

Collaborative Design with Oracle SQL Developer Data Modeler

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Introduction, Heli

- * Graduated from Helsinki University (Master of Science, computer science)
- * Worked with Oracle products since 1993, worked for IT since 1990
- * Database!
- * CEO for Miracle Finland Oy since 10/2010
- * Board member for OUGF since 2001
- * Chairperson for OUGF since 2007 (vice-chair for years before that)
- * Ambassador/Spokesperson for EOUC since late 2007
- * Oracle ACE Director since 2013 (ACE since 2011)

Introduction, Jeff

- * Senior Principal Product Manager
- * BS in Computer Science from West Virginia University
- * Worked with Oracle since 1999
- * Product Manager for Oracle SQL Developer and SQL Developer Data Modeler
- * Blogs at <http://www.thatjeffsmith.com> and tweets as @thatjeffsmith
- * Oracle ACE Alumni
- * Wants you to enjoy your time working with Oracle Database

Introduction to this presentation

- * Why Subversion?
- * How does Subversion work?
- * How to work with Subversion?
- * MS Excel and collaborative work

Why Subversion?

- * Integrated to Data Modeler
- * Data Modeler has a lot of directories and files
- * The file names are not so readable (object id) -> Subversion integration shows the name of the object, not the file
- * Supports both version control and multiuser environment

Subversion

- * Free to use, open source, <https://subversion.apache.org/>
- * Many decisions:
 - * One or many repositories?
 - * Project layout? Trunk, Branches, Tags?
- * Must be installed
 - * The supported version can be checked from Preferences (Preferences, Versioning, Subversion)
 - * If only needed for version control, also possible to create a local repository with SQL Developer

Trunk

- * The main line of the design revisions

Branches

- * A branch that can be merged to Trunk if needed
- * Not very common in database design?

Tags

- * You might want to use Tags directory for solid versions of a database design (Version 1.0, Version 3.5, ...)
 - * maybe together with application versions (if not physically then bind with the same version number)

Working with Subversion

- * Copy-Modify-Merge
 - * You edit a copy of a design in your **working directory** and merge it to the one in Subversion with **commit**
 - * Each commit creates a new revision
- * A working directory
 - * A working directory always has a directory `.svn`
- * **Save** → saves to working directory
 - * Pending Changes only visible after SAVE
- * **Commit** → commits to Subversion

Working with Subversion, Preference examples

- * Default Designs Directory
- * Comment Templates
- * Automatically Lock Files with svn:needs-lock Property After Check Out
- * Show Log Messages in Subversion Console

Creating a Connection

- * Team menu, Create Connection **or** Versions browser, Create Connection
- * Manually Create a Subversion Connection **or** Import Subversion Connections

Creating a Connection

Edit Subversion Connection [X]

Enter the repository location and optionally a connection name and authentication details.
Please use slash / instead of backslash \ in the repository URL.

Repository URL:
file:///C:/Users/Heli/DataModeler/SubversionRepository

Connection Name:
SubversionRepository

User Name:
[Empty]

Password:
[Empty]

Test Read Access

Status:
[Empty]

Help **OK** **Cancel**

Tools for Subversion

- * Versions browser
- * Pending Changes
 - * Incoming Changes
 - * Outgoing Changes
 - * Unversioned Files
- * Team menu
- * Browser, right-click, Versioning

