milestone

XProtect

Retail 2.2
User's Manual
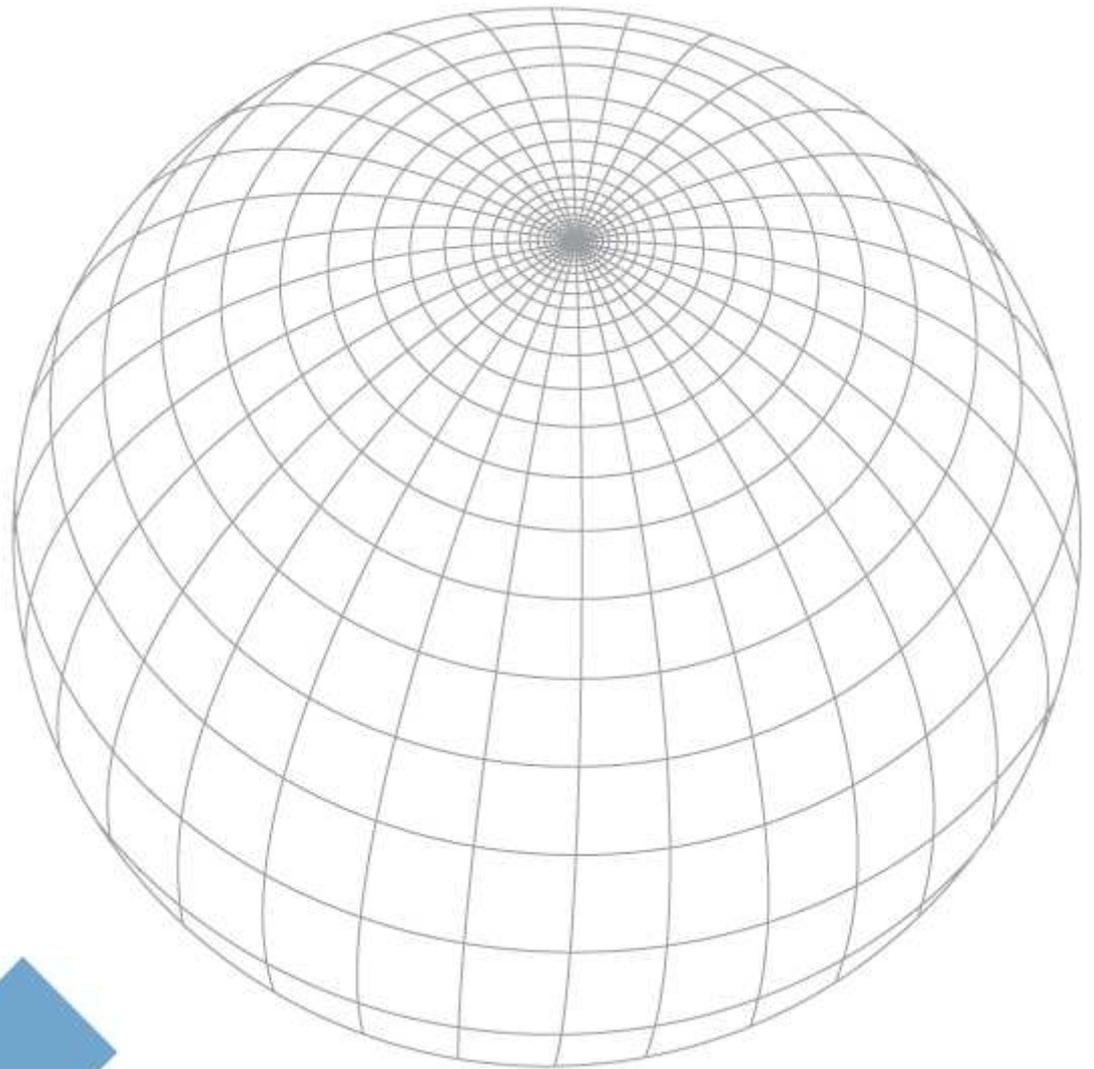
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Target Audience for this Document

This document is aimed at users of Milestone XProtect Retail and provides descriptions of how to create and use different types of queries.

The manual should be helpful to both the user who investigates known kinds of fraud or shrinkage using existing queries, and to the advanced user who creates or adjusts queries to match new types of fraud or shrinkage.

Note: The installation of Milestone XProtect Retail is not covered in this manual.

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Contents

Introduction

The Milestone XProtect Retail application is a powerful investigation tool which can help you to pinpoint shrinkage and fraud.

With the Retail software you are able to:

- Execute queries in business data to find suspicious transactions
- View video matching suspicious transactions
- Export recordings for video evidence
- Create your own queries

System Requirements

The requirements for the Milestone XProtect Retail system are project specific and can only be calculated based on the individual project.

