

# Volume 3, Number 11

## La Dig on L.A.D.U.G.



### LOS ANGELES DELPHI USER GROUP

#### October Meeting – LADUG

When : Thursday, December 3, 1998, 7:00 PM  
Where: Westside Pavillion, Pico Boulevard, West L.A.  
Featuring: J.T. Taylor and Gabriel Forner  
Topics: Raw CGI with Naked Delphi

#### Special points of interest:

- TThoughts - Emery Galambos
- Bug Cracker Review

#### Raw CGI with Naked Delphi

December's lecture is a creative blend of skit and lecture to present unadulterated, out-of-the-box Delphi Client/Server edition's ability to build active web sites using standard CGI and Paradox tables. The presentation will be jointly made by Gabriel Forner of FeSoft, and JT Taylor of TaylorMade Software, Inc. These two have collaborated on a trilogy of articles explaining CGI with Delphi which will be abbreviated and condensed into this one lecture. This lecture will be done in a skit-like fashion, almost akin to a question and answer session, but done to a storyline adventure of two misfit hackers, "G" and "J". I think this will be entertaining as well as extremely instructive for anyone interested in creating an active Web site the easy way...with Delphi!.

--JT Taylor

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## From the Editor's Desk

Some new changes are looming on the horizon. These changes have to do with membership tracking. I will spare you the details of how it was done, and it was done very well by Steve Cola.

I am nearing completion of a new member database and program to track all facets of LADUG membership. The following is a list of things to look forward to:

- ⇒ Ability to fill out a new member form on the web. (payment will still go through Dr. Neal.)
- ⇒ Assignment of a member number (since I can't remember names very well).
- ⇒ Notification of membership status will be by email.
- ⇒ Some new information which you will see on the update member signup form (due out early next month).

Hopefully these changes will make my process easier and more reliable. Another benefit will be ease of communication among the members of LADUG.

## The Los Angeles Delphi User Group

The Los Angeles Delphi User Group is a forum for ideas and a meeting ground to bring together users of Borland Delphi for the purposes of mutual education.

For more information about the Los Angeles Delphi User Group contact any of the officers or e-mail: [board@ladug.com](mailto:board@ladug.com)

## The Los Angeles Delphi User Group Newsletter

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As you may know, when I first took this job as President of LADUG I instituted a monthly column that contained my thoughts about what was going on with Delphi. However, you may be getting tired of the sound of my voice and since I really have nothing to say this month, I feel that I was very, very fortunate to run across these thoughts that Jim Starkey posted to the Interbase newsgroup 1.5 years ago.

You might be asking who in the world is Jim Starkey?

Jim Starkey is known in the software industry as a technology innovator and entrepreneur. He designed and wrote the first version of InterBase. As President and Chief Architect he lead the company through three major versions on nearly twenty different platforms. Blobs, arrays, events, and multi-generational concurrency control are only three of the many innovations he incorporated in InterBase.

If you've been developing database applications for any appreciable period of time, you should recognize that these are major, major innovations. I talked about the brilliance of multi-generational architecture in just last month's TThoughts. Rest assured that these other innovations are mostly as significant (in fact, the only one of these features that I have never used nor marvelled at is arrays stored within databases -- and at one time I might have thought this was very important; maybe this proves that Jim is human).

Now, I don't necessarily agree with all of Jim's conclusions (and let's not forget that I have benefit of 1.5 years of perspective that he didn't!), but then again he is an incredible visionary. I think that this is very thought-provoking and of sufficiently high interest to all of you that we are presenting it here.

So, with Jim's very kind permission, as well as some editing assistance from his brilliant-in-her-own-right wife, Ann Harrison, I bring you the very first TGuestThoughts.

## **Three-Tier Applications**

Here, as promised, are some thoughts on three-tier applications, the future of computing, and fate of western civilization.

