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Volume 17, Issue 6

Beyond Connectivity: An Industry Scorecard

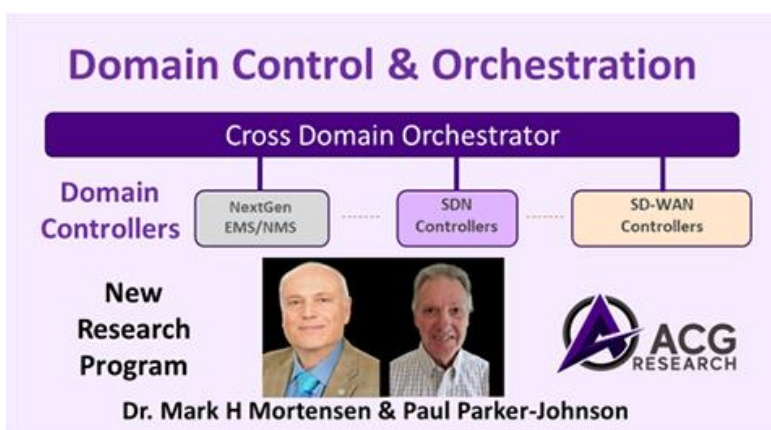
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The transformation of communications service providers (CSPs) to digital service providers (DSPs) has been going on for the last decade, with plenty more progress to come on advancing digitalized services, digitalized operations, and digitalized networks. This article focuses on the digitalized services beyond basic connectivity, scoring where they are now and predicting where they will expand the most.



Transition: CSP to DSP

All three aspects of the transition to digital service providers are important to a robust future for today's communications service providers. The transition has been underway for nearly a decade, with another decade to go. Digitalization of the network—virtualizing much of the network elements and putting them under software control—is proceeding more slowly than expected, but steadily. Digitalizing the user experience for consumers, business customers, and the DSP employees themselves has made significant progress in customer-facing operations, while attention is now turning toward network operations automation.



The third area—offering digitalized services—has turned out to be more difficult, with many potential avenues fraught with commercial risk. Several potential paths have already shown themselves to be dead ends. Several are active and successful. Many others are showing great potential, although there never has been a large “killer application” that we all hoped for. Here is the scorecard as one analyst sees it.

Recent digitalized services

Over the last decade, a few digitalized services have been introduced. Some have been successful; others have been disappointments. In the table below, I show our score of how well the industry has done in making these services an important part of the service portfolios (see Figure 1).

Recent Digitalized Services	Score out of 10	Prognosis
SD-WAN	7	Excellent
5G	6	Excellent
Managed Security Services	5	Very Good
Managed IT Services	4	Good
Digital Content	3	Unknown
Global Offerings	2	Unknown
Double-Sided Business Models	1	Poor
Utility Computing Offerings	1	Poor

Figure 1: Digitalized services scorecard
[click to enlarge](#)

SD-WAN – 7 out of 10 – Excellent Potential

Software-defined wide area networking (SD-WAN) was already growing well when the work-at-home explosion hit. The ability for enterprise customers to define their connectivity between their computing resources (whether on-premises or in a data center) and their branch offices, and then further to their remote workers, has proven itself to be of immense value. The recent incorporation of advanced security services (called “SASE”) is further expanding this opportunity. This is a major near-term opportunity.

5G Connectivity – 6 out of 10 Excellent Potential

The explosion of 5G technology is happening worldwide and represents a large opportunity to support many of the other services in this list. Its future is very bright.

Managed Security Services – 5 out of 10 Very Good Potential

DSPs are well-trusted by their enterprise clients and have shown themselves to be credible managed security service providers (MSSPs). By providing security services to enterprise networks, they are expanding their reach into the overall managed IT services arena.

Managed IT Services – 3 out of 10 – Good Potential

Some DSPs, most notably Colt and BT in the UK, have successfully become providers of multiple IT services to their enterprise clients. These range from managing an enterprise's private network to providing customer care platforms for an enterprise's call centers. The potential is large, especially for those DSPs that have large mobile workforces, to become major IT services providers, displacing many of the smaller players that serve small and medium enterprises.

Digital Content – 3 out of 10 – Unknown Potential

Several large DSPs, most notably AT&T and Comcast in the US, have made large acquisitions to control digital content assets. So far, however, they have not been able to gain synergy between their connectivity and content assets. With the increasing competition among other players, including web-scalers such as Netflix, the prognosis for digital content being a driver of growth is a question mark.

Global Offerings – 2 out of 10 – Unknown Potential

Early in the development of the digital economy concept, I wondered if CSPs would expand beyond their current geographic boundaries to provide more comprehensive offerings to multinational enterprises. So far, there have been few successful examples of this, with multinational companies and overlay service providers negotiating with multiple geographically bound CSPs. However, we are starting to see some service chaining that extends beyond a DSP's geographic boundaries, as well as experimentation with exchanges, making this a potential winner in the future as DSPs offer their networks more as platforms with APIs (often called network-as-a-service arrangements).

