

# NEODBUG

E L E C T R O N I C

## Newsletter of the Northeast Ohio Database Users Group

### Susan Lawson to Conduct All-Day DB2 Class

For our February Special Education Meeting, NEODBUG is thrilled to bring in Susan Lawson of YLA and Associates. Susan is an internationally-recognized consultant and lecturer with a strong background in system and database administration. She currently works with several large clients to help develop, implement and tune some of the world's largest and most complex DB2 databases and applications. She also performs performance audits for many clients to help reduce costs through proper performance tuning. Her other activities have included authoring articles, presenting at user group meetings, and authoring white papers. She is an IBM Gold Consultant for DB2 and z/Series, and has authored or co-authored the books *DB2 9 for z/OS Database Administration: Certification Study Guide*, *DB2 for z/OS Version 8 DBA Certification Guide*, *DB2 High Performance Design and Tuning* and *DB2 Answers*, among others.



January, 2010 issue  
[www.neodbug.org](http://www.neodbug.org)

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Susan will give two half-day presentations for NEODBUG, the first of which is *DB2 z/OS High Performance Design and Tuning Platform, Including V9*. Achieving maximum performance from DB2 requires a different approach and stricter methodologies than simply getting a DB2 application to perform well. In today's web and e-business environment the rules have changed, and we must find every tuning knob to get another transaction through the systems. This seminar focuses on specific issues of system design, physical object design, tuning methods and application methods to achieve high performance. Topics such as table and index design, large tables and non-partitioning indexes (NPIs), pushing logic into SQL, control and concurrency, enterprise-wide performance topics are examined for online transaction processing (OLTP), batch and data warehousing. Topics such as buffer pool design and utilization, concurrency and locking, DB2 compression, EDM pool sizing, RID pool sizing, SORT work tuning and parallelism are examined regardless of the application mix. The performance techniques of some of the new object-relational SQL features are also covered. Focus is on the complete set of design points of DB2, and how they will affect performance of your applications. Discover why many old guidelines no longer apply, how old standards can actually hurt us and learn the approaches to systems management and tuning for the DB2 environment.

The case study examples and stories told are from actual performance audits and design/development efforts.

After lunch, Susan's second presentation is *Table and Index Design for High Performance*. This presentation will discuss many issues surrounding alternative table designs and performance. We will look at many different alternatives to help design tables for the best performance possible for the type of application process. There are many issues to consider for high volume insert and update transactions, and a balancing act to be achieved for responsiveness to readers. Table issues such as denormalization, non-column attributes, indicator columns, repeating columns, derived data, aggregated columns, table flipping, identity columns, surrogate keys, and horizontal and vertical parti-

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# NEODBUG Treasurer's Report

## By Alan Solnick

### TREASURER'S REPORT

NEODBUG's year-end financial report for 2009 is listed below. We started 2009 with a net worth of \$18,669.24.

#### ASSETS

Money Market Account	\$ 12,425.11
Checking Account	\$ <u>6,128.86</u>
Total Cash and Bank Accounts	\$ 18,553.97
Projector	\$ 2,089.10

**TOTAL ASSETS** \$ 20,643.07

#### LIABILITIES

Membership Prepayment	\$ 0.00
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**TOTAL LIABILITIES** \$ 0.00

**NET WORTH** \$ 20,643.07

#### 2009 INCOME

Corporate Memberships	\$ 1,895.00
March Education Meeting	\$ 6,867.00
May Meeting	\$ 2,767.30
August Meeting	\$ 1,870.00
November Meeting	\$ 1,420.00
Interest	\$ 232.99
Membership Prepayment	\$ <u>720.00</u>
<b>TOTAL INFLOWS</b>	<b>\$ 15,772.29</b>

#### 2009 EXPENSE

March Education Meeting	\$ 6,931.70
May Meeting	\$ 2,000.00
August Meeting	\$ 2,494.80
November Meeting	\$ 1,559.52
Web-site/ Overhead	\$ <u>812.44</u>
<b>TOTAL OUTFLOWS</b>	<b>\$ 13,798.46</b>

**NET INCOME** \$ 1,973.83

In 2009, NEODBUG had a net income of \$1,973.83. This was due mostly to the generosity of vendors like BMC and CA who paid for lunch at the May and November meetings.