The state of the computer industry is almost unbelievable to those of us who have been around a while:

1. The price of hardware is so low that computers are practically free
2. An entry level, consumer grade PC is enormously capable, with vast memory, a huge disk, and a blindingly fast processor.
3. Off the shelf software is now dirt cheap, generally reliable (especially compared with the standards acceptable 10 years ago) with reasonably high quality GUIs.
4. We are rapidly approaching universal connectivity as LANs become Intranets and splice into the Internet.

Hardware is no longer a problem; software is a more or less manageable problem; and networking is mostly an issue of deciding how much we want to pay for what size pipe. The gating problem for software deployment is administration.

The Internet has everyone's full attention. The Internet is partly infrastructure -- TCP/IP, name server, wires, backbones, ISP, but mostly it's a new set of rules on how to structure things. The fundamental breakthrough of the Internet is the Web, and elegant architecture of platform independent browsers, real interchange standards to documents, images, and other useful things, and cheap and

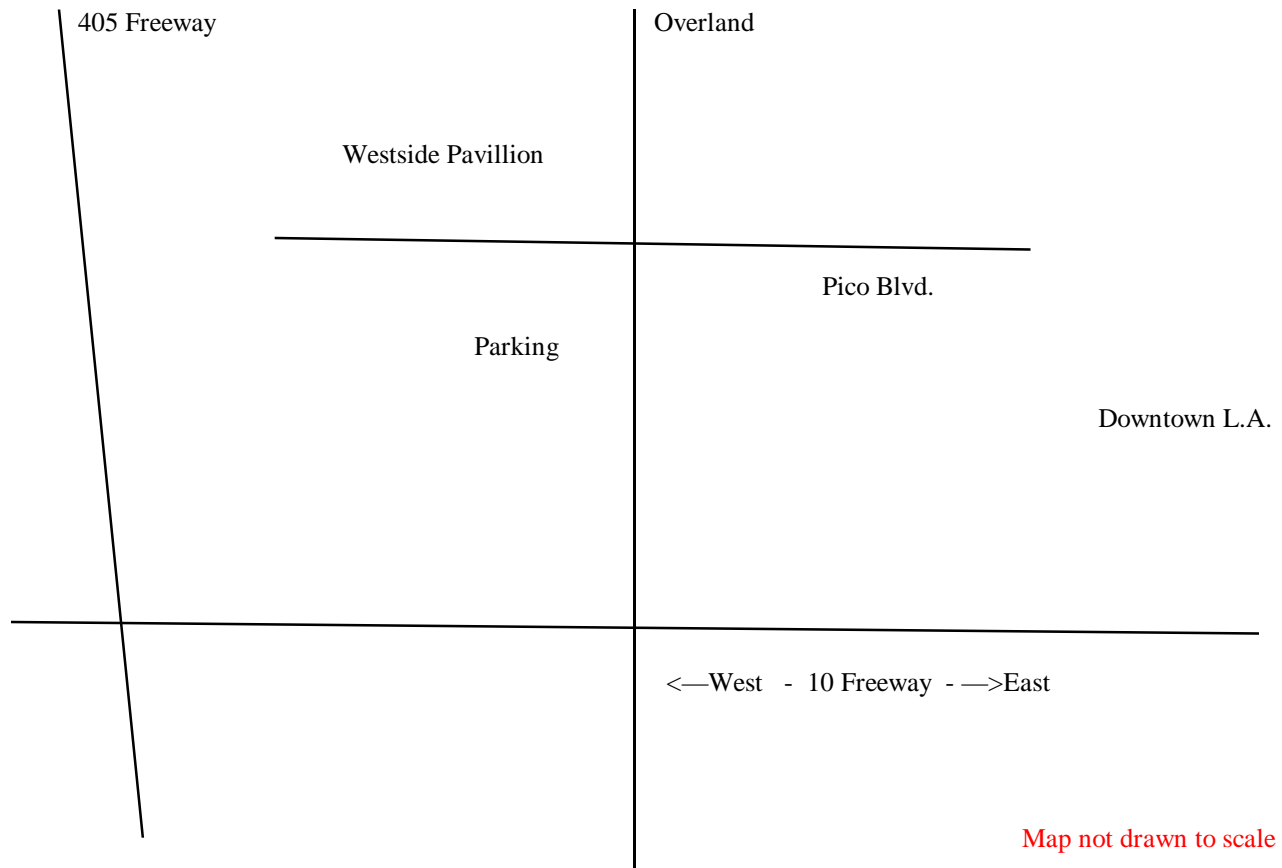
## Directions to the Meeting

The **Westside Pavilion** is a large shopping mall 3 long blocks north of the Santa Monica (10) Freeway just east of the 405 Freeway at the corner of Overland and Pico Blvd. Parking is free. We will meet at 7:00 p.m. in the Community Room A on the third floor, behind the food court. You're welcome to have a pre-meeting dinner or snack in the food court. There are a variety of food concessions there, and most stay open until 8:30.

You can most easily reach the third floor food court by entering the parking lot at the entrance on Overland, just south of Pico. Proceed straight up to the third level (two levels from the street level) without turning. When you reach the third level, veer slightly to the left and drive past the ramp to the fourth level. If you park in this area of the third level, enter the building, go up a few steps, and go through the doorway on your left, which is just before you get to the food court. Go down the hallway and look for the meeting room on the left.

If you park near the Robinson-May entrance, enter the mall through Robinson-May's and go to the left toward the food court. Turn left as you get to the food court and go through the doorway toward the bathrooms and the pay phones. Once inside the doorway, turn right and go down the hallway and look for the meeting room, which will be on the left side just where a second hallway intersects from the right.

