



www.[DanHotka.com](http://www.DanHotka.com)
Quarterly Newsletter

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Dan Hotka is a Training Specialist who has over 28 years in the computer industry and over 23 years of experience with Oracle products. He is an internationally recognized Oracle expert with Oracle experience dating back to the Oracle V4.0 days. Dan's latest book is the [SQL Developer Handbook](#) by Oracle Press. He is also the author of [Oracle9i Development By Example](#) and [Oracle8i from Scratch](#) by Que and has co-authored 7 other popular books including the [Database Oracle10g Linux Administration](#) by Oracle Press. He is frequently published in Oracle trade journals, and regularly speaks at Oracle conferences and user groups around the world.

Invite Dan to speak at your next event.

RMOUG (Rocky Mountain Oracle Users Group – Denver Colorado) was on February 14 and 15, another excellent production by the volunteer staff headed up by Tim Gorman. I had 2 speaking slots: [Oracle Discoverer Tips and Techniques](#) and [SQL Developer Tips and techniques](#). The presentations went well and were well attended.

I hope you find this newsletter of particular interest. I'm introducing 2 new course offerings: [Oracle10g New Features for Developers](#) and [Oracle Advanced PL/SQL Programming Techniques](#).

I am featuring my 1-day [SQL Developer](#) course that would make a great course when migrating to SQL Developer from other similar tools. Check out Educational Offerings (or my website) for descriptions of these courses.

This newsletter will again focus on tips and techniques across a variety of tools. There are tips for TOAD, SQL Developer, and Oracle Discoverer. I will share parts of my popular presentation: Tuning When You Cannot Change the Code, part 1 is in this newsletter.

I am sharing some of my email tips in the article Email Tips and Techniques. These techniques greatly reduce my exposure to viruses and pop-ups.

I have found some new websites that are full of useful information and discount computer accessories, see Freeware Downloads for these sites.

I am trying to figure out just when to get involved with Oracle's new Oracle Analytics tool...a cool drilldown environment from their JD Edwards purchase. Let me know if you are using this tool or are considering using this tool.

I was elected president of the Iowa Oracle Users Group. The group has been dormant for a while. I am the originating founder of the group back in 1988. I've been involved off/on thru the years as well.

Take note of my pricing model, it is very different from how others price training...I make on-site training very cost effective. Check the Educational Offerings for these details.

This newsletter, along with all prior newsletters, are available at www.DanHotka.com.

What's in this issue?

Tuning When You Cannot Change the Code!

- Part 1 of a 4 part series with excerpts from this very popular 1-hour presentation that is regularly requested – page 5

Freeware Downloads

- Oracle User Group's website with useful information – page 7
- SQL Developer v1.1
- Website of affordable computer components
- Dan's freeware tuning tools

Switching to SQL Developer?

My 1-day SQL Developer course is just the opportunity to jump-start your staff with this new tool from Oracle Corp. Course materials includes a copy of my book: Oracle SQL Developer Handbook – page 3

Email Tips and Techniques

Some of tips that helps to cut down on spam and eliminate viruses in my computing environment – page 6

User Group Information

- Dan's speaking topics, new half-day, and all-day hands-on training sessions – page 2
- Speaking topics for User Group – page 3

TOAD Tips

TOAD incorporates a new report writer - page 3.

SQL Developer Tips

Check out the Query Builder - page 8

Oracle Discoverer Tips

The major differences between the desktop and web interfaces - page 8

Product Review

New column where I review a useful product I've used or discovered - page 7

Dan In Print...

- *Oracle SQL Developer Handbook* ISBN: 0-07-148474-4.
- *Oracle Database 10g Linux Administration* ISBN: 0-07-223053-3 (I did the Oracle10g tuning chapters).

Order your copy today at www.Amazon.com.

Educational Offerings

- New Oracle10g New Features for Developers class – page 4
- Advanced PL/SQL Programming Techniques

- My Training Pricing Model – up to 15 attendees for 1 low price
- On-site at your company or in your city via user group participation...see Educational Offerings

Schedule of Events

- Attend my sessions at these user groups/trade shows - page 6

Featured Presentation:

- Discoverer10g Tips and Techniques - page 6

The Back Page:

- New toy
- Update on OldBug
- Cold birds!

Puzzler...

If an inch of rain falls on an acre of land, how many gallons of water fell from the sky?