Corporate membership invoices have been mailed to the contact person at each company. Contact and mailing list names (including e-mail addresses) are on the back of the invoice and need to be filled out and returned with the invoice so we can keep our newsletter mailing database current. If your contact person has not yet received your invoice, please call me at 216-514-4435 or e-mail me so I could e-mail you a replacement. Memberships will be considered late and will increase in price if received after 03/02/2010. Remember, corporate memberships play a large role in keeping this organization afloat, so please be diligent in sending them in. Thanks for your support.

Alan P. Solnick  
Treasurer  
Alan.Solnick@AntaresSolutions.com

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tioning will be discussed. We will also look at issues with designing VLTBs (Very Large Tables) and XLTBs (eXtremely Very Large Tables).

The course will then cover index design issues and query performance for topics such as best use of index matching predicates and index screening. Index access path issues will also be discussed (Matching Index Scan, Non-Matching Index Scan, IN-List Index Access, Multiple Index Access, One Fetch Index Access, Index-Only Access and Equal Unique Index Access). We will then turn our attention to join performance and index influence to avoid such problems as Death by Random I/O, Death by Sequential I/O and Death by Index Screening and problems with joining on mismatched datatypes. We will take a look at sorts, how to avoid them and when they are appropriate.

This presentation is suitable and of interest to both DBAs and application developers.

## Outline

### Physical database design issues

Table design

Code tables and reference tables

Column Placement

Partitioning

Clustering versus non-clustering indexes

Partitioning index design

Referential integrity and index design

Data sharing designs

Non-attribute columns

Denormalization

Large tables and their indexes

Index design

Unique vs. non-unique

NPIs and pieces

Identity columns

Large table case study

### Concurrency

Locking issues

Coding for minimal locking overhead

Lock monitoring - proactive vs. reactive

Impacts of row level locking

Lock avoidance

### Index design and query performance

Index matching predicates

Index screening

### Index Access Paths

Matching index scan

IN-list index access

One fetch index access

Equal unique index access

Non-matching index scan

Multiple index access

Index-only access

### Join performance and index influence

Death by random I/O

Death by index screening

Death by sequential I/O

Joining on mismatched datatypes

### Sort avoidance

ORDER BY

GROUP BY

DISTINCT

Column Function Evaluation

The pricing for this class will be at a special discount for NEODBUG members. For member company employees, the cost will be \$199 pre-registration; non-members will be charged \$225 per person. The price goes up by \$25 each for day-of-show registrations.

We are offering two ways to reduce the cost for this class. First, there is a \$40 credit offered for every 5<sup>th</sup> pre-registered attendee from the same company. Second, if you have already acquired coupons for prepaying 2010 meetings fees, you can apply one of them for \$40 off the price of the class.

This first meeting of 2010 will be on February 25, 2010 at the Skyline Hotel & Conference Center, formerly the Sheraton Inn Cleveland South, on Rockside Road in Independence. The deadline for pre-registration is Friday, February 19th, so don't delay. As always, registration is on a first come, first served basis.

You can find a registration form on the last page of this newsletter.

## Chairman's Corner By Michael James

I hope all of you had a great holiday season. This year, it was especially difficult for me to come back after vacation (I took two weeks off – it was great). And the Browns are (not) in the playoffs again! We did win our last four games, though! Oh well, there's always next year! We have a new VP (Mike Holmgren), a new GM and a new front office. Same old coach, though! Sound familiar? Go Cavs! Looks like one of our teams has a chance to reach the promised land! At least the weather has gotten better in 2010, so far.

Once again, I feel honored to be returning as a member of the Board of Trustees and Chairman of NEODBUG for 2010. I will work hard to continue the fine work performed by the last year's Board. I want to thank the members of 2009's Board of Trustees for all of their hard work.

### The Year in Review

There was a lot accomplished during last year: NEODBUG hosted presentations covering DB2 with an eye towards V9 and continued our coverage of any database product able to reside in mixed environments.

In February, our Special Education class was given by Bonnie Baker, who presented *Things I Wish They Told Me, Part 12* and *Things I Wish I had NOT Told You*. The former new presentation was a preview of the one Bonnie made at IDUG three months later.

The pricing for this class was at a large discount for our membership and while we did not profit from this meeting, we broke even.

We had a jam-packed day for May's meeting: Mike Sniezek, Data Management Brand Manager of BMC Software gave us two presentations: *DB2 9 – XML and the Unprepared DBA* and *MIPS Reduction Program – DB2*. In the afternoon, Craig Mullins of NEON Enterprise Software presented *An Hour of DB2 for z/OS Tips and Techniques* and *Database Auditing: Who Did What to Which Data When and How?*.

