

FmPro Migrator Developer Edition - How to Convert FileMaker Pro Databases to Servoy



.com Solutions Inc.

1	Introduction	
1.1	Intro - FileMaker Pro to Servoy Migration Procedure	4
2	Step 1	
2.1	Import info from FileMaker Pro or Microsoft Access	6
3	Step 2	
3.1	Create Servoy Eclipse Project	8
3.2	Enter Servoy Project Parameters	10
4	Step 3	
4.1	Using Demo Mode - FmPro to Servoy	13
4.2	Using Licensed Mode - FmPro to Servoy	20
4.3	Money Saving Tip - Servoy Migration	26
5	Post-Migration Tasks	
5.1	Post Migration Tasks - Servoy Migration	29

Introduction

Intro - FileMaker Pro to Servoy Migration Procedure

This document provides an explanation of the steps required to convert FileMaker Pro layouts, relationships, globals and scripts into Servoy Eclipse project files using FmPro Migrator Developer Edition.

Revision 02

12/14/2009

This FileMaker Pro to Servoy migration procedure assumes that the database tables and data have already been converted into a SQL database. This document doesn't attempt to duplicate the individual PDF manuals which cover the migration process for tables, data and relationships.

This procedure also assumes that the FileMaker Pro layouts, relationships, value lists and scripts have already been copied into FmPro Migrator Developer Edition. These steps are covered in the first half of the Table Consolidation Procedure PDF manual.

Step 1

Import info from FileMaker Pro or Microsoft Access

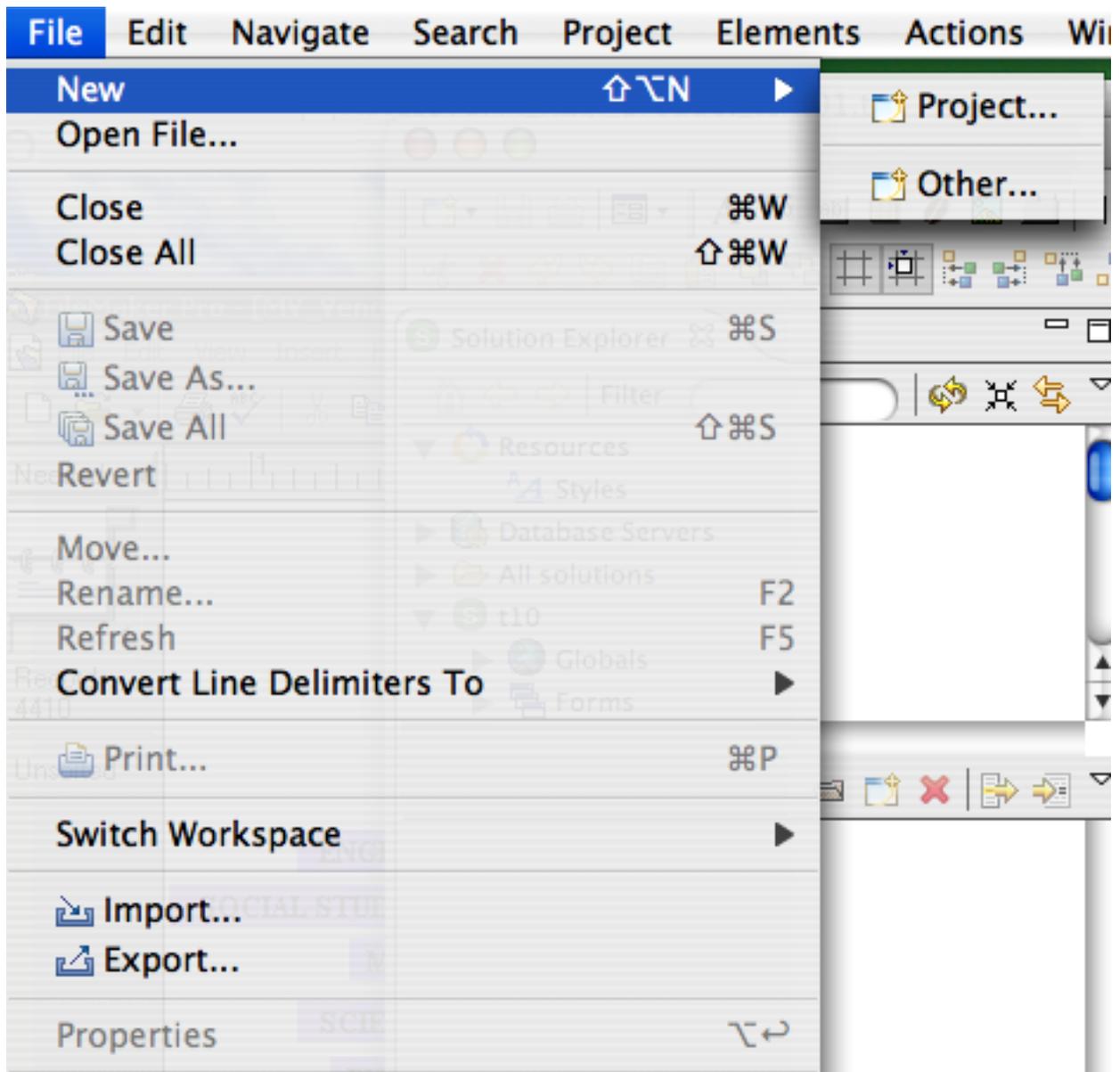
Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Import database information (including Forms/Reports, Value Lists and Scripts) into FmPro Migrator by following the Access to FileMaker Pro Migration Procedure PDF.

