XIS-Reverse user guide

Case Study: Social Security legacy application (SS-App)

The SS-App is a simple application that manages beneficiaries, dependents and tutors, associated documents, system's documents and user accounts.

Requirements:

- The user must have a computer running Windows, Sparx Systems Enterprise Architect [1] (version 7.5, 10 or above), Microsoft SQL Server and Microsoft SQL Server Management Studio (tested using version 2014).
- Depending on the dimension of the legacy application (number of tables) and profiler log file dimensions, the user may need up to 3Gb of available RAM to take advantage of all the available features.

Constraints:

- Each DB schema extracted, in the same EA project, must be in a different root node.
- The Logical View package must be named Logical View.

Instructions:

1. Access your server instance through Microsoft SQL Server Management Studio (SSMS), create a new database named SS-App.
2. Download the following SQL file `https://github.com/MDDLingo/xis-reverse/blob/master/UserGuide/SS-App.sql`, open it in SSMS and execute (press F5). 11 rows should have been affected if successfully executed.
3. Download the XIS-Web EA Plugin installer from: `https://github.com/MDDLingo/xis-web/blob/master/XISWebEAPlugin_Setup.msi`
4. Install the XIS-Web EA Plugin, which contains information about the XIS-Web profile.
5. Download the XIS-Reverse EA Plugin installer from: `https://github.com/MDDLingo/xis-reverse/blob/master/XIS-ReverseEAPlugin_Setup.msi`

[1] There is a 30 day trial version that can be downloaded from `http://www.sparxsystems.com/products/ea/trial.html` (Accessed on May 2017)

6. Install the XIS-Reverse EA Plugin. This plugin provides an extension for EA, that contains interfaces and functions that implement XIS-Reverse approach, and it is able to produce legacy application specifications using XIS-Web and RSLingo's RSL.
7. Open Enterprise Architect and create a new Project.
8. When the Model Wizard window pops up, select the "Core Modeling" technology, then check the "Logical View" option and press "OK". After that, our root Model should contain a Logical View package.
9. Right-click over the Logical View package, go to the "Code Engineering" menu option, and select "Import DB schema from ODBC ..." option.
10. Configure and or Select a Database using the "..." button.
    (a) Then you must change to "Machine Data Source" tab.
    (b) If not previously created, click "New".
        i. Click "Next".
        ii. Select "SQL Server" as your driver, click "Next" and then "Finish".
        iii. Name your data source "SS-App" (without quotes).
        iv. Select the SQL Server you want to connect (where you created the SS-App database).
        v. Click "Next" twice.
        vi. Check "Change the default database to:" option, and select "SS-App".
        vii. Click "Next".
        viii. Click "Finish".
        ix. You can test the Data Source and then click "OK".
    (c) Select "SS-App" and click "OK".
11. Select the "dbo" schema (left side of the "Import DB schema from ODBC ..." window). Then click "Import".
12. Check "Tables" package and then click "OK".
13. Once everything is imported close the "Import DB schema from ODBC ..." window.
14. Right-click on the "Logical View", go to the "Extension" menu option, "XIS-Reverse" option and select "Reverse Engineering". Them you will be prompt with a interface to perform configurations.
    (a) In the input area:
        i. Fill in the SQL Server name (where you created the SS-App database).
        ii. Fill in the database name field with "SS-App" (without quotes).
        iii. You can now test your connection clicking in the "Test Connection" button.
    (b) In the output area:
        i. Check RSLingo's RSL and select a folder in your computer.
    (c) In the Transformation Rules Guidance area:
        i. Click "Columns selection" in the Values Extraction sub area.
            A. Expand the dbo.SystemDocument element and check Status.
            B. Click "Save".

ii. Check “Use Generalization discovery” in the Generalization Discovery sub area, and change the minimum number of shared attributes to 3.

(d) When all the needed configurations are done you can click “Reverse Engineering Execution”. Depending of the entities’ number, configurations and your computer specifications this process may take several minutes to complete. Meanwhile, you can see the execution progress percentage.

15. When everything is done a “XIS-Reverse model generation is complete!” message will pop up. This window also gives you a brief summary of the execution.

16. You can now explore the produced XIS-Web and RSLingo’s RSL specifications!