Oracle® Retail Promotion Intelligence and Promotion Planning and Optimization
Configuration Guide
Release 12.0.1

October 2006

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Preface

Audience

This document is intended for administrators of Oracle Retail Promotion Intelligence and Promotion Planning and Optimization.

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- Oracle Retail Promotion Intelligence and Promotion Planning and Optimization 12.0.1 Release Notes
- Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Installation Guide
- Oracle Retail Promotion Intelligence User Guide
- Oracle Retail Promotion Planning and Optimization User Guide
- Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Operations Guide

- Oracle Retail Promotion Intelligence and Promotion Planning and Optimization Sample Dataset Guide

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- https://metalink.oracle.com

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- Detailed step-by-step instructions to recreate.
- Exact error message received.
- Screen shots of each step you take.

Conventions

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
Note: This is a note.	Notes are used to call out information that is important, but not necessarily part of the procedure.
This is a code sample	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.
hyperlink	Hyperlinks provide a method of opening another document or jumping to another location within the document.

Introduction

This document provides the configuration guide of Oracle Retail Promotion Intelligence and Oracle Retail Promotion Planning and Optimization products.

About the Promote Configuration Guide

The Promote Configuration Guide provides information about configuring the Oracle Retail Promotion Intelligence (PI) and Oracle Retail Promotion Planning and Optimization (PPO) products to meet a customer's specific business requirements. In order to take full advantage of the PI and PPO products and integrate them into your business practices, it is desirable to perform a customization to reflect your own business requirements.

Where applicable, this guide refers to the following documents:

1. Price 4.5.1 Configuration Guide
2. Price 4.5.1 Operation Guide
3. Promote 12.0.1 Install Guide
4. Promote 12.0.1 Standard Interface Guide
5. Promote 12.0.1 Operations Guide
6. Promote 12.0.1 KSInc Data Guide

Throughout the document, 'Promote' term means Oracle Retail Promotion Intelligence or Oracle Retail Promotion Planning and Optimization product. The acronyms PI and PPO are used throughout.

Getting Started

Getting Started with Configuring Promote

Once one of the Promote products is installed, it is ready to be configured to perform optimization runs in a production environment. Depending on the product installed (PI or PPO), optimization runs produce forecasting recommendations and historic analysis.

Configuration Process

The basic process, at a high level, consists of the following steps:

1. Plan and prepare the product environment
2. Collect information about business requirements, including the level of sales data and optimization, the level of worksheets, the contents of the weekly data feed, model start date configuration, promotions configuration, calendar definition, and the Promote GUI configuration (depending on the product installed)
3. Install the Promote product (PI and/or PPO), including the initial load (See Promote Installation Guide)
4. Create user roles and actions
5. Load customer-specific data
6. Load historic master data from the customer
7. Analyze the business data and develop a forecasting model. (Analytical Services)

7

8. Load weekly production data from customer

9. Do the first optimization run, using primarily default Promote settings.

10. Configure front end (if applicable)

11. Configure standard reports

Foundation

KSInc

KSInc is a ficticous company around which data has been created to represent an example of the type of data that could be used for an initial load of client data. Sample data is provided as a part of the installation process. The data included gives a self-consistent dataset of promotional vehicles and the related offers.

For more information, please refer to Promote 12.0.1 KSInc Data Guide document.

Install directory

"Installdir" is the place where the installation process copies and adjusts all the data related to the application. Please refer to Promote Installation Guide for further details.

The loading process

The loading process uses the standard interface API, which is installed during the installation process. The standard interfaces put forward a set of rules that has to be honored to successfully load the data into the target tables.

The loading process has three steps:

1) Load the pipe-delimited text files into a staging area

2) Apply applicable transformations

3) Load data from the staging tables to the destination tables

Step 1) is usually done by Oracle SQLLoader. Step 2) includes execution of DML statements.

At step 3), each standard interface uses a loader (implemented as a stored procedure), which in turn is often being driven by a shell script.

For more information, please refer to the Promote Standard Interface Guide.

The following sections outline the foundation items, to be loaded through the standard interfaces.