How to Investigate

With the Milestone XProtect Retail application you can investigate different kinds of suspicious data to identify shrinkage and fraud. This is done by using one of the defined queries to look for suspicious activity in the business data. Queries find transactions, which are linked to the video recorded from by a camera at the till when the specific transaction took place.
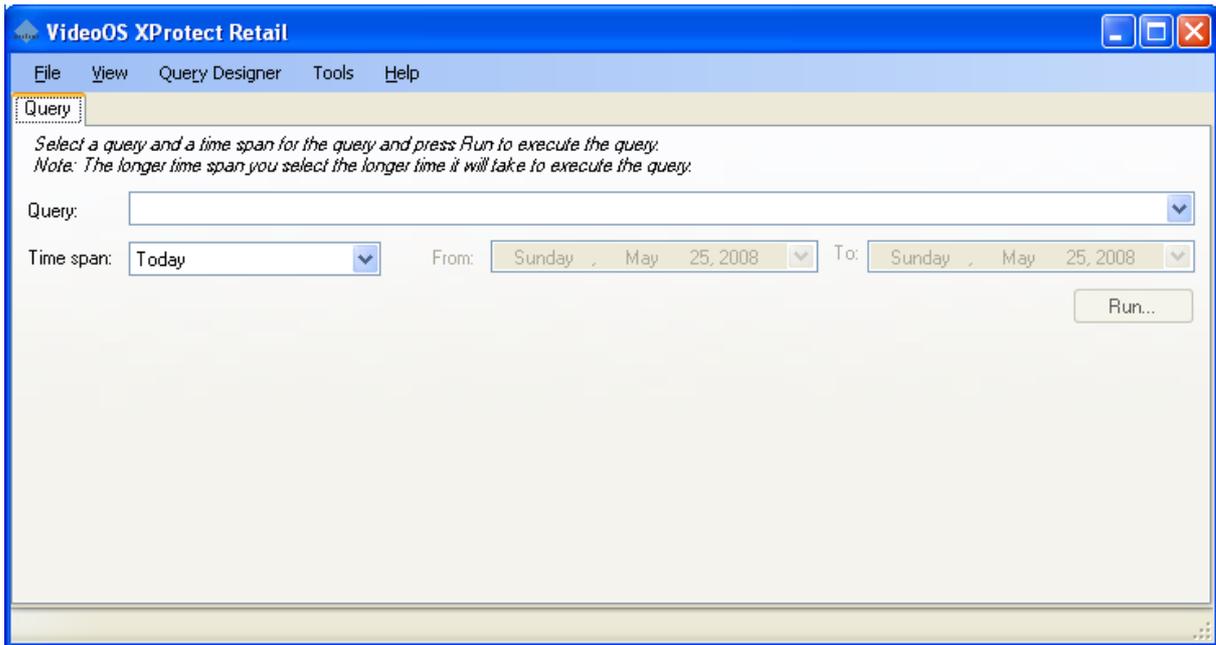
1. Select a query in the *Query* list to find data that you want to investigate.
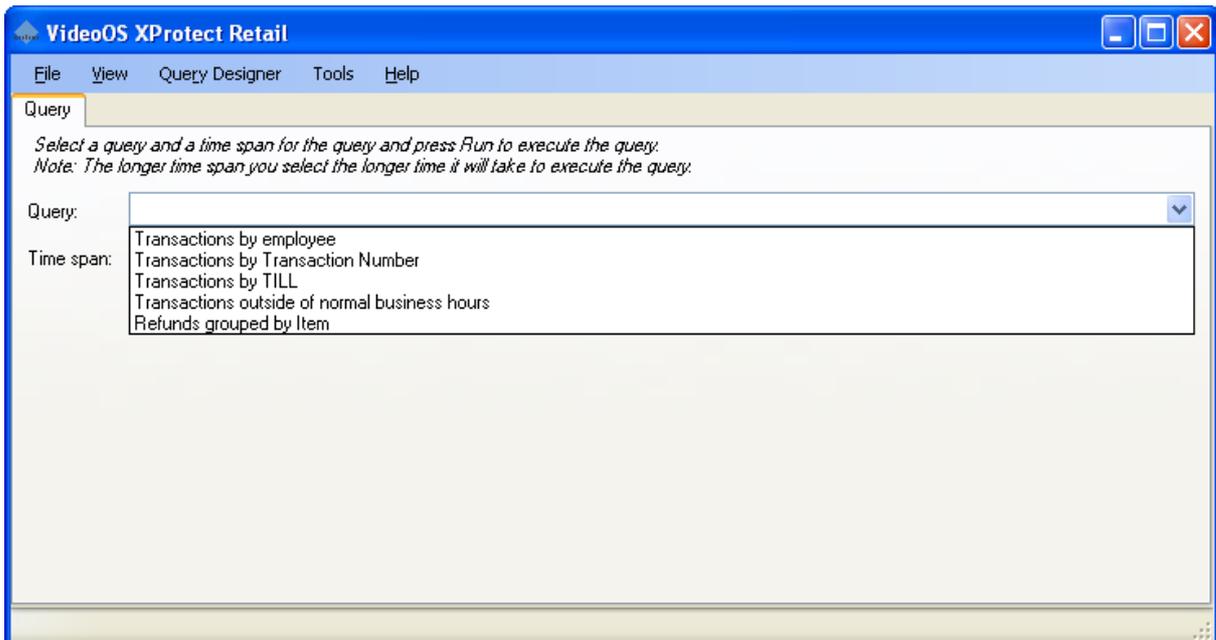
2. Select a time span. You can either select *Today*, *Last 48 hours*, *Last 7 days*, *Last 14 days*, *Last month*, *Everything* or *From - To*. When choosing *From - To* the *From* date picker and the *To* date picker will be enabled and you can specify the start and end date for the query analysis.
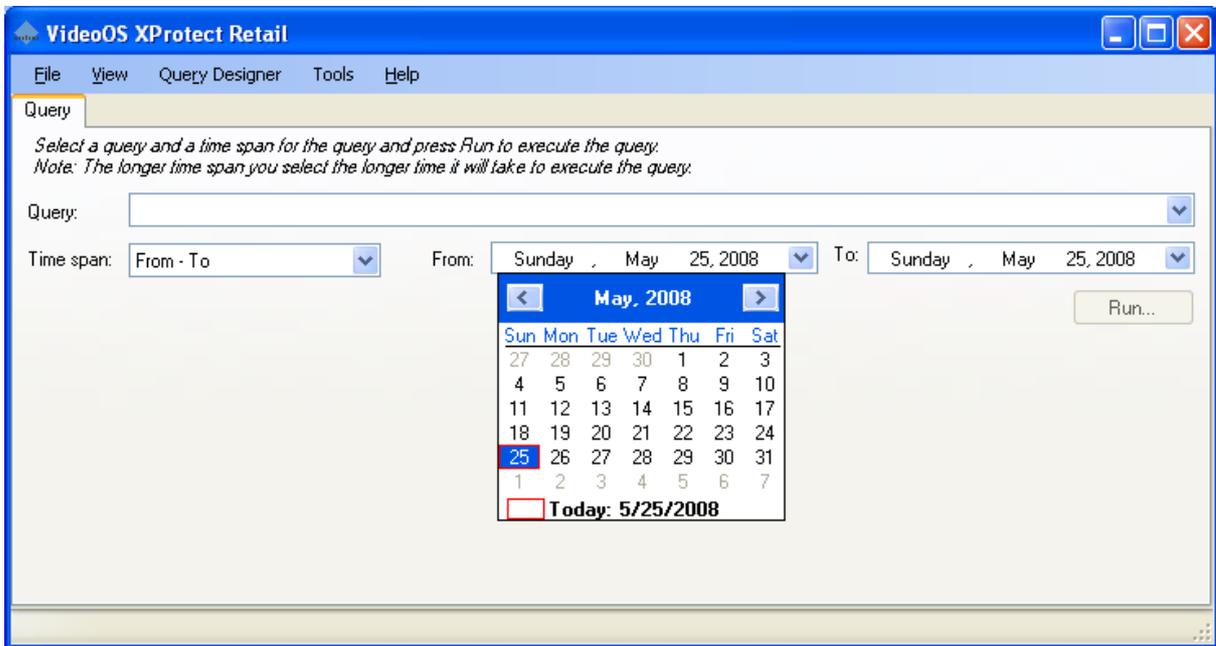
You can either enter the date manually in the *From* and *To* fields, or you can click the drop-down arrow to select the date from a calendar.

