

Tips and tricks & choosing the right tools in your Delphi Eco System

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Intro

- › Conference
 - Company
 - › Person
 - Love to teach

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Welcome

- › Learn by
 - Demos
 - Discussion
- › Your input is important!



Agenda

- › Minimal set of tools
 - Development / Sources / Version Control / General
 - Which ones and where to download
- › Learn by
 - Power user demos
 - Discussion
 - How do you improve your Delphi productivity?



Please interrupt me!

What tips & tricks do you want to share?

In what areas do you want to become more powerful?



Minimal development tools set (1)

- › Delphi – with RTL/VCL/FMX source code
- › GExperts –
<http://www.gexperts.org>
 - <http://www.gexperts.org/download.html>
 - <http://www.gexperts.org/files/beta/1.34/GExpertsRSXE134RC1.exe>
 - <http://www.dummzeuch.de/delphi/gexperts/english.html>
 - <http://www.dummzeuch.de/files/GExperts-1.33-experimental-twm-2009-10-02.zip>
- › ModelMaker Code Explorer –
<http://www.modelmakertools.com/code-explorer>
 - <http://www.modelmakertools.com/code-explorer/download.html>
 - <http://modelmakertools.com/downloads/MMX900Trial.zip>
- › IDEFixPack –
<http://andy.jgknet.de/blog/ide-tools>
 - <http://andy.jgknet.de/blog/ide-tools/ide-fix-pack-2009-10>
 - <http://andy.jgknet.de/blog/wp-content/plugins/download-monitor/download.php?id=75>
 - <http://andy.jgknet.de/blog/wp-content/uploads/2010/09/IDEFixPackXEReg35.zip>



Minimal development tools set (2)

- › Embarcadero sourceforge projects
- › RAD Studio Demo's - <http://sourceforge.net/projects/radstudiodemoss>
 - SVN: <https://radstudiodemoss.svn.sourceforge.net/svnroot/radstudiodemoss>
 - Download: <http://radstudiodemoss.svn.sourceforge.net/viewvc/radstudiodemoss/?view=tar>
- › RAD Studio SVN Version Insight – <http://sourceforge.net/projects/radstudioverins>
 - SVN: <https://radstudioverins.svn.sourceforge.net/svnroot/radstudioverins>
 - Download: <http://radstudioverins.svn.sourceforge.net/viewvc/radstudioverins/?view=tar>



Version control: SVN

- | | |
|---|--|
| <ul style="list-style-type: none">› Tortoise SVN – http://tortoisesvn.net<ul style="list-style-type: none">– http://tortoisesvn.net/download– x86: http://downloads.sourceforge.net/tortoisesvn/TortoiseSVN-1.6.12.20536-win32-svn-1.6.15.msi?download– x64: http://downloads.sourceforge.net/tortoisesvn/TortoiseSVN-1.6.12.20536-x64-svn-1.6.15.msi?download | <p>Supported by</p> <ul style="list-style-type: none">› Sourceforge› CodePlex› Google Code |
|---|--|



Version control: distributed & TFS

DVCS

Distributed Version Control

Is gaining popularity

- TortoiseHg (for Mercurial) - <http://tortoisehg.bitbucket.org>
- TortoiseGit (for Git) - <http://code.google.com/p/tortoisegit>

TFS

Team Foundation System

Used a lot in Visual Studio & Prism

- Team Explorer (for Team Foundation System) - <http://codeplex.codeplex.com/wikipage?title=Using%20TFS%20and%20Team%20Explorer%20with%20CodePlex>



Minimale set generic tools

- › SysInternals – <http://www.sysinternals.com>
 - <http://technet.microsoft.com/en-us/sysinternals/bb842062.aspx>
 - <http://download.sysinternals.com/Files/SysinternalsSuite.zip>
- › Everything – <http://www.voidtools.com>
 - <http://www.voidtools.com/download.php>
 - <http://www.voidtools.com/Everything-1.2.1.371.exe>
- › 7zip – <http://www.7-zip.org>
 - <http://www.7-zip.org/download.html>
 - <http://downloads.sourceforge.net/sevenzip/7z465.exe>
 - <http://downloads.sourceforge.net/sevenzip/7z465-x64.msi>
- › Add things like:
 - FreePDF BullZIP PDF
 - Adobe Reader (make sure you disable “allow fast web view”)
 - Google Chrome
 - Avast Antivirus
 - Office 200x or Dia + Open^H^H^H Libre Office
 - OpenVPN
 - Paint.NET
 - Fiddler2 http debugger (Not possible on port 888 when ColabNet is installed)



GExperts

- › Grep search
- › Code proofreader
- › Editor experts (sort lines, change case)
- › Components to code
- › Source export
- › Clean directories
- › ASCII chart

```

initialization
  RegisterTest('',
    TXMLEOSErrorTestCase.Suite);
end.

```

GExperts - opdracht

- Q: What would be the ratio between
- | | |
|----------------------------|-----------------------------|
| <code>try</code> | <code>try</code> |
| <code><u>except</u></code> | <code><u>finally</u></code> |
- A: `end;` `end;`
- Perform a “grep search” in the Delphi source code
- Q: Why is the ratio like this?

