Accelerating Standards Development

How Agile and Iterative Processes Can Help

One common complaint against standards bodies is "you guys take too long. I've got a business to run and can't wait while the standard is developed."

Developing standards is not easy. It requires a number of competitors to cooperate in the creation of a mutually agreed standard. There is the pressure to retain competitive advantage, and to achieve a rapid time to market for new products. You could say these aims were mutually exclusive, but standards also facilitate business. Where would digital content be today without the work of MPEG?

Why Develop Standards?

A big advantage of using standards is that it makes interoperation between systems more open, and avoids potential vendor lock-in. To build new content processing chains, media companies are presented with a number of choices. One is to opt for a single vendor solution; another is to choose best of breed from a range of vendors.

However, no single vendor can provide a complete solution from acquisition through to delivery, so choosing one vendor for the primary solution will still require a degree of interconnection with products from other suppliers.

Whether you take the primary vendor or best-of-breed route, the issue of interconnection standards becomes a key factor in designing an efficient system architecture. Single-vendor systems frequently use the vendor's house or proprietary protocols to link components together. Multi-vendor solutions can use a number of different ways:

- vendors adopt each others proprietary interconnections
- international standards are used

The use of proprietary connections can leave a technology stranded as products are updated. With International standards there is a comfort factor that they will be around for the foreseeable future and are likely to be adopted by a range of suppliers.

Collaboration

The media business is much like other sectors with a supply chain and subcontractors. A typical production company will need to use a shooting crew, post-production house (offline and online), sound design, graphics and VFX. A different facility may be used for each of these operations, with constant media file exchange between facilities, and ongoing client review and approval. Prior to broadcast, material is often sent to other countries for language dubbing and subtitles.

The many facilities involved in this collaboration are unlikely to use systems from a single, common vendor. Standards are essential for efficient exchange of the content between the parties to facilitate collaboration.

Standards to Meet Changing Demands

The arguments above should convince you that standards are good. But there is a catch; standards have traditionally taken a very long time to develop. One or two years is not uncommon. But the pace of change in our industry is accelerating, and timescales measured in years are not keeping up with the change in the business.

New consumer devices can alter the landscape in six months; just look at the effect the tablet has had

in 2011. Content providers must adapt fast to such developments.

Several of the issues around standards could be avoided if they could be developed faster. The AMWA has been looking for a solution that could accelerate specification development to the mutual benefit of both media companies and vendors.

One technique that has gained wide adoption in the software business is agile development.

The Traditional "Waterfall"

Conventional development has been referred to the "waterfall" method; also know as "big design up front." The term "waterfall" stems from the flow from one process to the next. The sequential processes include:

- generating the requirement
- design
- coding
- validation
- installation

It is difficult to argue against getting the requirement right at the start, but it invariably turns out that the requirements change during the subsequent development. It could be through technology advances, or in the light of the experience of developing the standard. Changing requirements during the development cycle frequently extends the time to develop a standard.

Agile Development

There are many alternatives to waterfall development, but one methodology which has proven popular is agile development. The project proceeds in incremental steps, with constant iteration of the requirements, adapting to the inevitable changing

⇒ **Caveat**

Agile development is not a silver bullet. It is conventionally used within a single company, not deployed across a collaborative group like the AMWA. But the waterfall development philosophy has not delivered specifications in timely fashion so it is time to look around with an open mind for alternate development methods.

environment. In the case of software, releases can be made at shorter intervals, so that the most important features can be made available to users in shorter timescales.

One agile development framework is SCRUM. A brief guide to the framework can be downloaded from the SCRUM website at www.scrum.org.

Brad Gilmer, Executive Director of the AMWA, said: "Our media company members work hard to keep up with the demand from the consumers for their content. When a new business and operational requirement is identified we strive to match that with a practical specification for the technology solution. Anything that helps to speed up the journey to an effective result must be a good thing."

Summary

The AMWA believes that standards are beneficial to both the vendor and the end user. Past standards work has taken too long, and a fresh approach has been welcomed.

To this end, the AMWA is adopting agile development for some new projects to achieve usable results faster than the legacy processes.