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

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Fall 2009



Dan Hotka is a Training Specialist who has over 31 years in the computer industry and over 24 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 [TOAD Handbook](#) by Pearson. He is also the author of [SQL Developer Handbook](#) by Oracle Press, [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.

### Public Training Offerings

Watch for Dan in your area with these courses. Contact Dan for course details and enrollment. Check [www.DanHotka.com](http://www.DanHotka.com), click on Onsite Training for course outlines, or, just ask Dan.

- Oct 19 - 20** Intro to PL/SQL (Salt Lake City)
- Oct 21 - 23** Advanced PL/SQL (Salt Lake City)
- Dec 14 - 15** Discoverer10g for End Users (Salt Lake City)
- Dec 16 - 17** Discoverer10g for Administrators (Salt Lake City)

### Web-based Training Offerings

Instructor-led training at your desk! The future is here today...morning lectures that includes hands-on lab exercises. The same quality of training in an instructor-led class. Check [www.DanHotka.com](http://www.DanHotka.com) for details, contact Dan ([dhotka@earthlink.net](mailto:dhotka@earthlink.net)) to reserve a seat in one of these offerings:

- Nov 2 - 6** Advanced PL/SQL at your Desk!
- Nov 30 - Dec 4** SQL Tuning at your Desk!
- Jan 11 - 15** Advanced PL/SQL at your Desk!
- Mar 1 - 5** SQL Tuning at your Desk!

**I**nstructor-led training at your desk! Yes, the future is here today. I've had the opportunity to do training remotely for a large company this summer and the training sessions have gone extremely well. I provide the same classroom lecture over the web. You see the presentations; you receive my annotated course guide with all the slides/notes/and lab exercises; and assistance to setup a lab environment at your site. Any of my courses are available for delivery this way. I am offering my 2 most popular classes: Oracle SQL Tuning and Advanced PL/SQL in the above-mentioned schedule. Any of my courses are available for delivery this way. Let me know your training needs and we can see if it is better for me to travel to your site or to provide the training in this 'no travel/no expense' web environment.

I'll be presenting at Oracle Open World with my topic All the Free Stuff from Oracle. I am sure I'll be at RMOUG in February presenting top topics as well. I always do a book draw with current TOAD and Oracle11g books.

This newsletter will cover:

- Oracle11g Tips and Techniques
  - New PL/SQL Trigger Features
- Loopback Adaptor Install/Config
- How to get Free Training from [www.DanHotka.com](http://www.DanHotka.com)
- *TOAD Handbook* by Scalzo/Hotka
- Featured Presentation: All the Free Stuff from Oracle
  
- Back Page: Face on the Barroom Floor and Slugbug

This newsletter, along with all prior newsletters, are available at [www.DanHotka.com](http://www.DanHotka.com).

## *What's in this issue?*

### User Group Information:

- See Dan at Oracle Open World!
- See page 2 for Dates and Submitted Papers.
- I have several new presentations for User Groups – See New Presentations. A complete list of topics is at <http://www.danhotka.com/>

### Oracle11g Tips and Techniques

An overview of the new Trigger features found in Oracle11g. Page 4

### Loopback Adaptor Install/Config

Using laptops with Oracle without a network connection. Page 9

### Training at your Desk!

Training over the web by Dan. Page 3

## Book Review

*TOAD Handbook*

Check out this useful and updated book by Bert Scalzo and yours truly! Page 8.

## Educational Offerings

- Training at your Desk! Training over the web by Dan...see Educational Offerings on Page 3.
- On-site at your company or in your city via user group participation...see Educational Offerings on Page 3.

## Featured Presentation

- Presentation scheduled for OOW: All the Free Stuff from Oracle. See page 9.

## The Back Page:

- Face on the Barroom Floor!
- Slugbug story

## *Puzzler...*

What year was the word "computer" first used to describe a mechanical calculating device?

A: [1897](#), B: [1912](#), C: [1926](#), D: [1942](#)

Go to [www.DanHotka.com](http://www.DanHotka.com) for the answer!

## User Group Information

See Dan at these events:

**Oracle Open World Oct 11 - 15** (San Francisco)  
All the Free Stuff from Oracle Corp (Monday 4pm)  
[www.Oracle.com](http://www.Oracle.com)

**RMOUG February 16 - 18, 2010**

Submitted Papers:

All The Free Stuff from Oracle Corp  
Oracle11g New Features for Developers  
Discoverer10g Tips and Techniques  
TOAD Tips and Techniques  
www.RMOUG.org

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 can fill your timeslot.

