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**Standards -
What about it?**

Standards: to be used with common sense!

by Erik van Veenendaal

Probably, I'm one of those persons who doesn't like standards, because they tend to restrict me and provide me with a harness. As many of you, I have experienced that a quality document, e.g. a test plan, wasn't accepted by QA because it wasn't according to the standard. Who cares! As long as it does the job. Having co-developed the TMap methodology and written several TMap books – a de-facto testing standard in amongst others the Netherlands, I'm probably as much to blame as anyone else. However, the real question to ask ourselves here is "Who's to blame: the standard, or those who apply the standard?" Having worked in many industries with many different standards over the years, I probably have to state that it is down to those applying the standards to use them effectively. Of course, it makes a difference whether it's a mandatory external standard, e.g. FDA, or "just" a company-internal standard, but still

Unfortunately, there is no single software testing standard yet (ISO is in the process of developing one to be released in 2012). There are many standards that touch upon software testing, but many of these standards overlap and contain what appear to be contradictory requirements. Perhaps worse, there are large gaps in the coverage of software testing by standards, such as integration testing, where no useful standard exists at all. Where standards related to software and system testing do exist, I would like to point to my personal top 3 recommended standards, for both building confidence between supplier and consumer, and providing information on good practice to the new or even experienced tester.

IEEE 829 – Software and System Test Documentation standard

One of the most popular and well-known testing standards is IEEE 829. IEEE 829 is referenced in many testing book and lectured as part of the ISTQB certification scheme. The recently updated version from 2009 has many benefits over the "old" version of 1998.

Amongst others, it now has a dedicated template for a master test plan and a dedicated template for a level test plan; also there are various instances of test reports provided. Of course, IEEE 829 should again not be used as a restrictive harness, but rather as a source of inspiration. In fact, there are three main ways you can use this standard effectively:

1. If you do not yet have templates in your organization or project for test documentation, do not start re-inventing the wheel! IEEE 829 can be a great source to use when defining your own customized test documentation standards.
2. If you do already have a set of templates in use, it can be used as a checklist. A review your own set of documentation standards against IEEE 829 can lead to some improvement ideas and is a verification of completeness of your own test documentation standards.
3. Many of us now work with third parties, e.g. outsourcing, and try to make agreements on the test processes to be used and documentation to be produced. However, what is a "good" test log or test plan? This question often leads to a never ending discussion. My recommendation would be to use the well-known and internationally accepted IEEE 829 as part of the test agreements and state that test documents to be delivered have to comply with IEEE 829. An easy, but quality way out of an on-going discussion.

IEEE 1028 – Reviews

When discussing reviews, I always wonder why we are not all practicing such an effective and relatively low-cost technique. Surveys show that only 50% of projects practice reviews and only 25% practice them in the way they are meant to be practiced. Yet the technique has been around since 1976 when Michael Fagan published his famous paper. One of the things that strikes me as very strange

is that many companies define their own review processes. Most often they end up with at least 90% of what has already been defined by IEEE 1028, but somehow succeed in mixing up terms and renaming the review types etc. Confusing and a waste of effort to say the least. Probably only great for consultancy companies that provide the service. IEEE 1028 is a very straightforward standard that provides the processes for the different types of review that can be distinguished, e.g. inspection, walkthrough, technical review and management review. Let's not waste effort in defining what is already provided; to the best of my understanding the added value is NOT in the 10% difference. Let's focus on getting reviews implemented using IEEE 1028 as a common reference process framework.

BS7925-2 Software Component Testing

Although this standard was originally targeted towards component testing, it can be used by all testers whatever test level they work at. The standard provides a test process framework, especially for component testing, but much more important provides great detailed descriptions for both structure-based and specification-based test design techniques. Not only does it provide a description, in the annex it also provides detailed examples for all test design techniques which is really helpful. A highly usable and complete overview of test design techniques, that should be used when introducing or improving test design within your company or project. Unfortunately, this standard is not lectured as part of the ISTQB certification scheme, which is a mistake according to my opinion. Nevertheless, I strongly recommend you to download this standard and start using it. It's much better than most test design books and totally independent of any testing method or process.

Finally, I strongly recommend not re-inventing the wheel, but using the testing standards available. But please, let common sense prevail..... good luck!



Erik van Veenendaal is a leading international consultant and trainer, and recognized expert in the area of software testing and quality management. He is the director of Improve Quality Services BV. At EuroStar 1999, 2002 and 2005, he was awarded the best tutorial presentation. In 2007 he received the European Testing Excellence Award for his contribution to the testing profession over the years. He has been working as a test manager and consultant in software quality for almost 20 years.

He has written numerous papers and a number of books, including "The Testing Practitioner", "ISTQB Foundations of Software Testing" and "Testing according to TMap". Erik is also a former part-time senior lecturer at the Eindhoven University of Technology, the vice-president of the International Software Testing Qualifications Board and the vice chair of the TMMi Foundation.