	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
BT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Butlin and Co.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LE16 8AY	
Dave	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Dave 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Eastpoint	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Halifax	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LK3 5TT	
HBOS plc	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EH1 1YZ	
highland company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>		
Howard Smith (csv)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Howard Smith Demo Bite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
Imported Company 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	bb99 6FS	

Entities:

- New Group
- New Group

The Shuttleworth System <Selector - Company>

Home Functions Style Selector

New Open Copy Delete Notes First Previous Next Last Reports

Record Navigation Reporting

Navigation Selector - Company

Entities

- Home
- Company**
- Event

ABL Frame Company Filter: Prospective Customers Customers Suppliers

Drag a column header here to group by that column.

Company	Pros	Activ	Acti	Main Site/Post Code
0H097000	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	CW7 3ALXX
Abbey	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	AB1 2BA
Abbey Edi	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SD2 5FG
abbey national	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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another new company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
APS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	APS
Bens company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NN9 6TT
Bob the supplier	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LE16 7PQ
BOS Payment Services	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EH12 9HP
Bradbury and Co	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
BT	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Butlin and Co.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	LE16 8AY
Dave	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Dave 2	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Eastpoint	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Halifax	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	LK3 5TT
HBOS plc	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EH1 1YZ
highland company	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Howard Smith (csv)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Howard Smith Demo Bite	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Imported Company 1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	bb99 6FS

Entities

- New Group
- New Group

Shuttleworth: Data Window

Company - ABC Printing & Company

Company | Customer Details | Supplier Details | Sites | Contacts | Communication Numbers | Events |

Main Representative:	Mark Bradley	Default Sales Nominal:	
Market:	England g	Vat Code:	(None)
Default Pricing Group:	martins test	Vat Registration Number:	ABC135798642
Default Special Uplift:	(None)	Accounts System:	Company 1
Default Special Uplift %:	0.00	Sales Ledger Code:	Jones
Default General Uplift:	(None)	Settlement Days:	0
Default General Uplift %:	0.00	Settlement Discount %:	0.00
Round Up:	0	Invoice Discount %:	0.00
Default Quote Print Price:	(None)	Default Invoice Template:	Bob Invoice
Quote Print Run On Price:	(None)	Default Credit Template:	(None)
Company Code:		Default Quotation Template:	(None)
Business Unit:		Default Production Delivery Template:	Bob del note
Pecs Code:		Summary Exchange Values:	System Default
Pecs Overall Code:		Default Currency:	
<input checked="" type="checkbox"/> Job/Orders Available <input checked="" type="checkbox"/> Deliveries Available <input type="checkbox"/> Multiple Jobs on Automatic Invoices <input type="checkbox"/> Multiple Sop Orders on Automatic Invoices		Exchange Rate:	0.00000000
Default Commodity: Default Delivery Term: Default Carrier: Standard UPS UK			
Warehousing Charges			

Customer | SOP Details | Other Details | Reps | Estimates | Jobs | Master Estimates | Completed Jobs | Brands | Charge C |