Adding a design into Subversion

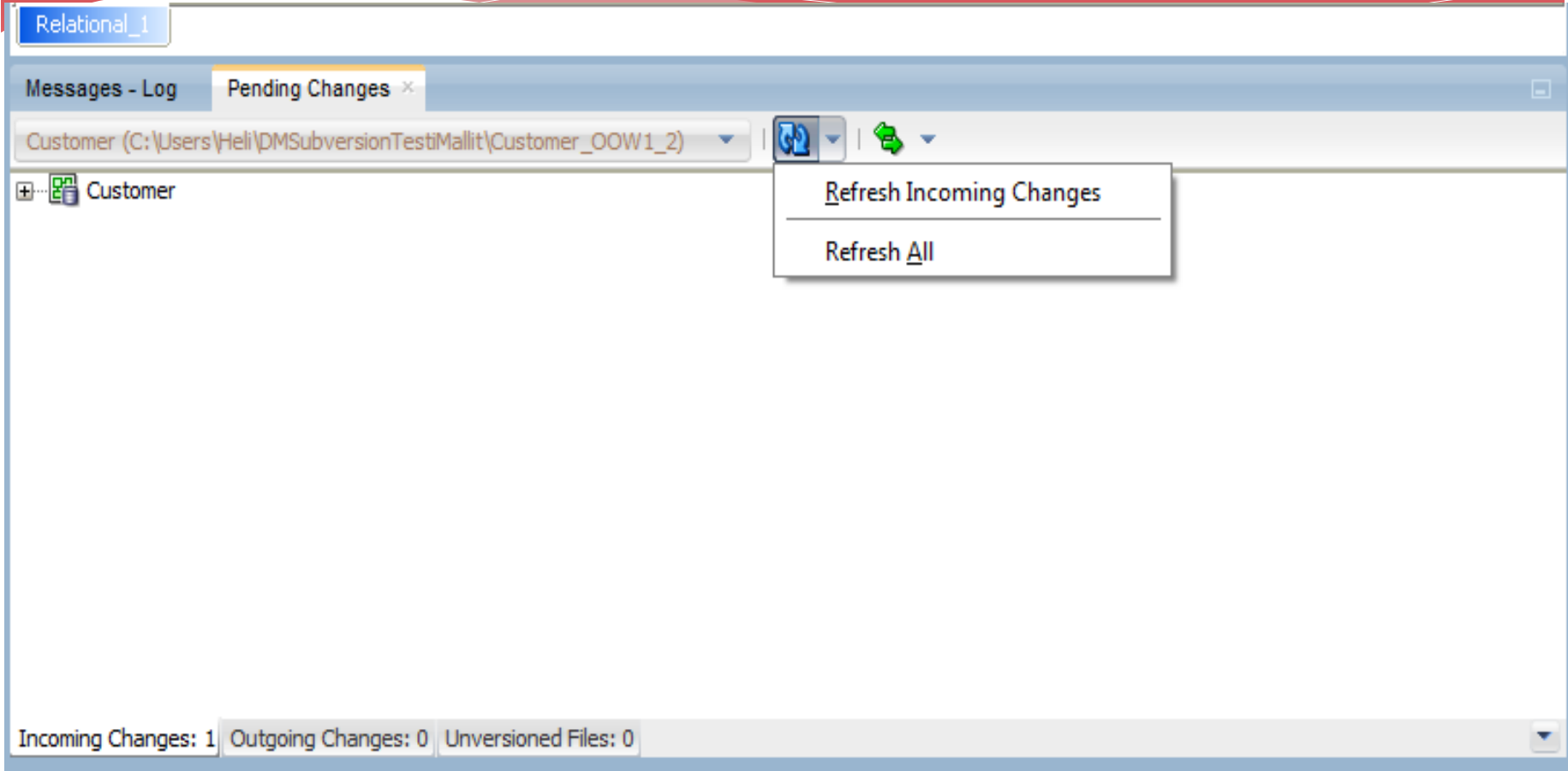
Importing a design into Subversion, Save as

- * **Create** the design and **save** it.
- * Go to Versions browser and create a **new remote directory** for your design.
- * **Check out** to the location you want to have as your working directory (Data Modeler will create a directory for you if needed).
- * **Open** the design.
- * **Save as** to the working directory.
- * Data Modeler will ask you “Add design to version control system?”. Answer Yes.

