



# DEV-20: Sex and Sizzle – Developing with .NET and OpenEdge 10


Paul Petersen and Brad Ackermann



## DEV- 20: Sex and Sizzle – Developing with .NET™ and OpenEdge® 10

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### Agenda

**Some Business, More Technical**

- Why Sex and Sizzle?
- Target Body (Architecture)
- Warning - plastic surgery isn't for the faint hearted...
- Deep Dive:
  - How to put your fat GUI V9 app on a diet
  - Example: Re-Generate
  - Example: Re-Factor
  - Example: Re-Develop
  - Tips and Tricks
- What it really takes - Warts and All
  - Tailoring OERA, .NET Infrastructure, UI facial
- Summary

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### Why Sex and Sizzle?

**Background**

- Established in 1987. "SuperVisor" Product was born.
- Software Provider to *Superannuation / Retirement Administrators* eg
  - 401K Retirement Administration (USA)
  - Special Retirement Plan (France)
- 4 of 5 largest Self-Managed Super Providers, 100s of Accountants
- History of Transformation (legislative/market necessity)
- Last complete rewrite in 98/99. "Supervisor II" drove new business!
- **10 years, 12 major, 80+ minor releases later ...**

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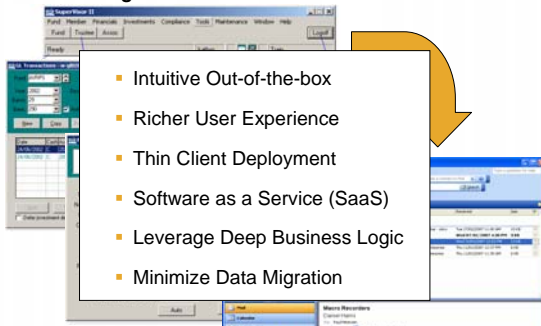
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### Why Sex and Sizzle?

*Time for new generation of our software*



- Intuitive Out-of-the-box
- Richer User Experience
- Thin Client Deployment
- Software as a Service (SaaS)
- Leverage Deep Business Logic
- Minimize Data Migration

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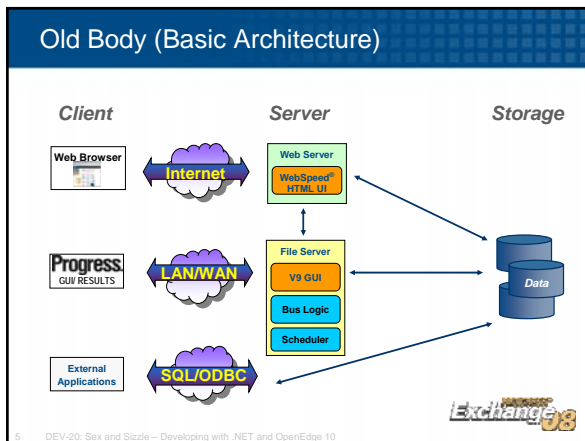
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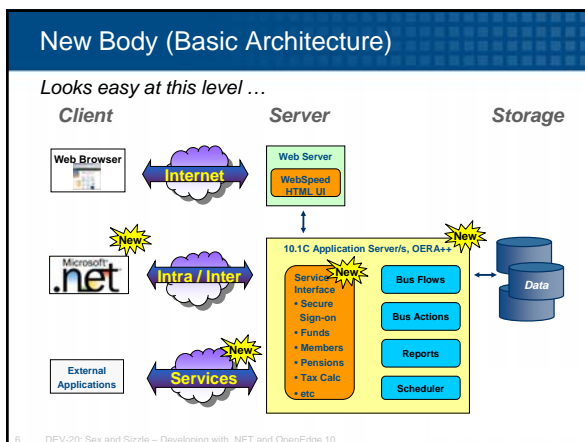
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### New Body (Technologies)

