Customizing Progress Developer Studio for OpenEdge

Gunnar Schug, VP Development, proALPHA Software AG

Customizing – why???

- Automate recurrent tasks
  - Program headers
  - Code fragments
- (Re-)use your ABL based development tools
- Converge development process and development tools

Customizing – how???

proALPHA

Customizing PDS (simple)

Customizing PDS (extreme)

A day in the life of a proALPHA developer

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History / Milestones

1994
First **proALPHA®** Version

1998
Beginning of **internationalization**;
USA, France, Hungary, Austria

2005
Foundation of proALPHA Poland

2010
Member of the Software Cluster funded by the German Federal Ministry of Education and Research (BMBF)

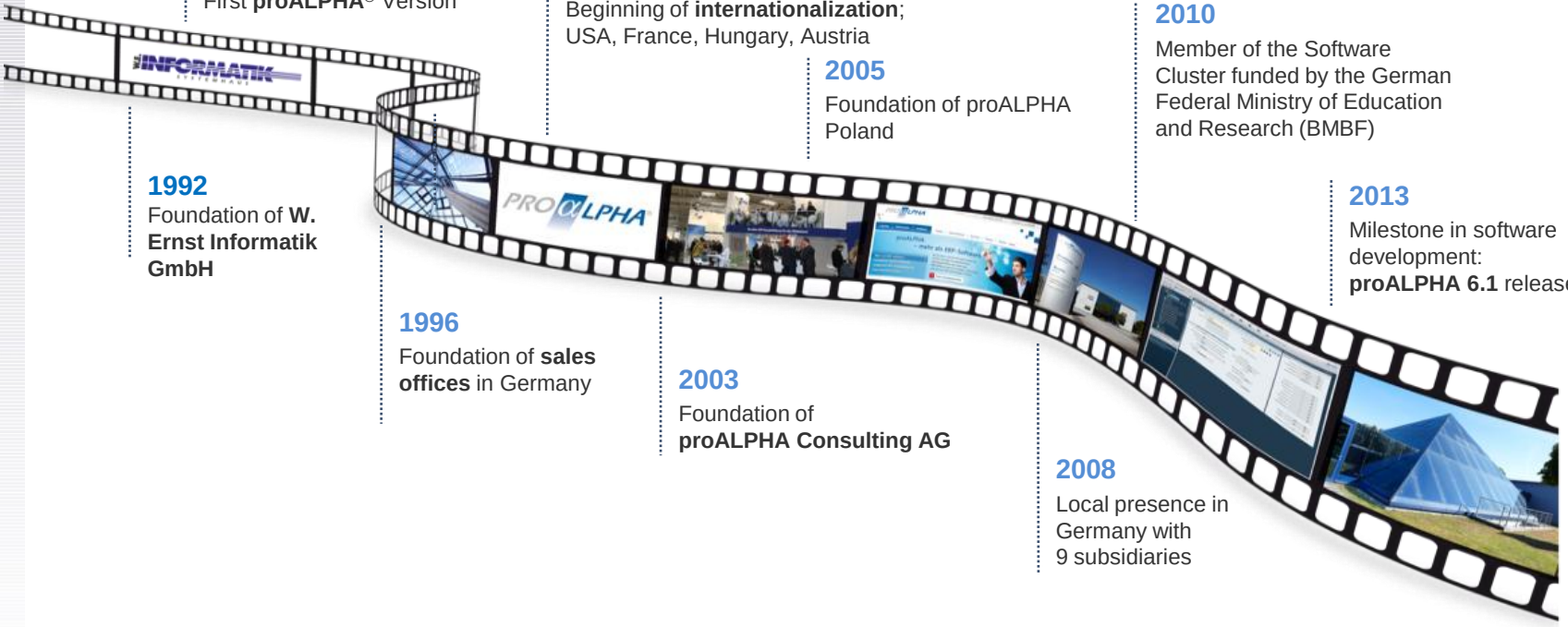
2013
Milestone in software development:
proALPHA 6.1 released

