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The Real Times

Vol.35 No.10

www.acm.org/chapters/gbc

June 1997

Thursday, June 19

Applied MPP Data Warehousing: Usability Testing Experiences Martin Lurie, Principal Systems Engineer, Informix Software

Jointly sponsored by the GBC/ACM and IEEE/CS Boston Section

Meeting begins at 7:00pm refreshments at 6:30pm

Bolt Beranek and Newman (BBN)

70 Fawcett Street, Cambridge, MA.

For more information, contact Marcia Nizzari at (617) 563-3569 or Marcia.Nizzari@FMR.com.

This talk focuses on the application of Massively Parallel Processing (MPP) for data warehousing. The target audience is not expected to have a background in MPP or very large database design. The talk is based on testing performed for two large financial companies in New England. MPP (Massively Parallel Processing) has moved out of the research labs and into active commercial use. This presentation will feature an overview of how a "shared nothing" MPP database works, focusing on the issue of function shipping versus data shipping. The key issues for MPP database will be examined, including optimal distribution of data across the MPP nodes, data collocation, scalability, and join strategies. Hardware configurations will be discussed, including SCSI disk versus raid. The talk is based on usability testing of Informix XPS on 2, 4, 8, and 16 nodes on an IBM SP2 and tests on a Sun PDB Cluster.

People will learn:

1. **What is an MPP database?**

2. **How do the individual processors work together?**
3. **What are the challenges to the MPP architecture?**
4. **What test results were obtained when testing for these challenges?**

The discussion will conclude with recommendations for setting up a data warehouse environment.

Speaker

Marty Lurie is a Systems Engineer in the Informix Boston office. His focus is applying database technology in the financial sector for DSS and OLTP applications and benchmarks. He has worked with SMP, SMP Cluster, and MPP systems in 2, 4, 8, 16, and 32 node configurations and has tested scalability, collocation, skew and other MPP parameters. Prior to Informix, Martin spent 17 years at IBM in Systems Engineering, development, marketing, and finance. Martin holds a Bachelor's degree in EE from MIT and an MBA from Boston University. He is a Certified AIX Administrator, Certified AIX Instructor, and is Certified in Production and Inventory Management.

Directions to Bolt Beranek and Newman (BBN)/Recorded directions: (617) 873-4567

From Route 128, Lexington: Take Route 2 inbound. The four-lane highway narrows to two lanes near Route 16. At the traffic light bear right onto Alewife Brook Parkway. Proceed past shopping centers to the Fresh Pond Rotary. Take the first right onto Concord Avenue. Fawcett Street is one block down Concord Avenue, on the right.

From the Mass. Pike: Take the Pike inbound to the Cambridge/Allston exit. Exit onto the Cambridge off-ramp and take Cambridge Street. Turn left onto either Storrow or Memorial Drive. (Storrow Drive is on the Boston side of the Charles River and Memorial Drive.)

From Storrow and Memorial Drives: Take Storrow or Memorial Drive west: follow signs to Route 2, 3, 16. Remain on 2. The road will become narrow and winding. This is the Fresh Pond Parkway. Several car dealerships and Fresh Pond Seafood will be on the right. At the 1st rotary, take the third right onto Concord Ave. Continue straight at the second rotary. Fawcett is one block further on right. Once on Fawcett St. the Newman Auditorium is about 1/2 block, on the right. Park in the lot on the right side of the street; the lot is adjacent to the auditorium building.

Public Transportation: Take the T to Harvard Square. From Harvard Square take the Concord Ave./Belmont Center bus. Get off at Fawcett St.

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Timely notices of events, meetings, and other activities of interest to the Chapter's Membership should be submitted by the 10th of the month before the intended issue and sent, with attention to the Managing Editor to:

**GBC/ACM, P.O. Box 465, Lexington, MA 02173.
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The Chapter's mailing list is available to related professional organizations or for commercial use. Please contact the Membership Chair at the address above when requesting mailing lists.

Subscriptions:

Annual subscription cost is included in the Chapter Membership dues of \$10.00. See top line on mailing label for membership expiration date. Library subscriptions are free. Please send orders for copies to the Chapter mailing address above.