New OK Cancel Apply

Shuttleworth: Data Window

Company - ABC Printing & Company

Record

New OK Cancel Save Delete Notes

First Previous Next Last

Navigation

Customer Details

Company Customer

SOP Details

Other Details

Reps

Estimates

Jobs

Master Estimates

Completed Jobs

Brands

Charge Codes

Warehousing Charges

Main Representative: <input type="text" value="Mark Bradley"/>	Default Sales Nominal: <input type="text"/>	
Market: <input type="text" value="England g"/>	Vat Code: <input type="text" value="(None)"/>	
Default Pricing Group: <input type="text" value="martins test"/>	Vat Registration Number: <input type="text" value="ABC135798642"/>	
Default Special Uplift: <input type="text" value="(None)"/>	Accounts System: <input type="text" value="Company 1"/>	
Default Special Uplift %: <input type="text" value="0.00"/>	Sales Ledger Code: <input type="text" value="Jones"/>	
Default General Uplift: <input type="text" value="(None)"/>	Settlement Days: <input type="text" value="0"/>	
Default General Uplift %: <input type="text" value="0.00"/>	Settlement Discount %: <input type="text" value="0.00"/>	
Round Up: <input type="text" value="0"/>	Invoice Discount %: <input type="text" value="0.00"/>	
Default Quote Print Price: <input type="text" value="(None)"/>	Default Invoice Template: <input type="text" value="Bob Invoice"/>	
Quote Print Run On Price: <input type="text" value="(None)"/>	Default Credit Template: <input type="text" value="(None)"/>	
Company Code: <input type="text"/>	Default Quotation Template: <input type="text" value="(None)"/>	
Business Unit: <input type="text"/>	Default Production Delivery Template: <input type="text" value="Bob del note"/>	
Pecs Code: <input type="text"/>	Summary Exchange Values: <input type="text" value="System Default"/>	Default Currency: <input type="text"/>
Pecs Overall Code: <input type="text"/>	Exchange Rate: <input type="text" value="0.00000000"/>	Default Commodity: <input type="text"/>
<input checked="" type="checkbox"/> Job/Orders Available	<input checked="" type="checkbox"/> Deliveries Available	Default Delivery Term: <input type="text"/>
<input type="checkbox"/> Multiple Jobs on Automatic Invoices	<input type="checkbox"/> Multiple Sop Orders on Automatic Invoices	Default Carrier: <input type="text" value="Standard UPS UK"/>

Company - ABC Printing & Company

Data

New OK Cancel Save Delete Notes

First Previous Next Last

Record Navigation

Customer Details

Company Customer Details Supplier Details Sites Contacts Company Events

Main Representative: Mark Bradley
Market: England g
Default Pricing Group: martins test
Default Special Uplift: (None)
Default Special Uplift %: 0.00
Default General Uplift: (None)
Default General Uplift %: 0.00
Round Up: 0
Default Quote Print Price: (None)
Quote Print Run On Price: (None)
Company Code:
Business Unit:
Pecs Code:
Pecs Overall Code:
 Job/Orders Available
 Deliveries Available
 Multiple Jobs on Automatic Invoices
 Multiple Sop Orders on Automatic Invoices

Default Sales Nominal:
Val Code: (None)
Vat Registration Number: ABC135798642
Accounts System: Company 1
Sales Ledger Code: Jones
Settlement Days: 0
Settlement Discount %: 0.00
Invoice Discount %: 0.00
Default Invoice Template: Bob Invoice
Default Credit Template: (None)
Default Quotation Template: (None)
Default Production Delivery Template: Bob del note
Default Currency:
Exchange Rate: 0.00000000
Default Commodity:
Default Delivery Term:
Default Carrier: Standard UPS UK
Warehousing Charges

Customer
SOP Details
Other Details
Reps
Estimates
Jobs
Master Estimates
Completed Jobs
Brands
Charge Codes

ABL Frame

Reference III: CCE / Belgium

- ERP for food industry
 - before
 - after
- Own framework, developed since V8
- ADM1 elements
- WinKit as an intermediate solution
- High demands for added productivity and “demo” features



Reference III: CCE/Belgium

Bestand Fiche Zoeken Extra Tabs Teksten ?

Ordernummer: 2011000034 Ordertype: sr Vestiging: SEGA Entiteit: 1

Leverklant:	BART001 : Bart & Van Beversluys	DHR
	BART001 : Bart & Van Beversluys	DER
Art/art	Leveradres: Edekestraat 58	BART001
Assortiment	1120 Bruxelles (Neder-Over-Hei) BELGIË	

Leverdatum: 0 09/09/11 Friday Week: 201136 Status: ACCP

Opslaan (F1) Opslaan van de gegevens.

