Oracle Discoverer Release 3.1.28 (Production) for Windows 95 and Windows NT Release Notes
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Release 3.1.28

This document provides various installation and late-breaking product information for Oracle Discoverer Release 3.1.28 for Windows 95, Windows 98 and Windows NT.

Release 3.1.28 represents a cumulative maintanence release to the 3.1.25 production release. As such it includes the patches in release 3.1.26 and 3.1.27. It is designed to be applied to either Discoverer 3.1.25, 3.1.26 or 3.1.27. In addition, release 3.1.28 includes new functionality which is described in more detail below.

Using Discoverer in a Language other than English
If you are planning to use Discoverer in a language other than English, we recommend that you contact Oracle support to obtain the Oracle Required Support File (RSF) patch 8.0.4.3.7 or higher for Windows 95, 98 or NT. This RSF patch contains additional Oracle RDBMS Translation and Localization bug fixes for using Discoverer in a language other than English. In particular, this RSF patch has fixes for bugs 729977, 770803, 708944, 682444, 752421, 732618, 730008, 708885 and 771325 which you may or may not encounter depending on the content of your workbooks.

Administration Edition - Creating a New EUL
If you are using the Administration Edition to create a new EUL, and you elect to create a new user as the owner of the EUL in step 1 of the Create EUL Wizard, please type in the new user name in UPPERCASE. Otherwise, you will encounter and ORA-0107 invalid username/password error during EUL creation.

Change in Behaviour of Totals on Calculations
At the behest of many customers, the behaviour of a total on a calculated column has been modified. An example best illustrates this difference:

	Column A	Column B	Calculation (A/B)	
	10	2	5	
	200	4	50	
	90	3	30	
	---	---	---	
Total	300	9	In 3.1.25 Total = 85	(i.e. 5 + 50 + 30)
			In 3.1.26 and higher Total = 33.33	(i.e. 300 / 9)

In short, Discoverer now calculates the total instead of totalling the calculations.

Should you still require the old behaviour, you can achieve this by defining the desired calculation in the Administration Edition of Discoverer, including it in your User Edition query and then creating a total on this item.

Oracle Applications Release 10.7 Support
While release 3.1.26 provided certain specific features to support using Discoverer with Oracle Applications Release 11.0, release 3.1.28 of Discoverer provides the same level of support for Oracle Applications Release 10.7 as well. Users may access this support by following the same instructions given for 11.0 support (refer to your release 3.1.26 documentation). No special setup is needed to differentiate connecting to a 10.7 database. On connection to the database, Discoverer automatically detects which release is installed and modifies its behavior appropriately.

Oracle Applications Release 11.0 Support - Additional Comments
The Discoverer 3.1.26 release notes contain the following instruction for creating an Apps mode End User Layer: "Create an Applications mode EUL by launching the product typing dis31adm.exe /APPS_MODE". Due to a bug, this command fails in 3.1.26. This bug is fixed in the Discoverer 3.1.28

release.

In certain situations, connecting to an Apps mode EUL as the EUL owner fails with the message "You have connected to an Applications EUL but the required Applications tables cannot be found. Check your value of FNDNAM". The most common causes for this are:

a) The value of the FNDNAM variable has not been set. The value must be set on the command line or in the registry, as described in the release notes(see below).

b) Unsupported version of Oracle Applications used. The Applications security features will only work with Oracle Applications releases 10.7 and 11.0. Creating and connecting to an Apps mode EUL in any other version of an Oracle Applications database will produce this message.

c) EUL owner has insufficient privileges. The EUL owner needs to have SELECT privilege on the following Oracle Applications tables. Connect to the database using the account specified in the FNDNAM variable and execute the following statements:

```
grant select on FND_USER to &EULOWNER
grant select on FND_APPLICATION to &EULOWNER
grant select on FND_USER_RESPONSIBILITY to &EULOWNER
grant select on FND_RESPONSIBILITY_VL to &EULOWNER
grant select on FND_ORACLE_USERID to &EULOWNER
grant select on FND_DATA_GROUP_UNITS to &EULOWNER
```

Known Oracle Applications Specific Issues
1. When installing the Oracle 8 RDBMS on a client PC after installing Discoverer, the Oracle 8 installer overwrites the RSF file - ora804.dll (version 8.0.4.0.3) with an older version (8.0.4.0.0). The Oracle Applications 10.7 support will not work at all with this older RSF file. The workaround is to install Discoverer after installing Oracle 8.

2. Some Applications tables have items of datatype "Rowid". If an item of this type is included in a worksheet, the query fails with the message "Error ORA-0000: normal successful completion".

3. Some Applications 11.0 instances appear to install with SELECT privileges on DBA_OBJECTS granted to PUBLIC. If this is the case, the bulk load wizard offers the EUL owner tables to load which he doesn't have privilege to see. Loading such a table fails with no error message.

ODBC Support for IBM DB2 on MVS
Release 3.1.28 provides support for Discoverer against IBM DB2 on MVS. The particular version supported is:

Data Source Name	Data Source Version	ODBC Driver	ODBC Driver Version
IBM DB2 For MVS	Client : 2.1.2, Server : 4.1	IBM	Not Marked

Note that when saving workbooks to this database there is a limit of 35K on workbook size.

3.1.28 Fix List
The following represents a partial listing of the bugs fixed in 3.1.28. Due to the nature of bug fixes, it is possible that other bugs (not listed here) are fixed as a consequence or as a prerequisite of these fixes.

836567 SCATTER GRAPH DOES NOT USE COLUMNS VALUES FOR THE X AXIS
836271 UNABLE TO OPEN WKBK THAT HAS MIXED DETAIL/AGGREGATED ITEMS
836103 CONDITION: WRONG RESULTS IF USE <> BETWEEN ITEM AND HARDCODED STR
825342 DECODE DOES NOT WORK PROPERLY IN 3.1.26 BUT WORKS IN 3.1.25
818144 WHEN INSTALLING EUL WITH QUOTED MIXED CASE USERNAME, CREATES UPPER CASE USER
809139 DISCO WON'T CONNECT TO DB2 NT VER5 DUE TO A SELECT NULL FROM

STATEMENT
808115 R6025 PURE VIRTUAL FUNCTION CALL
806907 Y2K - THERE IS A Y2K BUG WHEN CREATING SUMMARIES WITH DATE FORMAT 'YY'OR'RR'
801856 IF USER PASSES IN /APPS_FNDNAM PARAMETER, THEY CAN'T CONNECT AS EUL OWNER
801800 DISCOVERER IS NOT AWARE OF THE CHARACTER SET USED IN EXPORT FILE
801690 NEED TO ENSURE THAT ALL CLASSES, VECTOR, POINTER VECTORS ARE EXPOSED FROM PUBLIC
801662 NEED TO ACCOUNT FOR UNINSTALLING DAYS TABLE FROM ODBC DATA SOURCES
798314 TOTALS ARE BLANK WHEN PARAMETERS ARE USED IN A LINER TYPE CALCULATION
788661 SETTING PC DATE TO YEAR 2000+ WILL NOT ALLOW THE SCHEDULING OF A WORKBOOK
785964 CANNOT SORT ON TOTALS IF THERE ARE TWO ITEMS ON THE HORIZONTAL AXIS
785286 INCORRECT ERROR MESSAGE WHEN COPYING AN ITEM ACROSS BUSINESS AREAS
784976 ERROR EXPORTING END USER LAYER OBJECTS. EXPORT STOPS AFTER 95%
768001 RUNNING IN BATCH KEEPS PROMPTING FOR INPUT
767910 DEFAULT FORMAT MASK FOR NUMERIC COLUMNS CONTAINS '.' INSTEAD OF 'D'
767108 PROBLEM WITH CUSTOM SQL IN CUSTOM FOLDER
766980 UPGRADE SUMMARY TABLE FROM 3.0.8 WITH UNMAPPED COLUMN GETS WRONG COUNT NUMBER
764696 DB2 FOR MVS - BULK LOAD WITH JOINS FROM COLUMNS FAILS DUE TO "!=" IN CODE
758286 DB2 FOR MVS DOES NOT CREATE JOINS AUTOMATICALLY ON BULK LOAD
750456 USING /APPS_MODE CMD LINE -> INCOMPLETE EXPECTED TO FIND CONNECT
749808 INSTALL TUTORIAL ON PRIVATE EUL GRANTS NO EUL PRIVILEGES TO VIDEO31 USER
704460 CANNOT IMPORT SQL FILE - ERROR: CANNOT JOIN TABLES
699488 WHEN PARAMETER OPTION "ALLOW MULTIPLE VALUES" NOT SET, OPTION IS IGNORED
683847 UNABLE TO CHANGE DEFAULT EUL FOR USER WITH MIXED CASE NAME
670941 ODBC MVS: REQUIRE EUL_ODBC_SCHEMAS SYNTAX FOR MVS
670935 ODBC MVS: BULK LOAD TEST FOLDER EMP_ALL CAUSES FAILURE
670934 ODBC MVS: CLICK ON SECURITY MENU CAUSES ASSERTION.
670929 ODBC MVS: DERIVED ITEM BASED ON SUM CAUSES SQLPREPARE PARSE ERROR
670927 ODBC MVS: MVS DOES NOT SUPPORT != IN A QUERY
670926 ODBC MVS: CREATE TABLE REQUIRES IN <DATABASE NAME>.<TABLESPACE NAME> CLAUSE
656989 PARSER: ACCESS VIOLATES WHEN PARSING SELECT * FROM (

---------- End of 3.1.28 Release Notes ----------

January 19th 1999
Release 3.1.27

This document provides various installation and late-breaking product information for Oracle Discoverer Release 3.1.27 for Windows 95, Windows 98 and Windows NT.

Release 3.1.27 has one additional bug fix to the 3.1.26 release. Discoverer Release 3.1.27 incorporates all of the 3.1.26 fixes and features, and can be applied on top of either 3.1.25 or 3.1.26. The additional bug fixed is :
792212: Discoverer hangs if you perform a command line batch operation and your machine has been up for more than 24 days.

The symptoms of this bug are a slow start-up time for Oracle Discoverer 3.1.26.