Step 2

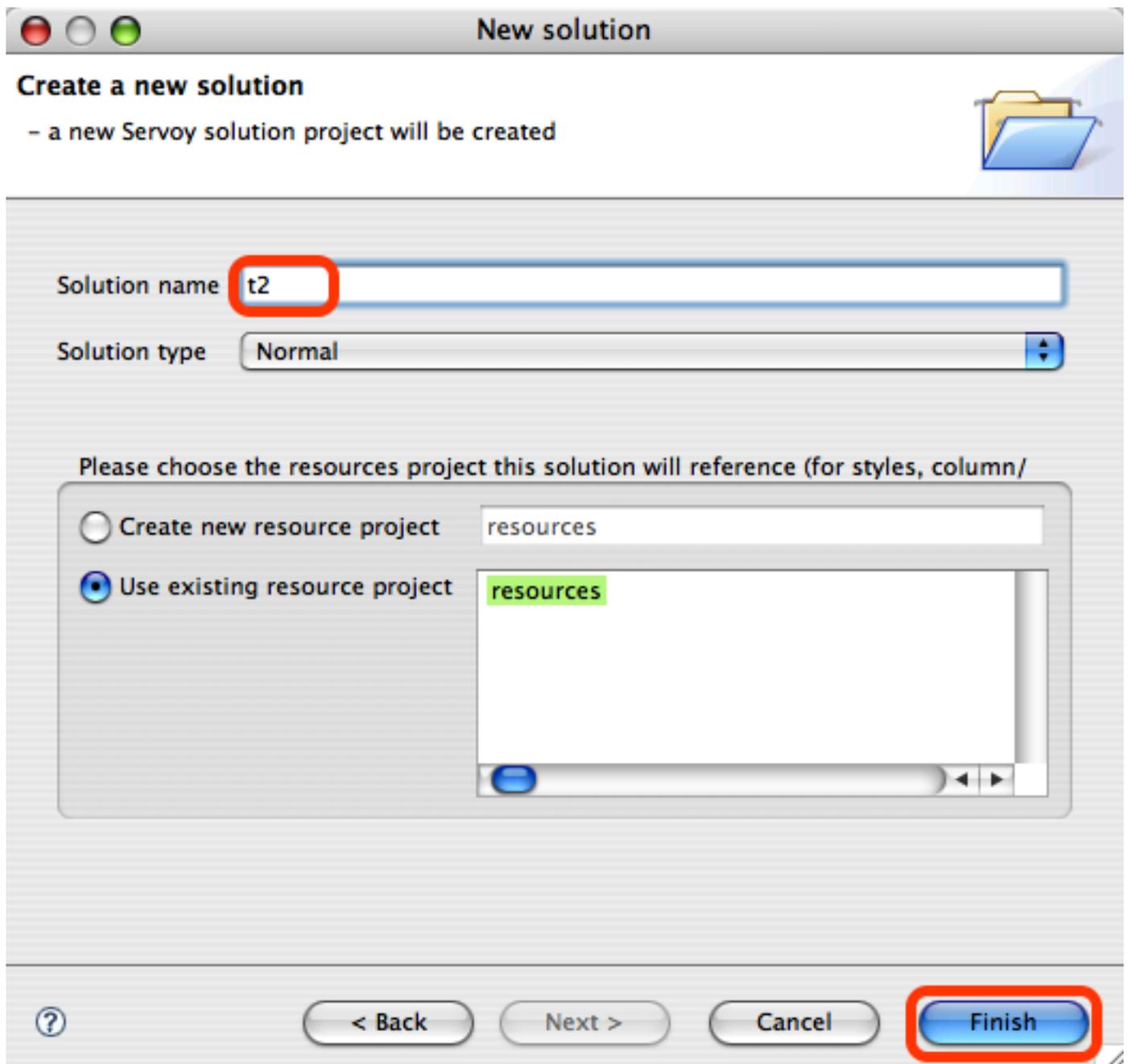
Create Servoy Eclipse Project

Create New Servoy Eclipse Project



Select New -> Project from the File menu to create a new Servoy Eclipse 4.1+ project. This step is necessary, because FmPro Migrator will delete and re-create the directory when creating the new Servoy Eclipse project from the FileMaker Pro database structure information stored within the FmPro Migrator MigrationProcess.db3 file.

Enter project name



New solution

Create a new solution
- a new Servoy solution project will be created

Solution name

Solution type

Please choose the resources project this solution will reference (for styles, column/

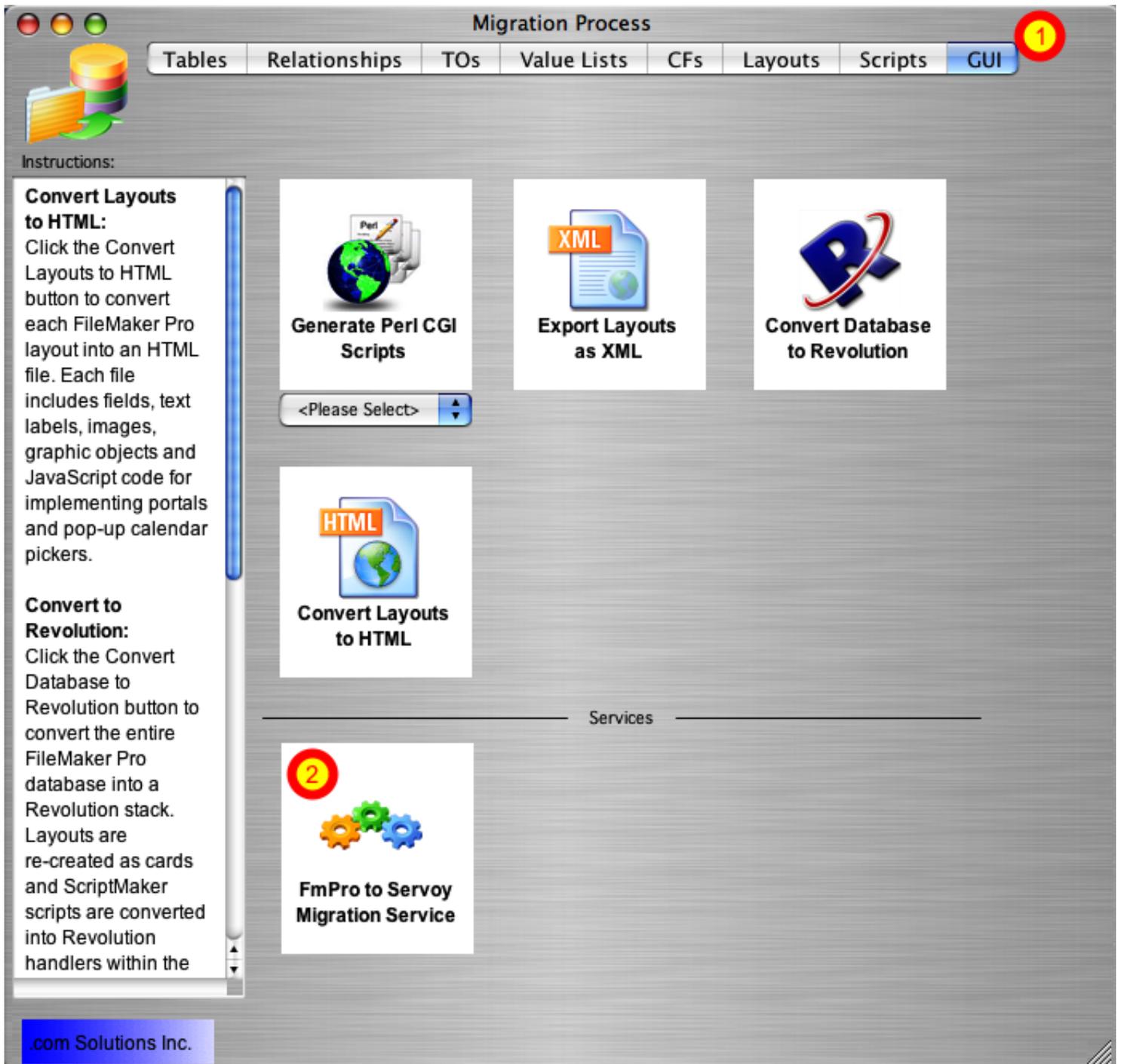
Create new resource project

Use existing resource project

Enter the project name, then click the Finish button.

Enter Servoy Project Parameters

Click FmPro to Servoy Migration Service Button



- 1) Click on the GUI folder tab within the FmPro Migrator Migration Process window.
- 2) Click on the FmPro to Servoy Migration Service button.

Servoy Project Parameter Fields - Demo Mode

Instructions:

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.
Note: FmPro Migrator will delete & re-create the contents of this directory.

Step 3) Use the Demo mode or order a license key.

