A premise behind the Open Architecture system is to have a single set of hardware and software standards across the test industry, allowing instrumentation to be exchanged between ATE supplier boundaries. Will the ATE suppliers cooperate to set and maintain these standards while maintaining competition? Perhaps! But does it matter? Is there a sufficient number of third party suppliers to support multiple Open Architectures?

For a customer the Open Architecture concept seems great, however, it is unknown whether it will provide a reduction in the overall cost of test. For instance, an advantage of an Open Architecture is to be flexible and scalable to reduce total platform replacements. However, flexibility and system scaling introduces complexity which tends to be at odds with cost. Thus an Open Architecture solution is likely to be more expensive than a focused solution for a given application. Can competition from third party suppliers and fewer platform replacements offset the added cost for flexibility and system scaling? Does the Open Architecture allow for upgrading specific features within an instrument, or does the complete instrument have to be replaced? For example, increasing scan memory without replacing the entire instrument is cost efficient. Likewise, replacement of Timing & Format or Pin Electronics to support better edge placement accuracy or smaller pulse widths without a total instrument replacement helps to manage the cost of system upgrades. Bottom line, how painful is it to enhance or upgrade the hardware.

For an Open Architecture ATE System approach to succeed, it must provide ongoing applications support, reliability, maintainability and integration that equals or surpasses today’s services currently supplied by the ATE companies, regardless of whether or not third party instrument designs are involved. Expectations of an Open Architecture System may include calibration & diagnostics to be self contained within the instrument whenever possible, and a user friendly load board technique when necessary. An Open Architecture System should support the possibility of data flow between instrumentation. This would enable an instrument to share or borrow resources from neighboring instruments or allow it to service a greater number of pins to the Device Under Test. The Open Architecture System should enable an overall reduction in the cost of test. The question is, will it?