1992
Foundation of **W. Ernst Informatik GmbH**

1996
Foundation of **sales offices** in Germany

2003
Foundation of **proALPHA Consulting AG**

2008
Local presence in Germany with 9 subsidiaries



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proALPHA – Partner for Small and Medium Sized Enterprises

Product:	Standard software proALPHA®	
Services:	IT consulting, project management, implementation, seminars, maintenance, support and hotline	
Target market:	Small and medium-sized industrial, trade and service enterprises	
Figures:	Customers	1,700
	Revenue 2012/2013	58,8 million €
	EBIT	10.8 million €
	Employees (as of 07/2013)	> 580
Board of management:	Leo Ernst	Corporate development
	Werner Ernst	Technology strategy
	Jürgen Brand	Finances
	Markus Klahn	Sales
	Matthias Kläsener	Technology and consulting
Supervisory board:	Dr. W. Wawrzinek	Lawyer and auditor in Hamburg
	Jan-Christopher Kling	Tax advisor and auditor in Kaiserslautern
	Prof. Dr. H. Müller-Merbach	TU Kaiserslautern
	Prof. Dr. H.-O. Günther	TU Berlin

Agenda

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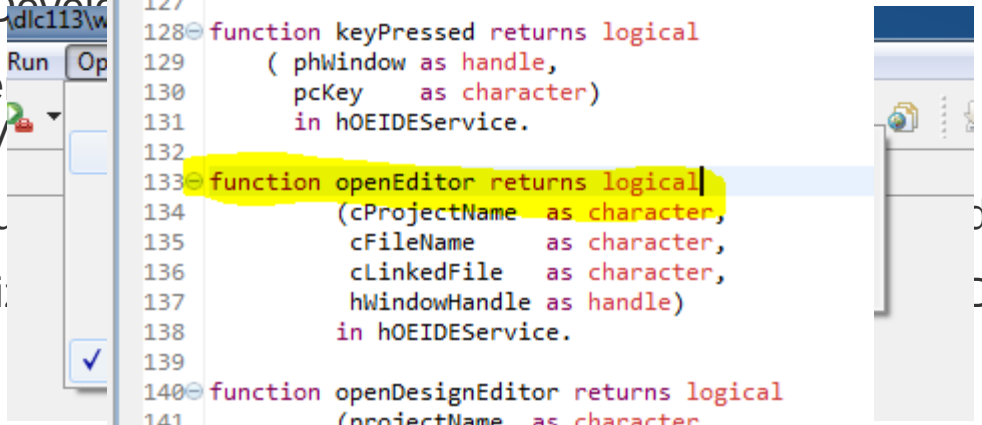
Customzin… Things, yo… art…

- Progress Develo…
- Every Ope… (exception "shared AV…
- Both execu… directions
- → customi… DS



oeideservice.i

```
121          in hOEIDEService.
122
123  function gotoPage returns logical
124          (phWindow as handle,
125           piPage as int)
126           in hOEIDEService.
127
128  function keyPressed returns logical
129      ( phWindow as handle,
130        pcKey    as character)
131        in hOEIDEService.
132
133  function openEditor returns logical
134          (cProjectName  as character,
135           cFileName     as character,
136           cLinkedFile   as character,
137           hWindowHandle as handle)
138          in hOEIDEService.
139
140  function openDesignEditor returns logical
141          (projectName  as character,
142           fileName     as character)
143           in hOEIDEService.
144
145  function openTextEditor returns logical
146           (cProjectName  as character,
147            cFileName     as character )
148            in hOEIDEService.
149
```

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Out of the box customizing options in PDS

- Macros
- Startup routines
- Event subscription
- Menu and toolbar options
- Code-generation templates
- Custom project types