**Body Parts**

- Appearance .NET User Interface + Infragistics  
(Advanced GUI was still being developed)
- Skeleton C#, OpenClient, Progress AppServer™, DB, OpenEdge 10.1C -> Deploy 10.2A?
- Organs Supercorp .NET, modified OERA, Superannuation Services (V9 -> OE10)
- Tools Visual Studio, OpenEdge Architect, SCM - Subversion/Subclipse/Tortoise SVN Code Generators
- Vital Statistics Crystal for Reporting

### New Body (New Appearance)

**Inspiration ...**

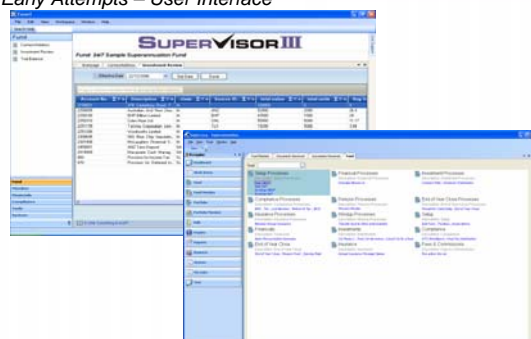


Sleek, Stylish, but Practical
Flexible but Robust
Portable and Affordable
Excellent SDK
Remote with Monitoring
Multi-Actor Calibration

<http://www.vrealities.com/qypsy5.html>

### Warning - plastic surgery isn't for the faint hearted...

**Early Attempts – User Interface**



### Seek Expert Advice and Help ...

1. Got Progress Involved [App. Transform. Workshop Consulting - USA .NET Expert](#)
2. Leveraged internal skills [Past Lessons learnt](#)  
[Major Functionality Review](#)
3. Brainstorm / Workshop [Downloaded OERA, AutoEdge](#)  
[Prototype the look and feel](#)
4. Trial at User Group [Taste Test](#)
5. Iteratively Build/Harvest [Infrastructure / Functionality](#)
6. User Feedback Sessions [Continually Fine Tune](#)

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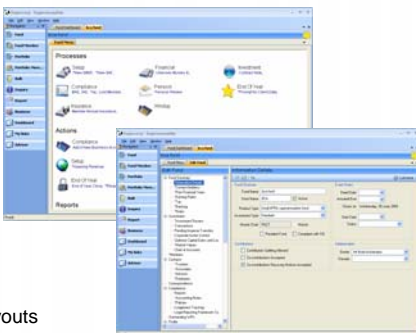
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### Demo – Plastic Surgery can work!

**Several Iterations Later..**

- Search
- Tile Menus
- Workspaces
- Standard Layouts



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### Agenda

**Now for the Deep Dive...**

- Deep Dive:
  - How to put your fat GUI V9 app on a diet
  - Example: Re-Generate
  - Example: Re-Factor
  - Example: Re-Develop
  - Tips and Tricks
- What it really takes - Warts and All
  - Tailoring OERA to Supercorp Style
  - .NET infrastructure / middleware
  - UI still needs a facial

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How to thin down your fat GUI V9 app


Liposuction anyone?

Analyse

Re- Generate

Re- Factor

Re- Develop



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Old Body (Check Up)

Analysis can be revealing...

Application UI d-, b-, v-, w-\*.w

Logic in local row-available, DB access etc

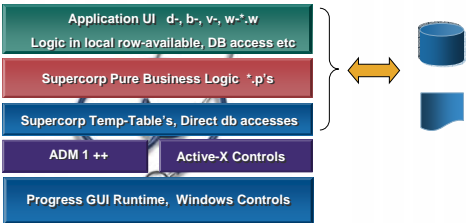
Supercorp Pure Business Logic \*.p's

Supercorp Temp-Table's, Direct db accesses

ADM 1 ++

Active-X Controls

Progress GUI Runtime, Windows Controls



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New Body (Architecture Diagram)

Now that looks better!

Rich, Thin Client

SaaS/App Server

New UI – MyApp.exe

New Presentation/Bus. Logic \*.cs

Supercorp.NET, Supercorp.Middleware

Infragistics

Progress\*.dll

.NET Runtime, Windows Controls

Service Interface

New Flow, Task, Entity Logic

Supercorp Wrapped, Pure Logic

Data Access Logic – Wrapped tt's

OERA++

Supercorp Ext.