Answer is on www.DanHotka.com

User Group Information

I have configured 20+ of my PC workstations for use in half or whole day hands-on training courses. I think we can seat 40 people per session and they can do the labs together or take turns doing the labs.

I have arrived at these 4 topics:

SQL Developer Tips and Techniques (half day)

Understanding Oracle Explain Plans (I have material for a whole day, or a half-day)

Working with the Oracle Trace Facility (half day)

Finding SQL Problems in the Oracle RDBMS (half day)

My thought here is to line up as many of these, back to back, as there is interest in your area. You would be responsible for collections and the event room (perhaps you could have a company or college in your area lend us a conference room...), and we split the gross intake.

I am available to speak at your user group. A complete listing of available topics is on my website.

Let me know what you would like and I am sure I can fill your timeslot.

Switching to SQL Developer?

Onsite Oracle SQL Developer Course will Jumpstart your staff with this new/cool tool from Oracle Corp

I am getting a number of requests for my 1-day SQL Developer course by people using other popular Oracle development tools.

The course guide is fully annotated and makes a great reference guide all by itself. I also include a copy of my Oracle SQL Developer Handbook by Oracle Press as well.

SQL Developer Tips and Techniques 1-Day Course Outline

Dan will illustrate the latest features of the new free SQL Developer tool from Oracle Corp necessary to view, extract, and manipulate data within the Oracle database. This workshop covers all of the features necessary to develop, manipulate, and debug PL/SQL code, develop & tune SQL statements, and discover all of the features of SQL Developer. Students will add their own reports and build master/detail reports. All of the various SQL Developer reports will be reviewed. This short course will also cover exactly how to put Oracle data into Excel spreadsheets!

This is the perfect course to get your staff productive with this new tool from Oracle.

This is a hands-on workshop. Attendees will be able to learn by using SQL Developer in a test environment. This workshop includes on-line tutorials of all the topics useful to enable the end user to be more successful when working with the Oracle database.

TOAD Tips

Single/Cool Report Writer/Formatter

TOAD has added a real report writer using Fast Reports. The 2 'print grid' options still appear but there is now a new 'Report' option when right-mouse clicking on any data grid.

This feature first appeared in TOAD 8.6.

Selecting this Report option starts a Report Wizard where you can select columns from your data grid.



You can group data together.



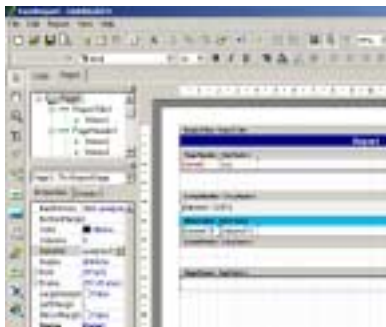
...Select a report layout



...and select a basic report style



Click 'Finish' at any time and the Fast Report image appears. It is now easy to change the report heading, adjust columns, add code, and more! This is a complete and functional report writer.



I Googled 'Fast Report' and found the User Manual, Programmer Manual, and Developer manuals on the www.Fast-Report.com website. They also have a forum and a newsgroup.

This is a nice addition to the TOAD tool and will make for better formatting of the data grids into real reports.

Yes, I will cover using this new report writer in my 1-day TOAD for IT course.

Educational Offerings

Remember that my portable computer lab make these courses

very easy to teach at your site. The cost of this lab is included in my 1-fee pricing model (see below).

New Courses:

Oracle10g New Features for Developers

The purpose of this 3-day course is to present some of the most advanced features available to database developers. Many of these features are either newly available with the Oracle10g release or have been substantially improved with that release.

Advanced PL/SQL Programming Tips

This course also covers many of the Oracle10g new features while working with PL/SQL.

The attendees have the opportunity to learn how to find the poorly-performing components of PL/SQL routines, use Oracle's newer DEBUG routines to find problems in PL/SQL logic and how to use the latest features of the PL/SQL language such as the new optimizing compiler and collections.

Topics covered:

- Oracle Architecture
- Introduction to PL/SQL
 - Syntax and language structure review
- PL/SQL Topics
 - Package Usage (both User Defined and Oracle Defined Packages)
 - Profiling/Debugging/Compiling
 - Cursor Sharing/Cursor Variables
 - Collections
 - Dynamic SQL
 - Autonomous Transactions

- PL/SQL Coding Tips
- Debugging PL/SQL
- Working with Oracle Trace

Training Pricing Model

I price my courses at a fixed rate for up to 15 attendees. This rate compares to the price that others charge for just 2 to 4 attendees. This course fee includes the use of my portable computer lab. There is a separate per-attendee charge that covers the cost of the student guide and any books that might be associated with the course. This student fee is anywhere from \$30 to \$150, depending on the course.