Step 4) Press the Migrate button. The FileMaker Pro

Layout Qty: 87

Project Name: 1 t2

DB Connection: 2 mysql_mbp17

Project Directory: J:\sers\dsimpson\s1v41_workspace\t2 Browse 3

Processing Type: Demo

QUOTE

Migrate

By default, FmPro Migrator sets the Processing Type for the FmPro to Servoy Migration Service to Demo mode. When running in Demo mode, 5 layouts and 5 scripts are processed - and all other objects including relationships, globals and value lists are migrated.

(1) Enter the Servoy project name which was just created, (2) the database connection name, (3) and select the project directory within the Servoy project workspace.

Note: Since FmPro Migrator deletes and re-creates the project directory each time the Migrate button is pressed, there are a couple of safety features incorporated into the Project Directory Browse button. The selected output directory path must contain the text "workspace" and it must contain the text consisting of the Project Name ("t2" in this example).

Step 3

Using Demo Mode - FmPro to Servoy

FmPro Migrator includes a Demo mode for the FmPro to Servoy Migration Service. Demo mode enables Servoy developers to fully test the migration capabilities of the migration service with a limited number of layouts and scripts.

Demo mode also enables Servoy developers to quickly create "Proof of Concept" conversion projects for prospective clients who need to migrate their existing FileMaker Pro database solutions.

Click Migrate Button

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

QUOTE

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: Jsers/dsimpson/s1v41_workspace/t2 **Browse**

Processing Type: Demo

Migrate

Click the Migrate button to create the Servoy Eclipse project files. A progress dialog will be displayed to show the progress as each type of database object is created.

Migration Statistics

The screenshot displays the 'FmPro to Servoy Migration Service' window. On the left, there is an 'Instructions' panel with two steps: Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF. Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory. The main area shows a visual flow from a FileMaker Pro database to a Servoy project. Below this, the migration statistics are displayed: Layout Qty: 87, Project Name: t2, DB Connection: mysql_mbp17, Project Directory: J:\sers\dsimpson\s1v41_workspace\t2 (with a Browse button), and Processing Type: Demo. A red box highlights the migration statistics: 5 Layouts Processed in 6.123 Sec. 5 ScriptMaker Scripts Processed. A 'Migrate' button is located below the statistics.

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: J:\sers\dsimpson\s1v41_workspace\t2

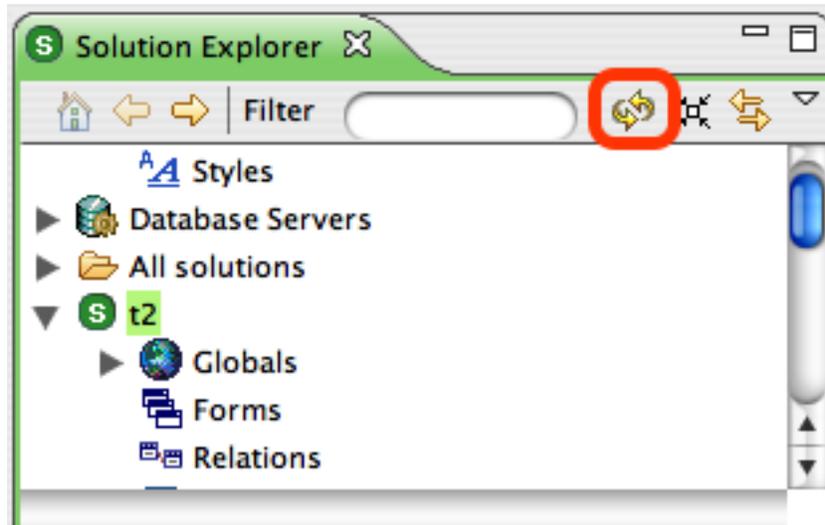
Processing Type: Demo

QUOTE

5 Layouts Processed in 6.123 Sec.
5 ScriptMaker Scripts Processed.

After the migration has been completed, the processing statistics will be displayed above the Migrate button. FmPro Migrator will typically process layouts in less than one second. As seen in this screenshot the layouts and all of the other processing including scripts, globals, relationships and value lists were processed in about 6 seconds.

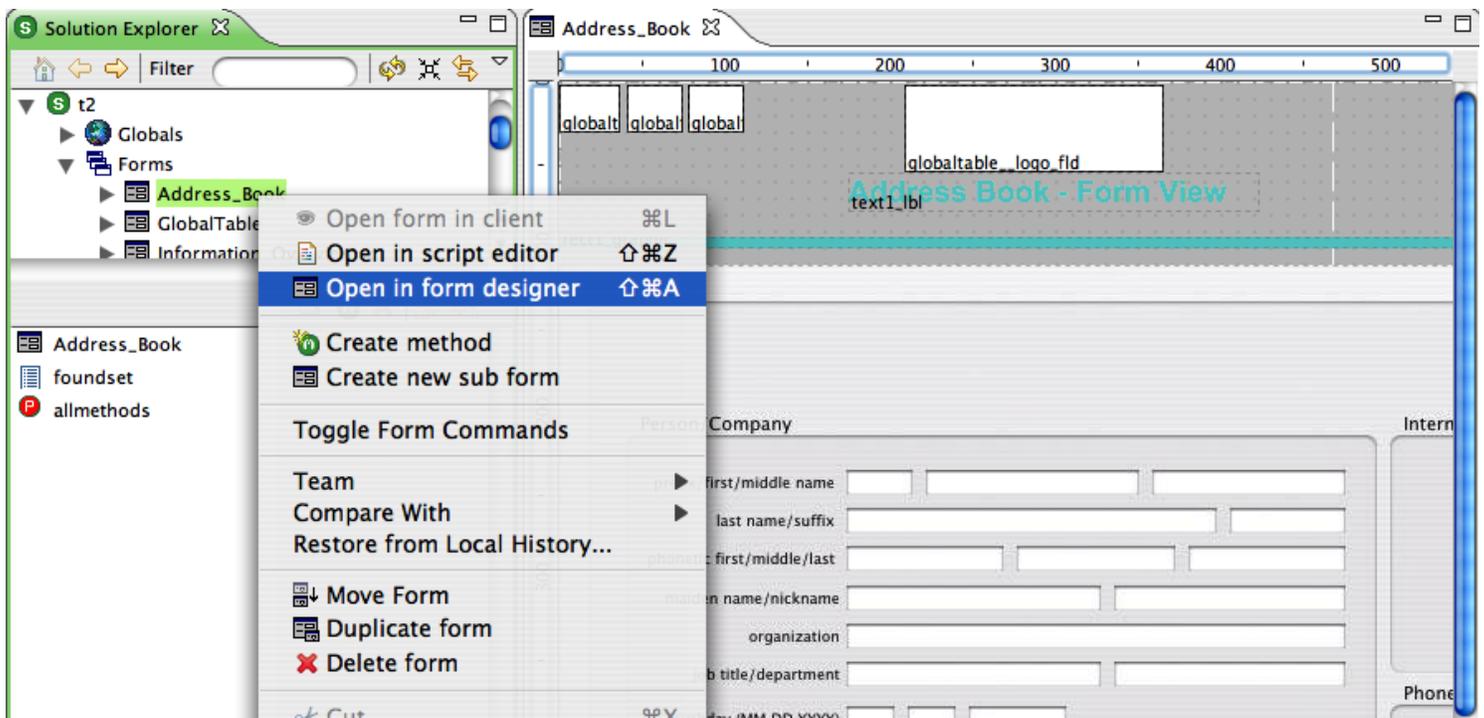
Refresh View in Servoy Eclipse



At this point in time, the Servoy Eclipse IDE is displaying an in-memory copy of the info which was read from the newly created project named t2. But the files which make up this project have all been deleted and replaced by FmPro Migrator. So it is necessary to refresh the view of the project to cause Servoy Eclipse to reload the project files from disk.