Bestelgeg.	Factgeg.	Levergegevens	Direct leveren
Ritcode: 01136CA5D : LFS VR - WO		Gewenste leverdatum: 28/01/11	
Vest afh dr klant:	Afspraaknr:	Uitleverdatum: 09/09/11	
Laadkade:	Prioriteit: 0	<input type="checkbox"/> Backorders	
Vervoerder: LFS001 : Laurent Formesyn		<input checked="" type="checkbox"/> Onvolledige levering toegelaten	
Cd.verv.wz.: 3 : wegvervoer		<input type="checkbox"/> Vervoerdocument per order	
Transporteenheid: PLT : Universele pallet		<input checked="" type="checkbox"/> EDI vervoerdocument?	
Leveringsvoorwaarden: DDU : GELEVERD ZONDER BETAL. RECHTEN			
Leveringsplaats:		Assortimentskl: BART001	
Werkcenter:		Def.UVD:	

User interface modernization

The leverdatum field indicates the date on which the order will be delivered.

CK1 - 25L. Übersicht Aufträge - Auftragkopf - 2011000034

Reference III: CCE / Belgium

Bestand Zicke Zocken Extra Tabs Verksten

Auftrag-Nummer: 2011000034 Bestell-Typ: sr Filiale: SEGA Einheit: 1

Lief-Kunde: BART001	: Bart & Van Beversluys	DHR
BART001	Bart & Van Beversluys	DER
<input type="radio"/> Art/art	: Edekestraat 58	BART001
<input checked="" type="radio"/> Assortiment	1120	Bruxelles (Neder-Over-Heembeek BELGIË)

Leverdatum: 0 09/09/11 Vrijdag Week: 201136 Status: ACCP

Besteldaten Rechnungsdaten Lieferungsdaten Referenzen Direct. lev.

Bestell-Kunde: BART001	: Bart & Van Beversluys	DHR
BE 1120	Bruxelles (Neder-Over-Heembeek	
<input checked="" type="radio"/> B Kontakt:		GSM:
<input type="radio"/> L Tel: 09 328 06 691234		Fax:
Besteldatum: 28/01/11	Bestell-Art: FAX	Bestellungsbestätig.: FAX
Bestätigungsdatum:	Anzahl Bestätigungen: 0	BVB-Typ:
Art Verkauf: STD	: Standaard	Eindddatum:
Afhandeling: VRD	:	Dossier:

Save / Exit Save Cancel

User Interface modernization

Printer: 11 Notepad

Volgorde: 1. code

Aantal: 1 Taal code: 01 : Nederlands

ABL FRAME for Print Selection and Functions

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Report en

Afdrukken



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Leverklant:

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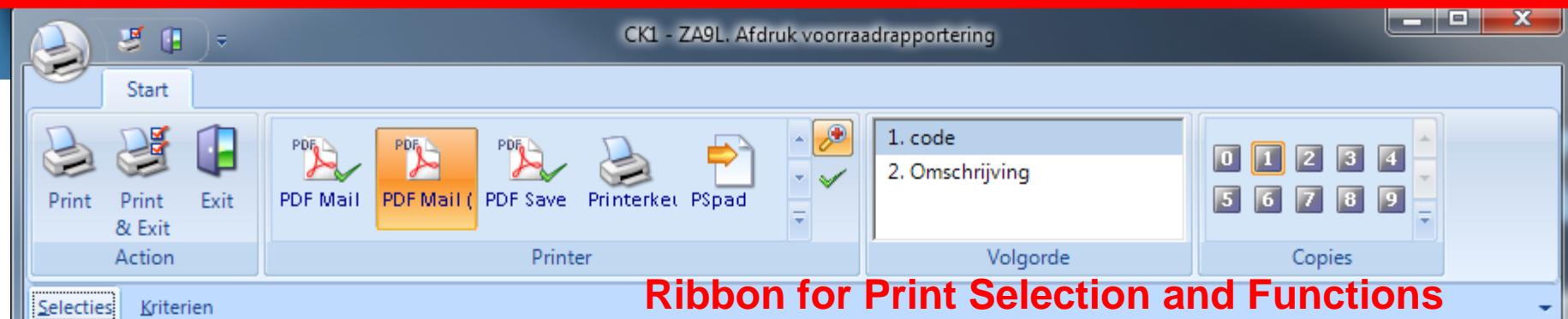
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Ribbon for Print Selection and Functions