Current Course Offerings

Give your technical staff that competitive edge with Oracle Workshops. These courses are designed to enhance your staff's skill set to perform their job better.

These workshops are designed to be held at your location. These courses use my portable computer lab. On-site instruction enables more people to be trained with the same training dollar.

The course utilizes a variety of current tools. Students will have the opportunity to learn more about SQL Developer, TOAD, TextPAD, as well as the Oracle tools like SQL*Plus, iSQL*Plus, and Dan's new Java-based SQL Tuner.

Oracle SQL Tuning Tips and Techniques with Optional 3rd Day Advanced Tuning Topics

SQL Developer for IT Staff

TOAD for IT Staff

Oracle Discoverer for End Users

Introduction to Oracle (SQL)

Oracle Intro to PL/SQL

Oracle Advanced PL/SQL

Oracle Fundamentals

Oracle10g New Features for Developers
 Introduction to UNIX/Linux UNIX/Linux Shell Programming
 Oracle/Unix Scripting Tips and Techniques

Tuning When You Cannot Change the Code – Part 1

I want to share some of my tuning tips with you from this popular presentation. I won an award with this presentation at last years Collaborate event and they submitted it to OOW where I gave the presentation again. User groups: ask me to come and deliver this presentation.

I will discuss 4 different tuning topics when you cannot change the code, ie: any purchased application.

This part will discuss histograms, monitoring histograms, and the benefits of histograms.

Histograms in Oracle are part of the cost-based optimizer (CBO). You do have to ask for them to be collected/refreshed using the DBMS_STATS package (no one from v8.1.7 should be using the analyze command anymore...).

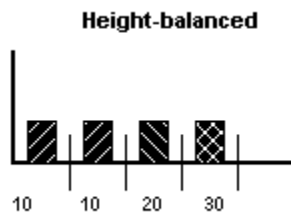
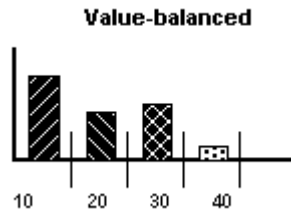
Histograms help Oracle make decisions on whether to use an available index or not, giving the CBO the ability to see the possible number of occurrences of a particular field value (as compared to the number of values for the column for the entire object). The CBO uses this information to make a decision on whether it might be more efficient to do a full-table

scan versus using an index range scan.

Histograms fall into 2 categories and this is more of a concept than something planned.

A histogram is a series of 1 to 1,254 buckets (I think the default is 75 buckets), or slots where the number of values associated with the key value is stored.

Value-based histograms has one bucket per key value where height-based histograms has the same number of occurrences per bucket but might have multiple buckets per key value.



These buckets can be visualized using this script:

```
Select ENDPOINT_NUMBER,
ENDPOINT_VALUE
From USER_TAB_HISTOGRAMS
Where TABNAME = '<table name>'
And COLUMN_NAME = '<column with histogram>'
```

Use DBMS_STATS to collect and refresh histograms:

```
DBMS_STATS.GATHER_TABLE_STATS
+ Method opt FOR COLUMNS
- Column name | FOR ALL (INDEXED) COLUMNS
- SIZE [n, REPEAT, AUTO, DISTYONLY]
+ n - others n is number of buckets (1 - 1,254)
+ REPEAT - refreshes existing histograms
+ AUTO - Oracle determines column histograms based on data and user load (see sql.sql_page@)
+ DISTYONLY - Oracle determines column histograms based on data distribution only
+ METHOD OPT FOR ALL COLUMNS SIZE SKYONLY'
```

Do remember that from Oracle8.1.7+ that SQL with bind

variables are resolved ****before**** an execution plan is derived. When re-executing the SQL that is in the library cache, Oracle will use the execution plan for the first SQL and bind-variable contents until the SQL cycles out of the library cache and is re-parsed. So, the use of histograms with SQL that has bind variables might produce different performance results on different times of the day and on different days.

Overall though, I have noticed that having histograms seems to help Oracle make better explain-plan decisions.