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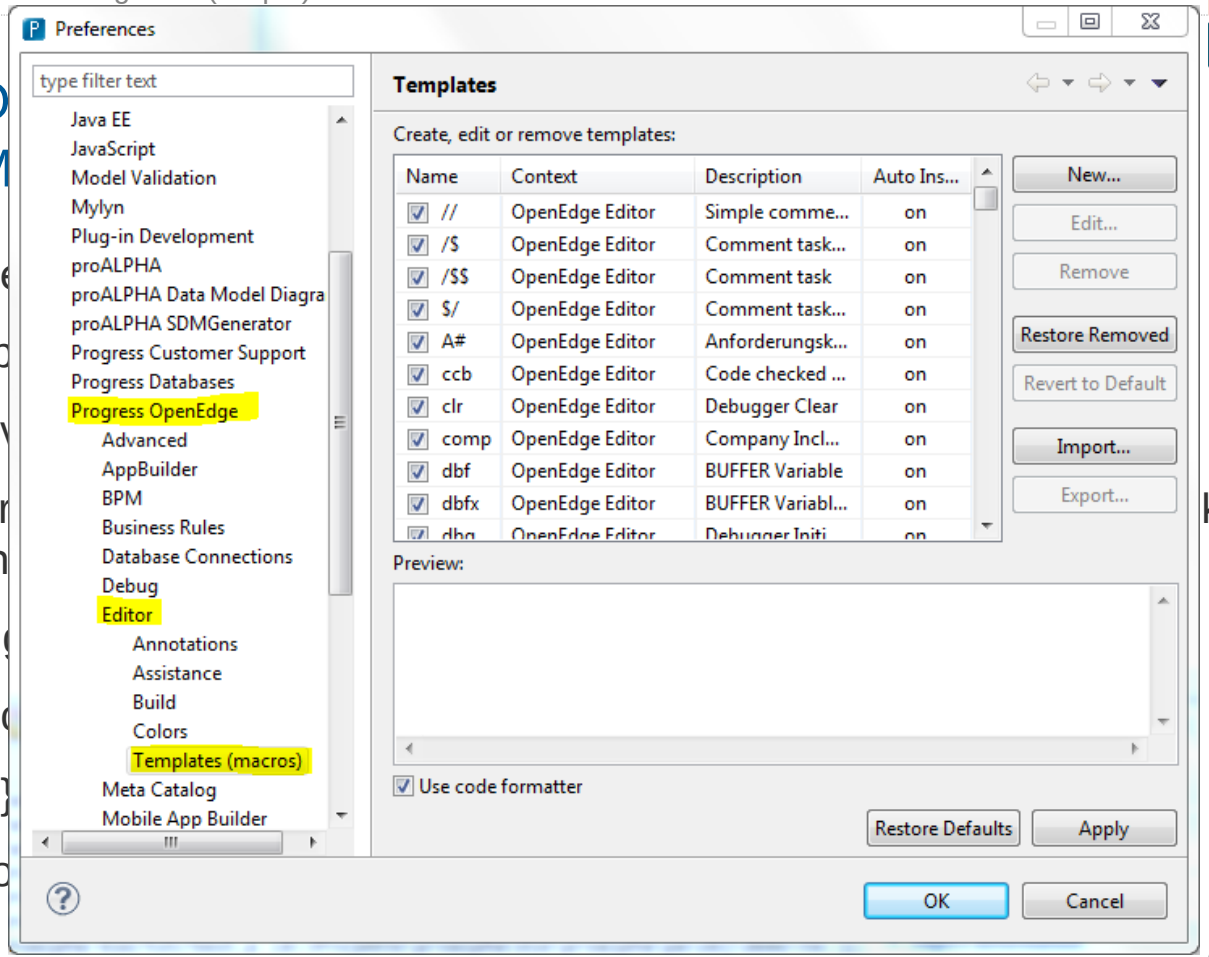
M

- Easi
- Simp
  - “dv
  - “ifr
    an
- Usin
  - ${
  - ${}
- Expo

keyboard



Demo

Out of the box customizing options in PDS Startup routines

- Use your existing (ABL-) Framework in PDS
- Just place file “_idestartup.p” in propath
- Start your framework (persistent procedures, OOABL services, etc.)
- Don’t “wait-for” anything, you’ll have to return from that procedure
- Optionally subscribe to “oeide_event“