3. Click the *Run* button.

Query Parameters

If the query has been designed with parameters the Milestone Xprotect Retail application will present you with the following dialog:
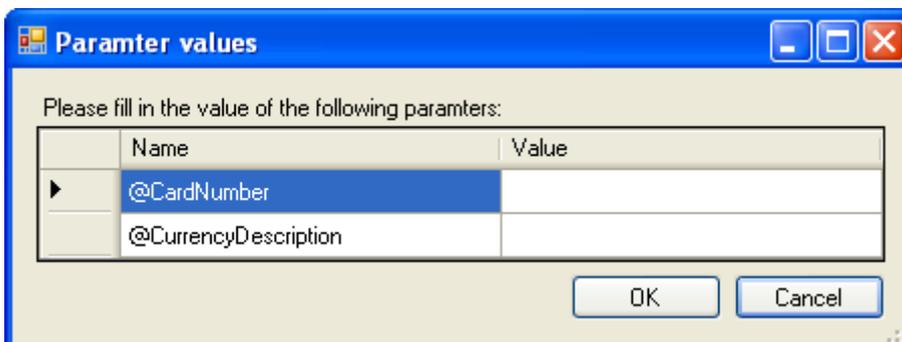
In this dialog the values of the different parameters for the query can be entered. When you have entered all values click the *OK* button.

Query types

The Milestone XProtect Retail application has two different types of queries: normal queries and group by queries.
- Normal queries are simple queries resulting in a set of specific transactions where each line in the result set represents one transaction.
- Group by queries are aggregated queries resulting in a set of records representing several transactions.

A transaction line may be greyed out in the result set. There can be several reasons for this:
- the Milestone surveillance system doesn't have any video matching the transaction
- the Retail System is not correctly connected to the Milestone surveillance system
- no camera has been assigned to the till

Tip: You can filter out the greyed out lines by clicking in the menu *View* and selecting *Hide filtered rows*.

Performing a Normal Query

When you perform normal queries you will see a window like this:
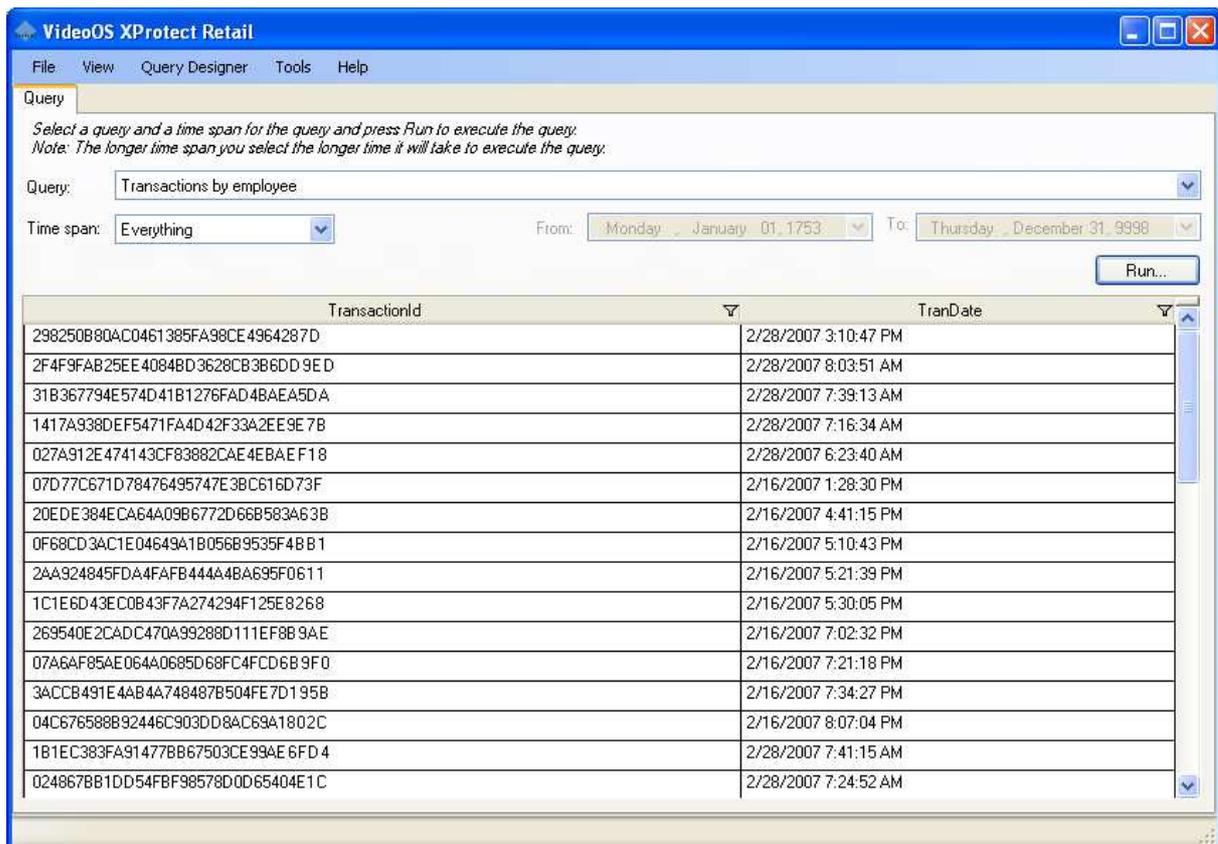
Every transaction is represented by a single line in the table. By clicking on a transaction line the Milestone XProtect Retail application will show the transaction with the receipt and the matching video (see Viewing Transactions and Video on page 10).