## Educational Offerings

### Training at your Desk!

Dan teaches classes over the web now. He has adapted his popular 3-day Oracle SQL Performance Tuning and his 3-day Advanced PL/SQL classes to a 5-day morning-lecture format delivered at your desktop over the web. Notice his public offerings at his website and at the beginning of this newsletter.

**\*\*ANY of Dan's course offerings can be delivered to you and your staff utilizing this web-environment\*\***

You get the same quality lectures packed full of current Oracle information and the ability to ask relevant questions.

All of Dan's course offerings include hands-on lab exercises. These web classes depend on you to have your own lab environment. Dan provides:

- The scripts to build the lab environment on your companies development environment
- Links to get Oracle10g Express, SQL Developer, and TOAD to setup your own personal lab environment, along with the scripts to build the lab environment
- VMWare images with Oracle10g Express, SQL Developer, TOAD, and the lab environment scripts all pre-installed.

Course guides and the above lab environment assistance will be delivered prior to the class via email. The course guides contain all the presentation slides, instructors' notes, and lab exercises with lab answers.

See [www.DanHotka.com](http://www.DanHotka.com) for course outlines and pricing. Contact Dan ([dhotka@earthlink.net](mailto:dhotka@earthlink.net)) to reserve a seat in an upcoming course.

### Onsite Training at your company!

Please 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).

2008 has been a year of PL/SQL and SQL Performance Tuning. I have been doing training for 5 years now (where does the time go...) and have noticed definite patterns of training.

My PL/SQL offerings include both Intro to PL/SQL (a 2-day course) and Advanced PL/SQL (a 3-day course). Both courses cover using the Oracle PL/SQL Profiler and other PL/SQL tuning topics.

The focus of my SQL Performance Tuning course is to cover exactly how Oracle arrives at the explain plan, how Oracle uses/includes indexes in these plans, and tuning using a coding style that I find helps keep the tuned SQL stay tuned.

I have adapted this course to 1-day, 2-day, and 3-day offerings. This course also illustrates various tuning tools such as Stats Pack, SQL Trace, and the PL/SQL profiler, as well as advanced topics that include SQL Profiling, finding SQL problems using the V\$ tables, and Oracle10g performance issues.

### Pricing Model for Training

I price my on-site 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 always 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 additional books that might be associated with the course. This student fee is anywhere from \$50 to \$150, depending on the course.

The web-based training is a per-person price and is all-inclusive. The course guide and lab setup scripts will be delivered via email and the lectures will be live over the web.

### 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
- 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 TOAD, TextPAD, as well as the Oracle tools like SQL\*Plus and SQL Developer, and Dan's Java-based SQL Tuner.

### **Oracle SQL Performance Tuning (1-day, 2-day, or 3-day offerings)**

#### **Oracle Advanced PL/SQL**

#### **TOAD for IT Staff**

#### **Oracle Analytics/Answers for End Users**

#### **Oracle Analytics for Administrators**

#### **Oracle Discoverer for End Users**

#### **Oracle Discoverer for Administrators**

#### **Introduction to Oracle (SQL)**

#### **Oracle Intro to PL/SQL**

#### **Introduction to UNIX/Linux**

#### **UNIX/Linux Shell Programming**

#### **Oracle/Unix Scripting Tips and Techniques**

## **Oracle11g Tips and Techniques**

This is an excerpt from my Advanced PL/SQL Programming Tips and Techniques 3-day course.

Database triggers are PL/SQL code that execute or fire based on a database event. This activity is DML activity on a specific table or view, or system events such as at database startup or shutdown, or on specific error messages.