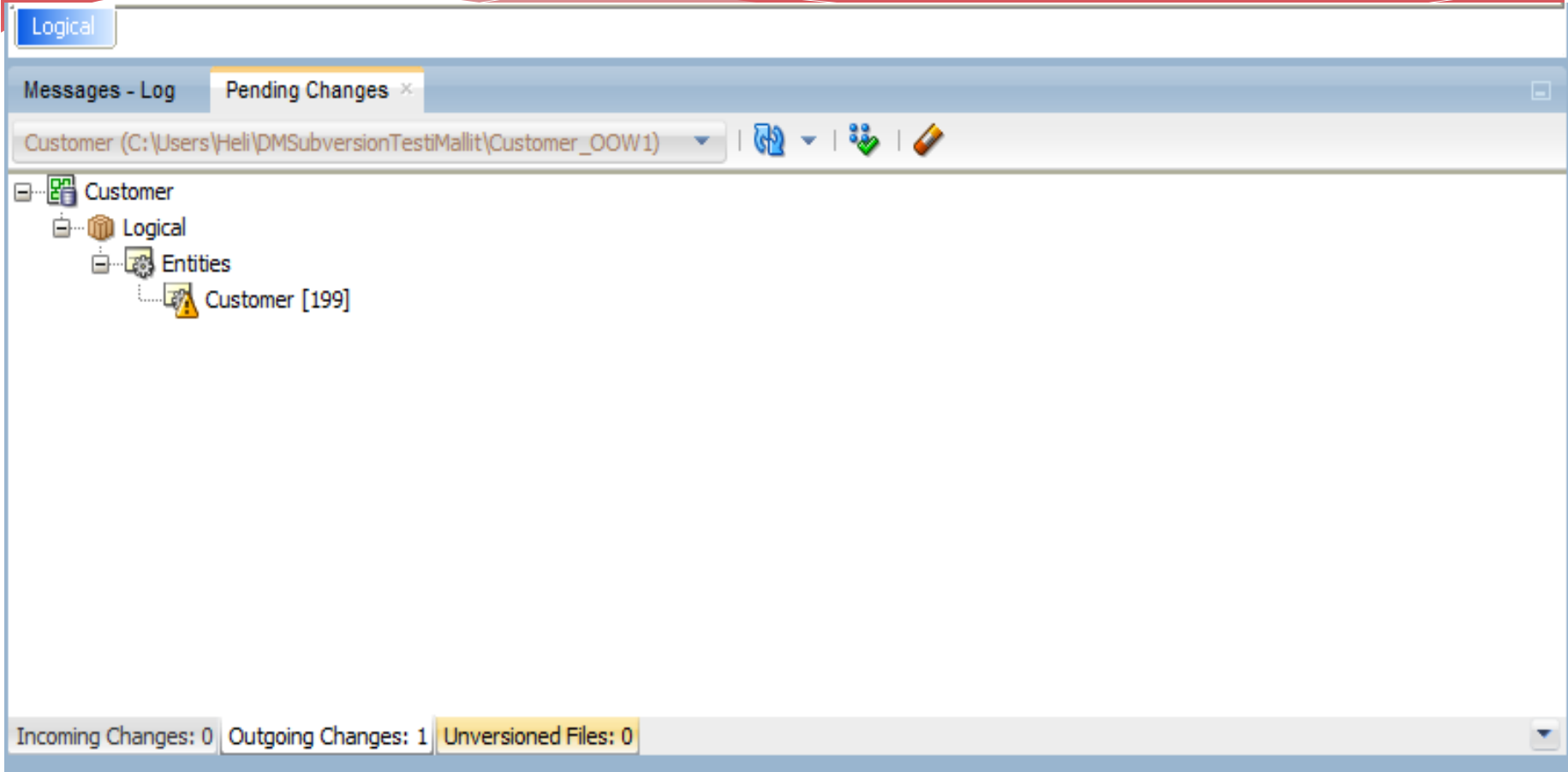
Working with a design

- * Any changes by other users?
 - * Pending Changes, Incoming Changes, Refresh Incoming Changes
- * If yes
 - * Update Working Copy
- * Start working
- * SAVE
- * COMMIT

