

## **Case Study – XML Composer**

### **The Roads and Traffic Authority of New South Wales, Australia**

***By Michael O'Brien, DRIVES Architect***

The Roads and Traffic Authority of NSW is responsible for the maintaining the data about drivers and vehicle registration for the state of New South Wales in Australia.

On 11 April 2005, the RTA released into production a set of 11 Web Services to allow other government agencies to use the RTA as a service bureau to validate Proof of Identity, capture Facial Images and print Photo Identification Cards. These services allow other government identification cards, e.g. Crane Operator Licences, to be produced with the same level of security and of identification protection as driver licences.

Three key development teams were involved in the project, primarily divided by technology - Gen, Java and C. A critical early decision was to use XML Composer to decode the incoming XML requests and produce the outgoing XML responses (and to produce outgoing XML requests and decode the incoming XML responses). This decision meant that the Gen team was responsible for the bulk of the custom project work, with the Java and C teams responsible for the infrastructure of transportation layers for inbound and outbound messages. Additional message types would then require coordination from only one team.

Several challenges were overcome in the project. Most importantly was the need to send large images (up to 100K) in messages. Fortunately, Canam was able to quickly extend XML Composer and allow us to deal with images as repeating group views of 4K fields (similar to the way that `xml_buffer` is used for dealing with XML messages greater than 4K in length).

A key lesson for us was to be aware of the potential for overly complex schemas. When using parsers, designers often over complicate messages. In order to keep processing straightforward in Gen, we would recommend using simple constructs. We ended up with multiple group views at the same level and group views nested three deep. While this did work, it was pushing the bounds of code complexity and memory usage, but was required because the other government agency required print messages to support multiple print requests.

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## Footnote

*Since this case study was originally written, later versions of XML Composer now take advantage of the AllFusion® Gen plug-in capability to provide seamless, bi-directional integration between the two tools.*

*XML Composer is now capable of being registered as an AllFusion® Gen plug-in which allows the XML Composer toolset to be launched from within AllFusion® Gen. Once XML Composer has been launched in this fashion, a new XML Handler can be easily created based upon the AllFusion® Gen action diagram views.*

*The XML Composer Plug-in capability also allows the current AllFusion® Gen model to be interrogated in order to identify and select candidate external action blocks to be used as the starting point for a new XML Handler.*