

## **ODBMS.ORG User Report No.9/08**

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*Category:* **Industry**

*Domain:* Various

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Scott W. Ambler Practice Leader Agile Development, IBM Rational.

Scott is author of several IT-related books, including Refactoring Databases, Agile Modeling, and Agile Database Techniques. He is based in Toronto Canada works with IBM customers worldwide to help them scale agile development approaches to meet their real-world needs.

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

**Scott W. Ambler :** I spend most of my time coaching senior IT professionals and IT executives in applying agile strategies effectively within their organization. I work mostly in the financial and telecom sectors but agile techniques really are orthogonal to the business domain. I often focus on mentoring people in scaling strategies such as Agile Model Driven Development (AMDD), Agile Data (AD) strategies, and techniques from Rational Unified Process (RUP).

*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?*

**Scott W. Ambler :** The technical aspects of the impedance mismatch are fairly straightforward to solve. Depending on your situation, an object to relational (O/R) persistence framework, an OR database, or a full-fledged object database should be applied appropriately. The real issue that organizations struggle with is what I call the cultural impedance mismatch which refers to the difference

in cultures that we see between the data community and the development community.

These two communities have different ways of looking at the IT world, both of which have their strengths and weaknesses, and both communities could benefit from working closely with the other.

I have some detailed thoughts on this subject at:

<http://www.agiledata.org/essays/culturalImpedanceMismatch.html>.

*Q3. What solution(s) do you use for storing and managing persistence objects?*

**Scott W. Ambler:** IBM has several persistence solutions available. DB2 is our best known one, but we also have Informix, IMS, and Infosphere to name a few. Our home page for our data-related products can be found at <http://www.ibm.com/software/data/>

*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)?*

**Scott W. Ambler :** Pick the right tool for the job is probably the best advice that I can give. Unfortunately too many IT professionals seem to be one-trick ponies -- they have their data hammer and everything looks like a data nail to them.

I believe that over specialization of people is a serious problem in the IT industry right now. When someone is specialized in X, and the solution that they advise is to use X, can we REALLY trust this advice? When someone is experienced in X, Y, and Z, plus has a basic understanding of M through T, and they recommend a solution based on X then I'm much more likely to follow their advice.

People need to become generalizing specialists and have one or more specialties plus a general knowledge of IT. This is the sweet spot between specialists who can't see the forest for the trees and generalists who understand the concept of trees but have never actually seen one.

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

**Scott W. Ambler:** Object database systems are a good solution for the class of problems that they're best suited for. I think that the past two decades have shown that they're not going to replace relational or file-based storage as the dominant strategy any time soon but then again they're not going away either. All things have their place.

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

**Scott W. Ambler :** I'd like to see more ethnographic research done around the cultural impedance mismatch. I did two surveys in 2006 around data management and data quality, see: [www.ambyssoft.com/surveys/](http://www.ambyssoft.com/surveys/), and found some very serious problems with the way that data professionals and development team members interact with one another.

For example, close to two thirds of development teams find the need to go around their data group at one time or another, indicating to me that there is very little hope for effective data governance in the organizations where this is happening.

I suspect that if the data community doesn't take the time to understand how to work closely with the rest of the IT organization, and the past four decades seem to show that they haven't gotten it right yet, that they'll never accomplish their goals of supporting the data needs of their organizations effectively. TDMI claims that data quality problems are a \$600 Billion annual problem for US-based organizations, so that tells me that there may be some room for improvement in the way that we approach data-oriented activities in most organizations.