If you use any other entrance to the parking lot, you're on your own. Neal Koss reports that the Westside Pavilion is the absolute WORST parking lot in the entire world. Your best bet is to use the Overland entrance.



**IMMEDIATE OPPORTUNITIES FOR 3 DELPHI PROGRAMMERS!!**

Looking for strong Delphi Programmers with Delphi v. 3.0 or 4.0 and SQL Server 6.5. Powerbuilder 6.0 is an added plus. Desire individuals with 2 or more years of HANDS-ON experience to work with a very extensive team to develop various customer applications.

Position is contract - full-time.  
Position is in Anaheim, CA with a large fortune 50 company.

All interested applicants please contact the following:

Murrell Garr, Act-1 Technical Services  
ph: (888) 339-2281  
email: mgarr@mail.act1tech.com

Eagle 1 Personnel Service  
POSITION ID: MT980010810  
DURATION:  
INDUSTRY: Financial  
FUNCTION: Development  
KEYWORDS: Delphi testing Pascal  
COMPENSATION: 50 to 65K  
Location: Orange County, CA

**DESCRIPTION:**

Specific responsibilities include:

- \* Develops, tests and documents simple to complex application programs.
- \* Updates existing programs to support enhanced capabilities or to maintain the functional operation of a production system.
- \* Designs, writes and executes unit test plans.
- \* Develops a knowledge of the operating environment, programming standards, system structures and specifications. Adheres to standards; suggests opportunities for improvement.
- \* Provides regular status updates to ensure meeting deadlines and specification requirements.
- \* Provide support to QA staff and users through problem resolution and bug fixes.
- \* From requirements, writes technical specifications used for development of code.
- \* Writes technical documentation for systems and software changes.

**REQUIREMENTS:**

- \* 2 years MINIMUM professional PC software development experience. Recent college grads will be considered
- \* 2 years experience using DELPHI, Pascal or Similarly complex language for Windows and/or Turbo Pascal for DOS. Integration and/or familiarity with Legacy helpful.

**COMMENTS:**

National company that attains double-digit growth year after year. Company is migrating client legacy systems to 32 bit with business rules. This is a small division of a very large company. Family candidates who want to grow with this new division and get in on this ground floor opportunity, please contact us. Ask about comprehensive benefits package.

Contact Steve Fox at Eagle 1 Personnel at (213) 628-6421 for more information.

Metropolitan West Securities, Inc.