Progress AppServer Runtime

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Progress Exchange 2008  
 8-11 June, 2008  
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## Demo – Re-Generate

### Send in the Clones

- Show creation of a simple maintenance screen
- Code Generators
  - ABL (Server)
  - .NET (Client)
- Templates
- Meta Database

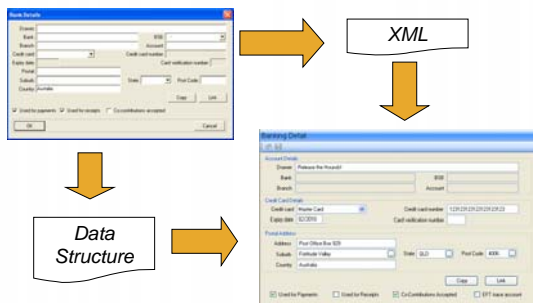


14xchange 08

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## Tools needed for the job ...

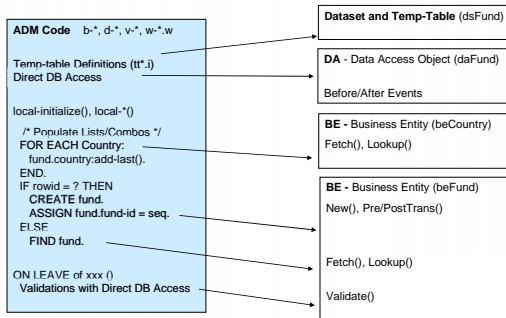
### Liposuction Part 2..



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## What to Re-Factor / Wrap?

### Re-Factor or Wrap – Data Definitions, DB access, Validation



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### What to Re-Factor / Wrap? Part 2

*Re-Factor or Wrap – Business Logic*

**ADM (Continued)**

```

ON LEAVE OF yyyy()
  Run tax.p /* common calc */

ON CHOOSE OF BUTTON-SAVE()
  More Validations
  TRANSACTION:
    Business Logic for Save
  END.

Local-row-available()
...
Other Internal Procedures
        
```

**BE - Business Entity (beFund)**

```

New()
/* Set default values */
Fetch(), Lookup()
run setContext("WhereString" ..
run fetchWhere()

Validate()
TaxCalc()

SaveChanges()
  run Validate()
  run WrappedLogic() or ReFactor

Pre/PostTrans()
ASSIGN sequence()

Internal Procedures / Functions()
        
```

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### Demo –Re-Factor / Wrap

- Show Re-factor / Wrap – External Banks
- Old V9 ADM Code
- New OpenEdge 10 / OERA
  - Business Entity
  - Data Access



**Exchange 98**

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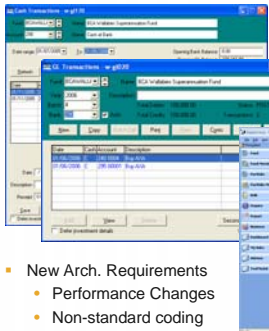
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### When to Rewrite?

**Extreme Makeover...**



- New Business Requirements
  - New Functional Capabilities
  - Major UI Changes
- New Arch. Requirements
  - Performance Changes
  - Non-standard coding

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### Demo – When to Re-Develop

- Show Cash Transaction
- Complex Logic
- New Bus. Services
- New UI Features



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### Summary of Tips and Tricks

*What Side Effects?*

- Tip 1 - Get experts involved early
- Tip 2 - Trial prototypes with real users
- Tip 3 - Standardize Screen Patterns and Features
- Tip 4 - Too many UI options doesn't make it user friendly
- Tip 5 - Wrapping old code is ok, harvest where possible
- Tip 6 - Infrastructure – Buy Vs Build - iterate!
- Tip 7 - Maximise existing tools e.g. Subversion, NUnit, ...