Selectie:	Sort	Tit	Tot	Blad	Oms
Vestiging: *					
Magazijn: *					
Artikel: *					
Kenmerk 1: *					
Kenmerk 2: *					
Kenmerk 3: *					
Kenmerk 4: *					
Aankoop km 1: *					
Aankoop km 2: *					
Aankoop km 3: *					
Aankoop km 4: *					
Merk: *					
Status: *					
<input type="checkbox"/> Uiterste verbruiksdatum	Van:	Tot:			
<input type="checkbox"/> Produktiedatum	Van:	Tot:			
<input type="checkbox"/> Verpakkingsdatum	Van:	Tot:			
Locatie type: *					
Locatie Van: *	Locatie Tot: *				
Stock unit: *					
Omverpakking: *					
Lotnummer: *	<input type="checkbox"/> Extern Lot				
Fifo order: *					
Leverklant: *	:				

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- Hands-On Labs

Agenda

- Overview
- Adoption challenges and strategies
- Running .NET Forms from ABL menus
- Simple embedding
- Embed an ABL window using the WinKit
- Add an Icon to the .NET Form
- Rendering of Toolbars
- Refreshing Toolbars
- Color customization
- Rendering of Browsers

Running .NET Forms from ABL menus

- Requires: The (one and only) WAIT-FOR Statements needs to be .NET style
- Small modification in mainmenu.w program

~~WAIT-FOR CLOSE OF THIS PROCEDURE.~~

```
/* .NET WAIT-FOR not associated to a .NET Form */
WAIT-FOR System.Windows.Forms.Application:Run () .

/* Use this method to terminate the WAIT-FOR, e.g
   from a WINDOW-CLOSE trigger. */
System.Windows.Forms.Application:Exit() .
```

Running .NET Forms from ABL menus

- Requires: The (one and only) WAIT-FOR Statements needs to be .NET style
- Small modification in mainmenu.w program

~~WAIT-FOR CLOSE OF THIS PROCEDURE.~~

Replace
WAIT-FOR for
.NET support

```
/* .NET WAIT-FOR not associated to a .NET Form */
WAIT-FOR System.Windows.Forms.Application:Run () .

/* Use this method to terminate the WAIT-FOR, e.g
   from a WINDOW-CLOSE trigger. */
System.Windows.Forms.Application:Exit() .
```

Running .NET Forms from ABL menus

- Code of MAIN-BLOCK after implementing the .NET WAIT-FOR

MAIN-BLOCK:

```
DO ON ERROR UNDO MAIN-BLOCK, LEAVE MAIN-BLOCK
  ON END-KEY UNDO MAIN-BLOCK, LEAVE MAIN-BLOCK:
    RUN enable_UI.
    IF NOT THIS-PROCEDURE:PERSISTENT THEN
      WAIT-FOR System.Windows.Forms.Application:RUN () .
    /* WAIT-FOR CLOSE OF THIS-PROCEDURE.*/
  END.
```

Running .NET Forms from ABL menus

- Code of CLOSE Trigger to end the session

```
ON CLOSE OF THIS-PROCEDURE DO:  
  RUN disable_UI.
```

```
  System.Windows.Forms.Application:Exit () .  
END .
```

Running .NET Forms from ABL menus

- Hands on:
Source converting (keep old ABL menu) (Lab 1)

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Simple embedding

- Calling an ABL window from a .NET Form
Hands on: Lab 2.1
- Embedding ABL windows using the
Progress.Windows.MdiChildForm
Hands on: Lab 2.2
 - Create an include file (makeEmbedded.i)
 - Add the include file to the ABL window code
- Run a .NET Dialog from an ABL window
Hands on: Lab 2.3

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Embed an ABL window using the WinKit

- List of include files supplied by the WinKit
 - `src/winkit/embedwindow.i`
 - `src/winkit/embedfinalize.i`
 - `src/winkit/closewindow.i`

Embed an ABL window using the WinKit

- Hands on:
Lab 3

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Add an Icon to the .NET Form