Incoming Changes



Outgoing Changes



Working with a new design

- * Create a subdirectory in “Default Designs Directory” (not mandatory, DM will create for you if needed)
- * Team, Check Out **or** Versions, Check Out
- * Then open the design from your working directory (File, Open)
- * Start working as described before

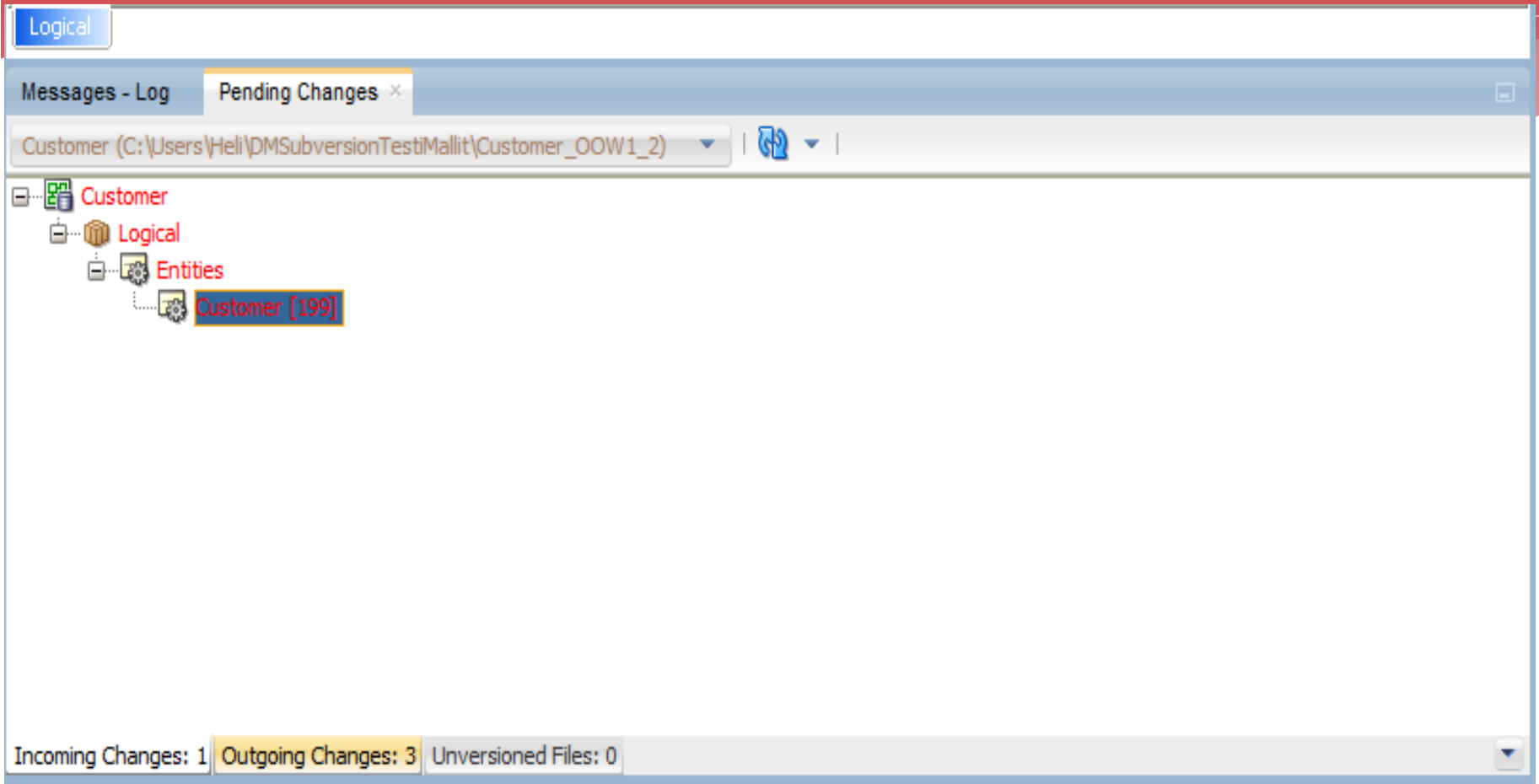
Check out

- * is used when you get the files from Subversion for the **first** time and define the working directory for the design
- * Check out brings the design files from Subversion to your working directory and creates the `.svn` directory for Subversion.
- * There is no such thing as check in! This has nothing to do with locks.