User Management

Important Considerations

These include:

1. Users and roles

2. User Management Bulk Loader Utility

3. The XML files

Please refer to Price 4.5.1 Configuration Guide chapter 3 for steps to follow to configure users and roles.

Promotional Templates

Introduction

Promotional template is used as a reference when creating a promotion. Note that this feature is available only in the PPO product.

The promotional template provides core information about a promotion, such as page width and height, plus the structure of the page. Using the template, a user can create and manage the promotion.

Examples

Example templates are provided as a part of the sample load and could be found at <install-dir>/ modules/pce/sample/templates. The source file is an XML text file that outlines the information being loaded, for example:

- name

- pageElements

- adPosition

I.e.:

```
<pageTemplate>

    <name>Standard Spread AX (024)</name>

    ...

    <pageElements>

        <!-- HEADER ROW 1 -->

        <adPosition>

            <name>Alt Focus</name>

    ...
```

After product installation, the schema definition is located at

<OAS-dir>/j2ee/home/applications/promote/xmlSchemas/templates.xsd.

Loading templates

To load a template into the system, follow these steps:

- Prepare the template XML text file

- Run the loading script named "promo-importer.sh", located at <install-dir>/modules/tools/bin. This script requires several input parameters:

  - o   –host : DNS name or IP address of the machine, where application server has been installed

  - o   –port : HTTP port of the application server

  - o   –file : template file to load

Note that the loading script assumes that a Java interpreter is on the PATH.

Historical Data

Promotion History

To perform thorough analysis, PI (which is also included in PPO) requires a rich set of promotional history to build forecast models. For example, it is important for the customer to provide a detailed record of each circular (offer, position of each item) in order to build the models.

Refer to the Promote Standard Interface Guide for the details on file formats, etc.

POS Data

Introduction

Point-of-sale (POS) data is required in order to mine as much knowledge about the market basket effects of promotions as possible.

This is a store of the customer's POS data. It is possible that there is already a warehouse of POS on the customer side data that existing analytic applications are expected to share. It is possible that the POS data warehouse is customer owned and external to the application. Interfaces may need to be built on a customer-by-customer basis to adapt the warehouse to the data mining needs of the Promote application.

Format

The input files (e.g. txns.txt text file) have the pipe-delimited data itself; the format can be found in the Promote Standard Interface Guide.

Data Feed Examples

Examples are provided as a part of the sample load and could be found at <install-dir>/ modules/pce/sample/dwh. Refer to KSInc Data Guide for more details.

Direct Access Example

If using a customer data warehouse the table (or a view) will need to have the following structure. This table or view should be called MB_DETAIL.

Attribute Name	Type	Nullable
TXN_ID	NUMBER(9)	NOT NULL
LOC_CLIENT_LOAD_ID	VARCHAR2(25)	NOT NULL
TXN_DATE	DATE	NOT NULL
MERCH_CLIENT_LOAD_ID	VARCHAR2(25)	NOT NULL
CUSTOMER_ID	NUMBER(9)	
UNIT_COST	NUMBER	
UNIT_PRICE	NUMBER	
AC_LEVEL	VARCHAR2(25)	
UNITS_SOLD	NUMBER(9)	
EXT_RETAIL_AMT	NUMBER(15,4)	
EXT_MARGIN_AMT	NUMBER(15,4)	

AD_IND	NUMBER(9)	
PRD_1	VARCHAR2(25)	
PRD_2	VARCHAR2(25)	
PRD_3	VARCHAR2(25)	
PRD_4	VARCHAR2(25)	
PRD_5	VARCHAR2(25)	

The load procedure (pl_create_summaries.sh) processes data in weekly segments. It relies on uniqueness of TXN_ID (plus it keeps last processed TXN_DATE) and does not check for updates of already processed data. The supporting tables have to be created by a corresponding procedure (see Chapter **Error! Reference source not found.**).

Configuring the Analytics

The Operations Guide details the steps, tools, and techniques used to perform historical analysis of promotion data. This section describes a set of configuration options applicable to the historic analytics engine.

