1 Creating and Using Real World Builders – Made Easy

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2 Who Am I?

- President of White Light Computing, Inc.
- Co-author: *What's New in Nine*
- Co-author: *Deploying Visual FoxPro Solutions*
- Co-author: *MegaFox: 1002 Things You Wanted to Know About Extending Visual FoxPro*
- Co-author: *1001 Things You Wanted to Know About Visual FoxPro* (KiloFox)
- VFP MVP and MCP
- Author of WLC HackCX & MenuDesigner
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3 What Session Covers

- Introduce builder technology
- Introduce the native VFP builders
- How to create/register builders
- Non-traditional builders
- Builder and BuilderX properties
- BuilderB and BuilderD technology
- Property Editors
- Examples and freebies

4 Session Inspiration

- VFP 3 DevCon 1995 (San Diego)
  - John Alden and David Anderson
- Hennig's session/whitepaper
- Visual MaxFrame
- Visual FoxExpress
- Was Potential MegaFox Chapter
- *Get More Productive with VFP*

5 What is a Builder?

- Technology built-in since VFP 3
- Extension of Form and Class Designers
- Extension/replacement of Property Sheet
- Code generation tool

6 What is a Builder?

- Unlike the wizards, they are re-entrant
- Any tool that helps us create apps
- Can be used to reduce exposure to specific properties and provide a set of valid settings

7 What can builders do?

- Add and remove properties and methods
- Add and remove objects
- Change property values and method code

8 What can builders do?

- Get property expressions
- Get method code
- Create classes, write programs, generate tables, generate stored procedures, assemble reports, and generate metadata

9 Native VFP Builders

1
- Application
- AutoFormat
- Combo Box
- Command Group
- Cursor Adapter (VFP 8)
- Data Environment (VFP 8)
- Edit Box

2
- Form
- Grid
- List Box
- Option Group
- Referential Integrity
- Text Box
- XML Web Service (VFP 8)
- Member Data Editor (VFP 9)

10 How do I access Builders?

- Object Context Menu in designer
- Form Control toolbar builder lock (Options Dialog)
- Form Designer Toolbar
- Project Builder from Project Manager
- Toolbox (VFP 8)
- Command Window or menu

11 VFP Builder Implementation

- _Builder and Builder.app
- Builder and BuilderD table
- FoxUser Resource points to Builder.dbf
- What happens if no builders for object?
- What happens when one builder is registered for an object?
- Can I have more than one?
- What Builder bug does VFP 9 fix?

12 Which ones are worthy?

- Option Group
- Referential Integrity (RI)
- DataEnvironment

- CursorAdapters
- Member Data Editor
- Any other one you find beneficial

13 Implementation Techniques

- ASELOBJ()
- SYS(1270)
- AMOUSEOBJ()
- WriteExpression / ReadExpression
- WriteMethod / ReadMethod
- ResetToDefault
- Builder and BuilderX properties

14 Create from Scratch

1. Pros
   - More control
   - Easy to integrate into existing VFP builder implementation
   - PRG, VCX, SCX, APP
   - Customizable without fitting it to predefined architecture
   - Educational
2. Cons
   - More grunt work
   - Individual builders for each type of class

15 BuilderB Technology

1. Pros
   - Framework removes some of the grunt work
   - Consistent user interface
   - Extendible
   - Easy to learn
   - Integrated into VFP
2. Cons
   - Need to create a builder for each class or set of classes (more code exposure and maintenance than BuilderD)
   - Need to learn framework

16 BuilderD Technology

1. Pros
   - Framework removes the grunt work
   - Consistent user interface
   - Least code exposure of all techniques since it is data driven
   - Extendible
   - Built into VFP
2. Cons
   - Need to learn framework (metadata is complex)
   - Least Flexible
   - Additional implementation headaches (distribution of metadata)

17 Property Editors

- New in Visual FoxPro 9
- Available via the Property Sheet

- Defined in “E” records in FoxCode.dbf
- Typically work with one property
- Anchor, Caption, _MemberData ship with VFP 9
- Work with intrinsic properties, but even better for custom properties

18 Third-Party Builders

- WLC ProjectBuilder
- WLC Tab Order Builder
- WLC Font Setter
- WLC Label Builder
- WLC Builder Metadata Editor
- Stonefield Grid Builder
- Stonefield RI Builder

19 Third-Party Builders

- Tax RI Builder (Walter Meetzer)
- CA VCX Builder (Mark McCasland)
- ProjBuilder (Erik Moore)
- Stored Proc Builder (Erik Moore)
- Visual FoxExpress (F1 Tech)

20 Limitations

- Cannot directly change properties like BaseClass, Class, Classlib, ParentClass because live objects
  - Use AddObject() and RemoveObject()
- Single “All” builder gotcha

21 Resources

- Whitepaper from this session
- White Light Computing website
  (www.whitelightcomputing.com)
- Doug Hennig’s whitepaper
  (www.stonefield.com)
- Hacker’s Guide to VFP 7

22 Resources

- Fox Wiki
  (www.fox.wikis.com)
- Universal Thread
  (www.universalthread.com)
- FoxTalk
- FoxPro Advisor

23 Questions?

- If there is time for questions that have not been asked during session, now is a great time to ask
- Feel free to ask me questions about this at any time during the conference
- Contact information is in the white paper if you want to ask after the conference

24 Southwest Fox Update Page

www.southwestfox.com

This session will have web updates

25 Thank You

Please remember to fill out your evaluation.