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*Category: **Industry***

Domain: Consulting

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Biren Gandhi is a *IT Architect and Technical Consultant* with several years in IT consulting with IBM Global Business Services.

Q1. Please explain briefly what are your application domains and your role in the enterprise.

Biren Gandhi: I am IT Architect and Technical Consultant typically working on JavaEE and RDBMS based systems

Q2. When the data models used to persistently store data (whether file systems or database management systems) and the data models used to write programs against the data (C++, Smalltalk, Visual Basic, Java, C#) are different, this is referred to as the "impedance mismatch" problem. Do you have an "impedance mismatch" problem?

Biren Gandhi: Yes, this issue pops up particularly in shared state concurrency of database.

Q3. What solution(s) do you use for storing and managing persistence objects? What experience do you have in using the various options available for persistence for new projects? What are the lessons learned in using such solution(s)?

Biren Gandhi: I think there is very fine boundary between OOP language & RDBMS.

But if system designers/Architects thinks of objects as a way of attaching behavior to data - and let that data live primarily in the database, then the relational and object models have very little impedance mismatch.

There are number of options available to name few have:

- 1) Object Relational Mapping (ORM)

- 2) Stored Procedure layer between DB and Applications accessing it.
- 3) Thin layer which manages relations above SQL
- 4) In SOA World---Standards like JAXB and SDO

Key lesson learned is as mentioned above is to understand boundary of OOP and RDBMS, role of each. One should design enterprise wide systems with data stores at center with well defined data governance practices.

Q4. Do you believe that Object Database systems are a suitable solution to the "object persistence" problem? If yes why? If not, why?

Biren Gandhi: No, as I think RDBMS are already moving/have moved to Object Orientation e.g. Oracle 9i and IBM DB2 V8. As well ORDBMS have lot of more advantages compared to odbms, particularly in enterprise data management. Yes, ODBMS could be suitable for embedded devices.

Q5. What would you wish as new research/development in the Area of Object Persistence in the next 12-24 months?

Biren Gandhi: I would like to see convergence of programming languages(functions that manipulate & present data) and db layer particularly for embedded/real time systems and here I think odbms can play big role.