Demo

Out of the
Event subs

- Best place: _ide
- Some events:
  - Op
  - Be
  - Project-startu
  - Full list in onli

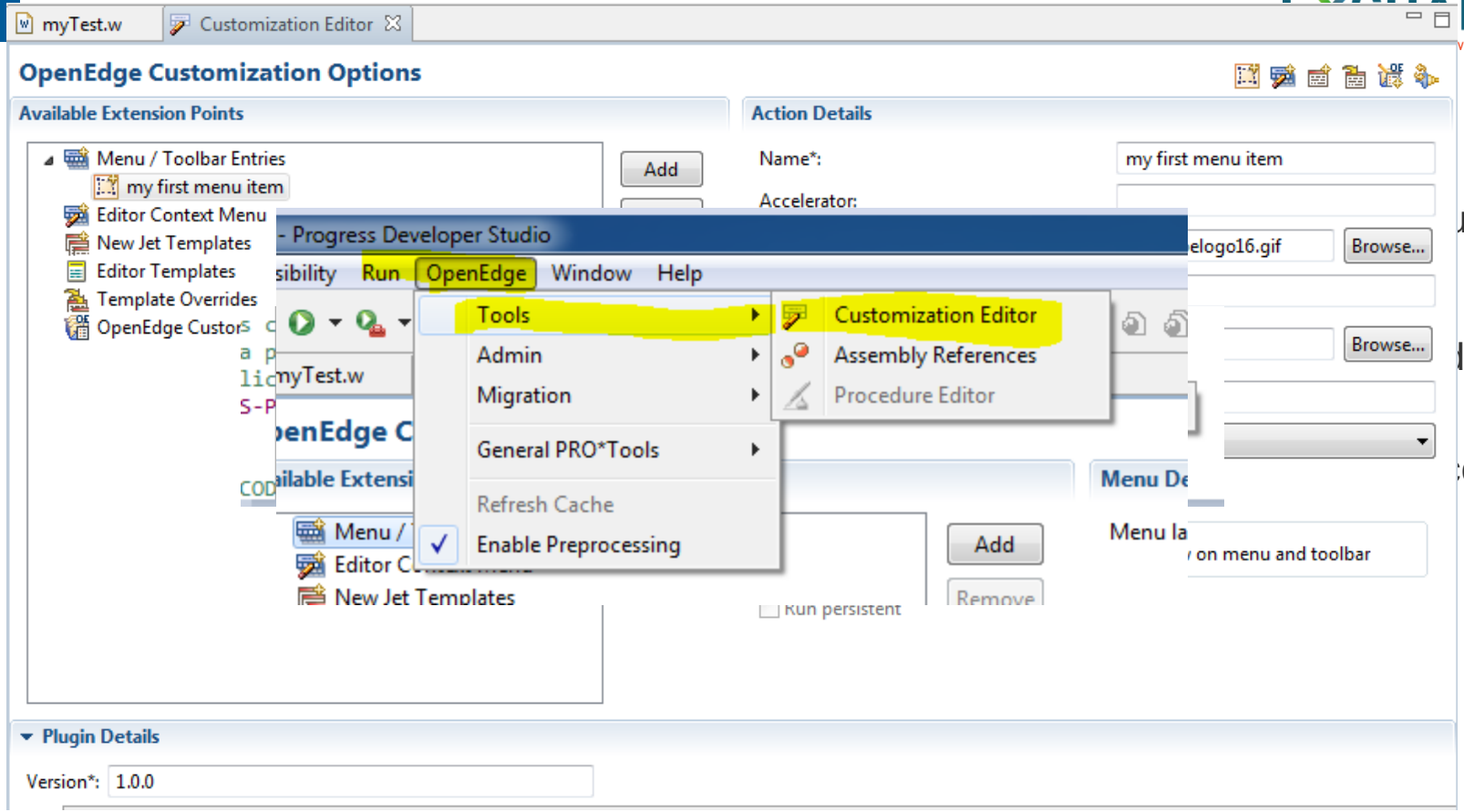
*_idestartup.p

```
138  run past
139  subscril
140
```

