

Venerable and vital

MD of QBIT and founder chairman of the BCS SIGIST **Geoff Quentin** explains the origins and revisits the importance of the model on which virtually all software testing is based

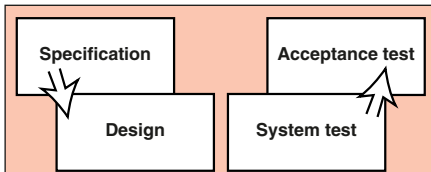


Figure 1: oversimplified view

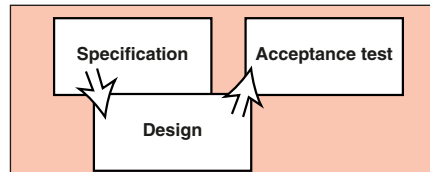


Figure 2: acceptance tester's view

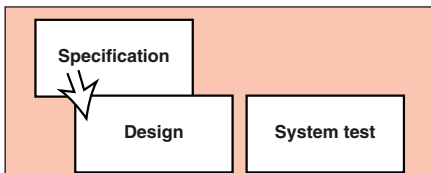


Figure 3: system tester's view

The original V-Model was called the U-Model – and the U was on its side. It can be found in the book *Testing in Software Development* (Ould and Unwin, CUP, 1986).

As a trainer I found this difficult to draw on a white board so I drew it upright as a V and used this to introduce software testing to thousands in the UK, Asia and Australia. The diagram was the basis of much of my teaching and by the end of a three-day course my drawing of it would look like a Jackson Pollock painting.

The V-Model is now widespread and even found in ISO 12207 *System Development Processes* to illustrate the way later testing activity should be developed from the earlier requirements-gathering activities. Not all testers like the V-Model and some popular presentations and books are openly disdainful of it. This is a strange opinion and can be safely ignored by any organisation that aspires to process maturity above level one.

Care is needed with the V-Model as it is often presented in far too simplistic a fashion, diminishing its value. Figure 1 shows a poor version easily discredited by detractors and promoters of other models. First it is essential to separate the views of the acquirer and the developer and view the work from each in turn. Thus the view of the acceptance tester is as shown in figure 2. This can now be balanced by the view of the system tester which is shown in figure 3. The V-Model now makes sense to both the acquirer (user) and developer and both the acceptance and system testers draw test material such as test plans and test scripts from the specification and design documents.

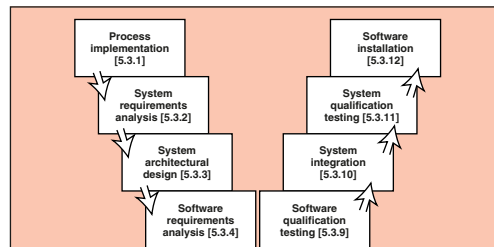


Figure 4: system tester's view, based on ISO 12207

The project manager has the job of deciding the degree of overlap between the testing work done at system level and that done at acceptance. In an ideal world the acceptance testers may simply concentrate on ensuring that the delivered system integrates properly within all the existing systems and rely on the system testers to have tested all the specified functionality.

The system tester view of the V-Model based on the activities of ISO 12207 is in figure 4. The references in the form [n.n.n] can be used to find the activities shown described in the standard.

It will be seen that system integration is not a testing activity as such and this is very sensible and practical. It will also be seen that the system tester may draw on information from many documents created during the early stages of the development process and this is essential for success. Finally it will

be apparent that the system tester expects the software to have been checked before delivery to system test. The empirical testing within ISO 12207 is referred to as qualification testing indicating that the system needs to be qualified before migration to the next activity.

The conclusion to be drawn from all this is that the system tester needs to be present at reviews of requirements and design documents throughout the development process and that the strategy for the system test should be based on the way that management have established the project at process implementation and documented it in the Project Initiation Document (PID). This is all very sound and accepted best practice. The V-Model is a mature and sensible model for all involved in the qualification and acceptance testing of both software and systems with a software component.

PT

£Attractive plus Bonus Plan and Benefits

SQA and Testing Practice Manager South East

Ajilon Consulting is an established provider of professional managed and outsourcing services. Part of the Ajilon Group we have the vision, ambition and financial muscle to extend our presence at every available opportunity and are looking to significantly grow our UK operation.

We require an SQA and Testing Practice Manager to help drive this growth. With several years' specialist experience in this area, you'll be an expert in your market and know all about influencing key decision makers to bring in large software quality assurance and testing service contracts. Your knowledge of testing systems and methodologies will be second to none.

You'll be tenacious, confident, focused, extremely enthusiastic and will relish the prospect of driving your practice and watching your responsibilities, prospects and career grow with it. Best of all you'll enjoy all the excitement, pace and flexibility of working within a growing UK operation against the backdrop of one of the world's most successful businesses.

Please apply by forwarding your CV with details of your current package to: Julie.downing@ajilonconsulting.co.uk

Ajilon
CONSULTING

www.ajilonconsulting.co.uk

PART OF THE AJILON GROUP