Event Trigger Syntax:

```
CREATE [or replace] TRIGGER <name>
{ BEFORE | AFTER | INSTEAD OF | FOR }
{ INSERT [ OR UPDATE [OF <column, ...> ]
  [OR DELETE ] }
```

```
ON <table or view>
[REFERENCING [OLD as <new old> ]
              [NEW as <new new> ]
[FOR EACH ROW] [WHEN <condition stmt> ]
[FOLLOWS <trigger name..11g] [DISABLE]
[COMPOUND TRIGGER...11g]
[WHEN <condition>]
[PRAGMA AUTONOMOUS_TRANSACTION ]
Begin
  PL/SQL Code
END [<same name>] ;
```

The DML trigger syntax is above. The DML trigger can perform work BEFORE or AFTER the affected change, on INSERT, UPDATE, or DELETE. Columns are available from the affected object using :OLD or :NEW references. These reference names can be changed using the REFERENCING syntax. Example → :OLD.ENAME and :NEW.ENAME refers to the value before it was changed and the value after it was changed (or the proposed new value). FOR EACH ROW will execute the trigger code for each affected row. This is known as a 'Row Trigger'. Without this clause, the trigger executes once per event and is known as a 'Statement Trigger'. The WHEN clause is like a where clause of conditions that must be met for the trigger to execute.

Oracle11g allows for triggers to be created in a DISABLED state. I believe this feature was introduced in Oracle10g but is now documented in Oracle11g.

Oracle11g also allows for the order of trigger execution to be defined using the FOLLOWS syntax.

Oracle11g has implemented a COMPOUND TRIGGER that allows for four trigger events to be combined into a single trigger.

The INSTEAD OF trigger allows for views to be updated that were previously not updateable.

Using this SQL, you can see some of the columns in the EMP\_DEPT\_VW view are updateable where others are not. The INSTEAD OF trigger allows for the non-updateable fields to be updated where an error would have been generated otherwise.

The INSTEAD OF trigger allows you to code the proper maintenance of adding/updating/deleting the non-mapping rows of the DEPT table.

```
SQL> select column_name, updatable UPD, insertable INS,
2   deletable DEL
3   from USER_UPDATABLE_COLUMNS
4   where table_name = 'EMP_DEPT_UW';
```

```
COLUMN_NAME  UPD  INS  DEL
-----
ENAME        YES YES YES
LOC          NO  NO  NO
SQL>
```

This article touches several new Trigger features of Oracle11g.

## Loopback Adaptor Install/Config

Oracle on laptops likes to have the network card active to enable the IP address assigned to the Oracle listener. Without this, the Oracle11g listener won't even start!

Bert Scalzo has been a friend and a fellow author for over a decade now. Bert is a Senior Technical Advisor at Quest Software on the TOAD team.

Bert passed on the following information for configuring a LOOPBACK adaptor. This adaptor simulates a network connection when there is none. This allows Oracle to start and function normally.

Thanks Bert!

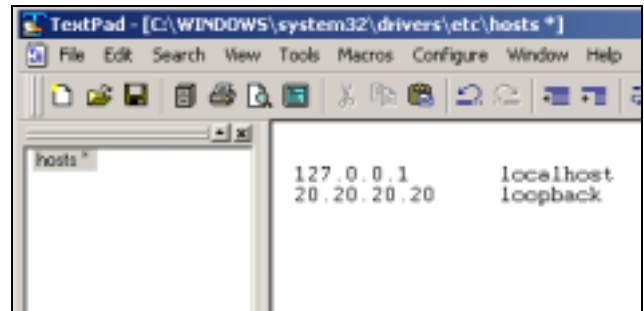
Configure the windows side first:

1. Click START, then select Control Panel
2. If 'Classic View' is present, switch to 'Category View'
3. Select 'Printers and Other Hardware'
4. Left pane: See also...click on Add Hardware
5. Select 'Yes, I have already connected the hardware'
6. Select 'Add a new hardware device' (end of list)
7. Select 'Install the hardware that I manually select from a list'
8. Select 'Network adaptors'

9. Select 'Manufacturer' and select 'Microsoft'
10. Select 'Network Adaptor' and then select 'Microsoft Loopback Adaptor'
11. Click 'Finish'

This will setup a new network in 'My Network Connections'. I right mouse click on it, selecting properties, selecting 'TCP/IP' then properties...giving it a hard IP address of 20.20.20.20, gateway of 255.0.0.0. I also renamed this to LOOPBACK but the name is not important.

This step is not important if you use hard addresses in your listener.ora and tnsnames.ora files. Otherwise... Find your HOSTS file (in the Windows directory) and add this entry: localhost 20.20.20.20...see below.



