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Category: **Industry**
Domain: Various
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Ajay Deshpande is Senior Architect at the Infrastructure & Systems BU, Persistent Systems Ltd., India.

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

Ajay Deshpande: We primarily work with Software Vendors building whole / parts of their products from our facilities. Some of the important domains we work in are Telecom software, Web based applications, Enterprise software, Bio-sciences, Mail and Messaging, Business Intelligence and System infrastructure software.

My role in the organization is that of a Software Architect, primarily responsible for building software from ground up, helping clients make technology choices and ensuring appropriate standards in the organization.

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?

Ajay Deshpande: Yes we do. We face the object versus relational model impedance mismatch in a significant number of our projects.

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)?

Ajay Deshpande: The most popular solution is to do Object Relational Mapping (ORM) using frameworks like Java Persistence API (via Hibernate). Java Data Objects, Web Objects or other numerous ones for .Net.

The experience here is that it is not easy for complex applications. One has to consider various parameters before one uses a solution. More often than not, suboptimal solutions are chosen because they have extensive community support. In software product development time is always critical and one cannot wait for the optimal solution if it takes time to get it going.

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

Ajay Deshpande: Theoretically yes ODBMS are definitely a suitable solution. However the problem is one of community support. Today we have so many ORM solutions on the internet and so many people maintaining them, that its very hard for one to think of using an ODBMS based solution. That is primarily because the developer does not want to tread an untrodden path. The developer would like to solve the problem at hand quickly and correctly in known ways.

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

The wish list in this area would be easier support for object persistence; today it is still too complicated for a developer to be able to get a framework to persist the objects one desires. JBoss seam takes a good step forward in this direction using an annotation based approach - makes the life simpler, however it can get better. Secondly flexibility in transactional access to the persistent objects could be better. Today it is hard for the developer to specify optimistic versus normal locking in the persistence layers. On the contrary the RDBMSs support this feature in a very straightforward manner.