INDUSTRY: Financial

LOCATION: Westwood

REQUIREMENTS:

- \* 2 years MINIMUM professional PC software development experience. Recent college grads will be considered
- \* 2 years experience using DELPHI, Pascal or similarly complex language.
- \* Knowledge of C, C++ a plus.
- \* Knowledge of financial markets and principals an added plus

COMMENTS:

Very competitive salary and benefits package. Annual performance based bonus.

Contact Myron Hammond at 310-441-7601 or [mhammond@mws.com](mailto:mhammond@mws.com)

capable Web servers.

The profoundly wonderful thing about the Web is that browsers are free, ubiquitous, compatible, and maintenance free. Install the sucker, and the world is at your finger tips. Web servers, depending on how fancy you want to get, are just as easy. Install one, dump your documents in the appropriate directory, and you're in business. Neat stuff. It works and nobody owns it.

The Web is the model for ALL future applications. No installation, no administration, no registration, just click and go. There are a varieties of client side technology that download automatically, HTML forms, JavaScript, Java, and ActiveX, all with warts, mind you, but solid building blocks.

When we embrace the Web as a solution to the problem of administration, we expose another deadly serious problem: Security. I don't lose sleep over whether or not somebody is intercepting my IP packets and stealing my passwords -- secure sockets solve this problem. The fundamental problem is that because I have access to 20 million other computers, 20 million other computers have access to mine, and not all of those 20 million users are necessarily my friends.

Lets assume that I'm a software company with a users' group and I want to have a Web (or just Internet) application that allows customers to register themselves for an upcoming conference. If I build the application with a client/server (two-tier) architecture, no matter how I distribute the application (linked C++ image distributed by FTP, a Java applet, or anything else), the following is all true:

1. To connect to the registration database, the application must sign on with an account and password.
2. My competitors (or one their employee's 14 year old kids trying to do dad a favor) would love to have a list of registered customers and then maybe provide a little gratuitous inconvenience.
3. The application must appear reasonably professional, or it would reflect badly on my company. It should guard against duplicate registration, validate companies, etc. A simple "fill in the blanks with whatever and hope for the best" application is rather an embarrassment for a software developer, after all.
4. A hostile user has legitimate access to the application program, which can be reverse compiled and analyzed at leisure. Similarly, the hostile user can trivially tap its own IP packets, and directly observe the message traffic between the client application and the database server. If the database account and password exists in, or is generated by, the application program, even a rather dull hostile user can get it.
5. If the hostile user has a legitimate database account and password, select access to some sensitive tables and update access to others, I've got a security problem. Big time.

When you get to the bottom of client/server application security, the only thing you have is technical obscurity and the ability to fire anyone who cheats. In the Internet world, you have neither.

Client/server technology, which I'll define as any direct SQL access across a fully functional interface from a client computer, is dead. It's insecure, can't be made secure, and will and must die deader than timesharing.

The answer to the security problem is a three-tier application, made up of:

1. A client side containing GUI and rendering code, communicating with
2. An application server, running in a trusted environment, containing the application semantics and performing all database access, and
3. A database server or servers, preferably behind a nice, thick firewall, communicating only with the trusted application servers.

This architecture is intrinsically secure. The client component can be assumed blown since all it does is pass messages to the application server. There is nothing that any process spoofing as the client component can do to make the application server do something that it shouldn't.

Although a three-tier architecture is absolutely dictated by security requirements, major performance benefits accrue for almost nothing:

1. Because the client component contains only the GUI parts of the application, download time is minimized
2. Application servers are naturally multi-threaded, reducing application start-up time.
3. Message traffic to the client is reduced to that necessary for display. Message round trips to support SQL API calls are

not necessary.

4. Database server connections can be cached within the application server, reducing both the number of simultaneous connections and (possibly) the cost of the software license from the database vendor.

So, if we weren't forced into a three tier architecture for security, we would do it for administration, performance, deployment cost, application start up time, or scalability.

Within a year or so (he predicts boldly) an application based on client/server technology will make as much sense of an application based on an IBM-026 (or even an -029).

So, speaking ex cathedra, client/server is dead.