Click the Refresh View [F5] button in the Solution Explorer window.

Viewing Migrated Layouts



Click on any migrated form and select Open in form designer.

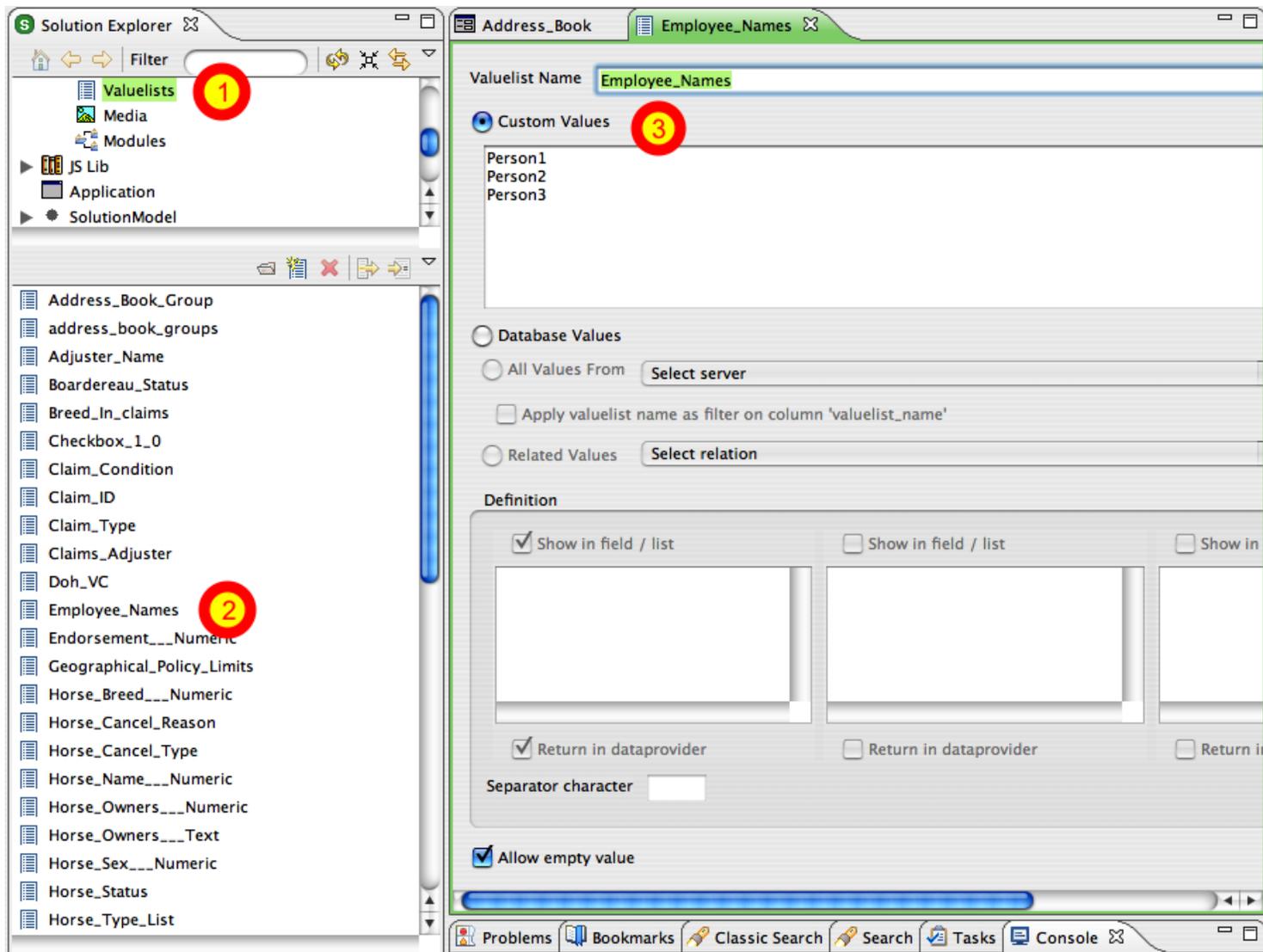
The migrated form will be displayed.

This example form is an Address Book importing layout which contains global fields holding graphic

images across the top of the form. The graphics are not embedded within the form on this layout, so the images will only be displayed by a running application - if you choose to implement the functionality in the same manner within Servoy. FmPro Migrator does transfer FileMaker Pro image data to any supported SQL database, via the features on the Tables tab of the Migration Process window.

The form fields and background graphic have been transferred to the Servoy form, along with the aqua colored text and aqua colored horizontal line across the top of the layout.

View Migrated Value Lists



(1) Click on Valuelists in the Solution Explorer panel. (2) Double-clicking on an individual custom value list imported from FileMaker Pro, (3) displays the contents of the value list. Field (or dynamic) value lists do require manual configuration in Servoy.

View Migrated Relationships

The screenshot displays the FmPro Migrator interface. On the left, the Solution Explorer shows a tree view with 'Relations' highlighted (1). The main panel shows the details for the 'claim_to_client_call_log' relationship, including source and destination tables, a table of field mappings, and join options (2). A red circle (3) highlights the 'Relation name' field.

Relation name: `claim_to_client_call_log`

Source: `mysql_mbp17.Claim` Destination: `mysql_mbp17.Client_Call_Log`

From	op	To
<code>claim_id</code>	<code>=</code>	<code>claim_id</code>
<code>client_id</code>	<code>=</code>	<code>client_id</code>
	<code>=</code>	