Environment variables

The analytical engine requires certain environment variables to be set up. These variables are located at <install-dir>/modules/pce/etc in a file named kde_local.vars. The installation process provides initial settings for environment variables in this file.

Examples are DWH_HOST, DWH_INSTANCE, DWH_USERNAME (database settings).

Analysis levels

Analysis Levels are to be defined in at <install-dir>/modules/pce/etc/kde_local.vars script. The installation process sets the initial values of these summary levels as follows:

- LOCATION_SUMMARY_LEVEL – 7 (this level should be tied up to the location hierarchy load)

- MERCHANDISE_SUMMARY_LEVEL – 4 (this level should be tied up to the merchandise hierarchy load)

Database configuration

Summary configurations

These are the four configurations that need to be included in the ASH_CP_TBL. These configurations specify the levels of aggregation along the merchandise hierarchy that is needed by the Oracle Retail Promotion Intelligence as well as the RDM.

INTERSECT_NAME	MERCHANDISE_LEVEL	LOCATION_LEVEL	Description
PROMOTE_TAE	SKU	STORE	Identifies the Level at which TAE Output is produced. This is assumed as the level at which the POS data is passed along by the

			customer.
PROMOTE_SUMMARY_1	CLASS	STORE	Identifies the Merchandise and Location levels of first level of the summary.
PROMOTE_SUMMARY_2	DEPARTMENT	STORE	Identifies the Merchandise and Location levels of second level of the summary.
PROMOTE_SUMMARY_3	DIVISION	STORE	Identifies the Merchandise and Location levels of third level of the summary

IR-Views

These views need to be modified as per the levels of summary needed. The view creation scripts are located at <install-dir>/
modules/Database/ROSEWOODSchema/install/oracle/ROSEWOODSchema/dictionary/views_ir

Update these views using the following guidelines:

- ir_pr_merch_summary_X_vw: These views map each merchandise summary level to its SKUs

- ir_pr_location_summary_X_vw: These views map each location summary level to its SKUs

- ir_pr_promotions_vw: This view exposes the attributes needed by the PCE for modelling

- ir_pr_promo_item_vw: This view exposes the attributes needed by the PCE for modeling

Configurable Data Attributes

Introduction
Configurable data attributes allow customers to store and retrieve custom data, not required by the Promote application.

Configuring CDAs
Please refer to Price 4.5.1 Configuration Guide chapter 7 for steps to follow to configure Configurable Data Attributes (CDA).

Configuring the PPO GUI

Introduction
The PPO product includes a configurable Graphical User Interface (GUI). There are several configuration points that can be used to change and/or adjust GUI behavior.

Configroot
"Configroot" is an entry point directory that is used by the application to look up all the configuration files. This value has to be set at the application server (OAS) level. Please refer to Promote Install Guide for instructions how to set that. Usually, it points to <install-dir>/config.

The PPO Configuration File
GUI-wide properties are set in 'promote.properties' file, which is located in 'promote' folder under "configroot". This file is pre-populated by the installation process with values, specific to your installation.

There are also properties related to OAS 10.1.3.0.0 (pre-fixed with "oas"). For example, "oas.java.naming.provider.url" has to be set to a correct (opmn or non-opmn) URI, e.g. "ormi://host:port". The same is true for configuration of UserManagement application. Its properties are stored in <configroot>/usermanagement/usermanagement.properties.

To specify time interval, at which Promote Planning updates the server session on browser-only user activity (i.e., when user click does not result in a server call), set 'promote.keepalive.interval' to a desired interval (in seconds).

Configuring Display Strings

GUI resources (labels, error messages, etc) are kept in 'promoteResources.properties' file, which is located in 'promote' folder under "configroot".

Configuring Export

Updating the Properties File

Export configuration is kept in 'promote.properties' file, which is located in the 'promote' folder under "configroot".