Email Tips and Techniques

I always view my email via a web browser prior to letting my desktop email application download the emails from the Earthlink server. I use www.Mail2Web.com, a free service that works with most email systems. My service provider is Earthlink. Like hotmail, google mail (gmail), yahoo, and others, Earthlink too has its own interface via the web. Check with your companies lan/Outlook administrator...the last company I worked for had their Outlook available via the web as well. I find the www.mail2web.com interface easier to use than the Earthlink web interface and it takes me immediately to my email inbox. I use this interface to check my email from computers at client companies and from trade show events as well.



The important tip here is to view and delete all unwanted email via a web interface prior to downloading to your computer.

I clean out any email that I do not recognize.

If it does not get onto your computer, it cannot pollute your computer.

I use an older Netscape interface for my email but this practice would work the same no matter what other desktop email system you are using (such as Outlook, Outlook Express, etc).

After cleaning out my inbox on the Earthlink mail server, I then click on 'Receive' to download my email.



I pay particular attention to this box that tells me how many emails are on the server and I quickly click on 'cancel' if the number of available email messages does not line up with what I just saw using the mail2web interface.

I have had problems where an email with an imbedded virus gets downloaded. My anti-virus will quarantine the file (the file that is the inbox of my desktop email application). My email system is then essentially rendered useless until I can manually remove the affected email from the inbox file.

Schedule of Events

"I do the very best I know how - the very best I can; and I mean to keep doing so until the end." - Abraham Lincoln

See Dan at:

SEOUG - March 1 & 2, 2007

Oracle SQL Developer Tips and Techniques
Discoverer10g Tips and Techniques
www.seoug.com

Collaborate 07 - April 15 - 19, 2007

Oracle SQL Developer Tips
Tuning SQL When You Cannot Change the Code!
www.ioug.org, www.oaug.org

Invite me to your next local Oracle Users Group!

Featured Presentation

A full list of my available Technical Presentations are on <http://www.danhotka.com/> under Event Speaking Topics

Oracle10g Discoverer Tips and Techniques

Dan will demonstrate the following features in a live-demo format. This presentation is packed full of tips and techniques, including scripts.

Dan will cover these topics using Discoverer10g web version:

- Review of the new 'Drake' interface
- Stop Light Exceptions
- Advanced Conditions
- Adding columns/Formatting data with Calculations
- Graph Review
- Scheduling Features and a useful Oracle script
- Key differences between the Oracle10g Desktop and Web versions
- Time Permitting:
Discoverer10g Admin topics:
How the thing works!

Dan will conclude with an in-depth comparison of the web-version versus the Desktop versions of the Oracle 10g Discoverer product. This presentation is good for people who are considering implementing Discoverer, new to Oracle Discoverer, as well as experienced Discoverer Users.

Product Review

This new column will feature a product I've run across and have found enough value to share with you. The data sheet of these products will appear for a period of time on my website under Product Review. I hope you find this information of value.

MGA Eagle Eye

Eagle Eye is a complete tuning environment produced by Mark Gurry and Associates out of Australia.



This tool has a variety of useful Oracle tuning problem-finding areas such as real-time monitoring and reporting, monitoring top Oracle sessions, monitoring the top IO users (each area having additional drilldowns to detail/problem SQL), and more. This tool incorporates a lot of the scripts we have read about or seen demonstrated at various events into a single, easy-to-use interface. The control center allows for easy Oracle instance monitoring and/or user session monitoring.

I like the Stats Pack report interface that allows you to easily access information stored in snapshots. Eagle Eye will then process the snapshots and present you with the stats pack report.

In my tuning course, I have all attendees learn how to turn trace on and off, finding and interpreting the trace output using TKProf or Trace Analyzer (I put up a cool interface JS Analyzer that eases the character-mode pain). Creating the proper trace file and capturing the correct SQL information can be difficult, and again, is a command-line process. Eagle Eye allows you to initiate trace sessions (with the proper Oracle permissions of course) for any user session, your session, or even system wide. Eagle Eye prompts you for the type of trace you want (just SQL, with bind variables, and with wait event information). Eagle Eye then can present this trace information to you by time waited per wait

event...very useful problem-solving information.

Eagle Eye has a free trial period. Try it out, let me know what you think.

<http://www.mga.com.au/products/eagle.shtm> or just navigate thru the www.mga.com.au site.

Downloads

This section will highlight a freeware/shareware type product that I use and I feel is important enough to share.

www.psoug.org/library.html: The Pungent Sound Oracle Users Group has a fantastic website full of articles and tips.