Edit your listener.ora file and add these lines:

```
SID_LIST_LISTENER =
(SID_LIST =
(SID_DESC =
(GLOBAL_DBNAME=orel1r1)
(ORACLE_HOME=C:\oracle\product\11.1.0\db_1)
(SID_NAME=orel1r1)
)
)
LOGGING_LISTENER = OFF
LISTENER =
(DESCRIPTION_LIST =
(DESCRIPTION =
(AADDRESS = (PROTOCOL = IPC)(KEY = EXTPROCL521))
(AADDRESS = (PROTOCOL = TCP)(HOST = 20.20.20.20)(PORT = 1521))
)
)
```

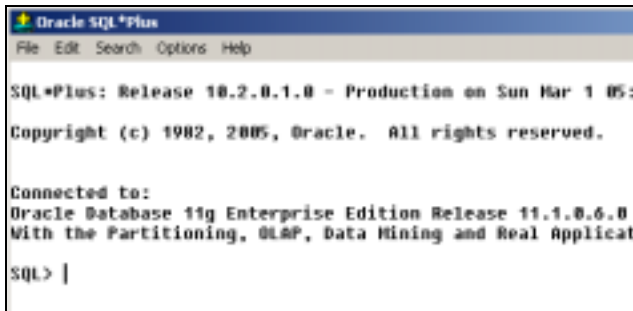
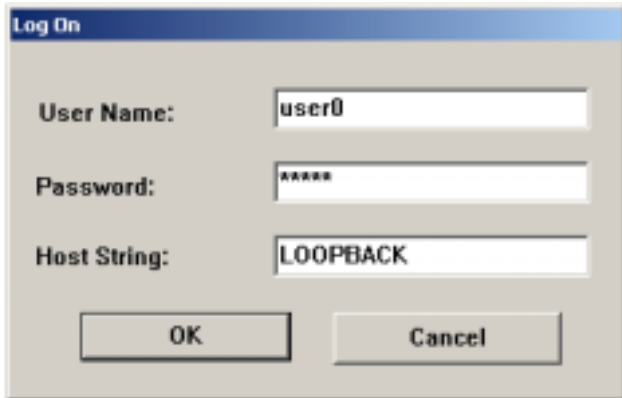
Notice I'm using the 20.20.20.20 hard IP address.

Start the listener.

Setup your tnsnames.ora file to have an entry that looks like this:

```
LOOPBACK =
(DESCRIPTION =
(AADDRESS_LIST =
(AADDRESS = (PROTOCOL = TCP)(HOST = 20.20.20.20)(PORT = 1521))
)
)
(CONNECT_DATA =
(SERVER = DEDICATED)
(SERVICE_NAME = ore11r1)
)
```

When connecting on your local PC, the host id of LOOPBACK should now connect fine!



If you are having problems reading these examples, ask me for the notes from Bert.

## Book Review

### The TOAD Handbook, second edition

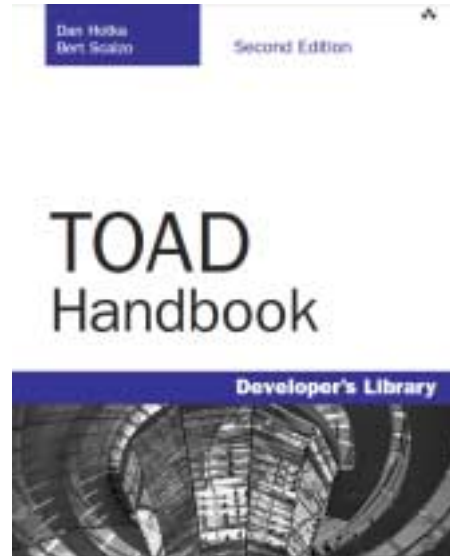
ISBN:

By: Scalzo and Hotka

Publisher: Addison-Wesley/Pearson Education.

- **Paperback:** 350 pages
- **Publisher:** Addison-Wesley Professional; 2 edition (September 28, 2009)
- **Language:** English
- **ISBN-10:** 0321649109
- **ISBN-13:** 978-0321649102

Dan and Bert team up again and update their popular TOAD Handbook! This book is current with TOAD 9.7 and includes documentation, working examples, and tips/techniques on all the latest features of TOAD. I'm just slightly biased here but we did a nice job on this already-popular book.



This book contains chapters on:

- Setup and Configuration
- Schema Browser
- SQL and PL/SQL Editors
- Database Reporting
- Tuning Tools in TOAD
  - Including the new AWR and Trace File Browsers!
- Database Management
  - Includes many common DBA tasks that TOAD automates
- Other useful tools
- TOAD Apps Designer

This is a good book for anyone working with TOAD.