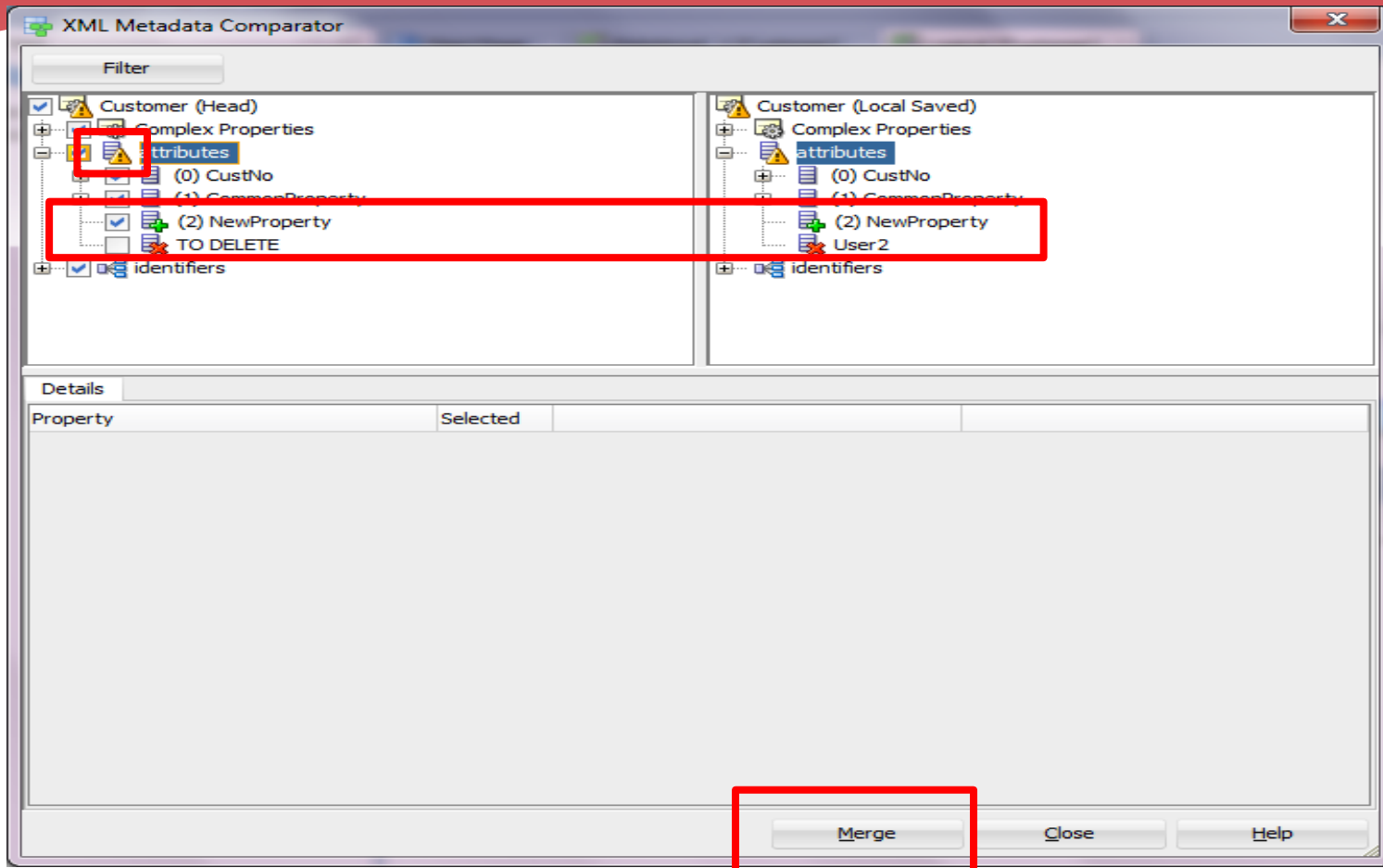
A Conflict...