*_idestartup.p | *pastarte.p

```
151 procedure oeide_event:
152 /* Description ------------------------------------------------------------*/
153 /*                                                                         */
154 /* Event handler for OEA-Events                                            */
155 /*                                                                         */
156 /* Notes ------------------------------------------------------------------*/
157 /*                                                                         */
158 /*                                                                         */
159 /*                                                                         */
160 /* Parameters -------------------------------------------------------------*/
161 /*                                                                         */
162 /* <none>                                                                  */
163 /*                                                                         */
164 /* Examples ---------------------------------------------------------------*/
165 /*                                                                         */
166 /*                                                                         */
167 /*                                                                         */
168 /*-------------------------------------------------------------------------*/
169
170 define input        parameter pcEventName   as character     no-undo.
171 define input        parameter pcProjectName as character     no-undo.
172 define input        parameter pcProgramName as character     no-undo.
173 define input        parameter pcEventData   as character     no-undo.
174
175 /* Variables --------------------------------------------------------------*/
176 /*-------------------------------------------------------------------------*/
177
178 define variable cBCR_Connection_Obj as character     no-undo.
179
180 /* Buffers ----------------------------------------------------------------*/
181
182 /*-------------------------------------------------------------------------*/
183 /* Processing                                                              */
184 /*-------------------------------------------------------------------------*/
185
186 /* If project is closed, we deactivate the current session                 */
187
188 if pcEventName = 'Project-ShutDown':U then
189 do:
190   cBCR_Connection_Obj = pACConnectionSvc:prpcBCR_Connection_Obj.
191   pACConnectionSvc:Deactivate(cBCR_Connection_Obj).
192   pACConnectionSvc:Disconnect(cBCR_Connection_Obj).
193   pACConnectionSvc:Shutdown().
194 end.
195
196 end procedure. /* oeide_event */
197
198
```

here.


myTest.w
Customization Editor
OpenEdge Customization Options
Available Extension Points
Menu / Toolbar Entries
my first menu item
Editor Context Menu
New Jet Templates
Editor Templates
Template Overrides
Add
Action Details
Name*:
my first menu item
Accelerator:
Browse...
Progress Developer Studio
Run
OpenEdge
Window
Help
Tools
Admin
Migration
General PRO*Tools
Refresh Cache
Enable Preprocessing
Customization Editor
Assembly References
Procedure Editor
Add
Remove
Run persistent
on menu and toolbar
Plugin Details
Version*:
1.0.0

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OpenEdge Cust
Available Extension
Menu / Too
Editor Conte
New Jet Ten
Editor Temp
Template O
com.ope
OpenEdge C

```
14
15
16  class mytest:
17
18
19    method public void myMethod
20      (  ):
21      /* Description ------------------------------------------------------------*/
22      /*                                                                        */
23      /*                                                                        */
24      /*                                                                        */
25      /* Notes ------------------------------------------------------------------*/
26      /*                                                                        */
27      /*                                                                        */
28      /*                                                                        */
29      /* Parameters -------------------------------------------------------------*/
30      /*                                                                        */
31      /* <none>                                                                 */
32      /*                                                                        */
33      /* Examples ---------------------------------------------------------------*/
34      /*                                                                        */
35      /*                                                                        */
36      /*                                                                        */
37      /*------------------------------------------------------------------------*/
38
39      /* Variables --------------------------------------------------------------*/
40      /*------------------------------------------------------------------------*/
41
42      /* Buffers ----------------------------------------------------------------*/
43
44      /*------------------------------------------------------------------------*/
45      /* Processing                                                             */
```

