

Collaborative Design with Oracle SQL Developer Data Modeler

Heli Helskyaho
Miracle Finland Oy

Jeff Smith
Oracle Corp
Cary, North Carolina, USA

Keywords:

SQL Developer, design, architect, model, ERD, diagram, merge, control, Subversion

Introduction

Oracle SQL Developer Data Modeler is a free design tool for modelling your Oracle Databases. It uses the free Subversion technology for versioning and control of your designs.

Many people are not aware of how easily one can manage conflicts using Data Modeler. This presentation demonstrates how to merge design conflicts. Of course, we cannot make it easy to help resolve design disagreements – that will be up to you!

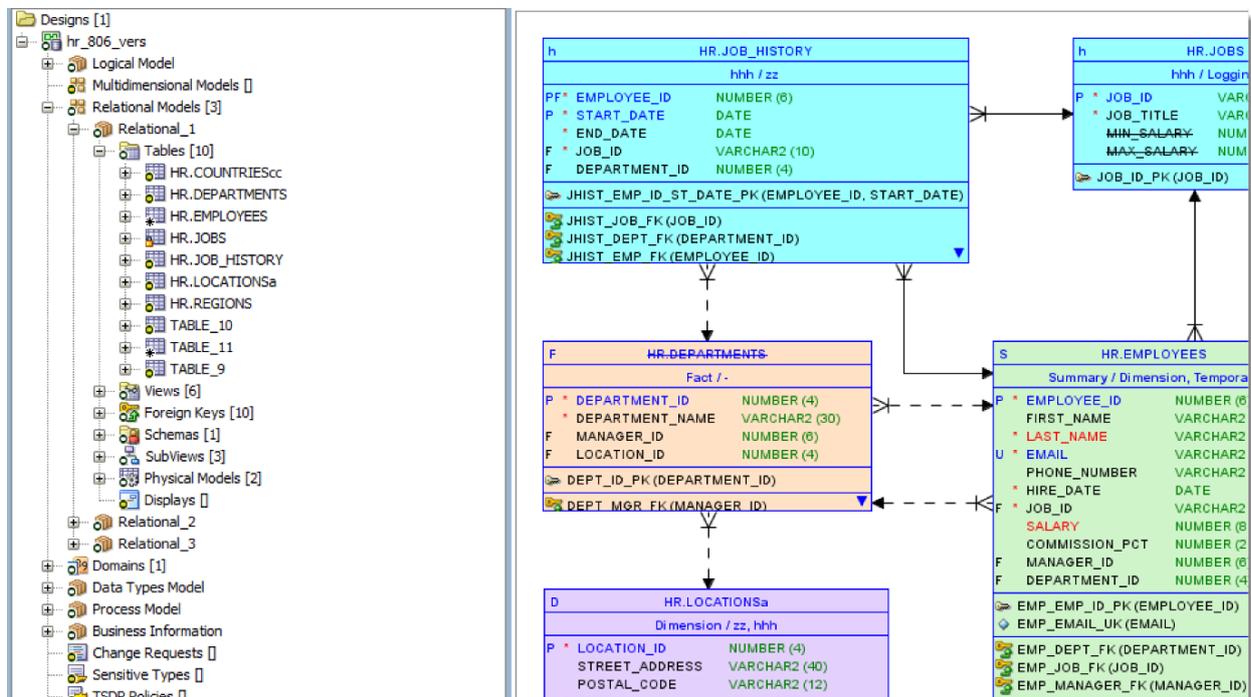


Illustration. 1: A new feature for v4.1 – Version indicators for each design element in the tree.

Why Subversion?

Apart from being free, Subversion is also the officially supported versioning control system for Data Modeler. Each design element, e.g. entities, attributes, relations are each stored in a separate XML file. Data Modeler abstracts these files as the objects themselves in the Modeler user interface. This means the designer can merge changes for their table, instead of having to worry about what file that is on the file system.

For this reason, we cannot recommend using any other versioning system. However, one could theoretically do so, but there would be no support for this in the Data Modeler UI itself.

We are frequently asked about Git support. This may be supported in a future version, however the nature of modeler designs (many hundreds if not thousands of files) does not necessarily make sense in a distributed system such as Git. But, stay tuned for updates!

Getting Started with Subversion

[Subversion](#) can be installed and configured for a single user using Oracle SQL Developer. But, if you will be requiring multiple users, then you will need to setup and install Subversion yourself. We currently support subversion 1.7, with future support for 1.8 and 1.9 underway.

