

Design.Everywhere

Interview with Bruce Douglass

Good design is all about quality.

The problem with the term of 'quality' is that it means many different things.

So when you have many different stakeholders or points of view, you can have many different definitions of what you mean by quality.

So every time you build a system, you really have to understand, how critical is this aspect of the design to the success of the product?

The traditional way of managing those different stakeholders' points of view is to have extraordinarily expensive, high effort reviews.

And I don't know about you but I know that whenever I sit in review meetings, by the end of two hours, everything is starting to look pretty good. You start glossing over the details and missing things.

So what we need is an environment in which the various stakeholders interact with these work products dynamically, be able to enter comments, have those comments managed and result in tasks that are done by the design team.

In a typical design project, there are dozens of different work products that we create, but these are all interconnected.

So we have to make sure these are consistent and correct and accurate.

The way we do this is through lifecycle traceability. We can look at requirements to make sure they are made by the design. We can look at our design to make sure that's reflected in the code.

IBM Collaborative Design Management enables stakeholders from both inside the core team and outside the core design team to contribute to the design expressing their concerns, their points of view in the actual design where it can be leveraged, understood and implemented by the design team.

What really makes it valuable is the integration of the tooling, the processes and the methods and the models all together. And IBM Rational is the only place you can get the tools that interconnect in these ways.

The key to this is the Jazz-based platform which allows the various tools to plug in together and provide an integrated environment so different stakeholders can work in different tools and all interact using these OSLC, open source interfaces. So you can use not only IBM Rational tools but other tools as well to enable the collaboration in a web-based fashion of the various work products created by those tools.

Allowing stakeholders from entirely different disciplines to make comments and meaningful contributions to the design.

By removing the siloed development – where you've got separately managed work products – Collaborative Design Management puts them into a central repository so everybody can access system, everybody can review them and they can be analyzed both formally and informally and we can then use metrics to get feedback on the efficacy and efficiency of those steps.

So it's all about avoiding defects through constantly paying attention to what you are doing against the objectives in the metrics.

Various steps can be automated through the use of things like process templates, tooling, modeling and test management so that we take it away from individual spending lots and lots of time producing paper documents, to things that actually run and execute and eliminate the burden of those steps.

One of our IBM automotive clients was manufacturing a truck with some very stiff constraints. They had to save 70% on fuel economy and reduce CO2 emissions by 40%.

The use of Collaborate Design Management and the use of IBM tooling and use of the services all came together to enable them to meet their goals on time, on budget and it was a great success story.

First and foremost, the business benefit of using a collaborative approach is improved quality in all the different aspects of definitions you have for quality: improved usability, improved functionality, decreased number of defects, better delivery time, better efficiency in terms of cost of development.

So Collaborative Design enables all these things to make sure our systems meet all the functional, quality of service, performance and resource needs that we have.