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**Warts and All...**

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### Tailoring OERA to Supercorp Style

*More Surgery*

- Modified persistent support procedures ([startserver.p](#))
- Added Session Security, Modified User Security  
([proSlgateway.p](#), [securityserver.p](#), [sessionserver.p](#))
- Added Session Context – Data Types ([context.p](#))
- Modified BE to BE calling ([libraryserver.p](#))  
e.g. `RunInputOutputComponentMethod()`
- New Error/Msg system ([message.p](#))



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### .NET Infrastructure

*Some Examples of Where the real cost is ...*

- Wrapping all Infragistics and Windows Controls
  - Goal is to standardise and simplify for developers
  - Pre-defined Rules eg `Date >= Today`
- Developing Standard Base/Screen Templates, Layouts
- Getting Gateway and Appl. Error Management right
- .NET Datasets and UI mapping
  - Default values, Nulls, unique-ids
  - Key field and Data Type mapping
  - Managing complex Grid and Tree



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### UI Still Needs a Facial


*Time Consuming ...*

- Tweaking – Colours, Edge Pixels, Effect of Themes etc
- Input Masks/Formats, Column Headings, Group-Box, Sort

```

ColumnDisplayFormatter formatter = new ColumnDisplayFormatter(columns);
UltraGridColumn col;
columnsHost.Bands[0].Columns.Add("Fund", "Fund").ExcludeFromColumnChooser
= ExcludeFromColumnChooser.True;
col = columnsHost.Bands[0].Columns.Add("AcBal", "Acct Balance").Width = 100;
formatter.SetFormat(col, ColumnDisplayFormatter.FormatType.LedgerAmount);
/* eg {"-nnn,nnn,nnn.nn",@"####.##0.00;###.###.##0.00"} */
formatter.SetVisibleColumns("TranDate", "AcNum", "AcBal", ...);

SortedColumnsCollection sortCols =
columnsHost.Bands[0].SortedColumns;
if (sortCols.Count.Equals(0)) {
    sortCols.Add("TranDate", true); /* ASCENDING */
    sortCols.Add("AcNum", false); /* DECENDING */
}
    
```



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## In Summary

- Involve Experts / Users Early
- Leverage Latest / Greatest Technologies
- Plastic Surgery is Expensive
- Results are Amazing!!



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## For More Information, go to...

- **PSDN**
  - Implementing the OpenEdge Reference Architecture: Webinar, Whitepapers – John Sadd  
<http://www.psdn.com/library/entry.jspa?externalID=107&categoryID=289>
  - Implementing the OpenEdge Reference Architecture: Code  
<http://www.psdn.com/library/entry!default.jspa?categoryID=289&externalID=1442>
  - Introduction to DataViews I, II, III – Haavard Danielsen
  - .NET Interface Tips, Tricks, and Traps - David Olson
- **OpenEdge Documentation:**
  - Open Client Introduction and Programming
  - .NET Open Clients



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## Relevant Exchange Sessions

- DEV-24: What's New with ProDataSets in 10.1C?
- DEV-26: OpenEdge Strategy and Roadmap
- **DEV-29: A Deep Dive into Developing with the Advanced GUI**
- DEV-36: Composite MVP – Building Blocks in Presentation Layer
- DEV-40: Using SmartDataObjects with the Advanced GUI

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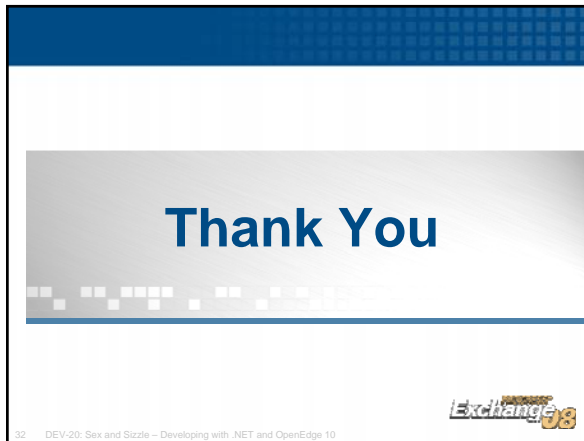
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