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Address changes should be sent to the mailing address above. Allow eight to ten weeks for changes to address or membership renewal to become effective. Send old label with address modifications.

**May GBC/ACM Monthly Meeting Review****Intranet to Internet and All Points in Between**

By Mitchell Liu, Brainstorm Technology Inc.

At the Chapter meeting on Thursday, May 16, 1997, Mitchell Liu talked about Lotus Domino as a form of web server technology. Mitchell claims that the 'war' will not be on the desktop (about who supplies the client software), but rather on the server; and the competitors are Microsoft, Netscape, and Lotus.

Two approaches to using the web are browsing and working. Browsing is an unfocused, unstructured, open-ended search for static items of information, whereas working is an interactive, targeted, purposeful, task-oriented effort resulting in activity that reflects the value of the information involved. In general, working in a distributed information environment includes getting the relevant information, assimilating the information, generating and publishing responses or new information, and coordinating activities.

In practice, it turns out that the minimal requirements for a web server include secure HTML, search engines, caching, support for on-line discussions, and support for content creation and editing from a browser; and for use in a mission-critical application, the server should also include a directory of visitors, messaging, replication and fault-tolerance, multi-level security, scripting, and management support features.

The Lotus Domino web server has been useful for supporting such mission-critical applications. Domino provides a number of interfaces (e.g., Notes, HTML/HTTP for the web, POP3 for cc:mail, and SMTP for traditional e-mail), although the functionality available through a Notes client is generally more extensive than that available through some other client (such as a web browser). Being based on Notes, a Domino server provides views (forms), documents (views with content), text searching (using a search engine from Verity), and information replication (at the field level). Messaging in Domino includes traditional email, workgroup collaboration features (push/pull, and document links in email, e.g., for document review), and group calendaring and scheduling. And for security, Domino provides bi-directional authentication, six categories of database access control (depositor, reader, author, editor, designer, and manager), four levels of privacy or encryption (network, message, database, and field), and digital signatures.

Job Openings at W³C

If you are good...

If you think what we are doing is important...

If you want to be here...

We are looking for people who can help us lead the web to order and rapid enhancement. We hire people who possess insight, tact, technical understanding, and the ability to follow things through.

Open Posts

System Programmer/Administrator at MIT LCS

Note: applicants for early posts are automatically reconsidered for later posts

MIT/LCS is an equal opportunity employer. Applications for a post at MIT itself must be made through the proper channel as indicated in the vacancy notice.

Visiting Engineers etc.

Note that we also accept visiting staff from collaborating companies and institutes. You may therefore be able to work physically with the team without having to quit your job if your company is enthusiastic. Get your company enthusiastic.

Consultants

From time to time we contract with local consultants to do specific pieces of development work. If you are in the Boston area, would be interested in work developing reference code, demonstration, and/or test systems, and would like us to have your details on file, please send them to Susan Hardy at susan@w3.org. Include a cover letter explaining why we should particularly contact with you: for example, if you have experience with areas of the reference code already, state where.

Taken from W3C website by Robert Epolito

Pleas cut out and mail in with payment to the return address on the back of this page.

| Greater Boston Chapter of the ACM Member Registration Form | | | |
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Eliminating Greying Out

Greyed Out Buttons and Menu Items. They were a gift with graphical user interfaces. As designers, we can easily show what is available and what isn't. The only problem is: user's hate them. User's hate them because they never know what to do to "ungrey" them. There are no clues for them. It's never quite clear what needs to be selected.

In some recent testing, we found that users often tried to click on buttons before they selected the objects those buttons were supposed to help with. We found that by changing the greyed out button to an error message, our users succeeded more often. But in most cases, we could go a step further. We could eliminate the error message by replacing it with a dialog box. Here's an example:

Suppose you have a collection of data elements and a Print Description button. Normally, the button would be greyed out until one or more elements were selected. In our first change, we never greyed out the button. Instead, upon pressing the button with nothing selected, the user would get a message explaining that they need to select something first.

However, in our second change, we displayed a list box filled with the relevant data elements and a prompt to choose the ones they wanted to print. This way, whether the select the elements first or not, the function still works.