Options

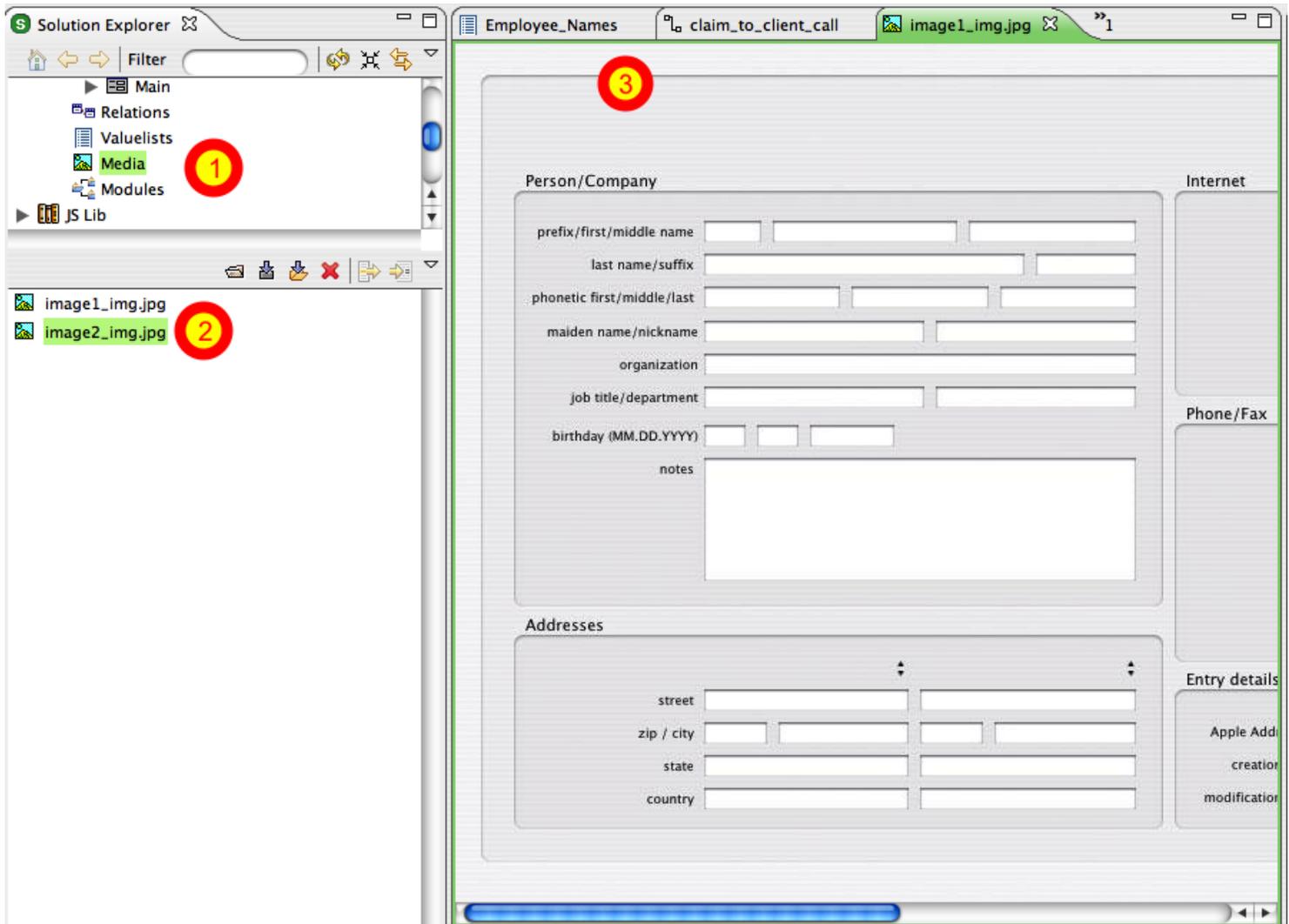
Join type: `inner join` Allow creation of related records

Initial Sort: Allow parent delete when having related records Delete related records

(1) Click on Relations in the Solution Explorer panel. (2) Double-clicking on an individual relation, (3) displays the relationship predicates in the details panel.

Note: FmPro Migrator can migrate relationships directly into the destination SQL database selected for the migration. But Servoy can also manage the relationships at the application level. Servoy developers need to weigh the advantages and disadvantages of using each technique for implementing converted FileMaker Pro relationships. One advantage to managing the relationships within Servoy is that the implementation will be independent of the actual SQL database server. This means that a Servoy application can be tested locally using the embedded Sybase database, and then it can be moved to a completely different SQL database server for production use.

View Migrated Images



(1) Click on Media in the Solution Explorer panel. (2) Double-clicking on an individual image, (3) displays the full sized image in the details panel.

There aren't very many images displayed in the list of images for this project, because only 5 layouts were migrated in Demo mode. The selected image above shows the background image extracted from the Address Book layout, as was shown in the screenshot of the entire layout.

FmPro Migrator implements automatic de-duping of embedded images which have been extracted from each FileMaker Pro layout. If a company logo image is used on 100 different layouts, only one copy of the image will be extracted and referenced on each of the 100 converted Servoy forms. This means that if the one copy of that company logo image is changed within the Media list, the change will automatically affect all of the forms where it is being used.

View Migrated Globals & Scripts

The screenshot displays the Servoy Eclipse IDE interface. On the left, the Solution Explorer shows a project named 't2' with a 'Globals' folder. Under 'Globals', the 'variables' folder is selected, indicated by a red circle (1). Below the Solution Explorer, a list of global variables is shown, including 'claim_logic_1_field', 'client_invoice_paid_status', and many others. On the right, the 'globals.js' file is open, showing JavaScript code. A red circle (2) highlights a variable declaration: `var underwriter_surplus_lines_tax_logic_1_field;`. Another red circle (3) highlights a function definition: `function Address_Book___Import_from_AB2FM_File___Admin_()`. The code includes comments describing the function's purpose and the source of the imported data.

(1) Click on variables in the Solution Explorer panel. (2) FileMaker Pro global fields are converted into Servoy Javascript global variables, located within the globals.js file. Globals are listed at the top of the globals.js file, which is followed by (3) commented Javascript code representing each FileMaker Pro script from the original database.

Note: The Javascript code created from each FileMaker Pro ScriptMaker script is provided as a development aid so that all of the elements of the original FileMaker Pro database are conveniently located within the Servoy Eclipse development environment. This Javascript code will need to be rewritten to utilize the features of the Servoy development environment in order to function in the same manner as the original code.

Using Licensed Mode - FmPro to Servoy

Using the FmPro to Servoy Migration Service in Demo mode, limits processing tasks to 5 layouts and 5 scripts. Ordering a license key lifts these operating limits for this service. Using the License Key allows for the processing of an unlimited number of database files for the purchased layout quantity during the duration of the license key.

Select Processing Type - Licensed

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

QUOTE

FmPro to Servoy Migration Service

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: /Users/dsimpson/s1v41_workspace/ Browse

Processing Type: Licensed Order License Key

License Key:

Migrate

(1) Select Licensed from the Processing Type menu.

(2) Click the Order License Key button. FmPro Migrator will open the .com Solutions Inc. web store hosted by Kagi. The specified layout quantity (3) and FmPro to Servoy service will automatically be

added to the Kagi shopping cart.

Obtaining a Price Quote

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: /Users/dsimpson/s1v41_workspace/ [Browse](#)

Processing Type: Licensed [Order License Key](#)

License Key: 

[Migrate](#)

QUOTE 

The Quote button links to a web form which creates a printable price quote & cost justification document based upon the number of layouts imported into FmPro Migrator. This document is designed to be suitable for project budget planning purposes and review by corporate finance departments.