Release 3.1.26 has some new features as well as numerous bug fixes. The documentation for the new releases and changes in behavior are all contained within this readme file. The readme is split into 2 main sections. Section A details all new information for Release 3.1.26 specifically. Section B is a copy of the release notes from 3.1.25. If you are upgrading from Discoverer Release 3.1.25 we recommend you read the Section A - Release Notes for Oracle Discoverer 3.1.26 (specific). If you are new to Discoverer, or are upgrading from Discoverer release 3.0.8, please read both sections carefully.

If you are upgrading from Discoverer Release 3.1.25, please log into the administration edition as the EUL owner to make automatic changes to the End User Layer. This will not affect your existing users in any way.

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A Release Notes for Oracle Discoverer 3.1.26 (specific)

1 Oracle Applications Support

Oracle Discoverer Release 3.1 supports access to Oracle Applications databases using Applications security.

1.1 Supported Features

Oracle Discoverer Release 3.1.26 supports access to Oracle Applications databases using Applications usernames, passwords and responsibilities. Discoverer also provides support for multi-org. Both these features are available when Discoverer is used in an "Applications-mode" of operation. Multi-org support is provided when the Applications-mode is used in combination with folders based on views that support multi-org. When used with Oracle Business Views, Discoverer's Applications-mode offers the ability to work with data from more than one organization. Users can query and analyze data from a set of organizations to which they have been granted access.

Using Discoverer in an Applications-mode requires:
(i) The creation and use of an Applications-mode End User Layer. This End User Layer(EUL) has special features that provide support for use with Oracle Applications.
(ii) Running the Administration and User Editions of Discoverer in Applications-mode. This is done either through command-line parameters specified when Discoverer is started up, or by specifying "userid:responsibility" when logging in.

By running the Administration Edition in Applications-mode with an Applications-mode EUL, Privileges and Security can be assigned to Applications Usernames and Responsibilities. In the Security and Privileges dialogs, Applications usernames are displayed instead of native-Oracle users and Applications responsibilities are displayed instead of database roles.

In the same way, running the User Edition in Applications-mode with an Applications-mode EUL allows users to connect to the database using the same username/password and responsibility combinations they use when connecting to Oracle Applications products.

Applications-mode EULs and standard EULs can co-exist in the same database without conflict. But native-Oracle users cannot connect to an Applications-mode EUL (with one exception) and Applications users cannot connect to standard EULs. The exception is the EUL owner, who can connect to an Applications-mode EUL.

1.2 Creating an Applications-mode End User Layer

You create an Applications EUL by modifying the normal Discoverer Administration icon on the desktop to add a new parameter, or by using a command line.

To use the Administration Edition in Applications mode:
(a) Right click on your Discoverer Administration desktop icon and choose Properties
(b) Select the "Shortcut" tab
(c) At the end of the "target" field append the switch /APPS_MODE. For example, on windows95 the target will now look something like C:\ORAWIN95\DISCVR31\DIS31ADM.EXE /APPS_MODE

Discoverer will start up as normal and all further subsequent operations in the Administration Edition will be in Applications-mode. New EULs created when Discoverer is started this way with the /APPS_MODE parameter will be Applications-mode EULs.

To create an Applications-mode EUL from the command line type the following command:

```
dis31adm.exe /CREATE_EUL /APPS_MODE /CONNECT eul_owner/password@database
```

The /APPS_MODE switch indicates that Discoverer should create an Applications-mode EUL.

1.3 Connecting to an Applications-mode End User Layer

The owner of the EUL is the only native-Oracle user who can connect to the Applications-mode EUL. The EUL owner can grant administration privileges to Applications users. These Applications users can connect to the EUL through the Administration Edition as well to perform administration of the business areas .
Connecting as EUL owner:

dis31adm.exe

Connecting as an Applications user (non-EUL owner) using command line:
dis31adm.exe /APPS_USER /CONNECT[username:responsibility/password@database]

Note: Quoting the connect string within "" is supported. Particularly useful because many responsibilities contain spaces.

The /APPS_USER parameter indicates that the user is connecting as an Applications user. (This isn't mandatory, as the user could also just connect to the standard dis31adm.exe with a "username:responsibility". If a ":" is present Discoverer assumes an Applications logon is intended.

1.4 User Edition Operations
All connections to an Applications-mode EUL have to be with Applications usernames and passwords. No native-Oracle users can connect to the Applications-mode EUL (even the EUL owner.) There are several different ways of making a connection to the User Edition. The user can either enter the responsibility directly through the login dialogue (using the username:responsibility syntax) or use a variation of one of these command lines.

(i) Modify the shortcut properties of the Discoverer User desktop icon
dis31usr.exe /APPS_GWYUID GWYUID /APPS_FNDNAM FNDNAM /APPS_USER

where gwyuid is the gateway user-id.
Fndnam is the foundation name
Note that both the gateway user-id and foundation name should be in UPPER case.

Here /APPS_USER indicates that Discoverer should expect Applications usernames. In the connect dialog that is displayed, the user needs to type in their username as a concatenation of their Applications username and responsibility, separated by a colon(":"). Eg, "jsmith:Purchasing Manager". The password and connect string should be typed in as normal.

The responsibility may be omitted if the user has access to one responsibility only.

(ii) Modify the shortcut properties of the Discoverer User desktop icon & setting an automatic responsibility
dis31usr.exe /APPS_GWYUID GWYUID /APPS_FNDNAM FNDNAM /APPS_USER /APPS_RESPONSIBILITY responsibility
Note that the GWYUID and FNDNAM schema names should be entered in UPPER case.

The responsibility has been specified on the command line. In the connect dialog, the user needs to type in username, password and connect string without the responsibility or the colon character.

(iii) Set all parameters using the shortcut properties of the desktop icon
dis31usr.exe /APPS_GWYUID GWYUID /APPS_FNDNAM FNDNAM /CONNECT username:responsibility/password@database

In this case all necessary information is passed in as parameters. This method by-passes the Discoverer connect dialog and starts the tool up directly. The GWYUID and FNDNAM schema names must be in UPPER case.

(iv) Use registry values (the simplest!).
The values for the /APPS_FNDNAM and /APPS_GWYUID parameters can be set in the Windows Registry instead of being passed in as command line parameters. The relevant registry entries are:
HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\AppsGWYUID
HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\AppsFNDNAM

If you set these registry entries, then you can use the standard dis31usr.exe to call Discoverer User Edition, and log in using your "username:responsibility". The registry entries should be in UPPERCASE.

1.5 Partial/Disabled Functionality

Managed Summaries - When working with Applications-mode EULs, Discoverer will not support any managed summaries (either internal or external) when these summaries include items based on Applications secure views or Applications Business Views. Some Applications database views contain row level security and return differing result sets depending upon the currently active responsibility. (I.e. the summary table will contain different data depending on the responsibility of the user that refreshed the table).

If a managed summary (based on Applications secure views or Applications Business Views) is refreshed Discoverer sets a switch that ensures the summary returns no rows. If a user then performs a query against the associated detail data, and summary redirection is performed, the user will be told that no rows satisfies this criteria (to ensure that the user does not see data they should have no access to). As an administrator, you should ensure that summaries based on Applications secure views or Applications Business Views should not be managed by Discoverer.

Managed summaries on data without Applications row level security will be completely unaffected. Users can continue to use external summaries. If the external summary is registered against an object with Applications row level security, it is the responsibility of the administrator to make sure the external summary table provides secure access.

Some views with row-level security support "public" rows (particularly the Apps Human Resources). So sometimes managed summary tables may contain small amounts of data.

2 New Workbooks to show the status of the EUL

2.1 Overview

Discoverer Release 3.1 comes with some useful workbooks for management and documentation of your current Business Areas. (These workbooks support both normal and Applications-mode EUL's.) The workbooks can be found in the {ORACLE_HOME}\discvr31 directory. They all use and require a single Business Area 'EUL for Discoverer V3.1'. The files required for installation are:

i. EUL31.eex
ii. EUL31.DIS
iii. Qstats31.DIS
iv. Sindex31.DIS
v. EUL31.sql

i. EUL31.eex - The business area 'EUL for Discoverer V3.1'
This contains folders that analyse and simplify the data structures contained in the EUL. This Business area includes folders such as:

EUL31 BA & Folders - Business Areas & folders defined in the EUL.
EUL31 Folders & Items - Folders & Items defined in the EUL
EUL31 Joins - The structures of Joins defined in the EUL
EUL31 Hierarchies - The Structure of Hierarchies
EUL31 Item Classes - The Structure of Item Classes or LOV's
EUL31 Summary Mappings - Mapping of summary tables to folders
EUL31 Security - Users access to Business Areas
EUL31 Privileges - Users Discoverer Privileges

You can use these folders, plus the others provided, to build your own workbooks, analyse and document the structure of your Discoverer Business Areas. Alternatively you can always use or modify the standard ones provided. If you modify the standard ones we recommend that you save under a separate name, as these will be upgraded automatically with each new release of Discoverer.

ii. EUL31.DIS - Displays useful information about the set-up of the EUL.
This workbook examines the EUL definition and consists of the following worksheets;

Version - The version of the Discoverer EUL you are currently using.
Folders - Folders, by Business Area.
Items - Items, by Folder by Business Area.
Joins - Joins defined, by Business area.
Conditions - Conditions defined, by Business Area.
Hierarchies - Hierarchies defined, by Business Area.
Item Classes - List of Values Defined, by Business Area.
Security - Access to Business Areas, by Users/Roles.
Privileges - Access Privileges, by Users/Roles.
Summary Mappings - Mapping of Folders to Summaries, by Business Area.

iii. Qstats31.DIS - Displays useful statistical information about users queries;

Queries by User, by Year and Month. - This gives you the ability see what users have been querying
Queries by Summary. - How many queries hit summaries and which queries hit the base data.
Summary Usage - How useful are your summaries which summaries are getting used.
Summary Refresh - Monitors the state and refresh of summaries

iv. Sindex31.DIS - Creates Indexes
You can place an Index on some summaries to further enhance their performance. This workbook Identifies those summaries to which index could be applied and creates the SQL Syntax required to generate the appropriate index.

v. EUL31.sql - Creates User Defined Functions
This is a SQLPLUS script that creates PL/SQL functions used by items in the 'EUL for Discoverer V3.1' Business Area.