The following values have to be specified:

- 'export.root.path' – where to place the exported files

- 'export.xml.template' – where to find the XML format XSLT stylesheet, e.g. {configroot}/config/promote/XmlExportTemplate.xslt

- 'export.txt.template' - where to find the TXT format XSLT stylesheet, e.g. {configroot}/config/promote//TxtExportTemplate.xslt

Export Stylesheets

There are two stylesheets being shipped with Promote Planning: 'XmlExportTemplate.xslt', intended for laying out the XML output of a promotion, and 'TxtExportTemplate.xslt', which describes the instructions for TXT format. Location and naming of these files are specified in the 'promote.properties' file.

Integration with Promote Intelligence

To allow proper functioning of opening Promote Intelligence reports from Promote Planning, the following configuration points need to be set.

Auto authentication flag

Flag, that allows to re-use Promo Planning user name and password, exists in the 'promote.properties' file.

The name of this flag is 'promote.report.auto_auth' and the allowed values are 'true' and 'false'.

When turned on, this auto authentication flag instructs the Promo Planning/Intelligence integration to use the currently logged in user's name and password when logging into the MicroStrategy.

Reports link configuration

The report mapping and report links configuration must be defined (a sample file will be set up during installation) in 'promote.xml', located in the 'promote' folder under "configroot".

MicroStrategy report server location and reports mapping includes:

- MicroStrategy server DNS name, port, protocol and webapp name

- Reporting areas (e.g. "Shared Reports") and particular reports grouping: e.g. what reports are to be included into what reporting area (e.g. "Ad ROI, Promotion Scorecard")

- What labels to display and what mapping to use (maps to the resources file)

The XML attributes are used as follows:

- `connect` XML attributes is to construct a part of URL, which will be same for all the links. Attributes of this tag are used to create an URL part, i.e. '`protocol://server:port/webapp_path`'

- Every `group` in `groups` XML tag, results in creation of a reporting area node, where `name` is used for the mapping to resource file. The request for the report or reporting area is constructed from `param` in `params` tags.

- For all `report` tags in `group`, sub-nodes got created in the GUI for the reporting area, using `name`, `params` and the common configuration from `connect tag`

- If there are no `report` tags in `group`, it means that this group is empty and will not have any sub-nodes

- If there is no `params` tag inside `group` or `report` tag, that means that no link will be provided

Currently, groups inside groups or groups inside reports are not supported.

After product installation, the definition is located at

<OAS-dir>/j2ee/home/applications/promote/xmlSchemas/promote.xsd.

Display Strings

All the Promote Planning/Intelligence integration GUI properties are kept in 'promoteResources.properties' file.

The resource file will have to include locale-specific labels and descriptions. Use "name" in the XML config file ('promote.xml') as a key for the entry in the resource file. For example, "My Reports":

label.report.MyReports.name=My Reports

label.report.SharedReports.name=Shared Reports

label.report.SharedReports.AdPageAllocation.name=Ad Page Allocation

label.report.SharedReports.AdRoi.name=Ad ROI

Debug messages

File, name 'promote.log4j.properties', located in 'promote' folder under "configroot", points to the log file, used by the application. You can change the debug level and the location of the log file. Note that application server restart is required for the new values to be picked up.

Configuring the Standard Reports

Introduction

Standard Reports GUI allows creation and sharing of new reports, based on standard templates. There are several pre-defined reports that are available. For example, these reports provide information on General Trends, Product Categories and Individual Products.

| Report Name	Description
Ad Page Allocation	This report provides an analysis of the impact of page allocation on ROI (return on investment). This report is based on the promotion being a circular.
Ad ROI	This report provides an analysis of the return on investment (ROI) for all ad events that occurred within a specific period of time and a comparison of that ROI to the ROI for other time periods.
Promotion Scorecard	This report provides an analysis of the effect that individual items have on the success of a particular promotion when they are included in the promotion. This report will be filtered by promotion and merchandise hierarchy level.
Strategic Ad Emphasis	This report provides an analysis of the total effect of all ad events that occurred during a specified period of time for a specified level in the merchandise hierarchy. Typically, this report would be run at the department level.
Strategic Business Emphasis	This report provides a sales and profit analysis of all groups within a given merchandise hierarchy level. Typically, this report would be run at the department level.