Entering a License Key

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

QUOTE

FmPro to Servoy Migration Service

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: /Users/dsimpson/s1v41_workspace/ Browse

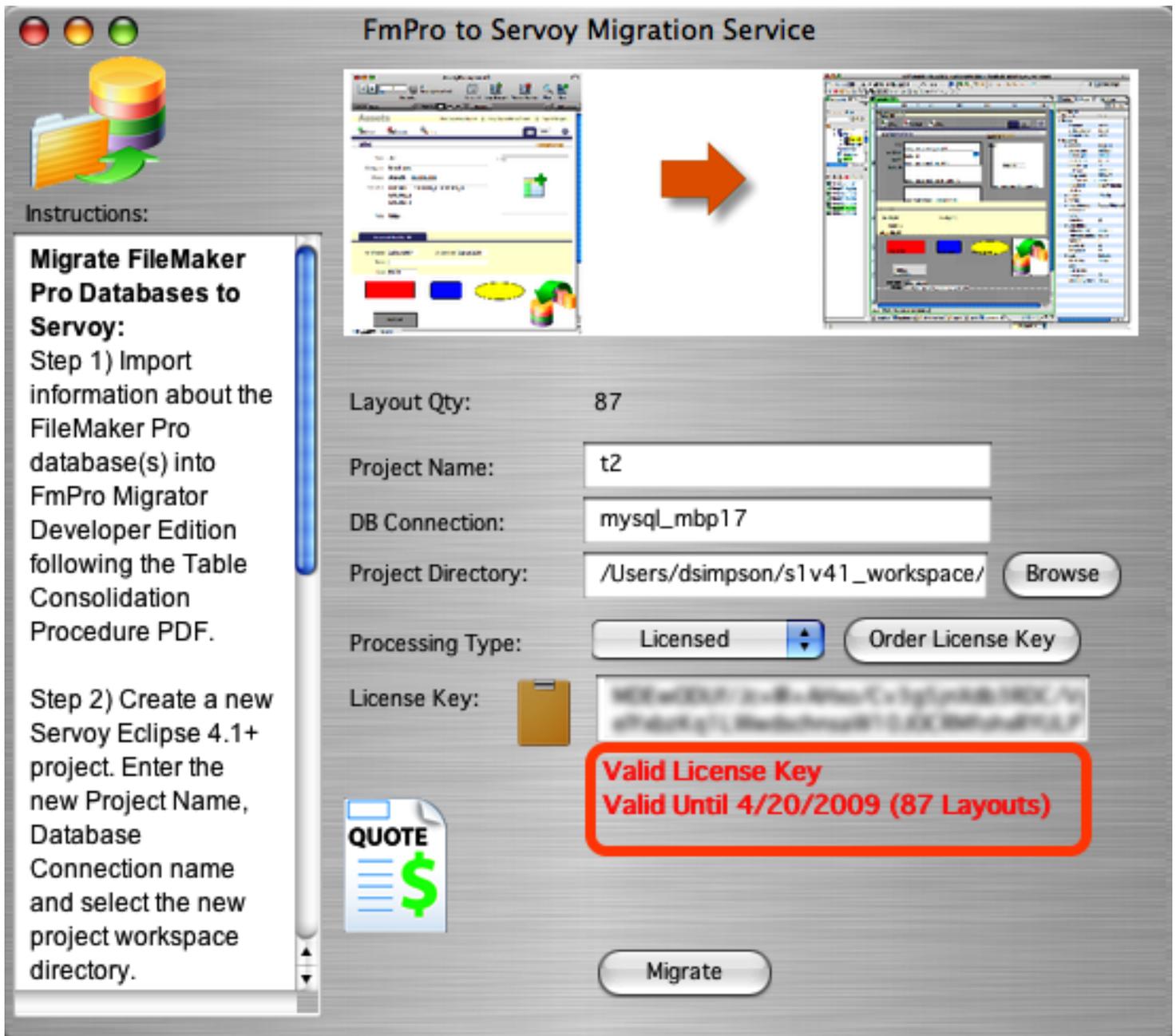
Processing Type: Licensed Order License Key

License Key: [Clipboard icon]

Migrate

Once the payment processing has been completed on the Kagi web store, an email receipt containing the License Key for the FmPro to Servoy Migration Service will automatically be sent within a few minutes. Copy the license key within the email receipt, then click the clipboard icon.

Validating the License Key



The screenshot displays the 'FmPro to Servoy Migration Service' application window. On the left, there is an 'Instructions' panel with two steps: 'Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.' and 'Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.' Below the instructions is a 'QUOTE' icon with a green dollar sign.

The main interface features a central area with two screenshots of FileMaker Pro databases connected by a large orange arrow. Below this, there are several input fields and controls:

- Layout Qty:** 87
- Project Name:** t2
- DB Connection:** mysql_mbp17
- Project Directory:** /Users/dsimpson/s1v41_workspace/ (with a 'Browse' button)
- Processing Type:** Licensed (with a dropdown arrow) and 'Order License Key' button
- License Key:** A clipboard icon and a text field containing a license key.

A red-bordered box highlights the validation results: **Valid License Key** and **Valid Until 4/20/2009 (87 Layouts)**. At the bottom center is a 'Migrate' button.

FmPro Migrator copies the license key from the clipboard, validates the key with the license key server via the internet and then displays the layout quantity and expiration date for the key.

Migration Statistics - Licensed Mode

The screenshot displays the 'FmPro to Servoy Migration Service' window. On the left, there are instructions for migrating FileMaker Pro databases to Servoy. The main area shows a progress bar and a 'Migrate' button. Below the progress bar, the following statistics are displayed:

- Layout Qty: 87
- Project Name: t2
- DB Connection: mysql_mbp17
- Project Directory: /Users/dsimpson/s1v41_workspace/ (with a 'Browse' button)
- Processing Type: Licensed (with a dropdown arrow and an 'Order License Key' button)
- License Key: [Redacted]

Below the license key field, the following text is displayed:

Valid License Key
Valid Until 4/20/2009 (87 Layouts)

87 Layouts Processed in 18.326 Sec.
149 ScriptMaker Scripts Processed.

A 'Migrate' button is located at the bottom of the window.

Instructions:

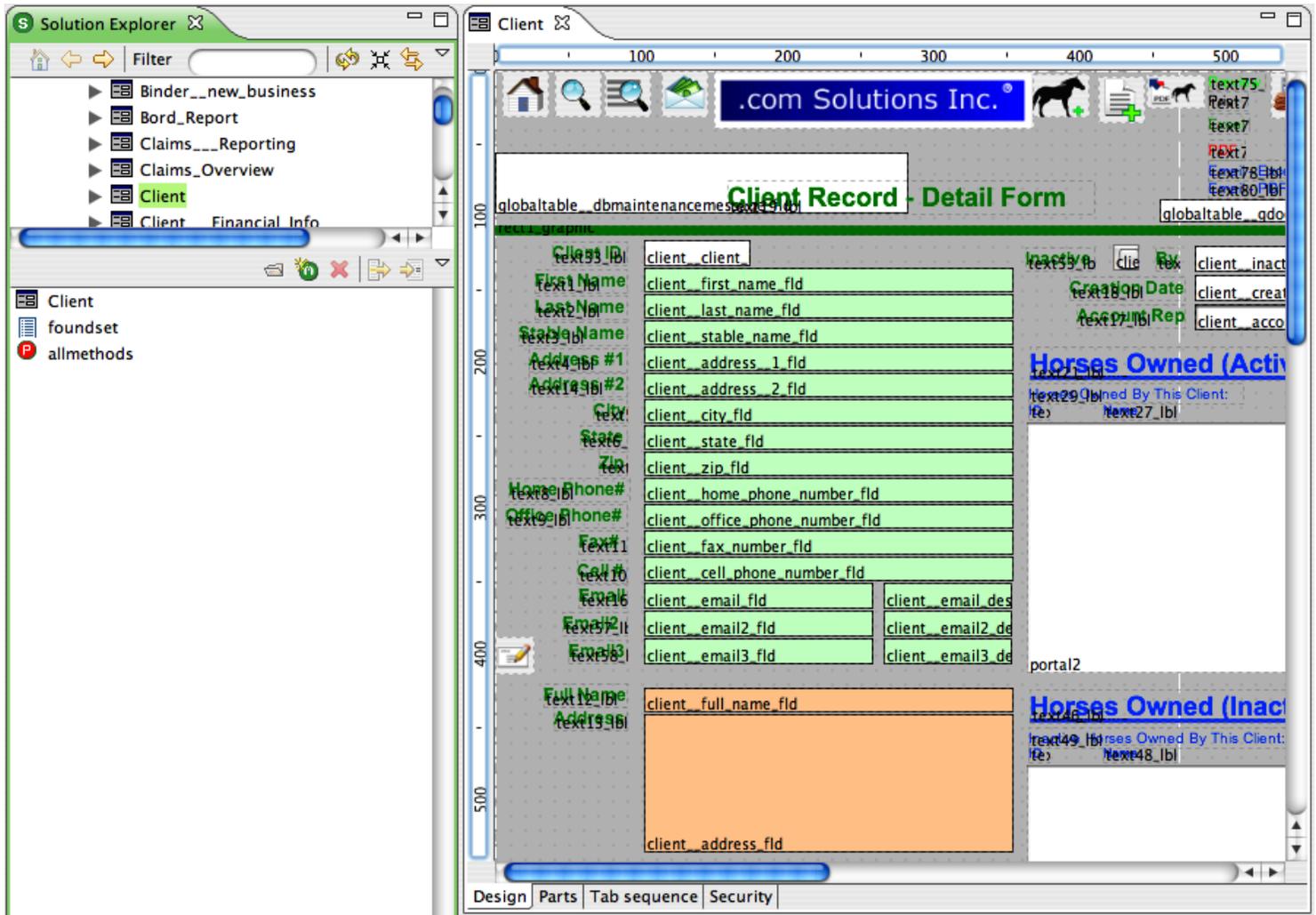
Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