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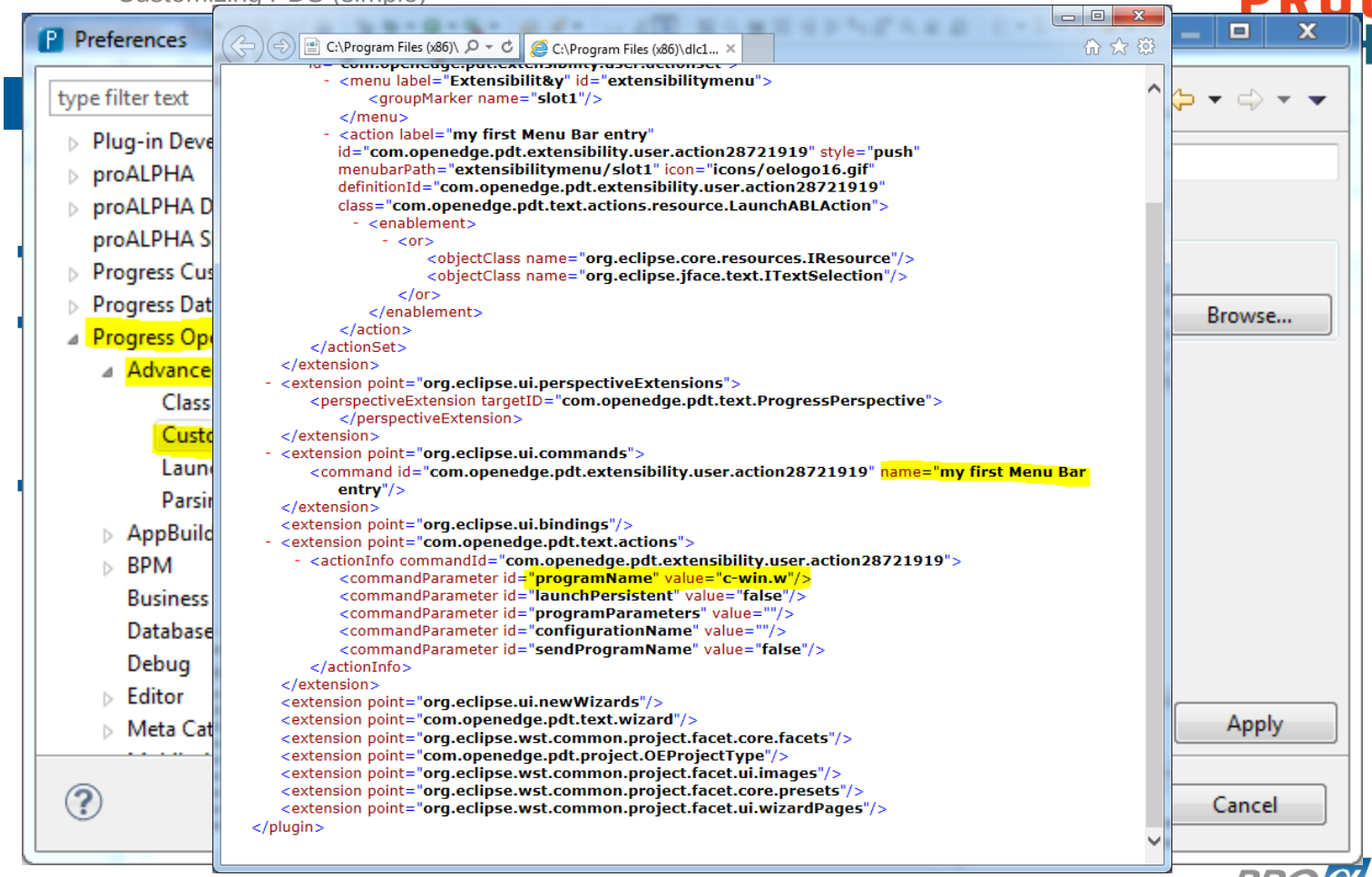
Out of the box customizing options in PDS
Custom project types

- Ability to create a custom folder structure
- not used by proALPHA → not much experience

Customizing PDS (simple)



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Customizing PDS (simple)

Customizing PDS (extreme)

A day in the life of a proALPHA developer

Disclaimer

The following part of the presentation makes use of undocumented and unsupported features of Progress Developer Studio.

