

## INDUSTRY TRACK PRESENTATION ABSTRACTS

### Security, Enforcement and Databases

**Sanjay Pande (Tata Consultancy Services)**

Trust in companies and government institutions often depends on the security of the information held in databases. Breaches of that security – whether deliberate or accidental - can have very serious consequences. Security is therefore a serious concern for both designers and users of database systems. Besides discussing security issues in database systems and how systems may be designed to ensure secrecy, integrity and confidentiality, would also touch upon the issue of enforceability of security vis-à-vis the IT Act framework.

### XPS – The shared nothing DB server

**MuraliKrishna (Informix)**

The first part of the talk will discuss the shared nothing architecture for databases and demonstrate why this has become the architecture of choice for successful commercial database servers. The shared nothing architecture provides for scaling without limits and provides a natural way for developing highly available servers. In the second part, we will discuss XPS, the shared nothing database server from Informix. XPS is the leading data warehousing database server with commercial applications hosting up to 27 terabytes of data. I shall discuss in some technical detail some of the features that allow users to manage very large amounts of data and run large queries in a highly parallel and scalable manner. A few of these features are coservers, slices, star joins, hybrid fragmentation, and zig-zag query plans.

### XML Support in Oracle

**Vishu Krishnamurthy (Oracle)**

XML is here as the internet standard for information exchange among e-businesses and applications. With its dramatic adoption and its ability to model structured, unstructured and semi-structured data, XML has the potential of becoming the data model for internet data. In this talk, we will present Oracle's strategy to publish XML data from databases. We will show how, using object relational techniques, we can efficiently publish XML from SQL sources, without having to re-invent new

optimization techniques. We will also try to compare and contrast the various options available to perform this XML generation.

### Implementing Security in Enterprise Portals

**Omkar Bhongir (Sybase)**

A "dream portal" provides users with easy access to the wealth of information in your organization. But that dream can turn into a nightmare if the portal lacks a robust suite of security features. It is crucial that the right portal user can get access to the right information. And, it's just as important that only the right users can access that information.

Because security is critical for conducting business on the Internet, Sybase has implemented a robust security architecture for the Sybase Enterprise Portal. This presentation discusses the security architecture of the Sybase EP and its major components such as user authentication, access control, single sign-on, roles, and integration to legacy applications.

### Achieving Continuous Availability with Sybase Adaptive Server Enterprise 12.0

**Omkar Bhongir (Sybase)**

Using Sybase Adaptive Server Enterprise 12.0, you can ensure the continuous availability of your database systems to your customers with no hassle, no confusion, no need for them to reconnect. Adaptive Server Enterprise 12.0 enables you to move end-users from a primary system to a back-up system in the middle of the day, in the middle of a transaction without missing a beat. It insulates customers from the complexities of back-end systems. Adaptive Server Enterprise 12.0 leverages cluster architecture to provide failover to a backup server without losing any non-committed data or severing user connections. Adaptive Server Enterprise 12.0 is designed to work in concert with existing hardware and software high availability solutions from third party vendors, including Compaq, Hewlett-Packard, IBM, Microsoft, and Sun Microsystems to deliver maximum systems availability.

## Data Links: Manage Enterprise Content - Linking File Systems with Databases Inderpal Narang, Suparna Bhattacharjee (IBM)

Data Links is a technology, invented and developed at the IBM Almaden Research Center, that extends Database Management Systems with support for external file references in database tables, allowing management of files that reside outside the database as though they are logically within the database. Data Links guarantees referential integrity to these external files, provides enhanced access control to them, and supports automatic and coordinated backup and restore capability within transactional environments that are crucial for data management. Enterprises can manage files on multiple distinct file servers within Data Links databases, allowing robust centralized control over distributed resources across intranets. Database data and datalinked files can be replicated together across independent systems in an atomic and consistent manner for availability and load balancing.

By bringing together database and filesystem data, Data Links provides a foundation for the next generation of enterprise content management.

Data Links is available as a part of IBM's DB2 Universal Database. The technology has now been deployed by several corporations and institutes, such as Boeing, Dassault, and automotive manufacturers, to provide database management of distributed scientific and engineering data stored in operating system files. The DATALINK datatype has been accepted an SQL/ISO

standard which is expected to be published by the end of 2000.

## Digital Experience Ramesh jain (Praja Inc)

We experience our environment using our natural senses: sight, sound, touch, taste, and smell. These senses combined with the models of the world allow us to experience and function in the world. Data are observed facts or measurements. Information is derived from data in a specific context. Experience is direct observation or participation in an event. Compelling and engaging experiences require immersion in a rich set of data and information so that one can directly observe a subset of the data and information. To create immersive and interactive environments, data should be collected using multiple perspectives and multiple sensors so that the complete environment can be represented at the level of granularity required and must capture all attributes relevant to human beings. Compelling experiences rely on carefully staged presentation. Immersed in an environment, you can only focus on a subset of sensed data. A strong presentation system will allow normal users to determine a sequence in which they may want to experience an event and will present the experience using appropriate devices. Digital experience is a natural major step in technology evolution. It will impact every aspect of our society including education, business, sexual behavior, business, and health care. Digital experience will give rise to experience society.