2.2 Installation
To install and use the workbooks do the following:

i. Either use Server Manager and "connect internal", or log into SQL*Plus as the user SYS:
Grant SELECT access on dba_jobs_running to your End User Layer Owner <EULOWNER>.

```
E.g.    SQL> connect sys/<sys password>
        SQL> Grant select on DBA_JOBS_RUNNING to <EUL OWNER>;
        SQL> Commit;
```

To check this has worked log on as your EUL owner and describe the table SYS.DBA_JOBS_RUNNING

```
E.g.    SQL> connect <eul owner>/<eul owner password>
        SQL> desc SYS.DBA_JOBS_RUNNING
```

You should then see the following results

```
 Name                           Null?    Type
 ------------------------------ -------- ---------------------
 SID                                     NUMBER
 JOB                                     NUMBER
 FAILURES                                NUMBER
 LAST_DATE                               DATE
 LAST_SEC                                VARCHAR2(8)
 THIS_DATE                               DATE
 THIS_SEC                                VARCHAR2(8)
```

ii. Run the SQL file 'EUL31.sql' as the EUL Owner

```
E.g.    SQL> connect <eul owner>/<eul owner password>
```

SQL> Start d:\{ORACLE HOME}\discvr31\sql\EUL31.sql

iii. Access the Discoverer Admin. Edition. Then import the file 'EUL31.eex'
E.g. From Menu choose - 'File' then 'Import' then select the new files 'EUL31.eex'.

NB. If you have already got the Business area 'Qstats' or 'New Qstats' included in your EUL, imported from QSTATS.eex, then you can delete it, as this is no longer required.

iv. Run the workbooks from the User Edition
The workbooks can be found in the {ORACLE_HOME}\discvr31 directory. They all use a single Business Area -- 'EUL for Discoverer V3.1'. Instructions on each sheet and its use are included in the workbooks.

2.3 De-installing
Removing the 'EUL for Discoverer V3.1' business area is a simple process;

i. Log into the Oracle Discoverer Administration Edition.
ii. Highlight the 'EUL for Discoverer V3.1' Business Area then choose 'Edit' 'Delete' from the menu.
iii. Once the Business Area has deleted then you can remove the associated PLSQL functions.
Choose 'Tools' 'Register PL/SQL Functions' highlight the following 'Functions' ;

EUL_GET_ANALYZED
EUL_GET_COMPLEX_FOLDER
EUL_GET_HEIRLVL
EUL_GET_HIERORD
EUL_GET_ITEM
EUL_GET_ITEM_NAME
EUL_GET_JOIN_ORDER
EUL_GET_OBJECT
EUL_GET_OBJECT_NAME
EUL_GET_SIMPLE_FOLDER

Then press the 'Delete' Button for each in turn.
Removal is now complete.

2.4 Modifying the Business Area or workbooks
The workbooks provided only run against Oracle databases. They analyse the main areas held in the EUL. Please feel free to edit the workbooks or the 'EUL for Discoverer V3.1' business area to suit your requirements. The business area 'EUL for Discoverer V3.1' is a standard business area, like any of those you may have already created.

As a word of caution, if you do make any changes to the business area, check that the results match up with the data displayed in the Administration edition. If you find you get into problems, you can always remove and reinstall the Business Area 'EUL for Discoverer V3.1' . As a general note, it is always worthwhile creating an export or backup of your other existing Business Areas prior to making any changes in the Administration Edition.

If you find an error or deficiency with the set of workbooks provided, then contact your local support representative, who will log a bug or an enhancement on your behalf. These will be fixed or considered for enhancement in a later release of the product.

2.5 Future Directions
We intend to improve and enhance this area of the product with future releases covering any new or existing areas of the End User Layer Management. If you have any ideas or requirements, then contact your local support representative they will log an enhancement on your behalf, that will then be duly considered for inclusion in future releases.

3. Other enhancements

3.1 Saving Workbooks in the Database with ODBC databases

Oracle Discoverer Release 3.1.26 now supports the ability to save workbooks in the database for ODBC databases. The compatible ODBC Drivers to do this are:

Data Source	Native driver	Intersolv 2.12	Intersolv 3.11
Microsoft SQL Server 6.5	Yes	Bugs in driver	Yes
Oracle Lite 3.0.6.2.4	Yes	N/A	N/A
Sybase SQL Server 11.0.1	Not tested	Yes with restrictions (see note 1)	Yes
Informix 7.20.TC2	Yes	Not tested	Yes
IBM DB2 for NT 2.1.2	Yes with restrictions (see note 2)	No	No

With Intersolv and DB2 some ODBC driver methods are not supported.

Notes

1) The Intersolv 2.12 driver for Sybase has a bug whereby LONG RAW columns of greater than 32K cannot be saved to the workbook. This is a driver bug and not a database limitation. Unfortunately there is no foolproof way of detecting the driver type and version we are running against. Therefore a database error is caught and displayed when attempting to save large workbook using this driver.

2) The equivalent datatype for LONG RAWs on IBM DB2 for NT has a maximum length of 32700. A method has been added to prevent saving a workbook with a length greater than the maximum length of a LONG RAW column on the data source, and to display a message.

3.2 Support for the Euro currency symbol

Discoverer 3.1.26 supports the Euro symbol. You can do this by adding the Euro currency symbol (or any other symbol) in front of any format mask. For example, if the format mask is X99,999.99 and the data is 1100 then the formatted result will be "X1,100.00". The user can substitute the euro symbol (or any other character that is not one of the reserved mask characters) for the X in the example.

Note: You need to have installed the Windows patch that gives you the OS platform support for the Euro!

3.3 New Command Line Parameters

Support for "/eul" from the command line. The user can optionally include a "/eul <eulname>" from the command line to connect to a particular eul. This allows for going against a non-default eul from the command line(more relevant for batch). Note that this does not change the default eul for the user. This support will be available only for English in this release. Discoverer will expect "/eul" to be accompanied with a "/connect" in the command line. Otherwise an error will message will be displayed.

Support for "/savedb" from the command line. The /SAVEDB switch takes the file name of a Discoverer workbook and saves this workbook to the database. For example:

dis31usr.exe /SAVEDB e:\temp\workbook1.dis

would save workbook1.dis in the database as WorkBook1. You can call this switch multiple times:

dis31usr.exe /SAVEDB e:\temp\workbook1.dis /SAVEDB e:\temp\workbook2.dis
/SAVEDB .....

3.4 Ability to switch off prompts when opening "read-only" workbooks

It is possible to set the operating system privilege for a file-based workbook to read-only. In this instance, when a user opens the workbook they get a warning message that the workbook cannot be opened read/write and to save any changes to another workbook. With release 3.1.26 we have added a new registry setting that enables you to switch this warning off.

HKEY_CURRENT_USER\Software\ORACLE\Discoverer 3.1\Application\ShowReadOnlyPrompt

By default, this setting is 1. To disable the prompt, set it to 0.

3.5 Support for "HH:MI:SS" format mask
The HH:MI:SS format mask is now available as a format for a numeric column. This enables users to have a column in seconds, and display it as time in Hours:Minutes:Seconds For example the number 3675 would display as 1:01:15. It is assumed the item formatted is in SECONDS. If the item is in other units of time, you should create a calculation to convert it to seconds before using this mask. Eg, Minutes_passed*60. If a total is applied to an item with HH:MI:SS format, then the total seconds is calculated and then formatted accordingly. This format mask has no effect on the value of the item if used in any calculations, because the item is still a number in seconds, it simply affects the display of the number in the report.

You can also use 0HH:MI:SS to format seconds as time including leading zeros. E.g. 70 would format as 00:01:10

3.6 Script supplied to remove existing Query Prediction Statistics
In the SQL subdirectory, the script eulstdel.sql has been provided. When run as the EUL owner, this script displays a summary of the query statistics stored, and offers to delete query statistics older than the specified number of days. If you don't want to delete statistics, leave the days blank and press RETURN.

3.7 Programmatic control of Discoverer via OLE automation and demonstration
It is now possible to start up Discoverer, open workbooks and run queries from 3rd party applications via the Windows OLE interface. In other words, 3rd party applications can programmatically call on Discoverer functionality through a single instance of Discoverer. Currently, a subset of the controls available through the command line interface are present in the OLE interface. For a full list of supported functions and more information on using this interface, please refer to the Discoverer 3.1 OLE Automation Developer's Guide, located in the $ORACLE_HOME\discvr31\demo\oleauto directory as OLEdev.doc.

Included in the release is a demonstration of this OLE automation facility. This demonstration shows how a Discoverer report can be started from Excel through a menu option. To start the demonstration, you will need to have Microsoft Excel 97 or Microsoft Office 97 installed. The demonstration files are located in your $ORACLE_HOME\discvr31\demo\oleauto directory. They are called OLEdemo.xls and Video.dis. The following steps will take you through the demonstation:

1. Run Excel and open "OLEdemo.xls"
2. From the Discoverer menu option now available in Excel, choose "Launch Discoverer..."
3. Provide a login name and password for a user who has access to the video demo data (typically video31).
4. From the Discoverer menu within Excel, choose "Open Workbook..." Give Excel the location of the "Video.dis" file on your local drive.
5. You will now be asked to enter a minimum value for "Unit Sales" from 5000 to 20000. This demonstrates the passing of parameter values to Discoverer.
6. Now Discoverer appears and queries sheet3 using the parameter you specified.
7. After the query has run in Discoverer, click on the Excel icon from within Discoverer. This will populate Excel with the latest sales figures, thereby closing the loop and demonstrating how Discoverer and Excel are integrated.
8.When you are done, return to Excel. From the Discoverer menu, choose "Exit Discoverer." This shuts down Discoverer.

If you would like to try opening a workbook from the database, first save a copy of Video.dis to your database (calling it "video DB"). Repeat the above steps, but choose "Open Workbook from Database" in step 4.

4 Changes in behavior from 3.1.25

4.1 Subtotals in crosstabs are now displayed on one line
In Discoverer 3.1.25, if you had multiple subtotals on the same crosstab, each subtotal was displayed as a

separate line. In 3.1.26, Discoverer display totals on the same line if possible. For example, if we have a SUM(Profit Sum) and a COUNT(Commission Sum), Discoverer will display them in the same row. The cell will contain both the label and the value as in a table. The idea is to group the totals if the totals are on different measures.