For further details, please refer to Price 4.5.1 Configuration Guide document, chapter 15, "MicroStrategy Data Mapping".

Changing summary levels in MicroStrategy

The reports use a default level of analysis (4, or Department), which can be changed by following the steps below.

Example: If we need to specify the Summaries at Division (MH Level 3) instead of Department (MH Level 4).

1. Edit the Corresponding Merchandise Level (Department) in the Schema Objects/Attributes/Product Attributes. Select PI_ID and click Modify.
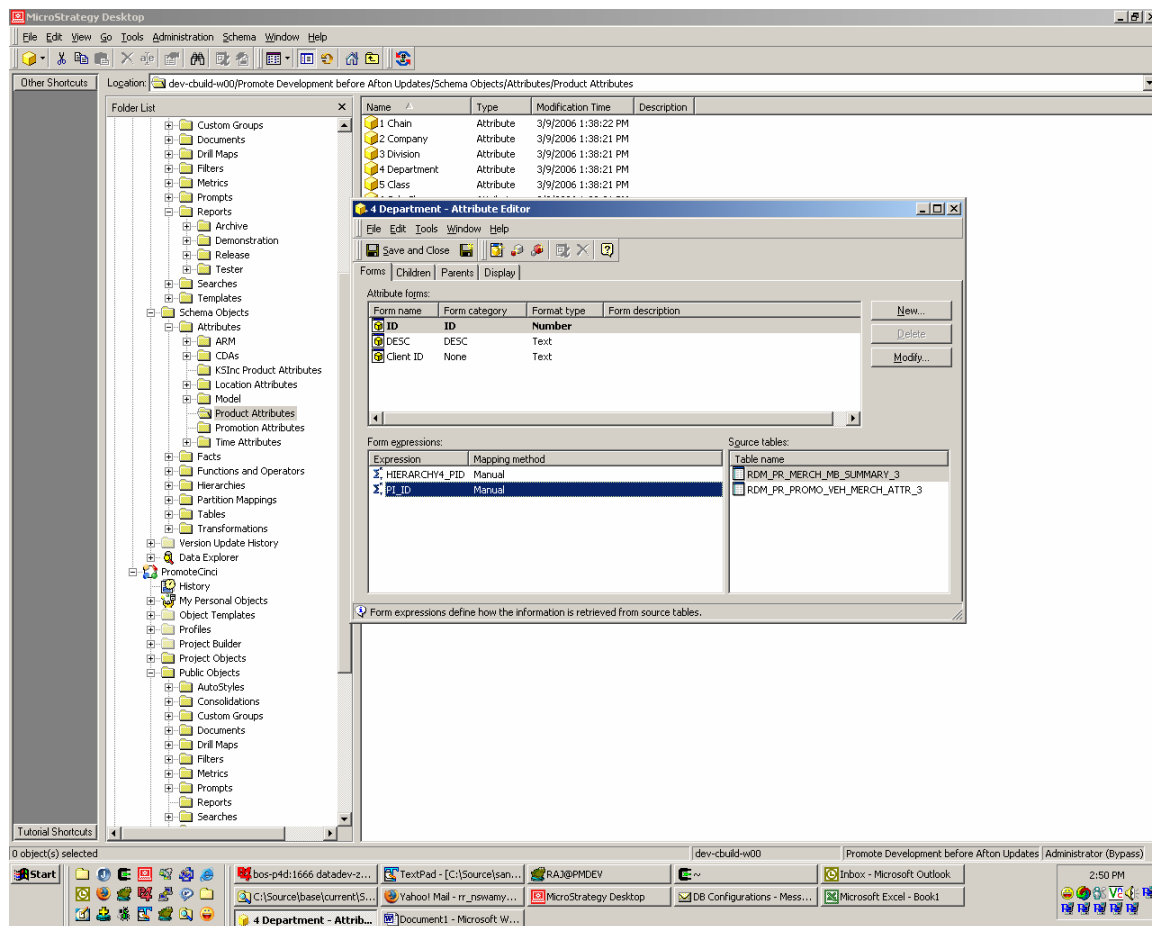
2. Select PI_ID and remove the two tables RDM_PR_MERCH_MB_SUMMARY_3
   RDM_PR_PROMO_VEH_MERCH_ATTR_3. Click OK all the way through to confirm.
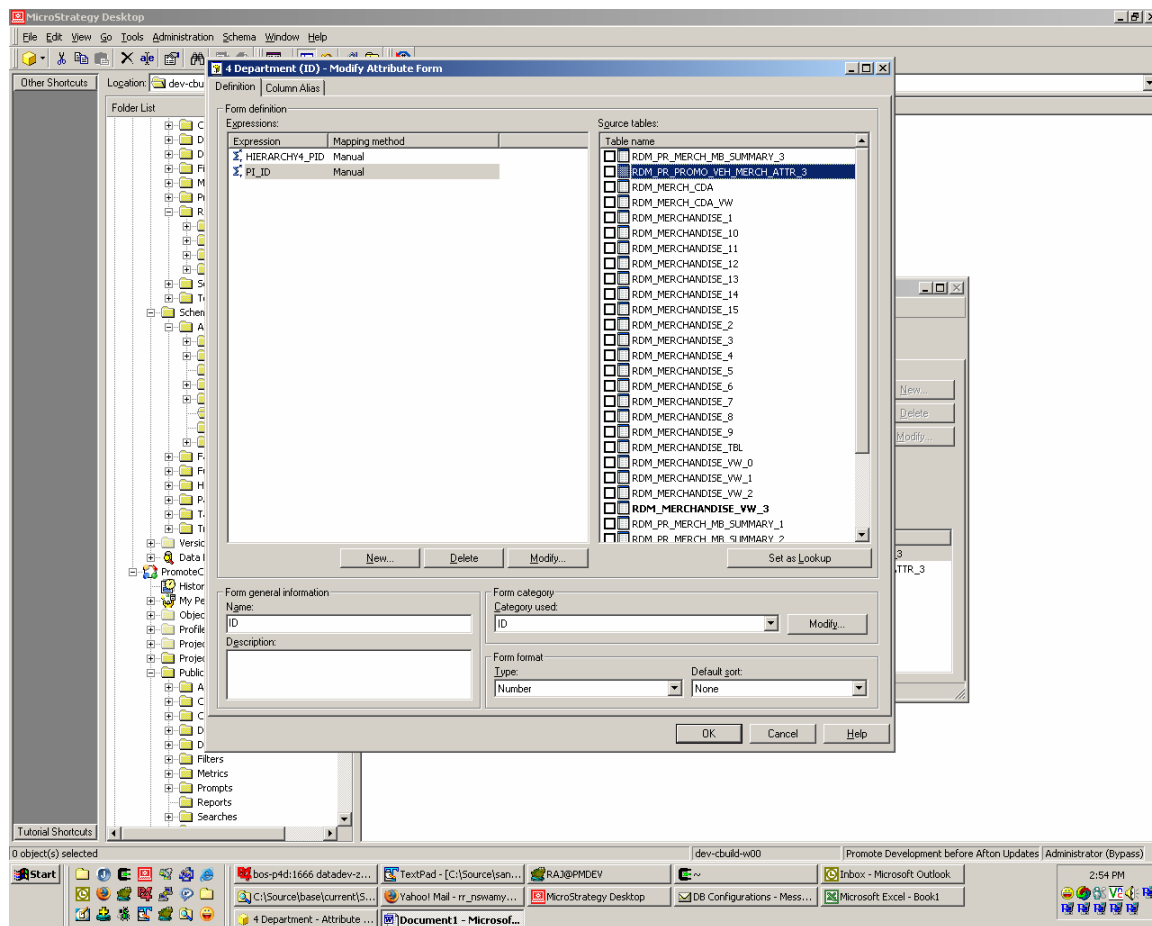
3. Edit the Corresponding Merchandise Level (Division) in the Schema Objects/Attributes/Product Attributes. Select HIERARCHY3_PID and