Note: If the Milestone XProtect Retail system is not correctly connected to the Milestone surveillance system it is not possible to access the *Video* tab and clicking on a line in the result set

will not trigger any action. (Please see Retail Application Settings on page 16 for instructions on how to connect to the surveillance system.)

Performing a Group By Query

Performing group by queries will present you with a window like this:
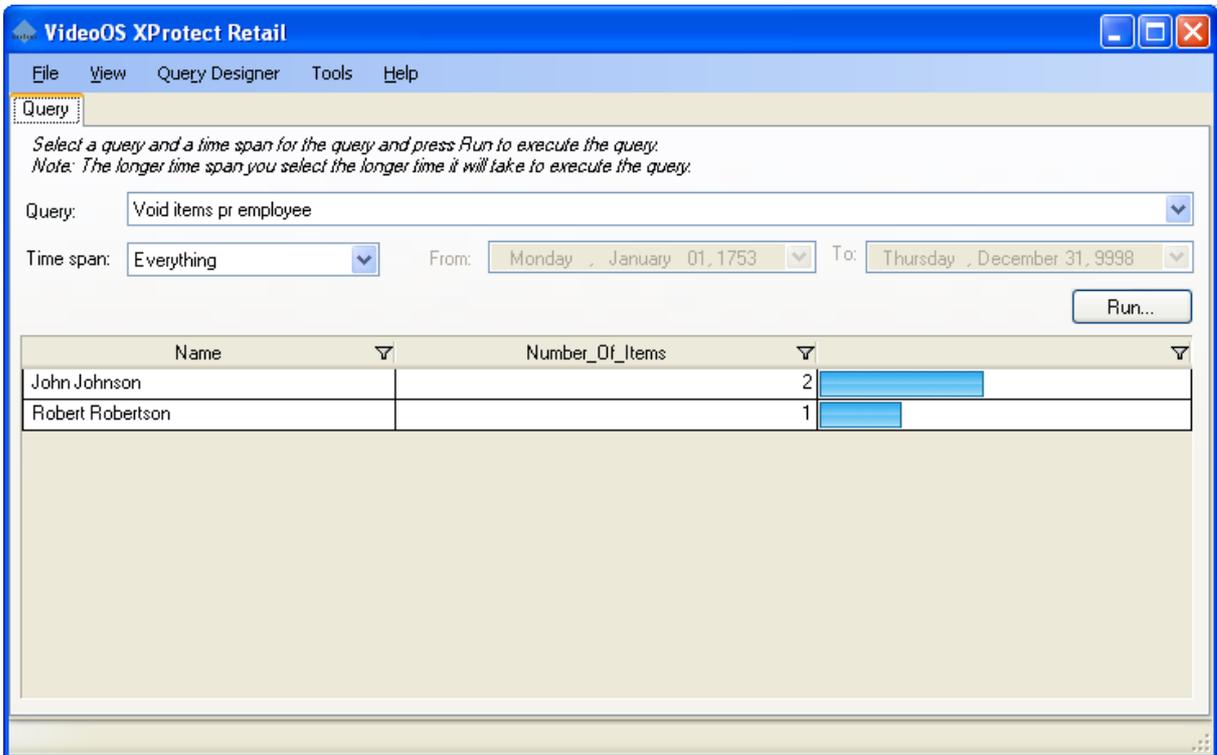
When performing a group by query each line in the table represents a set of transactions. In the example above each line in the table represents the void items made by each employee.
The *Number_Of_Items* column in the table shows the number of void items made by the specific employee and the last column gives a graphical representation of the number of void items.

When clicking on a line in the group by table each transaction contained in the group will be shown in a drill down table.