In August, we gave you a whole day with IBM's Roger Miller. This was chance to ask one of the architects and designers of DB2 questions about the future direction of the product. Roger presented *What's New in DB2 9 for z/OS and Beyond?*, *DB2 X for z/OS*, *DB2 for z/OS Selected Performance Topics* and *DB2 9 for z/OS XML and SQL*.

November's meeting brought our annual elections, and our membership approved the slate of candidates that were presented. As far as the presentation part of the agenda, we brought back Paul Wirth from IBM to present *Exploring IBM® Downloadable No-charge Features for Databases*. After lunch, Robert Andresen from CA gave us *Using Native SQL Procedures and Excelling at DB2 Monitoring and Reporting*.

### From The Board of Trustees

While all of our efforts to cut our expenses have been successful, our expenses have continued to increase. With the economy struggling, the Board of Trustees decided we needed to maintain our meeting fees at the same levels as last year and cut expenses wherever we are able.

The Board of Trustees voted to move the location of our meetings to the Skyline Hotel & Conference Center (formerly Sheraton Hotel in Independence). Feedback from our meetings shows that our membership seems to like the change.

NEODBUG is online at [www.neodbug.org](http://www.neodbug.org). We will be upgrading the site and provide more functionality (like on-line registration) over the course of this year. Watch for the latest NEODBUG information on the site.

We will continue to issue email blasts with information about the upcoming meetings,

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(Continued from page 4) Chairman's Corner

events, IDUG information, etc. This is the only way we will be communicating with you, so if you have not given us your email address, please let us know that you would like to be added to that list. Just send an email to [neodbug@sps-solutions.com](mailto:neodbug@sps-solutions.com), requesting to be added to the mailing list. We continue accepting email registrations for all of our meetings. However, your registration for any meeting is not confirmed until we receive payment. If payment is not received before the meeting, you will be charged the "at the door" rate for the meetings. We are required to pay for reserved but unused lunches and must guarantee the number of attendees to the hotel three business days before the meeting.

Remember, NEODBUG is still the only *independent* users group dedicated to presenting information about heterogeneous databases. The Board has voted to maintain this status.

None of these accomplishments could have occurred without the support and assistance of the 2009 Board of Trustees. I would like to especially commend the efforts of Kirk Bailey, Jim Budka and Sue Birgeles for their relentless efforts to provide exceptional programs for database issues at each and every quarterly meeting. I would like to thank Jim Szabo and Al Solnick for their efforts to keep us on track and under budget during 2009, Bill Moran, Jane Holloway and Phil Sherman for their good council, and Phil Sherman for all of his work on our website. We say goodbye to Barry Noble who had to resign due to work responsibilities. We will miss you! We also say hello to Bob Vargo from Progressive, who joined the board for the last election. You can find the complete list of NEODBUG Board of Trustees and Officers in the masthead at the front of this newsletter.

If your company is reluctant to purchase a NEODBUG corporate membership, inform them that this year, there are the three quarterly meetings and a special education event. Membership also provides special discounts for members at the IDUG conference. There is no a better deal for DB2 and general database education!

If you have any comments about our programs or anything else, please email the Board of Trustees at [neodbugquestion@sps-solutions.com](mailto:neodbugquestion@sps-solutions.com) to share your thoughts and suggestions. We really read your thoughts.

I hope all of you can attend our February 25 educational meeting with Susan Lawson!

Michael P. James  
Chairman

## Upcoming Database Events

Date	Organization	City
2/21-26/2010	The Data Warehouse Institute (TDWI) World Conference - Winter 2010	Las Vegas, NV
2/25/2010	Northeast Ohio Database Users Group (NEODBUG) Educational Meeting	Independence, OH
4/12-14/2010	Microsoft SQL Server Conference & Expo	Las Vegas, NV
4/18-22/2010	Collaborate 10 (International Oracle Users Group)	Las Vegas, NV
4/21-23/2010	Professional Association for SQL Server (PASS) European Conference	Neuss, Germany
5/8-14/2010	TDWI World Conference - Spring 2010	Chicago, IL
5/10-14/2010	International DB2 Users Group (IDUG) - North America	Tampa, FL
5/16-20/2010	CA (Computer Associates) World 2010	Las Vegas, NV
5/19-22/2010	IBM Information On Demand Europe Middle East and Africa Conference	Rome, Italy
5/20/2010	NEODBUG Quarterly Meeting	Independence, OH
8/15-20/2010	TDWI World Conference - Summer 2010	San Diego, CA
8/2010	NEODBUG Quarterly Meeting	Independence, OH
10/24-28/2010	IBM Information On Demand North America Conference	Las Vegas, NV
11/7-12/2010	TDWI World Conference - Fall 2010	Orlando, FL
11/8-11/2010	PASS Summit	Seattle, WA
11/2010	NEODBUG Quarterly Meeting	Independence, OH