Double-Sided Business Models – 1 out of 10 – Poor Potential

There was a lot of excitement about the double-sided business model (also sometimes called the two-sided business model or platform business model) for enterprises, but it fizzled, for the most part. The concept was that the CSPs would provide more than just communications between buyer and seller (via text, voice, or data), deriving a part of the benefit of the transaction. Most often, this meant providing a catalog of items to the buyer and the transaction processing. Amazon does this, beyond selling the items itself. CSPs do, too, with accessories for their phones and some other e-commerce items. But the model has not worked out well for most and has limited potential.

Utility Computing – 1 out of 10 – Poor Potential

Early in the growth of the computing utilities, it seemed natural that CSPs would become utility computing providers. They had large data centers already, maintain good relationships with corporate clients, and provide the connectivity already. Plus, they were experts at providing complex technical operations to scale. But they were slow, while other more computing-savvy players such as Amazon, Google, IBM, Microsoft, and others grew their computing businesses quickly. The business potential for the DSPs is small.

Emerging Digitalized Services

The next round of digitalized services is now reasonably understood. It remains to be seen how quickly the DSPs will attempt to capitalize.

Emerging Digitalized Services	Score out of 10	Prognosis
MEC	4	Very Good
Mobile Video	3	Excellent
Private 5G Networking	3	Excellent
Special Events Packages	3	Very Good
IoT Platforms	3	Moderate
Bundled Compute, Storage, & Communications	2	Good
Home Networking	1	Very Good
Low-Latency Gaming	1	Very Good

Figure 2: Emerging digitalized services scorecard
[click to enlarge](#)

MEC – 4 out of 10 – Very Good Potential

Multi-edge computing (MEC), or providing generalized computing resources in the edge of the DSP's network, is a fast-growing service. For internal uses (such as a place for firewalls to run or providing internal content delivery services), it has already been technically successful. The recent announcement of DSP partnerships with the web-scalers, which want computing resources available geographically close to their corporate clients without proliferating multiple small data centers, is providing a boost to the market. The future looks bright.

Mobile Video – 3 out of 10 – Excellent Potential

Consumers *do* want to look at videos on their small screens, much to the surprise of many. The growth potential is huge, although the DSPs may be left with just connectivity.

Private 5G Networking – 3 out of 10 – Excellent Potential

Private 5G networks for industrial use will be a major growth driver for the 5G infrastructure providers. But will the DSPs be able to also capitalize on this trend by providing service such as installation, management, and integration into their larger 5G networks? It remains to be seen.

Special Events Services – 3 out of 10 – Very Good Potential

Providing services for special events, especially with small-cell 5G networks—as well as specialty communications, processing, storage, and content management—represents an important opportunity. But, of course, such arrangements presuppose a return to large mass events.

IoT Platforms – 3 out of 10 – Moderate

Overall, platforms supporting the Internet of Things provide provisioning, support and security for the devices and data collection and processing for the information. So far, few DSPs are getting into the business, leaving it to specialty providers.

Bundled Compute, Storage, and Communications – 2 out of 10 – Good Potential

There is an important and growing need to implement and manage the communications fabric along with the multi-cloud compute and storage platforms. This is being done by service chaining and multi-layer management systems. Managing them as a single entity as a managed service represents a good potential opportunity for DSPs.

Home Networking – 1 out of 10 – Very Good Potential

Some DSPs are already doing significant business in home networking, Comcast being the key example. The growing complexity and importance of these networks with work-at-home represents a good growth opportunity, especially if the cost of these networks and services are subsidized by companies.

Low-Latency Gaming – 1 out of 10 – Very Good Potential

Interactive gaming is already a large industry. The provisioning of specialized communications services that provide low latency for fast response for competitive games and virtual reality represent a particularly good potential for growth.

Future digitalized services

Beyond the above emerging digital services are several others that are taking form, among them slicing-enabled enhanced connectivity that will provide specific, enforceable QoS guarantees; digital transformation fabrics that will do for various industries what IoT platforms do for IoT; and even DSPs shifting to being the overall providers of digital enablement of specific industries as they partner with industry-specific experts. Their potential is large, with the overall opportunities about three times the communications portion of the market.

So, what's next?

Most of the key opportunities described here are, not surprisingly, in the B2B arena, where the future growth of the DSPs primarily lies. Will the emerging DSPs be happy with enhanced connectivity? Or will they partner with, acquire, or develop their expertise in the other areas to expand their markets? Yes, they will. But the extent to which they are successful remains to be seen.