

Questions to Xavier Lopez, Oracle:

Q: What are the performance implications of moving my file-based GIS solution to a server based solution using Oracle Spatial?

A: One of the key trends we're seeing is the migration from desktop systems to more consolidated or enterprises systems and the reason for that is scalability. A lot of these desktops and work group systems tended to fall over; they reach their limits of scalability and essentially their performance is bottle necking in these desktop systems. And that's one of the powers of a server based approach; And it's not surprising to see all of these GI vendors moving toward a server based GIS. Oracle happens to be in the server business for 10 years! So one of the key advantages here is we can scale and perform better in that server based environment than any GIS by itself. Another advantage is that oracle provides optimization in the server, for example: things like real application clustering provides clustered databases. Partitioning: to be able to partition very large databases. It's something that we do with the UK ordnance survey so they can deliver very fast performance while using very large datasets. Replications and other capabilities that are part of the server that wouldn't be available to a GIS based approach solely where it just uses the database as a very expensive file system. So again, optimization in the database that can help with performance. But not only performance, but scalability, security and reliability. These are all things that are important as you move towards server based GIS and getting the performance that you need as the number of users go up and any amount of data that increases.

Q: Does Oracle Spatial replace products like ESRI, ARC SDE or work alongside them?

A: For many users that do a lot of the geo-processing that would usually be done in some kind of GIS only application, they can now leverage the geo-processing that's in the database. And I think the key is: what additional capability do you need? and that's where the tool comes in. So all of our implementation is partner based so there's a partner tool involved whether it's an ESRI tool or an eSpatial tool and it's up to the customer to identify which tool makes sense for their particular application they're delivering and what functionality they want to leverage that's in the database or the tool itself.

A: (additional comment by David Miller) The position with products like ESRI, products that are very highly functional and very good products as the market in existing GIS markets in particular for companies like ESRI. ARC SDE is just slightly different database in its own right. You can actually sit your applications alongside ARC SDE if you like and then you can actually connect the ESRI products directly to Oracle Spatial. So it is possible to sit alongside. In addition there's a whole other area that we didn't cover here in this presentation & that's international standards. For the OGC (Open Geospatial Consortium) standards and products by ESRI and other vendors will actually provide data using the OGC standards and they can be consumed by Oracle, by us and by other vendors as well. Thereby giving you choice and the ability to have the technology side by side.

Questions to Col. Ramon Lao:

Q: How long did it take to create the database infrastructure and to develop the application?

A: We kick off the project development in Mar 06, the application was ready for deployment by the end of July 06. Since that we have been enhancing the application and embedding the geospatial functionality into the HomeFront Portal. We have also create a mobile version of the application.

Q: What were the key technical criteria for the development of the system?

A: The mapping component had to integrate into our existing Oracle Database and Applications Server environment.

Secondly, ease of use was critical; no GIS functionality was to be exposed to the end users.

Lastly we wanted to get the application to look as close to the equivalent commercial products as possible, we used Google & Yahoo Maps as the bench mark

Q: Where do you see systems like this evolving? What are the main benefits that you are trying realise.

A: We realize the value of visualizing our business data spatially. Once you have created an enterprise geospatial infrastructure it can be used to enhance many applications hence vastly improving the end user experience.

Q: Why did you not just use a commercial service like Google/Mapquest/Yahoo for the mapping background.

A: Early in the project we realized that by using a commercial mapping service we would limit ourselves to what we could achieve if we controlled the data ourselves. By adding the NAVTEQ data into our existing data it gave us a lot more flexibility when it came to styling, security, controlling performance and access as well as the types of queries we could perform between the map and business data.

Q: What is the size of the hardware infrastructure supporting the application?

A: Because of the nature of the iSMART software we managed to deploy the application together with all the data on a dual CPU Unix database server running Oracle 10g and a 4 CPU Linux server running Redhat Linux. One must remember that these servers are also support a number of other DOD applications including the Military HomeFront Portal.

Q: Col you mentioned a mobile application, has this been deployed and what is the infrastructure that supports it.

A: We have deployed the mobile application on the same infrastructure as the web application. eSpatial modified the original web application to automatically fit the screen of a number of mobile devices that support the Windows IE browser. This process only took three weeks.

Q: Did you loose any functionality by deploying on the mobile device?

A: Not at all, we even have the routing and route maps running on the mobile devices. We are also testing the integration of imagery in both the mobile and web application