SVN – trunk/branch/tag

- › .../trunk
 - Bleeding edge
- › .../branches
- › .../tags
 - Marked versions
 - › Work parallel on different features
 - › Different product deliveries
 - › Archive of old versions
 - In SVN branch/tag are the same thing
 - Other version control systems might not allow you to change a tag



SVN

- › Repository is the central place with the full history
 - You can use a local file based repository (for a one-man shop)
 - › Not recommended as you want atomic operations (server based setups can do atomic, file based not)
 - Example: the <https://> locations at
- › Checkout make a local copy of what is in the repository
- › Commit push changes to SVN
- › Update pull changes from SVN
- › Log history on directory/file level
- › Blame history for a file on line level



Version control Blame/Annotate

Revision	Author	Line
55	skimball	362
183	tgerdes	363
55	skimball	364
55	skimball	365
55	skimball	366
55	skimball	367
55	skimball	368
55	skimball	369
183	tgerdes	370
183	tgerdes	371
183	tgerdes	372
55	skimball	373
183	tgerdes	374
183	tgerdes	375
183	tgerdes	376
55	skimball	377
55	skimball	378
55	skimball	379
55	skimball	380
183	tgerdes	381
55	skimball	382
55	skimball	383
		384



Delphi support for SVN

- › IDE support has been there since Delphi XE
 - › But this is better:
 - VersionInsight updates by Uwe Schuster
- <http://www.bitcommander.de/blog/index.php/category/delphisvn/>



Repositories: CodeProject

- › Two ways to store projects
 - With TFS and SVN:
 - › It uses SVNbridge in the background
svnbridge.codeplex.com
 - › You can reach them with both TFS (Team Foundation System) and SVN (Subversion)
 - › So you can do this:
 - check-in using TFS
 - update from TortoiseSVN
 - With Mercurial (Hg)



Other Repositories

- › There are many more repositories, for instance:
 - SourceForge
 - GitHub
 - Google Code
- › A comparison:
 - en.wikipedia.org/wiki/Comparison_of_open_source_software_hosting_facilities



SVN example

- › Get the most recent [radstudiodeemos.svn](#) revision.
- › Which revision of [radstudiodeemos.svn](#) introduced the RadStudio_XE3_Updates branch?
- › What date had the most commits in [radstudiodeemos.svn](#)?
- › What has been changed in [DBXUtils.pas](#) and by who?

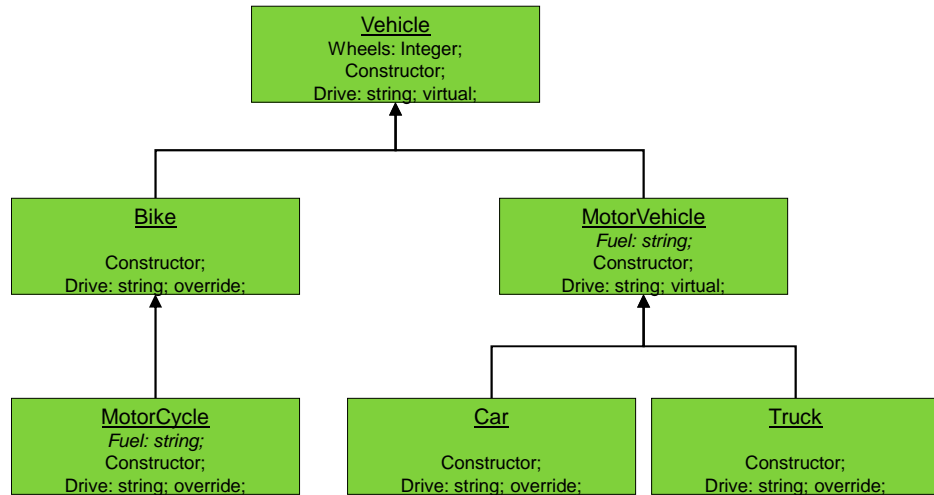


ModelMaker Code Explorer (MMX)

- › Focus on structure
in stead of source code
 - Browser (the code explorer)
 - Editing possibilities
- › Demo...



MMX demo: from Model to Code



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ModelMaker Code Explorer

- › Entities (class, method, interface, ...)
 - Add class
 - Add method
 - › Constructor/Destructor/Overload/...
 - › Parameters
 - Add property
 - › Presets
 - Add field
 - Cut/Copy/Paste/Delete
 - › Ctrl X/C/V; Ctrl-Shift-Delete
 - Edit
 - › Ctrl-E
 - Visibility
 - › private/protected/public/...
 - › interface/implementation
 - Convert
 - › Field->Property
- › Interfaces & classes
 - Extract interface
 - Implement interface
 - Kopieer class method in interface en omgekeerd
 - Sleep een interface over een class om deze te implementeren
- › Sort class/module/ implementation
- › Declare local variable
- › Use unit
- › Convert with statement
- › Refactor literal
 - Van: String, Number
 - Naar: resourcestring, const
- › try...finally wizard