Online registration is now available for IDUG 2010 North America! [Visit the Online Registration page](#) to learn about the short steps it takes to register for IDUG. You may also fill out the following registration print form applicable to you:

[Individual Attendee PDF Form](#)

[Multiple Attendee PDF Form](#)

### **Five Reasons to Attend IDUG 2010 – North America May 10-14, 2010 in Tampa, FL**

- It is difficult for technology managers and senior data management technicians to find meaningful training that can provide both breadth and depth in targeted technologies. The IDUG conference(s) have proven, for many DB2 professionals, to deliver the best value as a training alternative to pure depth training (e.g. a 4-day class on Database Performance Tuning). The quality and quantity of educational value of the IDUG conferences has been consistent and cost beneficial, over the years.
- The presentations are conducted by a mix of DB2 users, IBM developers, vendors and consultants. There are also keynote sessions that give broad coverage of where DB2 is going in the future.
- In addition to the conference content, there are ongoing opportunities to discuss technology with DB2 developers, customers, and vendors across a broad continuum of database, tool, and related product issues. For example, in a single venue, you can see demos of competing vendor products and talk one-on-one with experienced vendor implementation experts.
- In Special Interest Group (SIG) sessions, attendees can swap implementation tips and techniques and listen to others describe the proper and improper ways to use DB2 in ways they might be considering. As one past conference attendee described to a colleague, the value of the networking opportunities alone exceeds the price of admission.
- IBM provides complimentary DB2 certification testing throughout the conference, so attendees can go test their knowledge of DB2. This is a very valuable service, as the tests cost approximately \$125 per test if done at a testing center.

**NEODBUG Celebrates its Twentieth Anniversary in 2010!**

## February 25, 2010 Special Educational Meeting Agenda

8:30 - 9:00	Registration	
9:00 - 9:10	Opening Remarks	Michael James NEODBUG Chairman
9:10 - 10:30	<i>“DB2 z/OS High Performance Design and Tuning Platform, Including V9” - part 1</i>	Susan Lawson YLA & Associates
10:30 - 10:45	Break	
10:45 - 12:00	<i>“DB2 z/OS High Performance Design and Tuning Platform, Including V9” - part 2</i>	Susan Lawson
12:00 - 1:00	Lunch	
1:00 - 2:30	<i>“Table and Index Design for High Performance” - part 1</i>	Susan Lawson
2:30 - 2:45	Break	
2:45 - 4:00	<i>“Table and Index Design for High Performance” - part 2</i>	Susan Lawson
4:00 - 4:15	Closing Remarks	Michael James

**Skyline Hotel & Conference Center**  
(formerly the Sheraton Independence)

5300 Rockside Road  
Independence, Ohio 44131  
(216) 524-0700

<http://www.skylinehotelindependence.com>

## Meeting Registration Form

NEODBUG Special Educational Meeting  
THURSDAY, February 25, 2010 9am - 4:30pm  
Skyline Hotel & Conference Center  
5300 Rockside Road, Independence, OH

Cost: If your company is a member of NEODBUG: \$199 pre-registration or \$225 at the door.  
If your company is not a member of NEODBUG: \$225 pre-registration or \$250 at the door.

Yes, I will be attending the education meeting; a check for \$ \_\_\_\_\_ is enclosed for a total of \_\_\_\_\_ reservations.

YOUR NAME \_\_\_\_\_ BRINGING A LAPTOP? \_\_\_\_\_

PHONE & EMAIL ADDRESS \_\_\_\_\_

In addition to myself, the following persons will be attending:

NAME	BRINGING A LAPTOP?	PHONE & EMAIL ADDRESS
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

**FIFTH ATTENDEE RECEIVES A \$40 CREDIT TOWARDS REGISTRATION FEE**

**TENTH ATTENDEE RECEIVES A \$40 CREDIT TOWARDS REGISTRATION FEE**

Company Name: \_\_\_\_\_

Company Address: \_\_\_\_\_

Email this form to [neodbug@sps-solutions.com](mailto:neodbug@sps-solutions.com) to notify us of your intent to attend, then postal mail this form and your check (payable to NEODBUG) no later than Friday, February 19, 2010, to:

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