4.2 Subtotals and percentages are displayed on one line
Currently, if you display the sum of two separate items using the total and percentage dialogues separately, the sums appear on different lines:

```
Region   Year   ProfitSum  SalesSum  %ProfitSum
-------------------------------------------
East     1995   $25        $30       25%
         1996   $75        $80       75%
-----------------------------------------------
                       Sum:$110
-----------------------------------------------
Percent      $100                     100%
-----------------------------------------------
```

In 3.1.26, the sum and percentage aggregates now share a single row since the measure on which we compute the percentage(ProfitSum) does not have Sum and that row could be used.

```
Region   Year   ProfitSum SalesSum  %ProfitSum
-------------------------------------------
East     1995   $25       $30       25%
         1996   $75       $80       75%
-----------------------------------------------
         Sum:$100   Sum:$110   Percent: 100%
-----------------------------------------------
```

4.3 Removed restrictions on scheduling times
In the administration edition schedule workbook dialog, we have removed a check where the scheduling window start time was forced to be earlier than the end time. This was preventing nightly schedules like '18:00' to '03:00'.

4.4 Date fields are exported to Excel as dates and not strings
As of 3.1.25, workbooks having date fields were exported to Excel as strings. In 3.1.26 we now write the dates out in the Excel date format.

4.5 Bitmaps are stored with the workbook
The worksheet bitmaps (title, background, and parameter) are now saved with the workbook. When the workbook is opened it will look in the original directory for the bitmaps. If it can't find the bitmaps in that location it will use the bitmaps stored with the workbook itself.

4.6 Mixing Aggregate and Detail Data Points
In Discoverer 3.1.25, users cannot select both aggregate and detail data points in the same worksheet. This was a change in behavior from Discoverer 3.0.8, implemented in order to prevent users building queries that did not make logical sense.

In Discoverer 3.1.26 we now enable you to combine both of these, and give a warning that this may give you unexpected results. Please note that this will not give you "wrong" results – its to ensure users have a clear understanding as to what they are actually asking for.

Normally everything in a report should be aggregated to the same level. This section explains the new behavior of mixing aggregate and detail data points and explains the relatively unusual scenario where such queries are valid.

For example, using the EMP table:

1. Query Deptno and SUM(Sal), SUM(Comm) which groups by department :

DEPTNO	SUM(SAL)	SUM(COMM)
10	8750	
20	10875	
30	9400	2200

This shows total salary and total commission by department, and is correct.

2. Query Deptno, SUM(Sal) and Comm (Detail - which forces a group by Comm as well) :

DEPTNO	SUM(SAL)	COMM
10	8750	
20	10875	
30	1500	0
30	1600	300
30	1250	500
30	1250	1400
30	3800	

This query returns rows for every combination of Deptno and Comm, which is probably not what the user intended. This behavior was prevented in Discoverer 3.1.25. Usually such workbooks were built accidentally, where the user forgot to select the SUM aggregate of Comm.

There are a small number of cases where it does make sense to mix aggregates and detail in the same worksheet, and so in Discoverer 3.1.26, users will not be prevented from doing this, although they will get a warning which reads :

"Warning: You are combining a detail data point with an aggregate data point.
This may give you unexpected results."

The most common case where this still makes sense, is in a de-normalized table design, where aggregate information is recorded on each row.

Eg, Using the Emp example above, lets assume the folder contained a new item STAFF which contained the number of people in the department.

Querying Deptno, Ename, Sal and Staff we get :

DEPTNO	ENAME	SAL	STAFF
10	CLARK	2450	3
10	KING	5000	3
10	MILLER	1300	3
20	ADAMS	1100	5
20	FORD	3000	5
20	JONES	2975	5
20	SCOTT	3000	5
20	SMITH	800	5
30	ALLEN	1600	6
30	BLAKE	2850	6
30	JAMES	950	6
30	MARTIN	1250	6

30	TURNER	1500	6
30	WARD	1250	6

Note each value of DEPTNO has only one corresponding value of STAFF, and so mixing the aggregate SUM(Sal) with the detail STAFF still makes sense.

3. Query Deptno, SUM(Sal) and Staff :

DEPTNO	SUM(SAL)	STAFF
10	8750	3
20	10875	5
30	9400	6

In business terms, STAFF is really an attribute of the Department, not the Employee, so the additional GROUP BY on STAFF will not affect the result set.

Another way of achieving the same result and avoiding the warning is to select MAX(Staff), instead of Staff - Detail. This will also usually result is a faster query as well, because it avoids the extra GROUP BY.

4.7 Long query prediction times

Discoverer 3.1 forces the use of the cost-based optimizer within its query prediction process (it only parses the statements - the execution of queries is usually governed by the server's default optimizer mode). Unfortunately, the CBO can be inefficient on very large schema's, such as Oracle Applications.

When query prediction is used in a large schema environment, such as Oracle Applications, the database server can take a long time to parse a statement using the cost-based optimizer. This is known behavior of the server and has been documented as part of bug number 564060.

The effect this problem has on Oracle Discoverer is that query prediction can take several minutes. There are three ways around this:

a)Turn off query prediction.

This can be done by specifying the following registry key:

HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\QPPEnable

It should be set to a DWORD value of 0 (zero). To re-enable query prediction at some later point in time, either remove the registry key or set it to 1.

b) Stop query prediction forcing the use of the cost-based optimizer.

This can be done by specifying the following registry key:

HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\QPPCBOEnforced

It should be set to a DWORD value of 0 (zero) which means use of the Cost-based Optimizer (CBO) is not enforced. The CBO will follow the normal rules of the database server.

c) Patch the server and set the appropriate initialization parameters.

The database server should be patched to 8.0.5 or to any of the backports which fixes bug# 564060. These patches have introduced new database initialization parameters to give users greater control over CBO behavior:

optimizer_max_permutations gives the user the ability to control the maximum number of join permutations considered for each query block. The default is 80000, which gives the old behavior. When set to less than 80000 the optimizer also tries other initial order heuristics with up to four different first tables in the join order and limits the number of permutations in each OR-expansion branch to 10. This parameter is overridden by the optimizer_search_limit parameter in the sense that the maximum number of permutations will be at least the factorial of the latter.

optimizer_index_cost_adj changes the cost of an index access by a factor of X percent where X is the argument. The default is 100, which gives old behavior. By setting the parameter to more or less than 100, the user can make index scans look more or less costly and hence, make the optimizer plan selection more or less index friendly.

optimizer_index_caching changes the costing of the inner table in a nested loops join. By setting this parameter to a certain percentage between 0 and 100, the user can make the optimizer assume that that percentage of the index is cached. The default is 0, which gives the old behavior. Any higher value will increase the likelyhood that the optimizer will pick a nested loops join over other join methods.

4.8 Usage of "Validate Folders"

In the Administration Edition, there is a menu option "Validate Folders" that performs a check between the folders in a Business Area and the database objects they refer to. In 3.1.25 this option validated the folders, and kept re-validating with each change. This requires constant intensive processing and can cause delays in Business Areas with large numbers of folders and items. In 3.1.26 this menu option now acts like a button. It will validate the folders at that time only. If you wish to revalidate, then you should select the menu option again.

5. 3.1.26 Untranslated Error Messages

There are a set of error messages that will appear in non-US countries as:
Error XXX: Please see the readme file for more details.

These are error messages created after the product was translated. The following are the error numbers are messages:

3573 - Internal Error - Unable to generate SQL for this Scheduled Workbook (if you scheduled this workbook using a previous version of Discoverer, please reschedule and re-open)
3574 - EUL has changed - Cannot find referenced EUL element
3575 - Oracle Applications users cannot reside on ODBC datasources.
3576 - Missing or corrupt Applications Security DLL.
3577 - Workbook length exceeds maximum supported by the database

6 - Useful registry settings

Oracle Discoverer uses registry settings to store internal values and useful options that did not make it into the user interface in time for the production release. Below is a list of potentially useful settings. All keys are under \\HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\

Admin\CreateJoinInOtherBAs
type - DWORD, default 0
Controls the generation of joins when a folder is loaded or refreshed. Most users want joins to be generated automatically between folders in the same business area. However, some users also wish to have joins created automatically across Business Areas. This setting controls that option:

=0 - Do not generate/check joins to folders outside the current Business Area.
>0 - Generate/check joins to folders outside the current Business Area.

Database\ArchiveCacheFlushInterval
type - DWORD, default 1000
Controls the interval between EUL cache flushes during Export and Import of .eex files. Used to avoid excessive memory usage during the Exp or Imp of a very large archive.

Database\BusinessAreaFastFetchLevel
type - DWORD, 3.1.25 default 2, 3.1.26 default 1
Controls the amount of pre-caching that occurs for objects and items whenever a business area is fetched. In general terms, the lower the value, the less folders and items are fetched into the Navigator dialogue

immediately.
The possible values are:
0 - No Fast Fetch
1 - Fast Fetch the objects within each business area
2 - Fast Fetch objects within each business area and items in user mode only
3 - Fast Fetch objects within each business area and items in admin mode only
4 - Fast Fetch objects and items within each business area

Database\ObjectsAlwaysAccessible
type - dword, default 0
By default, in the User Edition, when we display the folders and items in the Navigator, Discoverer validates that the tables/views they refer to exist and that the user has access to them. If the user wishes, they can switch this validation off by setting this registry setting to be any number > 0. This speeds up the display of folders & items in the Navigator. If the database objects don't exist or the user does not have access to them and this setting is > 0, the user sees an error (E.G. 942 Table or View does not exist) when they execute a query.

Database\QPPCBOEnforced
type - DWORD, default 1
Query Prediction needs to parse statements in order to obtain their cost. The cost is only available when parsing with the cost based optimizer (it is not produced if parsing with the rule based optimizer). The default behavior in Discoverer 3.1 is to force the use of the cost based optimizer when parsing these statements. If this registry setting is set to 0 then Discoverer will use the default optimizer for the database and for the tables involved in the query, (i.e. if the default optimizer is rule-based and the tables have not been analyzed then query prediction will not be available.)

Database\QPPCreateNewStats
type - dword, default 1
Will record new statistics (used as part of query prediction) if set > 0. If you set this to zero, Discoverer doesn't create any new statistics for query prediction.

Database\QPPEnable
type - dword, default 1
Will use Query Prediction if set > 0. If you set this to zero, query prediction is disabled. This may be beneficial for certain applications.