Drilling Down a Group By Query

When you drill down into an aggregated (group by) query result, the transactions found in the group by query are presented like this:
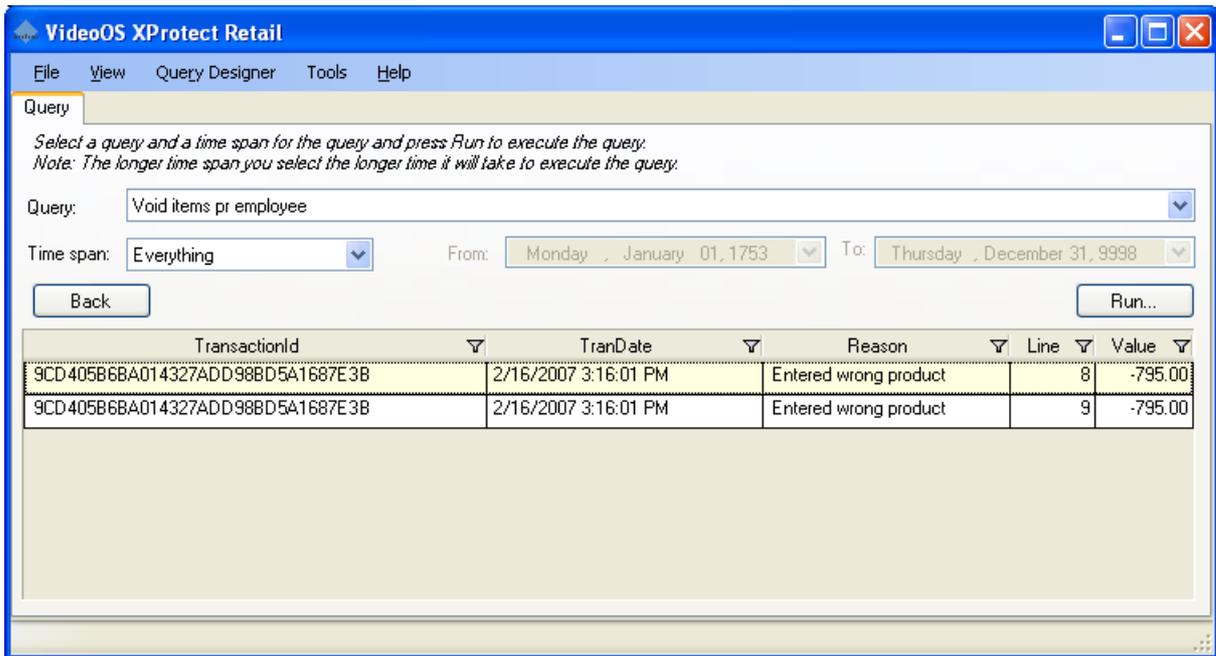
This window is very similar to the normal query window, where each line in the table represents a transaction, and clicking a line will switch to the *Video* tab showing the specific transaction (see Viewing Transactions and Video on page 10). The only difference between the drill down query and the normal query is the *Back* button just above the table in the left side of the window. This button will return to the group by query.

Note: If the Retail System is not correctly connected to the Milestone surveillance system it is not possible to access the *Video* tab and clicking on a line in the result set will not result in any action. (Please refer to Retail Application Settings on page 16 for instructions on setting up the connection to the Milestone XProtect Enterprise system).

Viewing Transactions and Video

Click on the *Video* tab to see the each transaction with the receipt shown to the left and the matching video to the right.
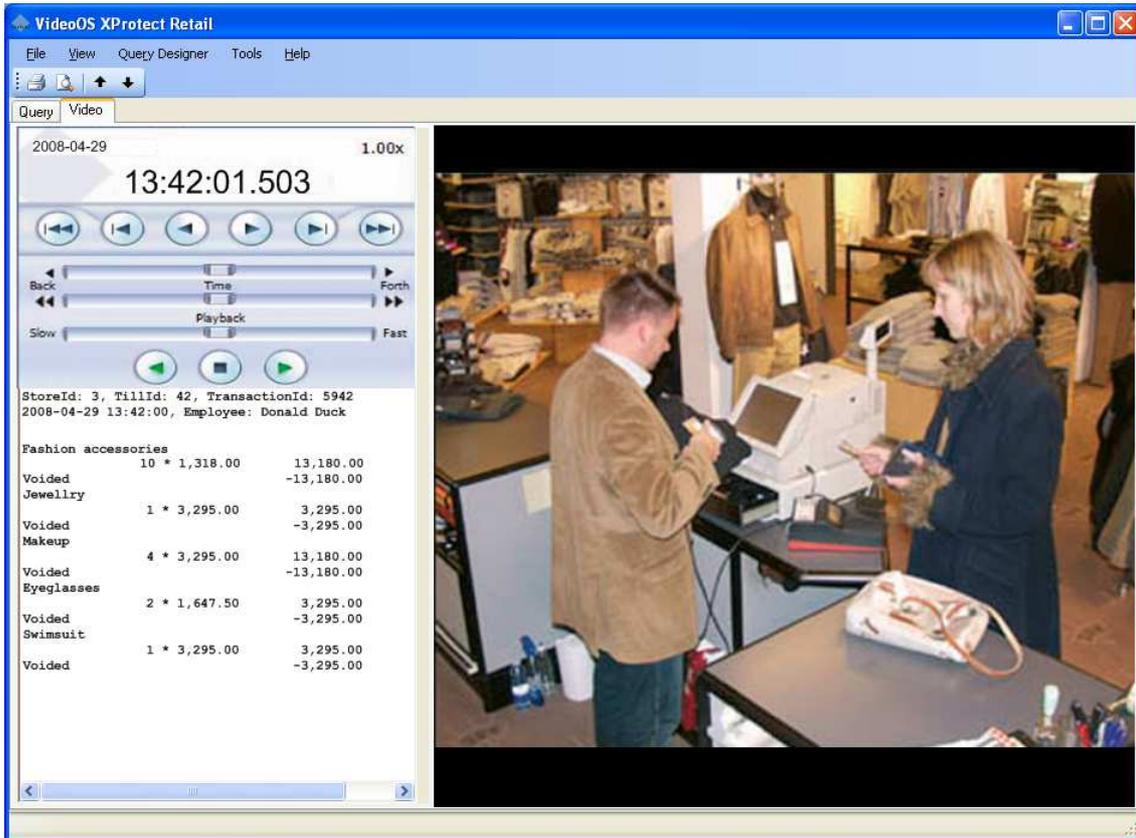
To return to the query table click the *Query* tab. From the query table it is possible to access another transaction by either clicking a different transaction in the table, or by executing another query.

