



DGI Update: Your Guide to Interoperability & Conformance Test Services

April 2008

AS4: Secure B2B Document Exchange Using Web Services

Almost two years ago, DGI really began thinking hard about the future of B2B messaging (particularly secure document transfer) using Web services (WS). We knew that obstacles were slowing the adoption of WS in the B2B messaging domain with reports of lingering interoperability problems. So the question we were really asking was, "How interoperable is the common WS-* stack implementations and, more specifically, the foundational work covered by WS-I's Basic Profile, Basic Security Profile, and Attachments Profile?" As DGI spoke to industry leaders, it became apparent that there was a strong interest in WS and a demand for something simple like AS2 to provide guidance for doing B2B messaging over a composition of WS-* specifications. Whatever was out there was either very complicated, business process or document/WSDL-centric, or just underspecified.

So last spring DGI invited a large group of B2B vendors to come together for a series of technical discussions to explore what WS B2B might look like. I should note that even at this point we weren't *looking* to mimic AS2 functionality -- just realizing we needed something simpler than what some other B2B standards were doing with Web services. Those series of technical discussions produced a high level list of business functionality and we arrived at some general consensus on some WS functionality around packaging, security, non-repudiation, and error handling.

In reviewing these requirements after consensus, the interested parties realized that there was quite a bit of common ground with the AS2 functional requirements, and thus, we began to colloquially refer to the WS B2B discussions as *AS4*. Furthermore, we decided we needed an official standard to implement and test from, so we set about finding a standards body to hand over our requirements and

support our efforts to develop and maintain an AS4 specification. At the same time, we also noticed that we had some common ground with the recent publication of the OASIS-sponsored ebMS 3.0 specification. ebMS 3.0 represented the next generation of ebXML messaging and was based on the WS-* specification stack and WS-I profiles. Within our vendor group we were able to agree that perhaps the best plan was to profile the ebMS 3.0 specification as an "entry-level on-ramp" to Web services B2B, and we approached the OASIS ebXML Messaging Services TC with our proposal. In mid-March, the TC officially created an AS4 subcommittee with the express purpose of developing a Conformance Profile to ebMS 3.0 that will map and extend the existing AS2 functional requirements onto the WS platform in order to provide standardized guidance for a simplified secure and document-agnostic transfer of B2B payloads using Web services. The extensible nature of Web services via the WS-* stacks gives us great freedom and is expanding and adding features in the future by composing other WS-* specifications.

There is much competition between various WS standards and groups, and we decided to not compete with the ebMS 3.0 effort, but instead to join forces in an effort to help drive WS adoption in the B2B marketplace. By aligning this effort as an ebMS 3.0 Profile, it makes clear a number of opportunities:

- AS4 provides the marketplace with an entry-level on-ramp to begin utilizing their internal SOA platforms for external B2B messaging without taking on some of the more complicated aspects of WS.
- AS4 serves to jump-start ebMS 3.0 implementations by constraining and paring down the options for vendors to implement, as well as provide some specific guidance for using WS as a secure, document-agnostic B2B messaging platform.
- It provides the ebXML Messaging Services TC at OASIS a working group to work on expanding and specifying guidance in the areas of compression, very large message support, and others.
- In time DGI would look to expand its Interop certification program to include not just AS4, but full ebMS 3.0 implementations as they become commercially deployed.
- By having a subset of ebMS 3.0 officially profiled as AS4, it makes the whole approach to WS B2B more open.

One of the main target markets for AS4 is domains that have or are interested in leveraging SOA infrastructures for doing B2B messaging.

While some traditional AS2 markets might consider migrating to Web services, we are mainly looking to move into new domains. We've seen interest in healthcare, electronics, retail, and of course, the automotive group which already has a history with ebMS.

For this new AS4 initiative, the testing and certification program will be a new approach for DGI and the implementing vendors. Briefly, the development of AS4 will be happening on its own OASIS mailing list (and weekly calls), so parties interested in implementation will be invited to closely follow the profile development. We think this will happen quickly and that by Summer 2008, early prototypes around some key features will begin to emerge. Given the vendor's success with AS2, they understand the importance of interoperable solutions and consider interoperability testing an essential part of this work. We also plan to leverage the work of DGI's patented automation testing technology, InSitu in the early stages to make AS4 Interoperability efficient and less laborious.

Drummond Group's plan is for interested software companies to ***collaboratively*** build and test their implementations as the standard develops so that certification is not a single event that happens at some point in the distant future (as in a waterfall type paradigm), but more of an iterative implement and test paradigm. In this case, the tests might go for a week or so periodically as we define various aspects of the profile. This is an attempt to avoid a *six month debug phase* for a new specification that we've experienced in the past. The end result will be that the release of the AS4 standard will closely be followed with easily implementable and interoperable products.

DGI is planning a webcast with more information about the AS4 initiative. Contact Joani Hughes at joani@drummondgroup.com if you are interested in attending the webcast or if you would like more information about AS4.