Order it today: [http://www.amazon.com/TOAD-Handbook-2nd-Developers-Library/dp/0321649109/ref=sr\\_1\\_2?ie=UTF8&s=books&qid=1241694818&sr=8-2](http://www.amazon.com/TOAD-Handbook-2nd-Developers-Library/dp/0321649109/ref=sr_1_2?ie=UTF8&s=books&qid=1241694818&sr=8-2)

*Thank you Bert for partnering with me again!*

# Featured Presentation

## Tools of the Trade: All the Free Stuff from Oracle

Dan has used a variety of SQL tuning tools thru the years. This presentation will include a live demonstration on various available tools from Oracle Corp...including SQL Developer, TKProf, the race Analyzer, and undocumented explain plan tools. This presentation is packed full of tips and techniques, including scripts that help find offending SQL statements.

Dan will cover these topics:

- SQL Developer
- SQL\*Plus Autotrace
- SQL\*Plus Explain Plan Scripts
- SQL\*Plus undocumented Explain Plan features
- TKProf (Oracle Trace Facility with scripts)
- Oracle10g Trace Analyzer
- PL/SQL Profiler (with scripts)
- JSAnalyzer – a freeware trace file tool that runs TKProf and Trace Analyzer
- JSTuner – a freeware explain plan tool that shows the ‘where clause’ predicates, includes index stat information, hints, etc

# Free Downloads

**TOAD** [www.ToadSoft.com](http://www.ToadSoft.com)

**SQL Developer**

<http://www.oracle.com/technology/software/products/sql/index.html>

**Oracle10g Express** – A single-user Oracle Database with most of the Oracle functionality but available for your use free of charge from Oracle. Please read and understand the license agreement associated with this product.

<http://www.oracle.com/technology/products/database/xe/index.html>

**Oracle Documentation** – Oracle has done a fine job of a nice hyper linked set of documents that makes finding the topic of interest a snap! Kind of a large download but worth the wait! This page has the current Oracle 11g doc set as well as links to just about all of Oracle’s documentation libraries.

<http://www.oracle.com/technology/documentation/databases.html>

**Oracle PL/SQL Profiler Paper and Script:** Learn how to use this free PL/SQL profiler from Oracle Corp. The paper also covers using the PL/SQL Profiler from TOAD. Download this paper and script from [www.DanHotka.com](http://www.DanHotka.com).

**Email Dan at [Dhotka@Earthlink.net](mailto:Dhotka@Earthlink.net) for any of these items:**

- **Oracle SQL Trace Start and Stop Scripts:** Use these scripts to start and stop the Oracle Trace.
- **JS Tuner:** This tool will assist you with enhanced explain plans and useful index info/hints/and SQL history at your fingertips.
- **JS Analyzer:** This tool makes running the character-mode TKProf and SQL\*Plus interface Trace Analyzer a snap. No more typing long trace file names.
- **SHOW\_PLAN.sql:** Use to give an explain plan from the PLAN\_TABLE that shows the statement ID relationships.

# The Back Page

## Face on the Barroom Floor



This is the famous 'face on the barroom floor' found on the floor of the Teller House bar in Central City Colorado.

The story involves the trading of a drink for a painting where the artist sketched his love, Madeline, on the floor. The story includes him then falling across the picture and dying.

The Opera Society now owns the Teller House and Madeline is only available for visiting when there is a scheduled opera. We had dinner right next to the painting before we attended an opera during our July RV trip to Colorado.

I have enjoyed Colorado and Central City since a child. I try to see Madeline every chance I can get.

## SlugBug



Ever hear of this silly game? I am frustrated that our cool hobby has this bit of violence associated with it. It goes something like this: see a beetle...slug the person next to you and say 'Slug Bug'...my neighbor taught her kids this...people just won't let it die.

I was recently checking the grease levels in my bugs. Neighbor was having a yard sale. Had both bugs in my driveway at the same time. A younger fellow approached from the yard sale and said "This is a once in a lifetime opportunity!...Can I take some pictures of your bugs?" ...Apparently he has not been to any bug or car event... Anyway...I said sure and let me line them up in the street. He went on to tell me how he and his wife slug each other when they see a VW bug...twice if its an old bug (aircooled) and three times if it's a convertible bug. I suggested they don't hurt each other after seeing my 2 bugs!