All things are subject to change (believe me – they will change).

If you use any of the following techniques, you might be enforced to re-engineer things when migrating to a new Progress version.

Requirements

- Eclipse (hence Progress Developer Studio) is developed in Java
- → if customization editor is not enough, you'll need to learn Java
- Best practice for use Eclipse extension points (or develop own plug-ins) is pre-build package "Eclipse for RCP and RAP Developers"
- Use the same version as Progress Developer Studio
- Run "integrateArchitect.bat –install" to install PDS plugins in your Java development environment
- Write whatever plugin that you need…

Interesting (Progress-) classes

- … we don't want to improve Java development – we'd like to customize Progress Developer Studio
- → some Progress classes and methods might be of interest
- com.openedge.pdt.text.Oeutil – useful tools
  - *getProjectSelection* returns „current" project
  - *isOpenEdgeProject* returns true if given project is an OpenEdge project (and thus can execute ABL commands)

Interesting (Progress-) classes

- com.openedge.core.runtime.ProgressCommand
  - Various constructors to setup a command object
  - waitforResult method to stop processing until AVM has finished
  - getCompletionStatus („*STATUS_COMPLETED*“, „*STATUS_FAILED*“, *etc.)*
- com.openedge.pdt.project.OEProject
  - .getRuntime().runProgressCommand executes Progress Command object
  - .getPropath to access propath

Interesting (Progress-) classes

- com.openedge.pdt.project.OEPropertyStore & com.openedge.pdt.project.properties.IOEProjectProperties
  - Update OpenEdge project properties, e.g.
  - IOEProjectProperties.*P_STARTUP* – project startup command
  - IOEProjectProperties.*P_RCODEPATH* - .r-code directory
  - Etc.

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Interesting (Progress-) classes

- Remember
  - All these class names and methods are subject to change
  - They are not documented and hence you can't be sure that they are stable between different versions
  - Ask your Progress contact if you have questions
  - Vote with me for making them "official"

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A day in the life of a proALPHA developer

Development in proALPHA - behind the scenes

- Create new project in PDS
- Setup project settings
- Setup database connections

- Tracking of changes
- source and repository
- Time recording

- Fetch newest version from server
- (optionally) lock object

- pA Tools

- Commit changes
- Create deployment package

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Further information

- My talks “Online Exchange 2010 - Session 1015 - Extending OpenEdge Architect" and “DEV07: Extending OpenEdge Architect” Pug Challenge Europe 2010
- Progress Exchange 2013 Workshop “Progress Developer Studio for OpenEdge”
- Progress OpenEdge Documentation „Progress Developer Studio for OpenEdge Online Help”, chapter 14 “Introducing Progress Developer Studio for OpenEdge customization”
- PSDN “OpenEdge Architect: Working with Custom Templates” (http://communities.progress.com/pcom/docs/DOC-16387)

Free and easy to use (and install) products to support your development process – my personal selection

- Client side tasks manager: e.g. MyLyn (eclipse built-in)
- Bugtracking system: e.g. Mantis (http://www.mantisbt.org/)
- Version control system: e.g. Subversion
  - Server: e.g. VisualSVNServer http://www.visualsvn.com/server/
  - Client:
    - Windows Explorer Client: e.g. TortoiseSVN http://tortoisesvn.tigris.org/
    - Eclipse-Client: e.g. Subclipse http://subclipse.tigris.org/
- Adapters available for integration (e.g. “MyLyn-Mantis-Connector”, “Subclipse Integration for Mylyn”, etc.)

Customizing of Progress Developer Studio – Questions?

Gunnar Schug, VP Development, proALPHA Software AG