Database\RdbFastSQLOff
type - DWORD, default 0
This only applies to Discoverer against RDB. If set to 1 then it turns off "fast sql" on the RDB server. This registry setting should only be used if errors are encountered against RDB and may help avoid some types of problems.

Database\AppsGWYUID
type - string, default APPLSYSPUB/PUB
Only used on an Apps Mode EUL and defines the Username and Password of the public Gateway used in the Applications Login.

Database\AppsFNDNAM
type - string, default APPS
Only used on an Apps Mode EUL and defines the schema that owns the core Applications tables and views.

Section B - Discoverer 3.1.25 Readme file.

1.1 Supported Oracle Databases
Discoverer 3.1 is supported running against any remote Oracle Server Release 7.1.16 and later, including all Oracle8 Servers including Oracle8 Personal Edition 8.0.4. Discoverer 3.1 is supported running against Personal Oracle7 Release 7.3.2 or higher with the exceptions noted in section 1.3 - "Installation with

Personal Oracle7".

Discoverer is not supported running against Personal Oracle8 Release 8.0.3. It is also not supported against Oracle8 Server Release 8.0.3 when both Discoverer Release 3.1 and Oracle8 Release 8.0.3 are installed into the same ORACLE_HOME and running on the same machine. See section 1.2 - "Installation with Oracle8 Release 8.0.3".

1.2 Installation with Oracle8 Release 8.0.3
Discoverer Release 3.1 is NOT supported with Personal Oracle8 Release 8.0.3. This installation will prevent you from installing Discoverer 3.1 into the same ORACLE_HOME if you have Oracle8 Release 8.0.3 (Server or Personal Oracle8) already installed. This is due to incompatibility between the Oracle8 Release 8.0.4 client software (Required Support Files and Net8) and the Oracle8 Release 8.0.3 database software.

Discoverer 3.1 is supported with Oracle8 Personal Edition Release 8.0.4.

Discoverer 3.1 is supported running against any remote Oracle Server Release 7.1.16 and later, including all Oracle8 Servers.

1.3 Installation with Personal Oracle7
Discoverer Release 3.1 is supported against Personal Oracle7 Release 7.3.2 or later with the following exceptions:

If you are using Personal Oracle7 you may need to install the SQL*Net Add-on. If you see the SQL*Net Add-on in your listing of Installed Products in the Software Asset Manager of the Installer, you do not need to install it. The installation will automatically add the SQL*Net Add-on that you need if you are using Personal Oracle7 Release 7.3.4.0.0 or later.

If you are using a release of Personal Oracle7 other than Release 7.3.4.0.0, you need to install the appropriate SQL*Net Add-on for your release of Personal Oracle7. The SQL*Net Add-on is available on your original Personal Oracle7 CD or in the \EXTRAS\NETADDON directory of this CD.

To install the SQL*Net Add-on from this CD, navigate to the directory that contains the SQL*Net Add-On that matches your database version --

\EXTRAS
\ NETADDON – contains a directory for each release of Personal Oracle7:

For73210	for	Personal Oracle7	7.3.2.1.x	(Win95 only)
For73220	for	Personal Oracle7	7.3.2.2.x	(Win95 & WinNT)
For73300	for	Personal Oracle7	7.3.3.x.x	(Win95 & WinNT)

and double-click on the SETUP.EXE file there to start the installer that matches that release.

In the Software Asset Manager, you will find the SQL*Net Add-On and in some cases the SQL*Net Client selected. Click on the Install button to install these components. This installs the SQL*Net Add-On and sets up Personal Oracle7 to allow connections from products built on the Oracle8 client software, like Discoverer, to Personal Oracle7. An advantage of this is that you will be able to Cancel queries when connected to PO7 because you are connecting via SQL*Net.

With Personal Oracle7 Release 7.3.2.1.1 under Windows95 you may still sometimes see a "TNS: Listener not found" error message and be disconnected from Personal Oracle7. You may be able to resolve this problem using a special connect string. In the Connect dialog box you can put 'tcp-loopback' in the Connect: field and try the same Username and Password for your Personal Oracle7 database (e.g. video31/video31@tcp-loopback).

There can also be some negative performance impact using the Bequeath driver (the default driver) against

any release of Personal Oracle7 under WindowsNT 4.0. It is highly recommended in this configuration you use the tcp-loopback connection at all times.

1.4 Installing to a LAN Server
To install Oracle Discoverer on a LAN Server please read the install.wri file in the top directory of your CD-ROM. Full instructions are contained there.

1.5 Installation and Tutorial log files
When an EUL or Tutorial install is invoked through the EUL Manager a log file is generated notifying the user of any warnings or errors which have occurred during the installation process. If an error does occur a message box is displayed indicating the file name of the log file created. Inspecting the log file will provide the user with more detailed information of the server error message and the SQL statement in error. The log files are named eulinst.log and deminst.log for the EUL installation and tutorial installation respectively.

1.6 Support for Oracle RDB 7
Discoverer Release 3.1 now works against RDB directly (without using ODBC).

Software Requirements
To use Oracle Discoverer directly with Oracle Rdb you need:
· Oracle Discoverer 3.1.18 or later
· Oracle Rdb Release 7.0.1.3 or later
· SQL*Net for Rdb7 Release 1.0.2. or later
· A special image for SQL*Net for Rdb7 with bug fixes specifically for Discoverer 3 is also required --supported customers can obtain by contacting their Oracle Support Representative.

SQL*Net for Rdb7 enables an Rdb7 server to appear as an Oracle7 server to the client.

You need to install SQL*Net for Rdb7 software only once on each server system. You also need to prepare each Rdb7 database environment by defining the Oracle7 functions and the emulated Oracle7 data dictionary to serve with SQL*Net for Rdb7.

If you need further information about SQL*Net for Rdb7, refer to the following documentation:
· Guide to SQL*Net for Rdb7 - This guide helps you set up and use SQL*Net for Rdb7 software to configure and develop useful connections between SQL*Net clients and Oracle Rdb7 databases.
· Oracle SQL/Services Release Notes Release 7.1.2 - This manual contains Oracle SQL/Services release notes that are specific to SQL*Net for Rdb7 Release 1.0.2. The notes describe changed and enhanced features; upgrade and compatibility information; new and existing software problems and restrictions; and other software documentation.
· Comparison of SQL Dialects for Oracle and Oracle Rdb - The principal purpose of this manual is to help users of the SQL*Net for Rdb software understand differences in the Oracle7 and Rdb7 SQL dialects. This manual identifies where differences in the SQL dialects might occur, and provide additional information to help you achieve the desired functions.

Features not supported using RDB
The following features will not be supported in Discoverer 3.1 when using RDB:

1. Query Prediction. (Oracle Specific - Uses Oracle's Cost Based Optimizer)
2. Qstats Workbook (This uses Oracle's PLSQL)
3. Register PLSQL functions. (See Known Bugs, below)
4. Internally Managed Summaries (Uses Oracle's PLSQL)
5. Database Roles (Later versions of SQL*NET for RDB may support this)
6. Parser Hints on Folders (Oracle Specific)
7. Server side Batch / Scheduled Reporting (Uses Oracle's PLSQL)
8. Security - Roles and Users (This can be done outside the tool. Later versions of SQL*NET may support this.)
9. Oracle Specific Functions; (i.e. INSTR, INSTRB ,VSIZE, UID, DUMP, TRANSLATE ,

SOUNDEX, STDDEV, VARIANCE, STDDEV_DISTINCT, VARIANCE_DISTINCT).

Known Discoverer 3.1 RDB Specific Bugs
667509 - Get ORA-1438 when comparing non-null string datatype bind variable to null.
This prevents the user from registering RDB procedural SQL.

683203 - sqlnet for rdb with discoverer- greatest and least functions restrictive.
Greatest and Least Functions in RDB only accept two parameters:
i.e. Greatest(100,200) = 200
  Greatest(100,200,300.....) - Error wrong number of parameters

1.7 Privileges required for the EUL owner

New Installation
Log into the Discoverer Administration Edition initially as SYSTEM or a similar user with DBA privileges. You will then have the necessary privileges to create a new EUL owner and install the tutorial.
Subsequent use of the Administration Edition can login as the EUL owner. If the userid for the EUL owner already exists, login as this userid to create the EUL tables, and see below for creating the Tutorial tables.

Upgrading from previous versions
Log into the Discoverer Administration Edition as the existing EUL Owner. You will be prompted to upgrade the EUL tables which requires the following privileges:

create procedure
create session
create table
create view
create sequence

These are also the default privileges given to new EUL owners created through the EUL Manager Wizard.

If you see the error: ORA-1031 INSUFFICIENT PRIVILEGES, check the privileges for the EUL owner.

To install the tutorial you need the ability to create the tutorial owner, and then grant public access on the tutorial tables. The extra privileges required are:

CREATE USER - to create the VIDEO31 user (needed if it doesn't exist)

1.8 Installation of the Summary Management Workbooks and Business Area
Discoverer Release 3.1 comes with some useful workbooks for summary management. If you have used Discoverer 3.0.8 and have imported the qstats.eex Business Area, you should delete this from your EUL before installing the Release 3.1 version of the Business Area.

The workbooks can be found in the {ORACLE_HOME}\discvr31 directory:
1. Qstats.DIS - Displays useful information about users Queries
2. Sumrfsh.DIS - Displays the status of any summaries that have been created or are being refreshed.
3. Sindex.DIS - Creates Indexes on Summaries to enhance performance.

To use these workbooks:

1. Either use Server Manager and "connect internal", or log into SQL*Plus as the user SYS:
  Grant SELECT access on dba_jobs_running and user_jobs to your End User Layer Owner <EULOWNER>.

E.g. SQL> connect sys/<sys password>
  SQL> Grant select on DBA_JOBS_RUNNING to <EUL OWNER>;
  SQL> Grant select on USER_JOBS to <EUL OWNER>;

```
SQL> Commit;
```

To check this has worked log on as your EUL owner and describe the table SYS.DBA_JOBS_RUNNING

E.g.
```
SQL> connect <eul owner>/<eul owner password>
SQL> desc SYS.DBA_JOBS_RUNNING
```

You should then see the following results

```
 Name                           Null?   Type
 ------------------------------ -------- ----
 SID                                     NUMBER
 JOB                                     NUMBER
 FAILURES                                NUMBER
 LAST_DATE                               DATE
 LAST_SEC                                VARCHAR2(8)
 THIS_DATE                               DATE
 THIS_SEC                                VARCHAR2(8)
```

2. Access the Discoverer Admin Edition. Then import the file 'qstats.eex'
   E.g. From Menu choose - 'File' then 'Import' then select the new file 'qstats.eex'.