To **step through the transactions** in the query table click on either the previous transaction ⬆️ or next transaction ⬇️ button in the toolbar. This will change the transaction (receipt and video) in the *Video* tab to the previous or next transaction in the query table.

Printing

To **print** the specific transaction from the *File* menu, select *Print* or simply click on the *Print* icon 🖨️ in the toolbar. Alternatively create a **preview of the print** by selecting the *Print Preview…* in the *File* menu, or click on the "Print Preview…" icon 🔍 in the toolbar.

Exporting a Query Result

You can export the result of all query types. The result set will be exported as a comma separated file (csv) containing only the data shown in the table. The Export facility is accessible through the menu *File* and click on *Export*. The export of the result set displays a *Save As* window from where a location for the file can be selected.

To **export the specific transaction** with Video, select *Video Export* from the *File* menu. This will open the *Browse For Folder* window where you select the export folder.

Managing Queries

The management of a store can identify and minimize fraud and shrinkage by using the Milestone XProtect Retail application. As the main sources of the shrinkage or fraud are eliminated, new kinds of fraud and shrinkage may emerge, or it can be relevant to investigate other kinds of already existing shrinkage or fraud. This is why you can create or edit queries in the Milestone XProtect Retail application.

Creating a Query

1. From the Query *Designer* menu select *New* to create a new query. This will open the *Query Designer*.

   The *Query Designer* offers two ways to edit queries: the SQL interface or the graphical interface. The SQL view is a simple text editor where the SQL text can be entered. The graphical interface resembles the one known in Microsoft Access. Both interfaces are equal and can be used when editing a query and any changes will automatically be reflected in both interfaces. This step-by-step description uses the graphical interface options. See *Using the SQL Interface* on page 14 for a short description of this method.
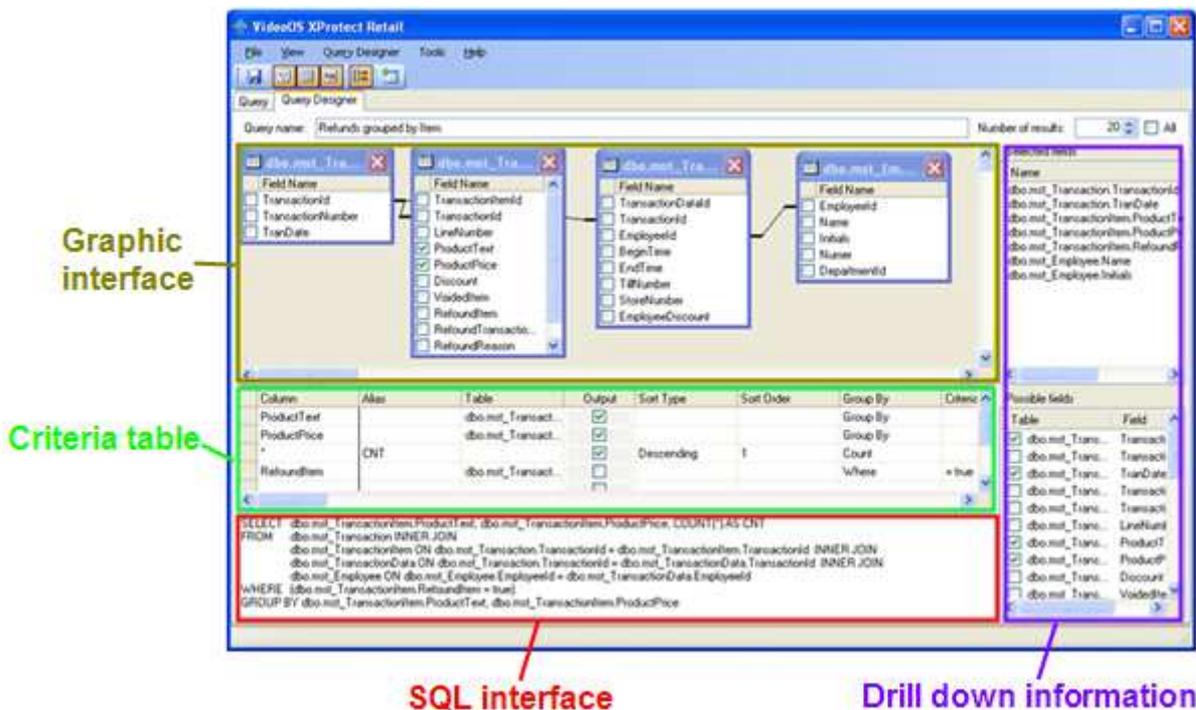
Example only. When creating a new query the Query Designer is empty. The SQL interface pane is by default not displayed. The drill down information pane is only enabled when editing a group by query.

2. Enter the name of the new query in the *Query name* text box. Use a name that describes the functionality of the query. The name must be unique.

3. Limit the result set returned from the database to the Milestone XProtect Retail application by entering an integer in *Number of results* field or set it to *All*. Since the dataset in the

database is usually very large it is important to select a relatively small amount of results to ensure that the performance of the Milestone XProtect Retail application and the SQL server is not compromised.