- Set the Icon property of the oFormControl

```
PROCEDURE finalizeEmbedding :
```

```
/*-----  
   Purpose:  
   Notes:  
-----*/
```

```
/* Mike Fechner, Consultingwerk Ltd. 11.11.2010  
   Load an Icon for the .NET Form */  
FILE-INFO:FILE-NAME = "images\window2.ico".  
IF FILE-INFO:FULL-PATHNAME > "" THEN  
   oFormControl:Icon = NEW System.Drawing.Icon  
      FILE-INFO:FULL-PATHNAME) .  
  
END PROCEDURE.
```

Add an Icon to the .NET Form

- Hands on:
Lab 4

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Rendering of Toolbars

- Build a Toolbar from the button widgets in the first 1.5 rows of the ABL window
- Move up the window frame to hide the buttonwidgets

```
Consultingwerk.Util.UltratoolbarsHelper:BuildToolbarFromFrame
```

```
(FRAME {&frame-name}:HANDLE,  
 {&window-name}:HANDLE,  
 1.5,  
 oForm:ToolbarsManager).
```

```
oForm:WindowContainerRowOffset = 27.
```

Rendering of Toolbars

- Hands on:
Lab 5

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Refreshing Toolbars

- Invoke the RefreshTools method of the UltratoolbarsHelper wherever the state of a button gets changed in code

FINALLY:

```
Consultingwerk.Util.UltratoolbarsHelper:RefreshTools  
    (oForm:ToolbarsManager) .
```

END FINALLY.

Refreshing Toolbars

- Hands on:
Lab 6

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Color customization

- Set the background color of each frame
- Set the background color of the ABL window

```
Consultingwerk.Util.WidgetHelper:SetFrameBackgroundColor  
    ({&window-name}, 33, 15, 15).
```

```
{&window-name}:BGCOLOR = 33.
```

Color customization

- Hands on:
Lab 7

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Rendering of Browsers

- Define reference variable for the RenderedBrowseControl

```
DEFINE VARIABLE oGrid AS  
Consultingwerk.WindowIntegrationKit.Controls.RenderedBrowseControl  
NO-UNDO.
```

Rendering of Browsers

- Create the .NET control

```
oGrid =  
NEW Consultingwerk.WindowIntegrationKit.Controls.RenderedBrowseControl  
    (BROWSE {&browse-name}:HANDLE,  
     oForm,  
     oForm:ClientArea,  
     FALSE,  
     THIS-PROCEDURE) .
```

Rendering of Browsers

- Implement view and hide logic for the RenderedBrowseControl

```
IF rs-show = 1 THEN DO:  
    VIEW FRAME frame-a .  
    HIDE FRAME frame-b .  
&IF DEFINED (winkitactive) NE 0 &THEN  
    IF VALID-OBJECT (oGrid) THEN  
        oGrid:VISIBLE = TRUE .  
&ENDIF  
    END .  
ELSE DO:  
    HIDE FRAME frame-a .  
    VIEW FRAME frame-b .  
&IF DEFINED (winkitactive) NE 0 &THEN  
    IF VALID-OBJECT (oGrid) THEN  
        oGrid:VISIBLE = FALSE .  
&ENDIF  
    END .
```

Rendering of Browsers

- Hands on:
Lab 8

Questions



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Consultingwerk
software architecture and development

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The lucky winner will be announced at the end of the conference.

- **Getting started with Embedded Windows,**
A practical introduction into WinKitLE (practical hands-on workshop),
Mike Fechner & Marko Rüterborries, Sunday, June 5th, 1:30 – 4:30
- **SmartComponent Library: GUI for .NET and OERA**
the productive way!
(Commercial presentation), Mike Fechner & Marko Rüterborries,
Monday, June 6th, 4:00 – 5:00
- **Extending the OpenEdge Architect Visual Designer,**
Mike Fechner, Tuesday, June 7th, 4:00 – 5:00
- **Extreme Windows Desktop Integration,**
Mike Fechner, Wednesday, June 8th, 11:15 – 12:15

first name
surname
e-mail
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