We've found this strategy to work frequently. (It ends the old object-action vs. action-object debate.) Users tell us the software seems more intuitive.

Questions During Testing

Lisa Wylie from Knight-Ridder Information recently inquired on the UTEST list about which questions to ask during usability testing.

The short answer is anything that will help you design the product better.

Of course, the main point of a usability test is to observe users working with the product. And we often put more weight on what they do versus what they say. For instance, we've had users tell us that they didn't like the icons but, as they worked with the product, we saw that they knew exactly how to use each one. Conversely, we've had users tell us they think the icons look great, but, during use, we saw that they didn't know what they did or when to use them.

There are things you can only get through asking questions. For instance, we've found that questions are the only real way to understand the user's mental model of an application. We had a test where users (electrical engineers) wouldn't press any button labeled Apply. It wasn't until we asked that we found out that they thought Apply meant Apply Voltage.

Usually, we're not worried about potentially "biasing" the user's

opinions with our questions. We do try to avoid changing their behavior by prematurely giving them hints. We typically don't ask them to explain their rationale until after they've had some chance to work with the product.

One type of question, we call them "design questions", seem to always produce poor results. These are questions like: "How would you order the menu options?" or "What would you like the help to say?" The users try really hard to answer these questions, often taking several minutes to come up with an answer. And the answers are usually simplistic and unimplementable. Since the users don't know the design constraints that the development team is working with, the answers can't take them into account.

Instead, we like to explore the rationale behind the problem. For instance, instead of asking how to order the menu options, we might watch which pull-downs the user goes to first. If they always look in the View pull-down for a particular option which is currently under Edit, we might consider moving it. We have some tricks that we use. For instance, when we see a user consistently pass over an icon or menu option that we think would help them, we'll ask them to do a walkthrough: "I'd like to do something a little different.

Starting with the first icon, can you just tell me what each one does without clicking on it?" (We don't just start with the one that will solve their current problem, because we don't want them to think we're trying to give them the answer.)

Another trick involves spoon-feeding concepts: "Would it help if I told you that files are saved in .TIF format?" With this type of question, we can see if a new concept changes the user's behavior. If the answer is yes, we can then figure out how to give the user this information through the design.

At the end of tests we like to ask the users some questions about the product as a whole. For commercial applications, we'll often ask them if this is something they'd buy. Every so often, we hear someone say "No, because it doesn't do anything I need." We learn a lot about the users from the ensuing conversation. At the end of a test, we also typically ask users to describe two things they liked about the product, followed by two things they disliked. The first part is often very encouraging, especially to the development team that has just spent 2 hours painfully watching someone struggle with their product. They second part often gives us insight into the user's priorities and their "latent pain" — the stuff that sticks with them.

By the way, you can subscribe to UTEST by sending the word

Subscribe in the body of a message to
listproc@hubcap.clemson.edu.

User Interface Engineering (508) 975-4343 (uie@uie.com)

SIGGRAPH/Boston June Meeting

The Use of Optical Motion Capture for Character Animation
 Wednesday, June 11, 1997
 6:30PM - 8:00PM

Adaptive Optics Associates, Inc Belmont Studio
 33 Brighton Street Belmont, MA 02178

Please call Beth Torrie at 617-234-0121 or email 3Dmotion@aoainc.com to RSVP.
 Directions are listed below and are available by calling Beth Torrie.
 SIGGRAPH/Boston Contacts <http://www.v-site.net/siggraph-ne>
 Julie Satterfield julies@world.std.com (617) 325-5351

Abstract

Adaptive Optics Associates (AOA) will present a hands-on approach to optical motion capture in their Belmont, MA studio using their Multi-Trax hardware and Windows NT capture software. The presentation will include the fundamentals of preparing for a shoot along with live motion capture demonstrations and examples of previous work.

Mark Thompson of Fusion Films will show how to take data from motion capture systems and apply it in different ways to characters using LightWave animation software. Mark will demonstrate how to apply captured data to both a bone skeleton and a hierarchy of objects.