- * Both incoming and outgoing changes at the same time in Pending Changes
- * Marked in red
- * Must be solved manually

A Conflict



A Conflict



Changes based an older revision or a branch

- * You can also change your design based on an older revision.
 - * The change can be just one single change, several changes or you can go back to the design of that time.
 - * Can use version control
 - * Team, Merge Design
 - * Can use design comparisons

Merge Design

- * Open the design you want to merge to
- * Team, Merge Design
- * Select the URL for the desing in Subversion you want to merge from
- * Decide what to merge and merge
- * Save, Commit

Merge with Design Comparisons

- * Make sure both designs have the latest revision on your working directory
- * Open the design you want to merge to
- * Two choices:
 - * Tools, Compare/Merge Models (only relational and physical model)
 - * File, Import, Data Modeler Design
- * Decide what to merge and merge
- * Save, Commit

Sharing files, Subversion

- * There are many files you might want to share with all the users:
 - * Preferences
 - * Domains
 - * RDBMS sites
 - * Design Properties
 - * Glossaries
 - * ...

Sharing files, Subversion

- * A directory in Subversion for these files
- * A directory in every computer where to bring these files when needed
- * A procedure for making changes to files
- * A procedure for informing users about the changes and instructions on what to do then (how to get the changes to the working directory and how to get the changes in effect)

Excel and collaborative design

- * You can use reports (Search) in XLS or XLSX format to edit and import back to Data Modeler.
- * Useful when
 - * you need documentation from end users who do not have access to Data Modeler (maybe Comments)
 - * Or maybe you want to edit Notes during a workshop or...
- * You can import them to Data Modeler in Logical/Relational model in Browser. Right-click and select “Update Model with previously Exported XLS (XLSX) file”.

Excel and collaborative design

Run a reports from Search to XLS or XLSX format
(logical or relational)

Example report

	A	B	C	D	E	F	G
1							
2							
3							
4	Name	Based on structured type	Comment	Comment in RDBMS	Complete subtypes	Create surrogate key	Created time
5	Company				false	false	2014-05-16 18:34:3
6	Customer				false	false	2014-05-16 18:31:3
7	Employee				false	false	2014-05-17 06:16:0
8	Person				false	false	2014-05-16 18:34:1
9							
10							
11							
12							
13							
14							

Excel, cont.

- * You can use the tools Excel provides to make some cells editable and some not
- * Give the report to an end user for editing