[www.Compuvest.com](http://www.compuvest.com): My buddy Kevin McGinnis told me about this site. I order all my laptop hard drives from here. Fair price and have yet to have a problem with any of their drives. This website sells parts for just about any electronic gizmo.

SQL Developer: Oracle Corp has a pre-release of Version 1.1 now available on Oracle Technet (www.Oracle.com → Downloads). You can download just SQL Developer and you can download SQL Developer with an installed Java Runtime Environment. This same download page has a white paper on the new features included in this option. Pay attention to Sue Harper and Kris Rice's blogs: always a good source of information on various features of SQL Developer

JS Tuner: Email DHotka@Earthlink.net and request this tool. This tool will assist you

with enhanced explain plans and useful index info/hints/and SQL history at your fingertips.

JS Analyzer: Email DHotka@Earthlink.net and request this tool. This tool makes running the character-mode TKProf and SQL*Plus interface Trace Analyzer a snap. No more typing long trace file names.

Oracle Discoverer Tips

Differences Between Discoverer Web and Desktop versions:

The Oracle10g Discoverer interface is as close to the desktop version as Oracle has produced so far. This quick article will feature a list of my observed advantages between these two interfaces. This comparison is using the Oracle10g Discoverer desktop and web interfaces.

Desktop Advantages:

- Can have multiple workbooks open at the same time
- Has a clipboard function that allows for column items to be easily shared across workbooks
- Supports bitmap images in titles and data area backgrounds
- Can drill down on graph points
- Can drag pie graph slices
- Can send report as an attachment (only available in Viewer)
- Has a command-line interface for batch processing of workbooks
- Can easily make a worksheet a new workbook
- Supports sub-queries in its conditions

- Prompts for saving workbook changes no matter how you exit the application

Web Interface Advantages:

- Reports easily accessible via any Java-compliant web browser
- Export has more options such as Acrobat PDF and Excel Pivot Table formats
- Has Text Area (footer)
- Supports multi-column change support for same data type items (ie: can add \$ to multiple numeric fields, etc)
- More Graphing style options, graphs are integrated with reports

SQL Developer Tips

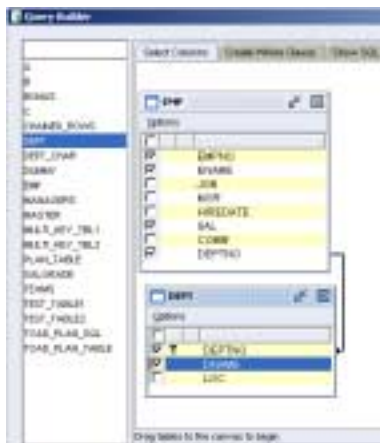
Query Builder in SD v1.1!

SQL Developer version 1.1 (rev 2514) is now available as of this writing from the Oracle SQL Developer website (www.Oracle.com, click on Downloads, click on SQL Developer).

This version has a new query builder. To access, right-click in the SQL Worksheet and pick 'Query Builder'.



Drag and drop the tables you want from the left window. Click in the boxes of the columns you want to appear in your SQL. For relationships, click and hold on one column and drag the line that appears to the related column in the other selected box (see where I did this with the DEPTNO column below).



You can add additional conditions via the 'Create Where Clause' tab. Simply fill in the boxes and select from dropdown menus. Right-click to add more conditions.



You can show SQL or hit Apply to prepare the SQL and bring it back to the SQL Window for execution. I formatted this one (using Right-mouse click & Format SQL). Notice that Query Builder qualified all the column names and built the WHERE clause correctly with the relationship and the condition.



It works great with objects from a single schema, a future enhancement will allow objects from any schema you have permissions to.

The Back Page

VW Update

The interior is complete. I went thru friend/club member Ross Lewis's pile of radios and found the bolt I needed to help hold the radio in the dash. The radio I installed worked (first one of 3 I installed...how many times does this happen?). The seats are upholstered and are back in the car. All that is left is the actual top. The top is purchased and requires a nice warm day...something we don't have many of in February in Iowa.

I start these cars about once every other week thru the winter to keep them running. I let them run for about 5 minutes.



New Toy

The whole VW hobby has evolved because they are to be the 'pull car' for the RV I don't own yet. Well, that issue is solved! This RV is 10 years old with 13,000 miles on it. I already have a fishing trip lined up, a VW event, and a trip to Colorado this summer!



Cold Birds!

It snowed here over the weekend and I found these robins huddled in a tree together (probably 50 or so in this single tree!).