AOA also plans to show other hands-on examples of character animation using Nichimen N*World Software, Alias Power Animator, SoftImage 3D and live performance animation with AOA's FaceTrax facial capture system.

Presenters

Dean Wormell, Entertainment Technologies Business Manager, Adaptive Optics Associates. Dean has over 13 years of new product development and research experience at AOA and currently runs AOA's motion capture business. Dean has developed strategic partnerships to facilitate rapid deployment of optical motion capture hardware, software and services for the entertainment market including the Multi-Trax, FaceTrax, and Creative Motion Editor products.

Mark Thompson, Founder, Fusion Films & The Big Machine. After working for 13 years in the computer and aerospace engineering field, Mark left his full time engineering job to found Fusion Films in 1995, a full service digital production facility concentrating on 3D animation. Building upon the success of Fusion Films, Mark founded The Big Machine in 1997. The Big Machine is a high-end animation house specializing in long form animated features, film special effects, and broadcast commercials. Current information and updates to the presentation will be posted at <http://www.aoainc.com/ET/localsig>.

Directions to AOA

From Storrow Drive (Downtown Boston) to AOA - Belmont: * As soon as you are merged onto Storrow Drive, stay in the middle lane and continue past the Kenmore Square, Central Square, and Harvard Square exits. * After the Harvard Square exit, keep right, following signs for "Rt. 2W - Arlington". This will take you across a bridge over the Charles River. * Follow signs for Rt. 2W - Fresh Pond Parkway. You will pass through 4 traffic lights and two rotaries - go straight through the second rotary staying on Concord Ave to Belmont * Proceed about 1/2 mile and make a right at the second traffic light after the rotary onto Brighton Street (also called Blanchard Ave). You will pass the Sancta Maria Nursing Facility just before you see the traffic light. * The studio is at 33 Brighton Street on the right immediately after White Hen Pantry. If you cross the railroad tracks you have gone too far. The studio is the first door in the one story brick building facing Brighton Street.

From Mass Pike & Rt. 2 to AOA - Belmont: * Follow Mass Pike East to Exit 14 (Rt. 95/Rt. 128) * Take exit for Rt. 95N/Rt. 128N * Follow 95N/128N to exit 29A - Rt. 2 East (Arlington/Cambridge) * Follow Rt. 2 East approximately 6 miles * Take Rt. 60 exit (Exit 59) off Rt. 2 and take a right at the traffic light at the end of the exit. * After about 1/8 of a mile, make a left onto Brighton Street at the first traffic light. * After about 1/2 mile you will see railroad tracks. Take the first left after the tracks into our parking lot. * The studio is at 33 Brighton St. It is the first door in the one story brick building facing Brighton Street.

SIGGRAPH/Boston maintains a mailing list for e-mail announcements of meetings. Send e-mail to siggraphdistrib-request@cs.umb.edu if you want be added or dropped from this list.

Software Process Improvement Network (SPIN) June Meeting Announcement**“Practical Software Measurement: Measuring for Process Management and Improvement”****Anita D. Carleton- Software Engineering Institute****Tuesday, June 17, 1997****6:30pm (refreshments), 7:00-8:30pm (meeting)****Boston area Software Process Improvement Network (SPIN)****(Admission Free)****GTE, Building #5, 77 A Street, Needham, MA****(Wheelchair accessible)****Maureen Harris (617) 455-3393, maureen.harris@GSC.GTE.com or****Ken Oasis (617) 563-4197, ken.oasis@fmr.com****Abstract**

Many organizations are beginning to use measures effectively to plan and manage software projects. A few are now extending these concepts to address longer term business and technical goals that reach across multiple projects. When they do, they inevitably find themselves led to issues of process management and process improvement.

Anita Carleton will summarize work that they have been doing to assemble guidelines and advice for using measures to characterize key attributes of software processes, so that process results can be made predictable, performance can be controlled, and improvement opportunities can be identified. Issues of process stability, process compliance, process capability, and investment return will be discussed, and techniques for addressing these issues will be illustrated.