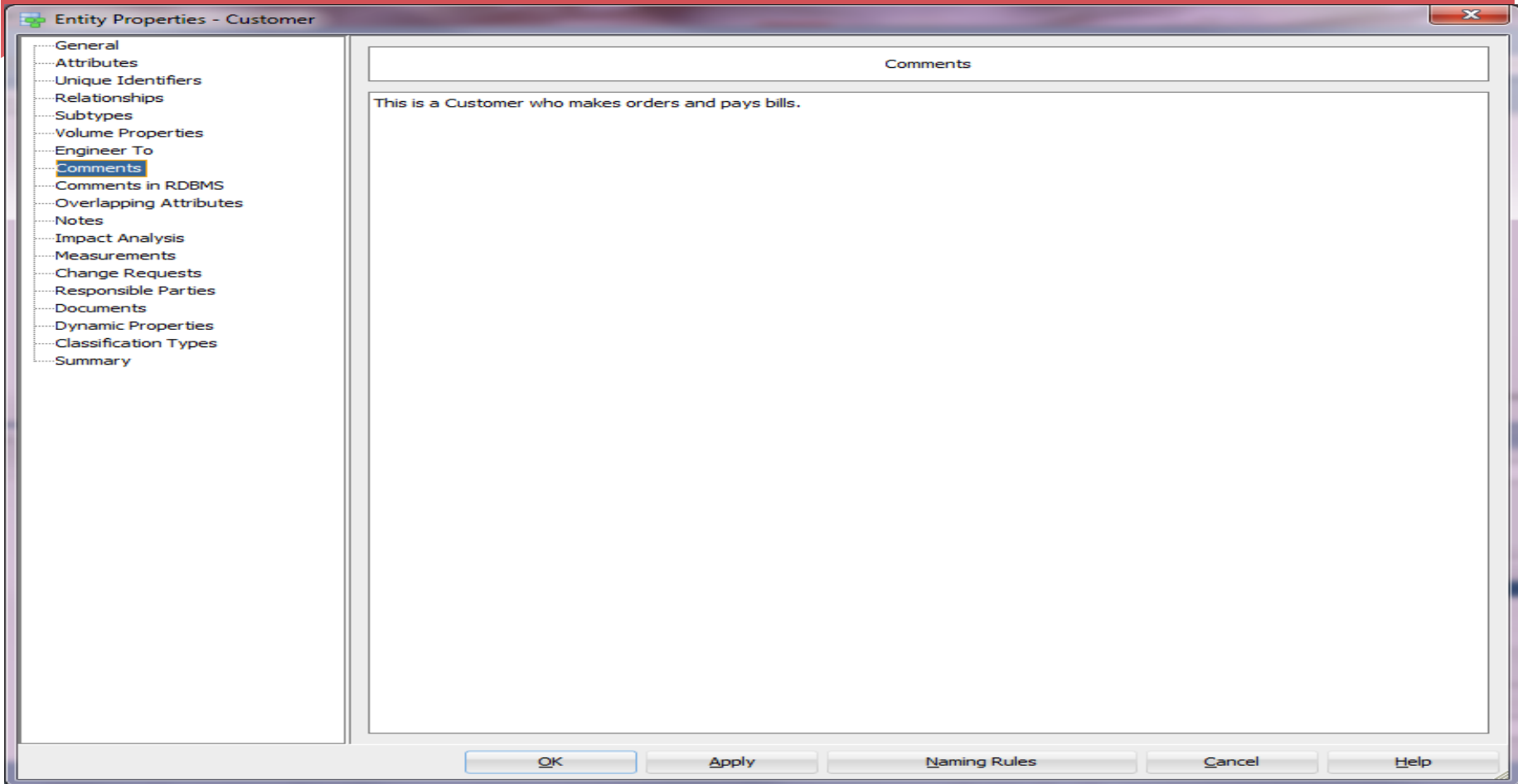
Excel, Edited Report

	A	B	C	D	E	F	G
1							
2							
3							
4	Name	Based on structured type	Comment	Comment in RDBMS	Complete subtypes	Create surrogate key	Created time
5	Company		Hel's comment in Excel		false	false	2014-05-16 18:34:3
6	Customer		This is a Customer who makes orders and pays		false	false	2014-05-16 18:31:3
7	Employee		Our own employees		false	false	2014-05-17 06:16:0
8	Person		Definition of a person...		false	false	2014-05-16 18:34:1
9							

Excel, Updating the Design

- * Right-click logical/relational model in Browser (depending which level of a report you are uploading)
 - * select “Update model with previously exported XLS (XLSX) file”.
- * Select the report from the list and press “Open”.
- * The “View Log” will show you what has been updated.

Example of updated Comment



Conclusions

- * For version control Subversion is the only logical selection
- * Subversion can be used both version control and multiuser environment
- * There are Preferences that influence Subversion
- * Copy-Edit-Merge
 - * Working Copy needed
 - * Save, commit

Conclusions

- * Conflicts must be solved manually
- * MS Excel can be used for multiuser environment in some cases

Thank you!

Questions?

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