4. Add the required tables by selecting *Add Table* from the *Query Designer* menu or by clicking on the *Add Table* icon 🔳 in the toolbar.

    This will open up an Add Table dialog:
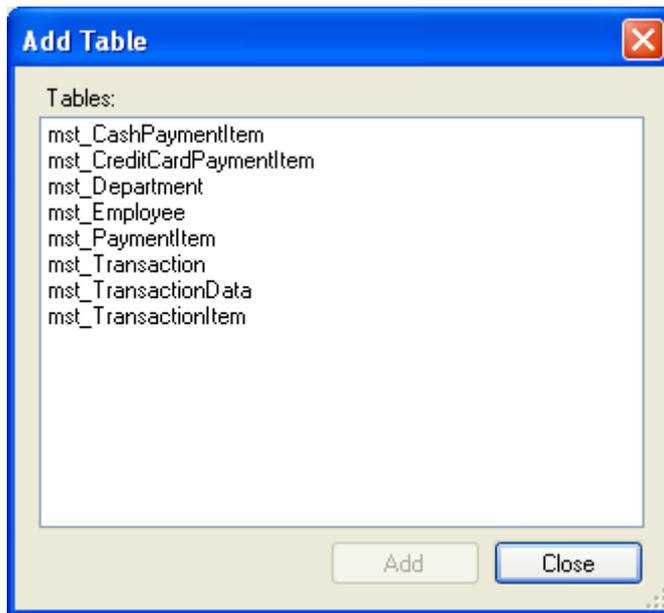
    Select the required tables, and click the *Add* button.

5. Tables will by default be joined based on their relations but these joins can be removed by selecting the line connecting the two tables in the graphical representation and pressing the Delete button.

    New table joins can be added by clicking on the required field name in one table and dragging it to equivalent field name in the adjacent table.

    Note: All queries must be joined to the table mst_Transaction.

6. Select output fields by clicking in the checkbox to the left of the field name in the graphical interface or by adding a line to the criteria table.

    Note: All normal queries must have the fields TransactionId and TransDate selected as output fields.

7. If you want to create a group by query either select *Add Group By* from the *Query Designer* menu, or click on the *Add Group By* icon 🔳 in the toolbar. If not continue to next step.

    This enables the drill down information section with *Possible fields* and the *Selected fields* lists. From the *Possible fields* list select the information you want to include in the drill down table. Selected information is displayed in the *Selected fields* list and will automatically be generated with a group by query.

    Note: To create a valid group by query, the fields TransactionId and TransDate from the table mst_Transaction must be selected (there is no restriction on where they should be represented in the list of selected fields).

8. Save the query.

Using the SQL Interface

To activate the SQL interface select *Pane > SQL* from the *Query Designer* menu or click the *SQL Pane* icon in the toolbar.

This will add a text box in the bottom left corner of the *Query Designer* tab showing the SQL for the query. This SQL text can be altered manually. When you have finished editing this text you can click anywhere outside the SQL interface pane and the graphical editor will reflect the changes you have just made.
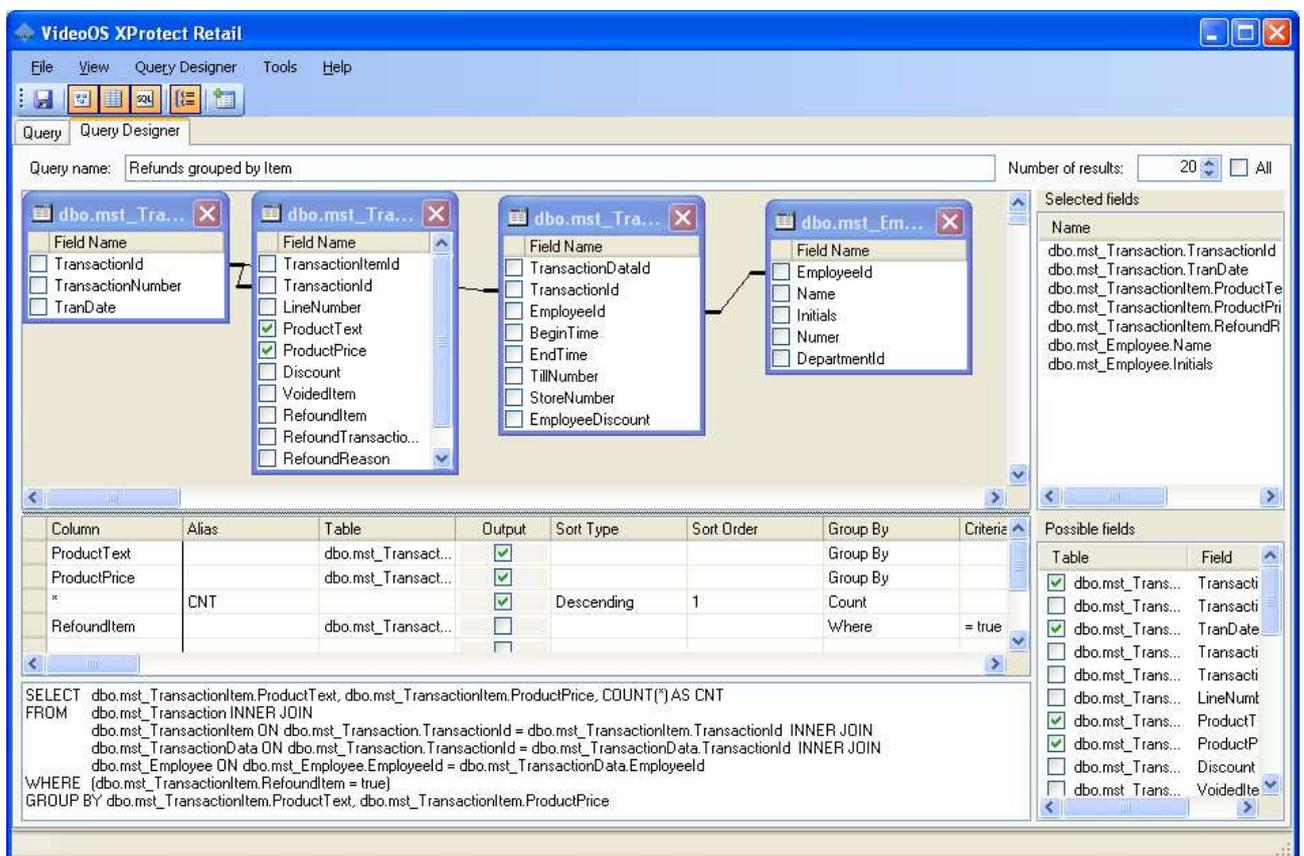
Editing a Query