Basic Terms:

- Trunk : the main line of design revisions
- Branches : a branch or deviation of trunk that can be merged back in if required
- Tags : frequently used to 'stamp' your directory of a specific version

Workflow:

Copy-Modify-Merge – Copy from subversion down to a local, working directory. Make changes. Merge updates back to subversion system with Commits.

Each commit results in a new revision.

Working directories are tracked via subversion by having a .SVN file in the directory.

Pending changes in the Modeler will not appear UNTIL you do a save. Save frequently! Commit as the changes are ready to be seen by everyone else.

Connecting:

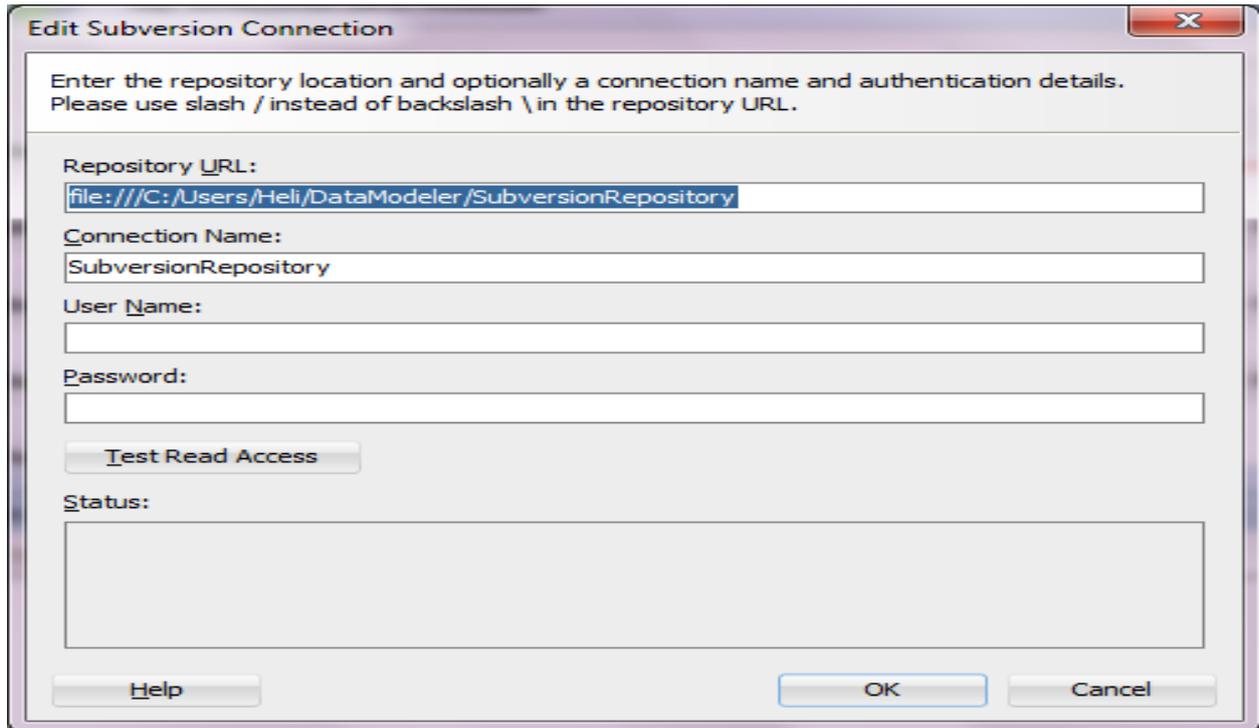


Illustration. 2: Use the 'Test Read Access' button to confirm your user has the rights to work in the directories.

Conflicts

When you and another designer have made changes to the same design object, then you will have a conflict.

This can be visualized when there are both incoming and outgoing changes visible in the Pending Changes panel.

They will be marked in Red, and must be resolved via direct user interaction. There is no 'automatic' fix the conflicts 'button' in the tool. At some point, you want a human to make these decisions, yes?