NB. If you have already got the Business area 'New Qstats' included in your EUL, imported from a previous/older version of QSTATS.eex, then you should, at this stage, change the 'import options' from: 'Rename imported objects, if they already exist' to 'Rename existing objects'.
You can then delete the renamed business area (eg.'New Qstats1') once the other new one has been imported.

3. Run the workbooks from the User Edition
 E.g. Select to Open an existing workbook and choose the workbook file you want to run (i.e. Qstats.DIS, Sumrfsh.DIS, Sindex.DIS).

The workbook should then be visible. Instructions on each sheets use are included, as usual.

1.9 Setting up Query Prediction
With the release of Discoverer 3.1, the Query Prediction has been improved such that it will work under more database environments by default and is more accurate.

With previous releases of Discoverer, it was necessary for the system administrator to set up the database in a specific way in order for Query Prediction to work. This is no longer necessary, apart from environments where queries are issued against secure views. Query Prediction should now work "out-of-the-box" in most Oracle database environments. Note that Query Prediction is not available under ODBC.

When Discoverer is first installed or in those database environments where query prediction is not available, a dialog will be displayed during each query execution in the User Edition advising that the "query estimate is not available". In addition, the advisory message "Query performance prediction not available because <reason>", where <reason> is one of the causes listed below will be displayed in the 'Database Information' dialog of the Administration Edition.

Improving the accuracy of Query Prediction
Query Prediction uses the cost-based optimizer in Oracle RDBMS Release 7.2 or later. To implement Query Performance Prediction effectively, you should analyze the tables you intend to query. Creating histogram statistics by performing column level analysis will lead to more accurate query predictions, reducing the server load and improving query performance.

For Oracle 7.2 databases, issue the following SQL statement using SQL*Plus (logged in as the data table owner):

SQL> analyze table <username.tablename> compute statistics;

For Oracle 7.3 databases, issue the following SQL statement using SQL*Plus (logged in as the data table owner) :
SQL> analyze table <username.tablename> compute statistics for all columns;
SQL> analyze table <username.tablename> compute statistics;

NOTE: If you expect the table contents to change significantly over time, your analysis should be reapplied at regular intervals.

Running queries against Secure Views and making Query Prediction faster
Query Prediction uses the EXPLAIN PLAN statement in order to analyze queries which the User Edition runs. Unfortunately, EXPLAIN PLAN does not work against secure views, and therefore, Query Prediction is not normally able to work in these environments.

With Discoverer 3.1, it is possible to workaround this by granting your users access to the system view V$SQL. In fact, it is generally recommended to do this as it usually has the added benefit of making Query Prediction faster.

To do this log into SQL*DBA (Oracle7 7.2) or SVRMGRL (Oracle7 7.3) on the database (UNIX) server as the user INTERNAL. Note: SVRMGR on Personal Oracle7 7.3, SVRMGR23 or SVRMGR30 on WindowsNT Server.

Grant the select by issuing the following command:
NB : 'v$xxxxxx' is a public synonym to a view called 'v_$xxxxxx', so the grant statements would read as follows:

SQL> grant select on v_$sql to public;

NB. You can do this by running the script {oracle_home}\discvr31\sql\eulsuqpp.sql in sqlplus. You must know the SYS password to use this script.

Query Prediction and the database optimizer mode
With previous versions of Discoverer it was necessary to make Discoverer run with the cost-based optimizer in order for Query Prediction to work. Discoverer 3.1 no longer has this requirement.

This has the following implications:
a) It is no longer necessary to have a specific setting of optimizer_mode in the init<sid>.ora file for the database.
b) It is no longer necessary to have a setting of true for timed_statistics in the init<sid>.ora file for the database.
c) It is no longer necessary to have special registry settings. Previous versions of Discoverer required the following registry setting to be set to 1:
HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\UseOptimizerHints
This registry setting should now be removed for optimal performance of database queries.

Maintaining the database INIT<SID>.ORA file
To check the settings of the database parameters timed_statistics and optimizer_mode, invoke SQL*Plus. Login as SYSTEM/<password> where <password> is your system specific password and execute the following query:

```
 SQL>    select name, value
from  v$parameter
where  name in ('timed_statistics', 'optimizer_mode');
```

To change the values of these settings, you need to manually edit the INIT<SID>.ORA file.
a) Locate INIT<SID>.ORA. For example, on Personal Oracle7 the file INITORCL.ORA is located in

<ORACLE_HOME>\database. The <SID> in this case is 'ORCL'.
b) Edit the file to change the settings.
c) You will need to shutdown and restart the server for this change to take effect.

1.10 Setting up Summary Management and Server Batch Support
The procedure for setting up summary management and the server side batch are the same, as they both use the native batch facility within the Oracle database.

In the Summary Wizard, the option to create and maintain summary tables automatically may be disabled for the reasons listed below. The advisory message "Summary management not available because <reason>" (where <reason> is one of the causes listed below) will be displayed in the 'Database Information' dialog.

There are several potential causes of summary management not being available. They include:
a) The server package DBMS_JOB has not been installed or is not available.
b) The user is unable to create a procedure in the current schema
c) The user is unable to create a view in the current schema
d) The user is unable to create a table in the current schema
e) The user does not have enough quota in their default tablespace to create the summary tables
f) The user has an object in their schema with the same name as their username (for example, Demo.demo)
g) The init<sid>.ora parameter job_queue_processes may not be set to at least 2.
h) The init<sid>.ora parameter job_queue_interval needs to be set to (at least) the frequency you wish the summary tables you want to be refreshed. This time is in seconds! The default is 60 seconds, which we would advise to increase to at least 600 seconds (10 minutes).

To enable automatic summary management, perform the following steps based on the information displayed in the 'Database Information' Dialog. For each cause, refer to the action below that corresponds with the cause above:

a) Confirm if DBMS_JOBS has been installed:
Log into SQL*Plus as the administrator and execute the following SQL statement:
SQL> select * from all_objects where object_name='DBMS_JOB' and object_type = 'PACKAGE' ;

If the statement returns no rows, use SQLDBA (Oracle 7.2) or SVRMGRL (Oracle 7.3) 'CONNECT INTERNAL' to execute the following SQL statement: Note: SVRMGR on Personal Oracle7 7.3, SVRMGR23 or SVRMGR30 on WindowsNT Server.

SQL> start <ORACLE_HOME>/rdbms/admin/dbmsjob.sql;
SQL> start <ORACLE_HOME>/rdbms/admin/prvtjob.plb;

NOTE: In some ports, the rdbms directory is called rdbms72 or rdbms73.

b-d) Create Procedure, View, Table. V_$PARAMETER
Use SQL*DBA (Oracle 7.2) or SVRMGRL (Oracle 7.3) 'CONNECT INTERNAL' and execute the following SQL statement: (Note: SVRMGR on Personal Oracle7 7.3, SVRMGR23 or SVRMGR30 on WindowsNT Server.)

SQL> Grant CREATE PROCEDURE to <USER>;
SQL> Grant CREATE VIEW to <USER>;
SQL> Grant CREATE TABLE to <USER>;
SQL> Grant select on v_$parameter to public;
where <USER> is the userid of the person using the Administration Edition.

e) Determine Tablespace Quotas
Use SQL*DBA (Oracle 7.2) or SVRMGRL (Oracle 7.3) 'CONNECT INTERNAL' and execute the following SQL statement: (Note: SVRMGR on Personal Oracle7 7.3, SVRMGR23 or SVRMGR30 on WindowsNT Server.)

SQL> select * from dba_ts_quotas where username = <user>;
where <user> is the userid of the person using the Administration Edition.

Reset the Tablespace Quotas by issuing the following SQL statement:

SQL> alter user <user> quota <n> on <tablespace>;
where <user> is the userid of the person using the Administration Edition
where <n> is the quota in K(ilobytes) or M(egabytes) or Unlimited
where <tablespace> is the default tablespace name e.g. USERS

f) Object / Schema Name
Ensure there is no object_name owned by the user which has the same name as the user. To verify this, login to SQL*Plus as the user and issue the following :
SQL> select object_name from user_objects where object_name = <user>;

where <user> is the same as the login used for SQL*Plus.

g-h) Job Queue INIT<SID>.ORA Parameters
The INIT<SID>.ORA parameter 'job_queue_processes' specifies the number of concurrent processes to use to process DBMS_JOBS, and therefore to build summaries. The default value is zero which means summaries will NOT be created. You should set it to a minimum of 2, or more if you have any other applications that use DBMS_JOBS. You need more than one job queue process, because if one job fails for any reason, then it may keep getting re-submitted, and thus prevent everything else in the queue from being completed.

The INIT<SID>.ORA parameter 'job_queue_interval' is the time in seconds which controls how often the job processes wake up to process pending jobs. The default is 60, which is quite frequent. What you set this to depends on how frequently you want Summaries refreshed. In the Summary Wizard you can set a summary to be refreshed every 15 minutes, but if the parameter 'job_queue_interval' is set to an hour, then the summary will only get refreshed every hour.

To enable these parameters, locate the INIT<SID>.ORA file. For example, on Personal Oracle7 the INIT<SID>.ORA file is held in <ORACLE_HOME>\database. Its default name is INITORCL.ORA where ORCL is the <SID> name.

Enter 2 lines into the file, for example :

job_queue_processes = 2
job_queue_interval = 600 (Note: this is equivalent to 10 minutes)

1.11 Using Oracle DBMS Profiles
You can use Profiles defined within the Oracle database to limit cpu and other resources. To assign profiles within the Discoverer Administration Edition you need the following database privileges:
DBA_PROFILES
DBA_USERS

1.12 Upgrading batch workbooks from Discoverer 3.1.14 (beta)
If you have any regularly scheduled workbooks created using the beta release of Discoverer 3.1, you will need to open these in the production release and re-schedule.

2 - ODBC Support
Oracle Discoverer Release 3.1 supports access to non Oracle Data Sources via ODBC. The implementation requires that the appropriate client software and ODBC Driver be installed on the machine running Oracle Discoverer.

