

“Open” Telephony Solutions: Does Reality Bite?

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Over the past decade, an architectural vision for contact centers has formed around open systems with “plug and play” modules that are glued together with standards-based interfaces. The routing logic in the traditional telephone switch (e.g., PBX, ACD) is the heart of this initiative. The architecture extracts the routing logic from the proprietary voice switching fabric, and transforms it into an open, interoperable application that also communicates with business applications, data repositories, and web based infrastructure. The end game is an environment characterized by rich functionality, choice, and competitive pricing. It’s a compelling picture, but how close to reality is it?

The CTI Link as the Great Enabler

The linchpin for the vision is the “open” Computer Telephony Integration (CTI) link, enabling the routing application of one component to control the switching matrix of another. CTI came on the scene in the late 1980s as a mechanism through which an external application communicated with the voice switching platform. The earliest CTI application took caller information from the switch — e.g., the dialed number and the calling party’s phone number or account number — and used it to “pop” screens on service representatives’ desktops.

Thereafter, some CTI applications became part of call routing decisions, often using data look-ups on back end systems to get specific information about each customer before directing calls to the right queues or representatives. They supported integrated reporting tools to consolidate management information from a variety of sources. And the routing logic was sometimes extended to other media, such as email, text chat, co-browsing, and fax.

Third party vendors, such as Genesys and Cisco, productized their CTI applications, making it easy to integrate their offerings with a variety of switch, IVR, web architectures, and database systems. Customers were no longer hostage to traditional switch vendors, and could turn to “application developers” to bring advanced multimedia routing and reporting features into their contact center operations.

When “Open” Isn’t Really Open

Unfortunately, external applications can only leverage the features that switch vendors open up to the outside world via their proprietary CTI links. Call control entails more than data queries and call transfers. When agents are unavailable, calls must be presented with music and/or queue announcements, and then routed to agents as soon as they become available. Features such as auto-answer and programmable whisper tones may also come into play.

Since today’s CTI links limit the use of switch resources for queue treatment, CTI solution providers are forced to resort to workarounds. Some CTI vendors use external resources, such as IVR platforms, to perform this function. Others continue to rely on the switch for call treatment, and manage a complex rotation between the switch and the CTI application to control the call.

For true call control, CTI applications need access to some switch functions for which the switch vendors own the “right of way.” But if the switch vendors open up all of their features, they

will transform their expensive platforms into “dumb” switches controlled by someone else’s “smart” applications. There is little margin in selling “dumb” switches.

The switch vendors hope to meet the market demand for openness and interoperability by porting their switching logic onto external, non-proprietary servers, running their own application code. Some of these solutions communicate with the switch using a proprietary link that is not available to the outside world. Others use a publicly supported CTI link for most common features, but reveal additional call control features only to their own platform. These vendor-specific adjunct servers are capable of performing more advanced contact routing than the switch alone can support, while also supporting CTI features such as screen pop, data directed routing, and consolidated reporting. In short, they want to provide a competitive CTI platform that uniquely leverages the call control features of their own switch.

Vision versus Reality

Part of the architectural vision has been realized. Call control and reporting functions have been extracted from the switching platforms, and customers reap the benefits of having a more robust, flexible architecture for contact management. Interoperability between the traditional switch and enterprise applications is improving, but switches are not necessarily on a path to become more open to third party applications. So it’s unclear whether or not the “plug and play” part of the vision will become reality for all vendors.

In the near term, customers must be vigilant when selecting a CTI vendor. Customers can’t just describe their requirements, and be satisfied with a simple statement of compliance. It’s critical to comprehend HOW prospective vendors meet their requirements. What limitations are inherent in the solution — either in feature support, or in access to switch capabilities? What are the workarounds? How will the switching interface (or the relationship between the vendors) evolve? What will happen as VoIP starts to play a bigger role in the infrastructure? What other possibilities are open (or impaired) in the future as the result of near term decisions? And if the switch vendor limits the features available on its CTI link to a third party vendor and compromises the solution you might prefer, ask the switch vendor "Why?"

Third party, switch-agnostic solutions are still pushing the edge of the “open systems” envelope. Switch vendors are re-inventing their proprietary offerings with feature rich, flexible, external routing engines that are tightly linked to the switching matrix. And customers who are stuck in the middle must decide what tradeoffs make sense for their business in both the short and long term.

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