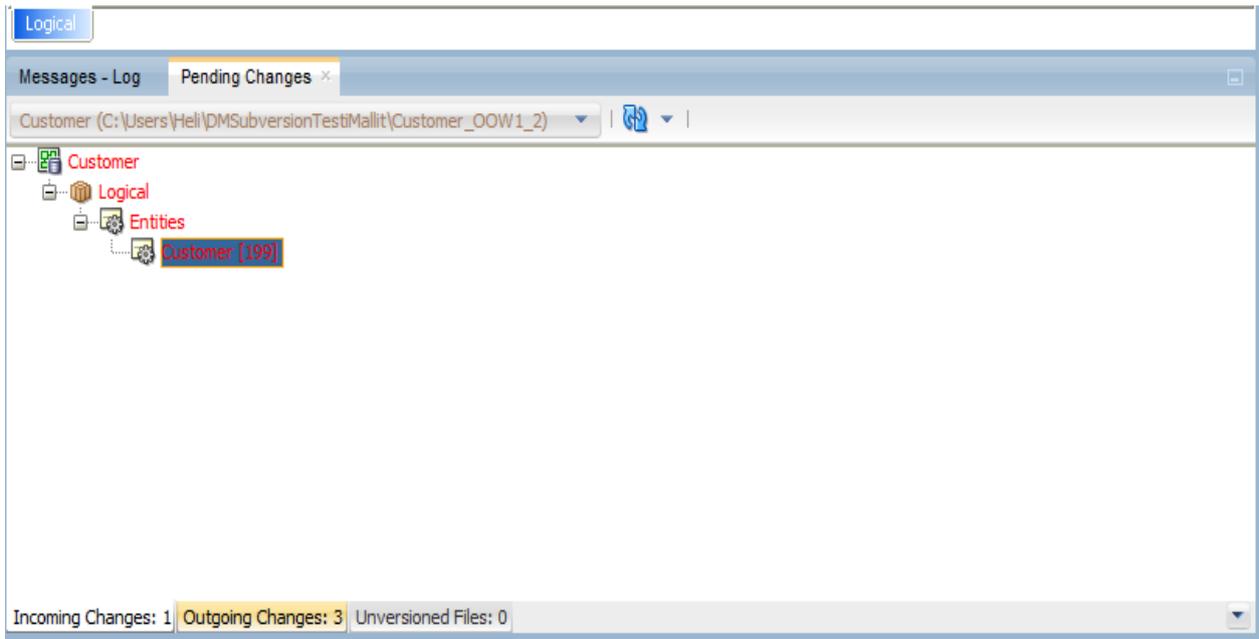


Illustration. 3: There are both incoming and outgoing changes – the outgoing changes are marked in Red. Our Customer entity must be attended to before committing the changes.