Oracle Discoverer allows the End User Layer to be created on the ODBC Data Source, alongside the data to be reported on. There is no requirement for an intermediate Oracle database to hold the EUL. Security on the ODBC Data Source will be used to control access to the created EUL and the data it defines.

To access an ODBC datasource enter ODBC:datasourcename as the connect string in the opening dialog, where datasourcename is the name of your ODBC source as set up in the Control Panel ODBC Data Source Administrator.

Available functionality will depend on the capabilities of both the Data Source and the Driver being used. Restrictions identified during testing are highlighted later in this document.

2.1 ODBC Data Sources
Oracle Discoverer Release 3.1 has been tested against a number of non Oracle Data Sources via ODBC. In each case, testing was carried out using ODBC Drivers provided by Intersolv (included with the Oracle Discoverer software) and, when available, Drivers provided by the Data Source manufacturer.

2.2 Untested Configurations
Oracle Discoverer Release 3.1 has only been tested against the non Oracle Data Sources listed in this document. The implementation of support for ODBC Data Sources is intended to be as generic as possible and may allow other Data Sources to be accessed using the current release. However, it is possible that some functionality may not be available and Oracle cannot guarantee that the information returned by an untested Data Source will be correct.

2.3 Tested Configurations
Oracle Discoverer Release 3.1 has been tested against the following non Oracle Data Sources :

- Microsoft SQL Server Version 6.5
- IBM DB2 for NT Version 2.1.2
- Informix Version 7.2
- Sybase Version 11
- Oracle Lite Version 2

Testing has been carried out against these versions only and using the ODBC Drivers identified below. Other combinations of Data Source version and ODBC Driver may work but Oracle cannot guarantee that the information returned by an untested configuration will be correct.

The following Matrix shows which version of each Data Source have been tested, together with the ODBC Driver used and it's version.

Data Source Name	Data Source Version	ODBC Driver	ODBC Driver Version
Microsoft SQL Server	6.5	Microsoft	2.65.0201
IBM DB2 for NT	2.1.2	IBM	Not Marked
Informix	7.20.TC2	Intersolv	2.12.0000
Sybase	11.0.1	Intersolv	2.12.0000
Oracle Lite	2.4.3.1.1	Oracle	2.04.0000

Other ODBC drivers will work against these data sources but some functionality may not be available. For example, SQL Server can be accessed via the Intersolv driver version 2.12.0000 but Administrators may find that locking is handled inefficiently.

Note: For Discoverer to work correctly when connecting via ODBC to a Sybase 11 server, you should ensure that the server database option ddl in tran is set to TRUE.

2.4 Disabled Functionality
Some Features within Oracle Discoverer have been disabled when connected to any ODBC Data Source. Users will find the relevant Menu Options, Windows and Wizards of the User Edition and Administrator Edition will be unavailable. Features affected in this way include :

Feature	Reason
Batch	Requires Oracle PL/SQL to submit jobs for batch execution.
Summary Management(1)	Requires Oracle PL/SQL to perform management functions.
Query Performance Prediction	Requires Oracle specific database objects and functions.
Date Hierarchies	Requires Oracle specific DECODE() Syntax.
Save to Database	Requires Oracle specific data type.
EUL Gateways(2)	Requires checkpoints for partial transaction rollback.

(1) It should be noted that it is only the Management of Summaries which is disabled. External summaries can be created and managed by the administrator, and will be used when appropriate in query execution.

(2) EUL Gateways have been enabled for Microsoft SQL Server and Sybase as these databases support partial transaction rollback via checkpoints and have been tested as part of the Discoverer ODBC certification process. EUL Gateways are not available on other data sources as ODBC does not support a common syntax for "rollback to checkpoint". This includes some data sources which do have support for checkpoints but where the required data source specific syntax has not passed the Discoverer ODBC certification process. Support for EUL Gateways on additional data sources is planned for a future patch release.

NOTE : The presence of a feature on this list does not preclude the feature ever being available when connected to an ODBC Data Source. Features such as 'Save to Database' are scheduled for future releases of Oracle Discoverer.

2.5 Partial Functionality

Some features within Oracle Discoverer have been made partially available when connected to a non-Oracle data Source via ODBC. The implementation has been designed to leave as much of a feature in place as is practicable, while only disabling those aspects which ODBC cannot support. These include :

Feature	Implementation Restrictions
EUL Management	Users can create EUL's under their current user or an existing other database user. The facility to identify and create a new user is not available. Similarly, the tutorial data can only be created if the tutorial user has been created in advance.
Count All Rows	The facility to return a count of all the rows to be returned by a query will not work for all possible queries. Oracle Discoverer creates a new query to return this count and makes use of an Inline View to improve performance. As Inline View syntax is not supported by ODBC, it is necessary to "Flatten" the SQL before it is sent to the ODBC Data Source. This process is not possible when the query whose whose rows are being counted contains any aggregate function(s). In this case, a message will be returned to the user explaining that a count is not available on the current query.
Available Functions	Users can still create derived or complex items using the formula editor and combining items and constants with database functions. However, the list of available functions is not the same under ODBC as for Oracle. A restricted list is provided offering those functions for which an equivalent is recognised by the ODBC driver as being available on the current data source. For example, DECODE() is an Oracle specific function and is not available on ODBC, while SYSDATE will be replaced by the ODBC function NOW().

Additionally, a number of data sources will escalate locks during intensive processes such as Bulk Load. As a result, it is recommended that only one Administration Edition is ran at a time against a single data source. Running multiple copies of Administration Edition could result in processes locking each other out. Running multiple copies of Administration Edition against different data sources - or different databases on the same data source - will not result in locking contention providing any System objects are specific to the individual databases and not data source wide.

2.6 Changed functionality

If an administrator chooses to validate folders through the Administration Edition, any error messages returned will be governed by the data source currently connected to. For example, if an underlying object no longer existed, connection to an Oracle database would give the message :

ORA-00942 Table or view does not exist

while a SQL Server database would give the message :

[Microsoft][ODBC SQL Server Driver][SQL Server]Invalid object name EMP

The quality of the message displayed will depend on both the target data source and the ODBC driver currently being used.

2.7 Specific Database Issues
SQL Server
SQL Server testing has only been carried out against release 6.5. Release 7 support is intended for a future patch release.

Informix
Due to a restriction on the available data types which can represent short amounts of binary data, it is not possible to implement summary redirection on Informix. It is planned that a future patch release will include support for summary redirection by allowing use to be made of the data types used for long binary data. Until then, summary redirection will not occur and performance will be restricted to that of the base queries.

Sybase
Discoverer requires that a Sybase System 11 client has been patched to release 11.0.1 in order for full ODBC support to be available. This patch can be obtained direct from Sybase.

DB2/NT
It is not possible to run Discoverer against DB2/NT using the ODBC drivers provided by Intersolv. Only drivers provided by IBM are supported.

Oracle Lite
Current testing shows that Discoverer will only operate correctly with release 2.4 of Oracle Lite. The later release 2.5 and new release 3.0 exhibit problems when connecting to the databases. Support for the newer releases of Oracle Lite are intended for a future patch release.

2.8 User List
Oracle Discoverer requires a list of known users in order to perform many of it's operations. The ODBC protocol only returns a list of users that own objects which the currently connected user can see. This restriction is limiting when performing administrative functions. While Discoverer will continue to work in this environment, it can be improved by creating a view on the data source which returns more accurate user information.

In order to achieve this, create a view on the ODBC data source which retrieves all the user names on the system. The view must comply with the following rules :

1.The view must be named EUL_ODBC_SCHEMAS
2.It must return a single column called - or alias to - OS_SCHEMA_NAME
3.The view creation should rely on underlying objects accessible to all users.
4.The view should return no duplicates.
5.Only users should be returned, not groups or aliases.

If this were to be created on an Oracle database, the SQL would be :

```
SQL>  Select username from all_users
```

Similarly, if the view were to be created on a SQL Server database, the SQL used would be :

```
SQL> Select name from sysusers where suid > 1 and uid <> gid
```

In this case, the first filter removes temporary user Id's, while the second removes user groups.

This view will automatically be created with an EUL for certified ODBC data sources. If the data source is uncertified, the view should be manually created alongside the standard EUL objects and with the same permissions granted on it as other read-only objects in the EUL.

As the view is part of an EUL, it will not be uncommon for it to be created several times on a given data source, once for each EUL.

3 - Useful Hints and Tips

3.1 Query Statistics

Discoverer 3.1 does not migrate or use query statistics generated by Discoverer 3.0. You will need to build up new statistics in order to achieve accurate query prediction estimates. Discoverer 3.1 added a great deal more information into the statistics, in order to enhance query prediction and system usage analysis. This now includes logging queries by user, and since this (and other) information is not available in the 3.0 statistics it is not possible to make use of them in Discoverer 3.1. When the End User Layer for Discoverer 3.1 is installed the query statistics table (EUL_QPP_STATISTICS) will be empty, and one row is then inserted for every query run. Note that statistics are cached on the client and are only written back to the database when you exit from the User Edition.

3.2 EUL Gateway Documentation

The EUL Gateway enables you to populate the EUL directly from any source of metadata. To set up an EUL Gateway, please see the eulgatew.doc file in the {ORACLE_HOME}\discvr31\kits directory.

3.3 Date Format Masks are different than Date Formats

You can define a date item in the EUL with a specific format. For example, defining a date item as eul_date_trunc(shipdate, "Q") will display only the quarter information for that date. When a user performs a condition, the date format is applied and the user can say "Where Quarter = Q1".

A date format mask is held in the item property sheet and only influences the way that a date is displayed to the user - not the way that it is held. Thus, if you have a format mask of "Q", the user only sees the quarter, but they cannot perform conditions in the same way.

A more subtle aspect of this is that the standard Oracle date format includes time (DD-MON-YY:HH24:MI:SS). When Discoverer loads dates in, it gives them a date MASK of DD-MON-YY (ie without the time). If a user then does a condition on dates where time is actually stored in the database then the time component will be included in the condition, even though the format MASK says that it is not. If this is the case, the solution is to change the item definition and truncate the date item itself to just DD-MON-YY

3.4 Creating/Editing/Opening workbooks without running queries

There are now two options to control whether a query is automatically run or not. Under Tools-Options there is a general tab which enables you to control the behavior of a workbook when it is opened:

Run query automatically – Runs the sheet in the workbook the first time it is selected (without asking).
Don't Run Query (leave sheet empty) – Only runs the query for that sheet when you select the "Refresh" icon.
Ask for confirmation – Ask whether you wish to run the query for each sheet.