click Modify. Define PI_ID as an alternate Identifier by selecting that from the RDM_MERCHANDISE_VW_X (Use the default view associated with the existing HIERARCHYX_PI_ID identifier)
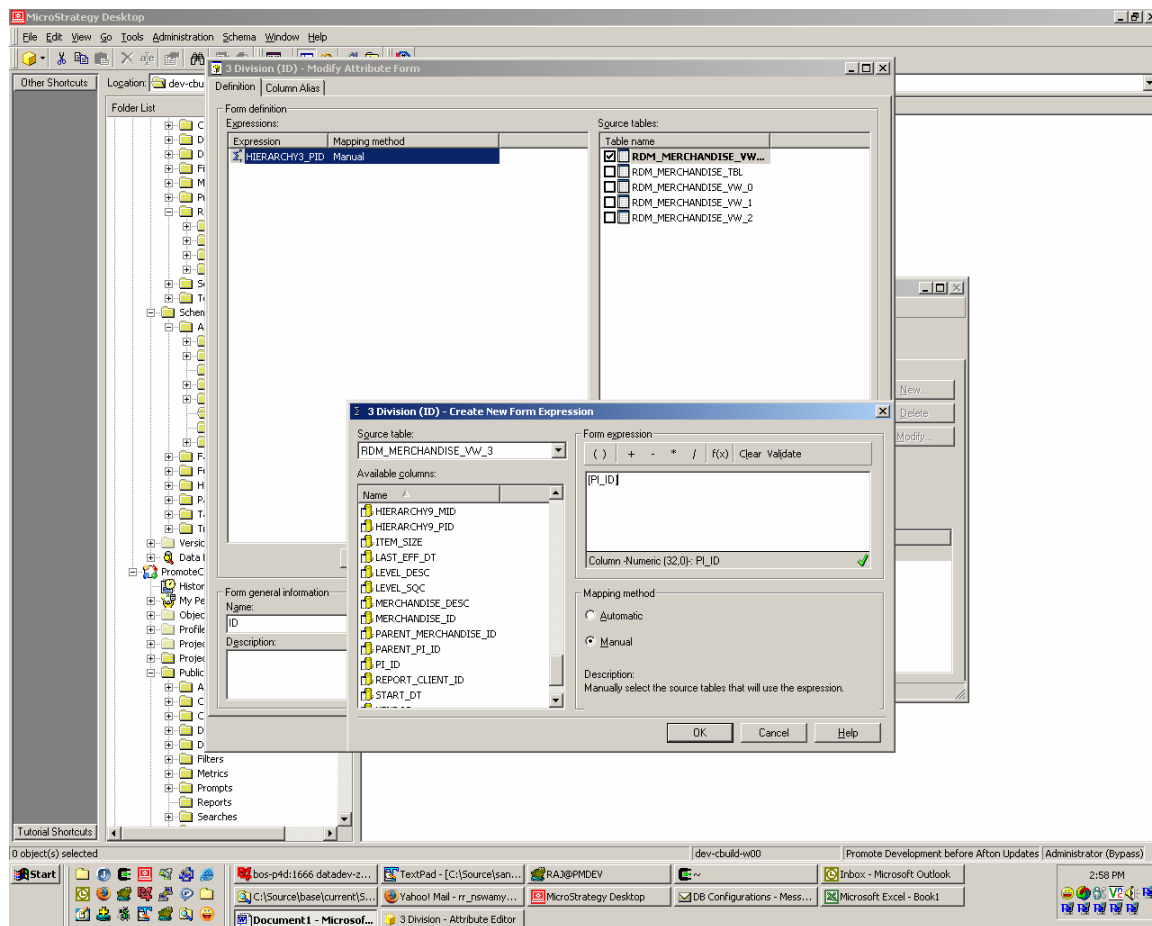
4. Repeat Step 1 and 2 above on the PI_ID identifier of the Division Attributes and choose RDM_PR_MERCH_MB_SUMMARY_3 RDM_PR_PROMO_VEH_MERCH_ATTR_3 as summaries available at this level.

5. Update Schema and run reports.