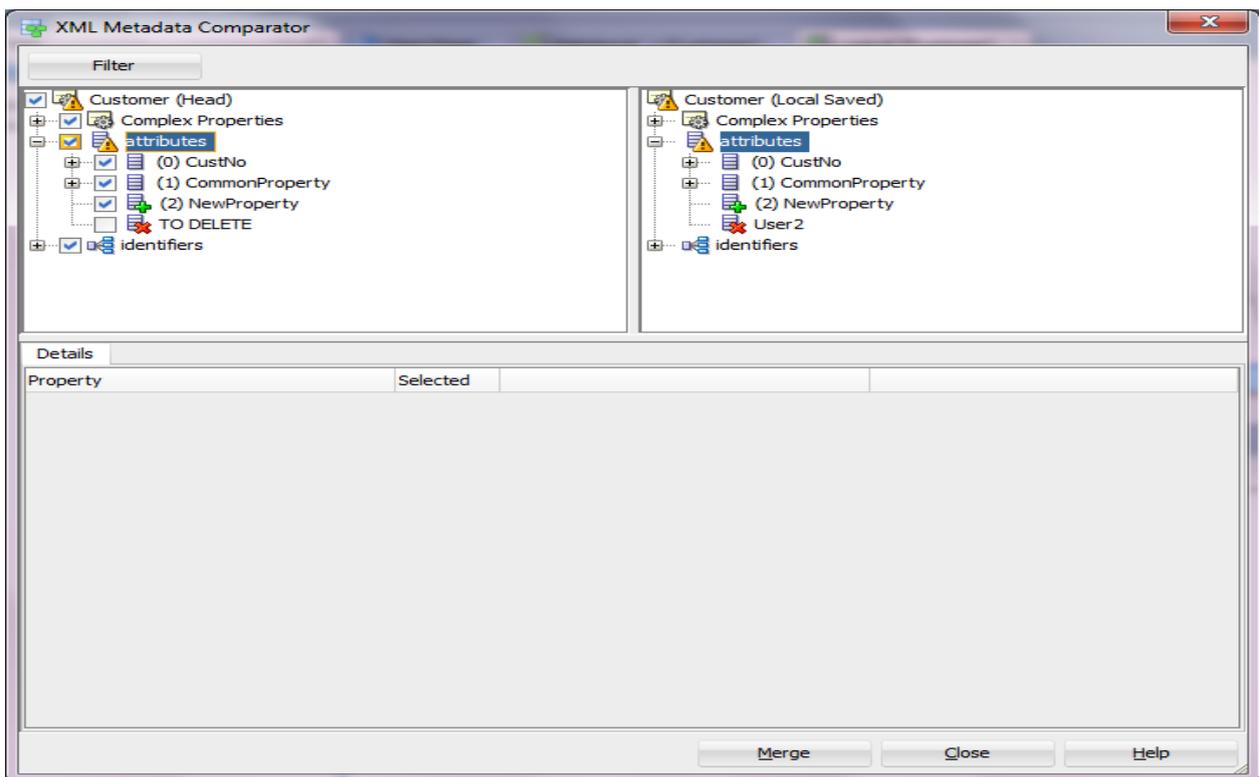


Illustration. 4: The Customer entity has a new attribute, 'User2' in the local revision. Hitting Merge will add it to the trunk.

Collaborative Design Via Excel

A newer feature in the Data Modeler now allows for certain design elements to be shared with non-Data Modeler users via an Excel spreadsheet.

This allows the business users to see your entity definitions and allows them to provide feedback without needing access to the designs or the software.

Simply by updating the notes in the spreadsheet, they can share their feedback to the modeler, and these can be merged in.

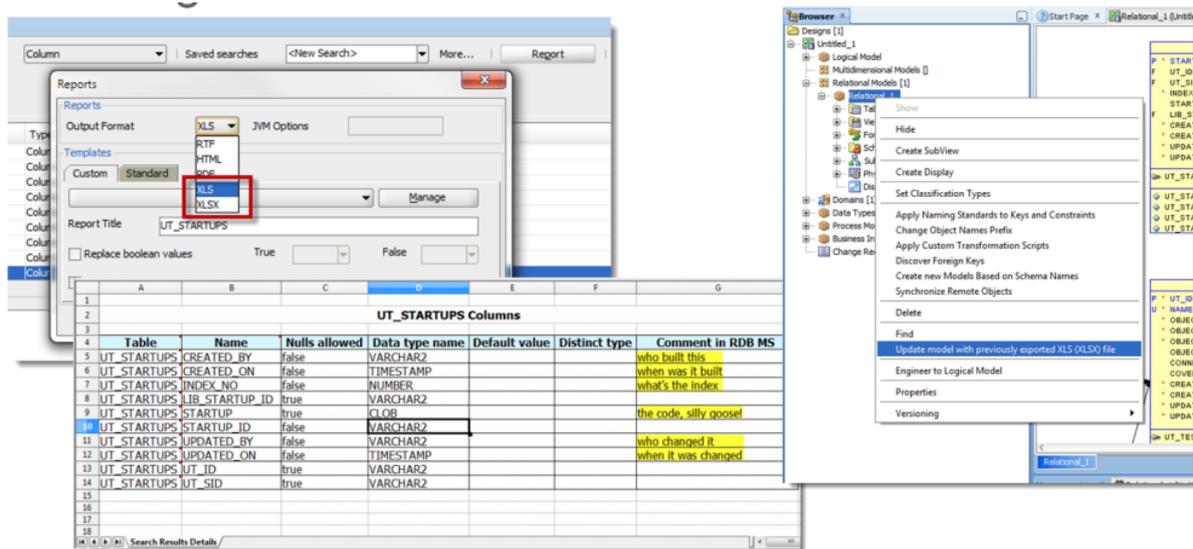


Illustration. 5: Export an entities or tables report to Excel. Share the Excel to your business users. They can provide feedback, save the file, and Update the model from the Excel for the changes to be merged.

Buy the Book!

Available for Spring 2015, Heli and Oracle Press will have a new book all about data modelling with Oracle SQL Developer Data Modeler. Add it to your 'buy list' and get a copy as soon as it is published. You can learn more about collaborative design and how Data Modeler works with Subversion in more detail there.

And of course, you can also learn more on these topics at Jeff and Heli's blogs. Do not also forget the official Oracle Docs, Hands On Labs, and Videos available on the Oracle Learning Library.

Thank you for your time and allowing us to present at your conference. Please feel free to contact me at any time for questions regarding our database development and design tools.

Contact address:

Jeff Smith

Oracle Corp

Phone: +001 919-539-6646

Twitter: @thatjefsmith

Email jeff.d.smith@oracle.com

Internet: <http://www.thatjefsmith.com>

Heli Helskyaho

Twitter: @helifromfinland

Internet: <http://helifromfinland.wordpress.com/>