To edit an existing query, on the *Query* tab select the query in the *Query* list. Then select *Edit* from the *Query Designer* menu. This will open the *Query Designer* tab.

Edit the query in the *Query Designer* until it fits your requirements and save it.

See also *Creating a Query* on page 12 for more information.

Deleting a Query

To delete a query, on the *Query* tab select the query in the *Query* list. Then select *Delete* from the *Query Designer* menu.

Retail Application Settings

The setup options for the Milestone XProtect Retail application is accessible by selection *Options* from the *Tools* menu. This will open the *Options* dialog with two tabs: *XProtect Settings* and *General Settings*.

Connecting to the Surveillance System

From the *XProtect Settings* tab in the *Options* window you can setup the connection to the Milestone XProtect Enterprise server.

Enter the URL to the XProtect Enterprise Image Server in the *Host URL* field.

Note: Remember to specify the port number if the Milestone XProtect Enterprise Image Server is running on a different port than the default port (port 80). If you want to use port 8080 from the local machine with the http protocol it could look like this: http://127.0.0.1:8080

Enter the user's login credentials in the *User name* and *Password* fields. The user must be configured in the Milestone XProtect Enterprise Image Server with the necessary access rights.
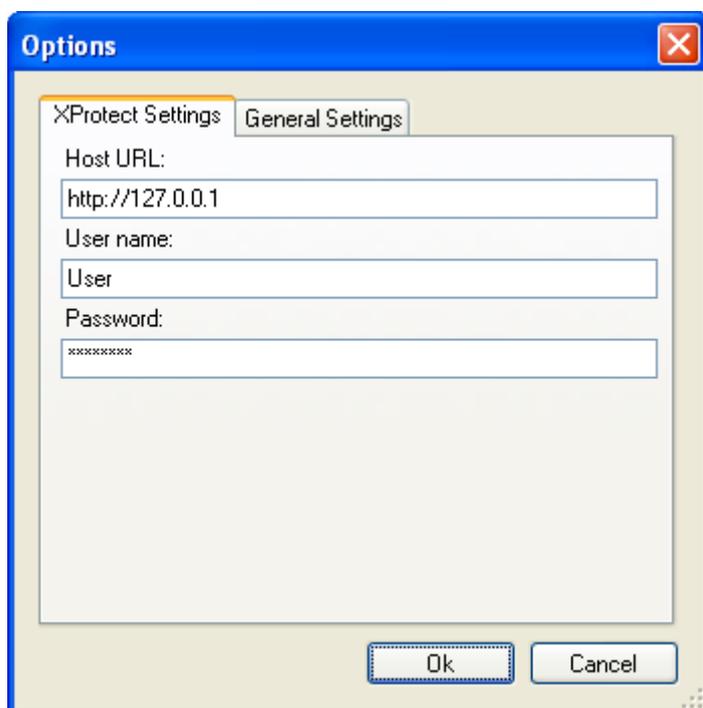
Reloading Database Structure

On the *General Settings* tab you can refresh the database structure by clicking the *Refresh Database Cache* button. The local cache of the database structure is reloaded. This is only necessary when the database structure has been changed. This happens very rarely.
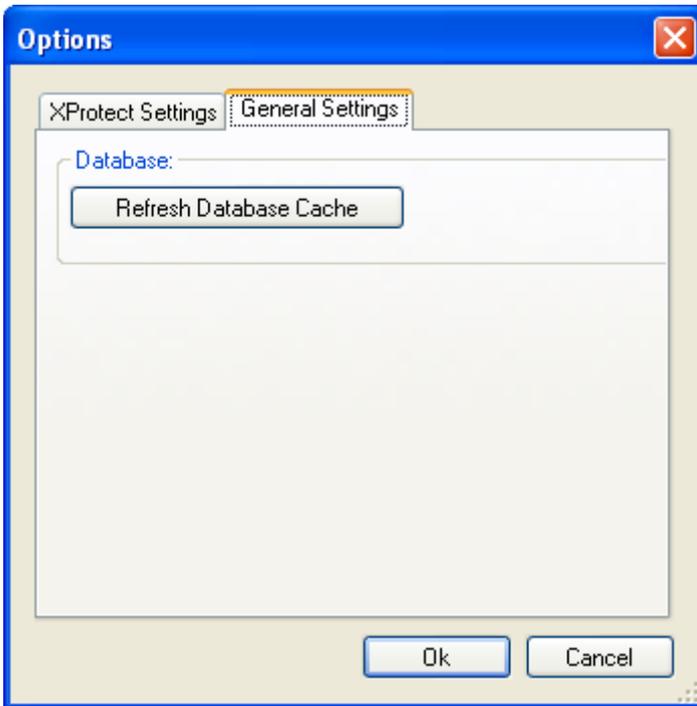
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