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MMX examples

- › XMLDOMParseErrorUnit
 - Copy/Paste class
- › XMLDOMParseErrorToStringUnit
 - Extract Interface IToString
 - Move IToString up in the unit
 - Change Ancestor after compile:
 - › TObject -> TInterfacedObject
 - Uses of XMLDOMParseErrorToStringUnit



Delphi browsing & refactoring

- › Always restart the IDE when you get errors like these:
 - System.AccessViolationException: Attempted to read or write protected memory. (This is often an indication that other memory is corrupt).
 - Messages about the read-only flag in the code editor.
- › These are the browsing tricks I use:
 - Find References (Ctrl-Shift-Enter)
 - Follow Symbol (Ctrl-Click)
 - Load Unit (Ctrl-Enter on unit name)
- › Refactorings I use most often:
 - Rename unit (in the project manager)
 - Rename symbol
 - › Brilliant: works through the whole project
 - › Understands DFM file consequences
 - Find unit
 - › Only works if the unit is used elsewhere in your project
 - › Otherwise: MMX Ctrl-U
 - Extract method
 - › Pro:
 - Usually figures out the right parameters
 - › Cons:
 - Always creates a 'procedure'
 - It is 'private' and 'non-virtual'
 - Simple result does not get translated into a 'function'
 - › So:
 - Some post-editing with MMX needed



MMX refactoring opdracht

1. Haal de jongste bo-library via SVN op: <https://bo.svn.codeplex.com/svn>
2. Open XmlProjectGroup.groupproj
3. Maak ValidateXmlWithXsd.exe actief
4. Open de unit LoggerUnit
5. Extract ILogger uit TLogger
 - Eventueel eerst TLogger splitsen in TLogger en TIndexedLogger (waar de “Index” zaken uit TLogger in komen) en daarna ILogger en IIndexedLogger
6. Fix de compiler errors
7. Bouw MainFormUnit van project XPathTester om zodat deze van ILogger gebruik maakt
8. Zoek binnen de bo-library uit waar TLogger nog meer gebruikt wordt, kijk of het zinvol is om daar ILogger te gebruiken en maak eventueel die overgang



Example: MMX / Delphi browsing

- › Zoek uit hoe in de XPathTester, op het MainForm in de XmlViewTabSheet de XmlWebBrowser gevuld wordt met XML.



TLogger

- › ‘poor man’ alternative for ‘CodeSite’ / ‘SmartInspect’
- › Shows the basic structure:
 - Centraal Logger object
 - A way of sending output to multiple targets (CodeSite: destinations)
- › TLogger is an example, it lacks serious performance
 - For that, you buy a commercial tool
 - Example at a client:
 - logging at level 7 takes about 10 seconds per transaction. Logging at level 3 only 0.5 seconds.



Example: Spell out numbers

- › Part 0: research
 - Look at [XMLEOSErrorTest](#) to see how easy unit tests can be
 - Look at [MD5DUnitGUIProject](#) how you can make unit tests more generic
 - Run [Number2StringProjectTests](#) to get a feel for the the tests (note: German tests aren't fully done, Dutch and English tests are)
- › Part 1: matches
 - In [TestRomanNumber2StringUnit](#), simplyfy [AddRomanMatches](#) so you don't have a zillion calls to [FMatches.Add\(TInt64StringPair.Create\(\)\)](#)
 - Same for the classes in [TestNumber2StringUnit](#)
 - Discuss how you can make these units more generic [TestNumber2StringUnit](#) en [TestRomanNumber2StringUnit](#)
- › Part 2: abstraction
 - Refactor the creation of new instances of the classes that inherit from [TAbstractNumber2String](#) into a method returning those instances
 - Refactor the loop in the many [TestNumber2String](#) methods to a more central place



Beyond Compare

- › Compare files
 - Text
 - PDF
 - ZIP
 - ...
- › Compare directories
- › Smart compare
- › Binary compare
- › Make sure you have the Delphi RTL/VCL/FMX source code
- › Compare between different Delphi versions to learn what changed



Everything

- › Extremely fast
- › Easy to find back files
 - resXplor
 - thrddemo
 - MainFormUnit.pas
- › Integrates with Windows Explorer
 - Context menu



SysInternals

- › Process Explorer
 - DLL pane (MSXML6 issue)
- › DebugView
 - Picks up OutputDebugString
- › Handle

```
c:\bin\handle.exe Deployed.exe > usage.txt
type usage.txt
for /f "skip=4 tokens=3,4 delims=: " %1 in (usage.txt) do
  if not %1==handles c:\bin\handle.exe -p %1 -c %2 -y
del usage.txt
```
- › TcpView
 - Show TCP/IP and UDP/IP connections
- › Contig
 - Convenient for VMWare VMDK disk files



BIN

- › Bring your own BIN directory
 - sql-set-sqlrun.bat
 - wget.exe
 - tee.exe
 - utf82ascii.exe
 - XVI32.exe
 - xpsp2supporttools
 - ...



Q & A | Discussion

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If you have questions after the session,
please contact me

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