There is also a "disable automatic querying" setting in the Advanced tab of the user edition's Options dialog. This option is a global preference that ensures that after opening a workbook a query is never submitted to the database until you explicitly click the "Refresh Query" icon. This enables you to create and modify workbooks without running the query.

3.5 The "Show SQL" dialogue now shows "flattened" SQL.

Discoverer utilizes "inline views" in its SQL generation for both performance and to ensure that the SQL

generation is always correct when drilling and pivoting. This SQL has now been "flattened" to remove the inline view portion, to make external editing easier. The "Show SQL" dialogue now shows the flattened SQL whenever possible. Please note the inline view and flattened SQL statements are identical when sent to the kernel.

If you are using an ODBC connection, ODBC SQL is created. To set the default variant there is now a new registry entry called HKEY_CURRENT_USER\Software\Oracle\Discoverer 3.1\Database\SQLType. The valid values for this entry are 0, 1 and 2. Through this entry the user can specify the particular form he/she wants the SQL to be displayed in the SQL-dialog.

0 -> Flattened SQL - no inline views. This is the default.
1 -> ODBC compliant SQL.
2 -> The generated SQL with inline views.

3.6 New /cmdfile option
"/cmdfile <filename>" is a new option from the command line. You can put any command line options in the file and use the file as a batch file. Also, you could have "/cmdfile" appearing inside a file that is being used by the command line. The argument of "cmdfile" will be expanded in place so your command line can have this option along with others. (For example – in the command line type in the connect string, document name etc. and then use the "/cmdfile" option to fill in parameters.

The \cmdfile option only works for the US-version of the product. The resource files for the other versions do not have the required resource. The option will automatically work as soon as they are updated

3.7 Usage of the Discoverer Eul_Date_Trunc function
There is a Discoverer function called EUL_DATE_TRUNC. This function enables you to truncate a date value to the format specified in the format mask, and keep it as a DATE data type. This has several advantages: For example, it enables you to have formats such as YYYY-QU. It also ensures when you specify a quarter format the item knows which Year the quarter is in.

E.g. If you apply Eul_date_trunc(Date,'YYYY') to the dates 25-Aug-1934, 11-nov-1934 & 03-feb-1933 we would produce 01-jan-1934,01-jan-1934 & 01-jan-1933 respectively. Hence we have produced the same value for the 1st 2 dates because they were the same in the elements of the date asked for in the format mask.

3.8 New changes in loading from Oracle Designer
There have been some minor changes in the loading defaults when we load from Designer. The folder name used to come from the table name in Designer, now it comes from the table display name (or table name if display name is empty). The item name used to come from the Designer column name, now it comes from prompt (or column name if prompt is empty).

3.9 How to export SQL used in a workbook without running the workbook
You can now export the SQL in a workbook using a command line interface. This will open the workbook and export the SQL, without running the query. This uses the standard /export option available from the user edition (please see admin guide):

Syntax: /export [FORMAT] [FILENAME]

If FORMAT = SQL, then the default format for that user is picked from the registry entry -
My Computer/HKEY_CURRENT_USER/Software/Oracle/Discoverer 3.1/Database/SQLType.
0 = flattened SQL, (i.e standard Oracle format - the default)
1 = odbc SQL,
2 = native SQL. (I.e Discoverer SQL sent to the kernel, with inline views)

If FORMAT = ODBCSQL, the exported SQL is in ODBC format.

3.10 Using the SQL in Oracle Reports

When you export to Oracle Reports, we pass through both the layout information and the SQL used to get the data. The SQL is passed through with aliases (required for Discoverer). E.g.

Select region as e109, year as e102
from video31.dept_reg_year

The column names "region" and "year" are passed through as the column headings in Oracle Reports. In the Reports Designer layout area, the columns will be referred to with their alias name "e109", "e102". If you wish to modify these to the actual column name you may do so be reviewing the SQL passed through to Reports and making the translation.

3.11 Discoverer/Express Integration
Details about the Discoverer and Express integration can be found in a separate document in {oracle_home}\discvr31\doc\oeodisco.doc.

3.12 Business Objects Conversion Kit
There is a Business Objects Conversion kit that translates Business Objects Universes into Discoverer Business Areas - details can be found in Appendix B of the Administration Manual. This is supported for Business Objects Release 4.0.

3.13 Changing the join behavior across Business Areas when loading the EUL
In 3.0.8 and 3.1 (beta), a bulk load in the Discoverer Administration Edition created joins across all Business Areas within in an EUL.

Due to user requests, this default behavior has been changed in the production release to create default joins across folders within the Business Area being created/loaded.

This is controlled by a registry entry:
\
\HKEY_CURRENT_USER\software\Oracle\Discoverer 3.1\Administrator\CreateJoinInOtherBAs

The default value is set to 0 (zero -- no joins created across Business Areas). In order to override this, the value must be set to 1.

4 - Known Issues And Workarounds
4.1 Getting disconnected from Personal Oracle7
With Personal Oracle Release 7.3.2.1.1 under Windows95 you may sometimes see a "TNS: Listener not found" error message, and be disconnected from PO7. This is an issue with the Bequeath driver on this platform/PO7 release. To resolve this, connect to PO7 using tcp-loopback. (ie video31/video31@tcp-loopback).

4.2 Performance when using the default SQL*Net driver with Personal Oracle on Windows NT 4.0.
There can also be some negative performance impact using the Bequeath driver (the default driver) against any release of Personal Oracle7 under WindowsNT 4.0. It is highly recommended in this configuration you use the tcp-loopback connection at all times.

4.3 Changing a pattern back to a solid in a graph
To change a patterned graph to a solid colored graph, you drag the color down over the pattern and it will replace the pattern. Thus, if you want a colored pattern, you first drag the color down, and then place the pattern on top .

4.4 Clipped screen shots in the Quick Tours
If you use Netscape 3.0 on an 800x600 resolution the horizontal scrollbar is not activated to see the rest of the screen, and some of the screen shots are therefore clipped. If you use 1024x768 you can see all screen shots in full.

4.5 Errors in batch or summary management

If you are using Summaries or Batch and get the following messages:
ora - 6550 : Line x, Column y
pls - 302 : Component 'xxx' must be declared
.
... then you have either a table, view, synonym, etc. in your schema having the same name as your username. You must change the object name. (See Section 1.8 (f)).

4.6 Non-translated Error Messages
There are a set of error messages that will appear in non-US countries as:
Error XXX: Please see the readme file for more details.

These are error messages created after the product was translated. The following are the error numbers are messages:
3564: Missing object foreign key usage for complex object - %s(This is issued by the gateway bulk load when a complex object is specified that is based on more than one simple object, and no foreign key has been set up to indicate the join to be used.)
3564: Expression contains a mixture of aggregate and non-aggregate items
3565: Cannot load a self join from this type of gateway
3566: This database will only support one administration session at a time
3571: Unable to convert to aggregate item as calculation has a dependency
3572: Unable to perform operation, the package EUL$BATCH_REPOSITORY is the wrong version. Batchusr.sql should be re-run against the current EUL
3573: Internal Error - Unable to generate SQL for this Scheduled Workbook (if you scheduled this workbook using a previous version of Discoverer, please reschedule and re-open)
3574: EUL has changed - Cannot find referenced EUL element
3575: Oracle Applications users cannot reside on ODBC datasources.
3576: Missing or corrupt Applications Security DLL.
3577: Workbook length exceeds maximum supported by the database

4.7 Get ora-600 [16221] when submitting a batch process or creating a summary
If a user submits a batch request there is a specific set of circumstances where they may get an ORA-600: internal error. Arguments [16221] [],[],[],[].

This is an Oracle RDBMS error that is fixed in Oracle8 Release 8.0.5 or later. You will see this in Discoverer if you have the following circumstances:
1. Create a user-defined PL/SQL function in the database
2. Register this function with Discoverer
3. Create an item based on this function
4. Schedule a workbook (or create a summary) with this item included in the workbook (or summary).

The reason that you get this error is that there is an issue in the database when you create a view using a function in an inline view or subquery, where the function is referenced as schema_owner.function_name for the very first time (only).

The workaround for this is to create a view with the PL/SQL function included in the database, and then drop it. For example, if I have created a PL/SQL function called "add_data" then:
1. Log into SQL*Plus
2. Create a simple view based on the PL/SQL function:create view foo as select eul.add_data from sys.dual;
3. Drop the view

4.8 You need a specific format when importing SQL which uses a database link
To import a SQL statement that includes a database link, the database link must be in an explicit format, with the database link enclosed in double quotes:
e.g. video31.sales_fact@"TESTDB.WORLD"

4.9 All summary columns need to be included when matching an external summary through ODBC
When you match an external summary table through ODBC, all the columns available in your external summary table have to be matched with items in the Business Area. If you do not have this, when you press the [Finish] button you will (correctly) get an error saying "One or more items is not mapped to a column". The solution is to either match all the columns in your summary table to items, or remove the columns that you cannot match from your external summary table.

4.10 Get "The specified file was not found r30run32.exe" when exporting to pdf format.
Discoverer uses the Oracle Reports capabilities to export to pdf format. If Oracle Reports Runtime is not installed on your PC and you try and export to pdf format you will get this message. The workaround is to install Oracle Reports.

4.11 Showing matches between Summaries and Query Statistics
Page 12-306 in the Admin Guide (Section 12.4.2) says that the cube icon appears only if the query finds an exact match that includes all objects.

This behavior has changed so that if a query statistic has a fit (partial or perfect) to a summary folder, then a summary cube is displayed in the row for that statistic. Furthermore, if the query statistic has a perfect fit (at the time the statistic was originally recorded), then the statistic row is displayed in bold.

If the fit is perfect, the 'Next' button is disabled in the wizard, as it makes no sense to build a summary folder that already exists.

4.12 Cannot change graph scale using the graph wizard (or edit graph) option
You cannot change the scale of a chart using the "edit graph" option from the menu, or the right mouse click. To change the scale, choose the "scale" option. Any changes in scale will not be saved with the chart (as the data may have changed when the workbook is re-opened, making the scale invalid.

Have fun!