



Coding Challenges: an alternative to regular class room training

Background

What do you do if you employ some of the best developers in the world and you want to really challenge them *and* introduce a new technology for them to work on? And if those developers are also highly time-constrained, how can you pack in a ton of new stuff in the shortest possible time? Finally, how do you really motivate and excite those same developers to engage with a new technology, whilst giving them the opportunity to demonstrate their general coding and organisational skills.

Especially when the developers just want to do what developers the world over love: build things.

These were the challenges that our major investment bank client presented to Rock Solid Knowledge consultant Andy Clymer.

Working closely with our client, Andy identified that the developer audience were largely senior developers with considerable experience in .NET and Windows Presentation Foundation (WPF). The new technology that was of interest to our client was Microsoft Silverlight, a RIA platform with close links to WPF.

The overlap of the two technologies meant that a formal training class would be unnecessary for such an experience developer audience. Formal training, whilst generally being an excellent way to ramp up on a completely new technology, would also not address the requirement to competitively challenge and test the developers.

So Andy formulated the idea of a "coding challenge", whereby teams of developers would have the opportunity to build a piece of software in Silverlight under competitive conditions, with prizes for the best teams.

Andy, in conjunction with Dave Wheeler, an RSK consultant who specialises in Microsoft .NET UI technologies, went away and defined a range of possible problem ideas to set the teams. Our client selected their favourite, and the challenge was on.

Building out the challenge

The first task for Dave was to expand out a detailed program specification for the challenge, with an accompanying marking scheme against which the submissions could be judged. The specification incorporated a wide range of subtle points, designed to test whether the developers could spot the essential requirements from deliberately distracting noise, and to lead the developers to using best practice approaches.

Of particular benefit to our client was the fact that they could incorporate real-world, business-specific features in the design, including the use of important and existing WCF services that deliver meaningful data, ensuring that the developers could see exactly how Silverlight could deliver value within their projects.

With the challenge specification finalised with our client, Dave could then implement a reference solution, proving the challenge and ensuring that it was tough, but achievable in the time.

Delivering the challenge

Some thirty developers arrived for the challenge, which was organised to run over a three day period.

Day one was an accelerated introduction to Silverlight, presented by Dave in a dynamic "chalk 'n' talk" format, covering the differences between WPF and Silverlight.

At the end of the day, the developers, who had been divided into working teams with three members, were issued the specification, and the clock was started. With just twenty-four hours to deliver a working solution, many of the teams immediately went into analysis/design mode, breaking down the work across the team and focusing their development ideas.

Day two dawned with the rush to code. With a tight deadline, team communication and organisation was as critical as speed of coding. Adoption of best practices, such as effective separation of concerns and the building of a loosely-coupled architecture were reinforced by the specification, ensuring that the developers picked up real, practical "coalface" experience with Silverlight.

Throughout the day, Dave was on hand to offer guidance and support across the teams, dealing with those "tactical" questions that pop up whenever developers engage with a new technology.

At the end of a brutally intensive day, the teams checked in their final solutions.

The pressure had been on the teams through the day, but now it was down to Dave to work through the submitted work that night, assessing and grading each of the teams' solutions.

Day three provided the teams with the opportunity to present their solutions to Dave and our client representatives, and for the teams to be quizzed on their design, approach and implementation.

With this final phase completed, the initial grades were combined with those of our client assessor to produce a final ranking of the teams.

Dave then rounded off the work by producing a final assessment report, highlighting the many positives on a team-by-team basis.

The reward

The structure of the event was always focused around the competitive aspects of the challenge, and a competition needs prizes; in this case, a shiny new IPAD for each of the winning team's members.

Ultimately, though, all the participants benefited from working intensively with a new and vibrant technology.

And the client successfully introduced a new technology to their senior developers in a challenging and innovative manner.

Further information

If you're interested in introducing a new technology to your developers, and feel that an intensive coding challenge is appropriate for your team, then please contact Rock Solid Knowledge at <http://www.rocksolidknowledge.com/ContactUs.mvc/>