Clicking the Migrate button with the license key enables the processing of 87 layouts as specified in the license key and an unlimited number of scripts, with the resulting processing statistics displayed below the license key field.

Viewing Migrated Layouts



After clicking the Migrate button, click the Refresh view (F5) button to update Servoy Eclipse's views of the project info.

This layout contains quite a few embedded graphics files displayed throughout the layout as buttons.

Troubleshooting Note: Sometimes the Servoy Eclipse IDE won't display the embedded images after refreshing the project. One cause of this issue is the lack of a functional database connection for the project. If the database connection is functional and the images are still not displayed, quit and relaunch the Servoy Eclipse IDE.

Money Saving Tip - Servoy Migration

Using License Keys to Your Advantage

Instructions:

Migrate FileMaker Pro Databases to Servoy:

Step 1) Import information about the FileMaker Pro database(s) into FmPro Migrator Developer Edition following the Table Consolidation Procedure PDF.

Step 2) Create a new Servoy Eclipse 4.1+ project. Enter the new Project Name, Database Connection name and select the new project workspace directory.

Layout Qty: 87

Project Name: t2

DB Connection: mysql_mbp17

Project Directory: /Users/dsimpson/s1v41_workspace/ **Browse**

Processing Type: Licensed **Order License Key**

License Key: [Clipboard icon]

QUOTE \$

Valid License Key
Valid Until 4/20/2009 (87 Layouts)

87 Layouts Processed in 18.326 Sec.
149 ScriptMaker Scripts Processed.

Migrate

Each FmPro to Servoy Migration Service license key provides the Servoy developer with unlimited usage of the FmPro to Servoy Migration Service for up to the purchased layout quantity until the license key expires.

For instance, if you have 10 FileMaker Pro database solutions which you want to migrate to Servoy, you can import the database structure (tables, relationships, value lists, layouts and scripts) into 10 separate FmPro Migrator projects. To work on multiple projects with FmPro Migrator, create a separate folder for each project, and FmPro Migrator will create a separate MigrationProcess.db3 SQLite

embedded database file within each project folder. You should import the database structure information for all of your projects before ordering the license key.

Note: Don't select the Servoy Eclipse project folder as the folder used by FmPro Migrator, because the Servoy Eclipse project folder will be deleted and recreated for each migration.

When you order the FmPro to Servoy Migration Service license key, make sure that you have your largest project open when you click on the Order License Key button. This way you will receive a license key capable of processing the largest number of layouts contained within any of your FileMaker Pro database files.

Once you receive your license key, create 10 Servoy projects, open each FmPro Migrator project (by selecting the project folder with the Browse button on the main FmPro Migrator window) and then click the Migrate button on the FmPro to Servoy Migration Service window. When you have finished, each of the 10 FileMaker Pro solutions will have been converted into a new Servoy Eclipse project.

Note: When processing multiple projects, it is important to enter the correct Servoy Eclipse project name and select the correct Project Directory within FmPro Migrator. You need to change these parameters for each of the 10 projects or you will accidentally overwrite previously generated Servoy Eclipse project files.

Post-Migration Tasks

Post Migration Tasks - Servoy Migration

Some manual steps will be required after the automated processing has been completed.

Unsupported Layout Features

There are some elements incorporated within FileMaker Pro layouts which are not currently supported by the FmPro to Servoy Migration Service. These limitations are listed on the [FmPro to Servoy Migration Service web page](#).

Layout Parts - The FileMaker DDR XML file does not include information about layout parts, so this information cannot be obtained from the original database file. However FmPro Migrator does automatically create a body part for each Servoy Form which is created, in order to insure that you can immediately see the objects within each form.