Responsibilities at the SEI have included chairing the SEI Measurement Steering Committee, supporting Software Engineering Process Groups, chairing the SEI Software Metrics Definition Working Group, providing engineering/consulting services to Air Force, Army, Navy, and industry clients engaged in software process improvement efforts, implementing software process definitions within client organizations, and leading strategic planning efforts for the SEI Software Process Program..

Speaker

Anita Carleton helped to launch the software measurement initiative at the Software Engineering Institute (SEI) in 1988. She currently provides technical leadership to the Software Engineering Measurement and Analysis Team. Currently, Ms. Carleton is leading two projects: co- developing the second volume of the Practical Software Measurement series on software measurement and developing the SEI's Information Repository.

Directions: To get to GTE, Building #5:

From Route 128 in Needham, take exit 19A onto Highland Avenue East. At first traffic light turn RIGHT onto Second Street. Go 1/4 mile (passing hillside Sheraton entrance on right) and turn RIGHT onto A Street. Go 1/5 mile and immediately after GTE HQ building on left (multi-story glass facade), turn LEFT into Visitor Parking lot. Go around to the back of the building and you will see the entrance. The security guard will direct you to the cafeteria.

Tuesday June, 24 1997
JUNE GB/SIGCHI MEETING ANNOUNCEMENT
Involving Users in the Design of Speech Applications

Nicole Yankelovich, Sun Microsystems Laboratories

Refreshments at 6:30, meeting 7:00 - 9:00

SUN Microsystems, Chelmsford, MA

Free and open to the public. wheelchair accessible.

Since speaking and listening are extremely familiar activities to most people, speech user interfaces must be designed in a way that matches people's expectations about conversational interactions. In the Speech Applications Group at Sun, we have designed a set of applications based on observing natural conversations in the domain of each application. These pre-design studies served as the basis for the dialog design. This talk first provides an overview of the speech applications we have developed and then focuses on two different applications whose design was based heavily on data collected during pre-design studies. For one of these projects, a user study conducted with a prototype of the application will also be described.

About the Speaker:

Nicole Yankelovich is currently Co-Principal Investigator of the Speech Applications Project at Sun Microsystems Laboratories. In addition to project management responsibilities, Nicole specializes in designing speech user interfaces. Prior to joining Sun in 1991, Nicole focused on user interface design in the context of an integrated, multi-user hypertext system. Nicole has published a variety of papers on speech applications, user interface design, and hypertext, and she has served on the organizing and program committees of conferences such as CHI, UIST, ASSETS, Hypertext, and CSCW. See <http://www.sunlabs.com/people/nicole.yankelovich/> for more details.

www.sunlabs.com/people/nicole.yankelovich/ for more details.

Directions to Sun

Two Elizabeth Drive
 Chelmsford, MA
 (508) 442-0441

From Route 128:

Take Route 128 (95) to Route 3 North towards New Hampshire (Exit 32).
 Get off at Exit 29, Chelmsford, Route 129.

Turn right onto Route 129 at end of ramp.
 Pass over Route 3, staying in the left lane.
 Go straight through first light.
 Get into the right-most left hand turn lane.
 Go left at the second light onto Mill Road.
 Immediately bear right onto Elizabeth Drive.
 Turn into the first driveway on the left.
 Turn left to find the main entrance to the building.

From Route 495:

Take Route 495 to Route 3 South.
 Get off at Exit 29, Chelmsford, Route 129.
 Turn left onto Route 129 at light at end of ramp.
 Get into the right-most left hand turn lane.
 Go left at the next light onto Mill Road.
 Immediately bear right onto Elizabeth Drive.
 Turn into the first driveway on the left.
 Turn left to find the main entrance to the building.

If there is no free visitor parking near the entrance, there are usually plenty of free spaces just to the right of the driveway entrance. The Faber conference room can be found by going up the stair case on your right and then turning right at the top of the landing.

Ron Perkins, Principal Design Perspectives,
 Design Consulting and Usability Research
 O. St.
 Plum Island
 508-465-6083 office Newburyport, MA. 01950
 508-465-1041 fax

For more information on the talk, please see the web site <http://www.sunlabs.com/research/speech/> or contact the program chair:

Ron Perkins
 rperkins@shore.net
 508.465.6083