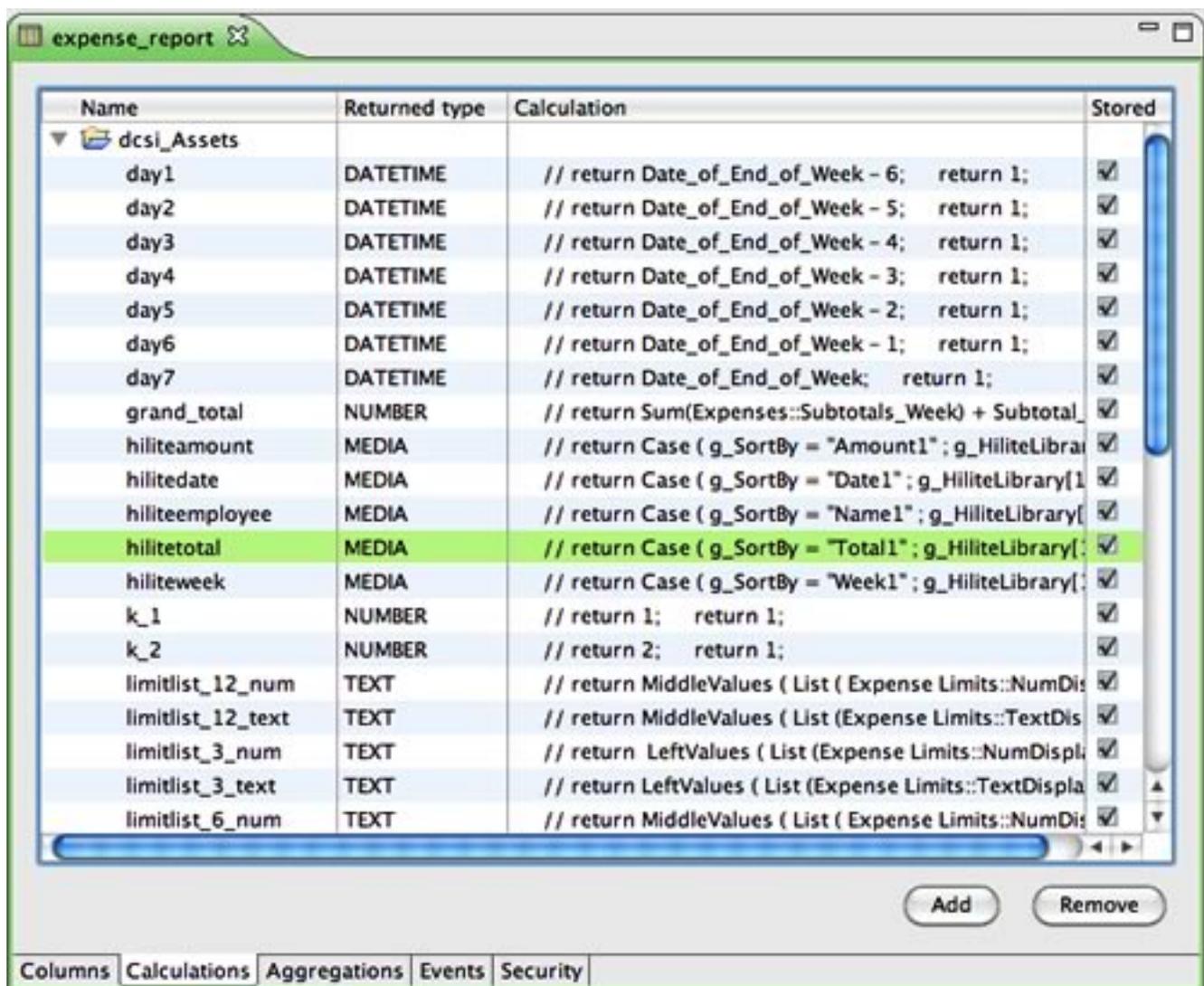
Object Tab Order - The FileMaker DDR XML file does not include information defining the tab order of each object on the layout, so this information cannot be obtained from the original database file.

Object Z-order Stacking - The FileMaker DDR XML file does not include information about the front to back stacking order of the objects on the layout, so this information cannot be obtained from the original database file. However FmPro Migrator does assign a formIndex parameter for each form object in order to reduce the possibility of important objects like fields and text labels from getting covered up by objects like rectangles and images. Some manual changes may still be required after the automated conversion.

ScriptMaker to JavaScript Conversion

Every FileMaker ScriptMaker script is converted into lines of Javascript code. The original commented script is followed by the converted script code. This code is provided as a guide to the Servoy developer during the development of replacement Javascript code to replace the original business logic.

Stored & Unstored Calculation Fields



Name	Returned type	Calculation	Stored
▼ dcsi_Assets			
day1	DATETIME	// return Date_of_End_of_Week - 6; return 1;	<input checked="" type="checkbox"/>
day2	DATETIME	// return Date_of_End_of_Week - 5; return 1;	<input checked="" type="checkbox"/>
day3	DATETIME	// return Date_of_End_of_Week - 4; return 1;	<input checked="" type="checkbox"/>
day4	DATETIME	// return Date_of_End_of_Week - 3; return 1;	<input checked="" type="checkbox"/>
day5	DATETIME	// return Date_of_End_of_Week - 2; return 1;	<input checked="" type="checkbox"/>
day6	DATETIME	// return Date_of_End_of_Week - 1; return 1;	<input checked="" type="checkbox"/>
day7	DATETIME	// return Date_of_End_of_Week; return 1;	<input checked="" type="checkbox"/>
grand_total	NUMBER	// return Sum(Expenses::Subtotals_Week) + Subtotal	<input checked="" type="checkbox"/>
hiliteamount	MEDIA	// return Case (g_SortBy = "Amount1" ; g_HiliteLibrai	<input checked="" type="checkbox"/>
hilitedate	MEDIA	// return Case (g_SortBy = "Date1" ; g_HiliteLibrary[1	<input checked="" type="checkbox"/>
hiliteemployee	MEDIA	// return Case (g_SortBy = "Name1" ; g_HiliteLibrary[<input checked="" type="checkbox"/>
hilitetotal	MEDIA	// return Case (g_SortBy = "Total1" ; g_HiliteLibrary[<input checked="" type="checkbox"/>
hiliteweek	MEDIA	// return Case (g_SortBy = "Week1" ; g_HiliteLibrary[<input checked="" type="checkbox"/>
k_1	NUMBER	// return 1; return 1;	<input checked="" type="checkbox"/>
k_2	NUMBER	// return 2; return 1;	<input checked="" type="checkbox"/>
limitlist_12_num	TEXT	// return MiddleValues (List (Expense Limits::NumDis	<input checked="" type="checkbox"/>
limitlist_12_text	TEXT	// return MiddleValues (List (Expense Limits::TextDis	<input checked="" type="checkbox"/>
limitlist_3_num	TEXT	// return LeftValues (List (Expense Limits::NumDispla	<input checked="" type="checkbox"/>
limitlist_3_text	TEXT	// return LeftValues (List (Expense Limits::TextDispla	<input checked="" type="checkbox"/>
limitlist_6_num	TEXT	// return MiddleValues (List (Expense Limits::NumDis	<input checked="" type="checkbox"/>

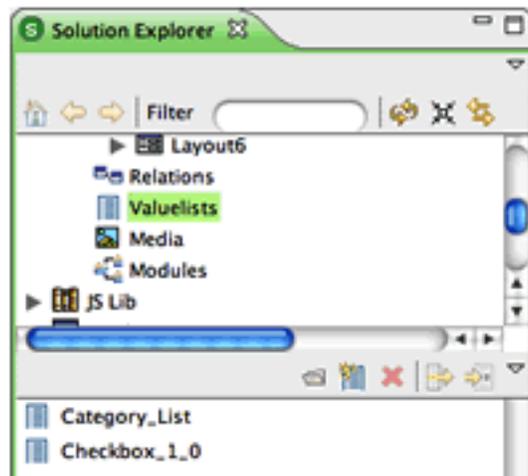
Buttons: Add, Remove

Navigation: Columns, Calculations, Aggregations, Events, Security

Unstored calculation fields are listed in the Drop Columns.sql file which is generated in the output directory by FmPro Migrator. This script should be run in the SQL database to drop unstored calculation columns from tables in the SQL database. This way, the columns will only be available within Servoy as calculated values, and will not be stored within the SQL database.

The calculation formulas are copied from the original FileMaker database and written into the <tablename>_calculations.js file as commented JavaScript functions. These functions will require manual development work in order to enable them to function in their original manner within the Servoy application.

Custom and Dynamic Value Lists



FmPro Migrator converts custom value lists into Servoy Valuelists. However some custom value list names may have been duplicated within the original FileMaker solution if it was a multi-file solution. Duplicated Value Lists having the same name and contents will be skipped automatically by FmPro Migrator. Duplicated value lists having the same name but different contents will be renamed and added to the Duplicate Objects Report.xls file generated by FmPro Migrator. Manual work will be required if a renamed Value List contains information which is actually preferred over the first occurrence of the Valuelist which was created.

Dynamic value lists are added to the list of valuelists in Servoy, but will require manual work to tie their values to the proper dataProvider.