Three Big Telco Predictions for 2021

Chassis-based systems will end, new vendors will enter the market, and access networks will be the focus of innovation.

By Pravin S. Bhandarkar / *RtBrick*

2020 wasn't the sort of year anyone would have predicted. Just as many aspects of people's lives were disrupted by the pandemic, so too was the telecom industry, which has settled into a "new normal."

As social videoconferencing massively increased and businesses dispersed operations to remote workers, internet connectivity reached whole new levels. At the same time, some underlying technology shifts didn't stop. Given these factors, what might be in store for the rest of 2021?

DEATH OF THE CHASSIS-BASED SYSTEM

For a while now, telcos have been clear about their desire to go "cloud-native": to follow the hyperscalers and become more agile and efficient. With more traffic to deliver than ever before – especially during the pandemic and with no expected increase in revenue from subscribers – something has to change.

This is the year the shift toward cloud-native networking will start. We've already seen adoption in the mobile RAN, for example, from players such as Rakuten. In 2021, expect to see it in fixed networks, too.

This year, carriers will start building disaggregated networks, giving them more choice, more programmability and lower costs. Telecom Infra Project (TIP) has called on the telecom industry to develop an open broadband network gateway, which is broadband routing software that runs on open hardware. This is outlined in a paper authored by BT, Deutsche Telekom, Telefonica and Vodafone – quite an impressive lineup of carriers.

The rise of cloud-native networking means that the days of monolithic chassis-based systems, with software and hardware from the same vendor, are over.

TURNING POINT FOR VENDOR CHOICE

In the telco equipment space, only a handful of big players are left standing: Cisco, Ericsson, Huawei, Juniper, Nokia … it's a pretty short list. The national security concerns Huawei raised have narrowed the field even further. Lack of vendor choice has become a huge issue and has stifled innovation in

telco technology. Very little has changed in infrastructure technology since the arrival of IP, and with higher and higher barriers to entry, it has seemed set to stay that way. But 2021 will be the turning point. Why? In short, because of the rise of software-based solutions and disaggregated networking.

For the first time in decades, providing solutions that compete with established vendors is viable for innovative new software and hardware companies. More than that, traditional vendors often are reluctant to eat into their established business models – with their high margins and long lock-in cycles – by being disruptive themselves. Expect to see some new kids on the block and some big projects going their way.

ACCESS NETWORK PAIN POINT

When internet traffic first hit carrier networks, the biggest pain point was in network cores. Vendors raced to develop ever-faster routers and higher-capacity optical systems to meet demands. Then the congestion flared up in the last mile, when subscribers found their broadband lines creaking under the strain of triple-play services and online TV.

These days, the core is insulated by the arrival of content delivery networks (CDNs), which serve up copies of the most popular content from servers embedded around network edges. Investments in fiber to the cabinet and to the home have alleviated the last-mile challenge, with 5G set to tackle mobile limitations.

This brings us to the biggest unsolved pain point – the access network. This is the part of the network that delivers all traffic from CDN servers to the last mile. All online TV traffic, along with surging traffic from people working at home and new machine-to-machine traffic, must cross the access network to reach the end consumer.

As 2021 progresses, it's becoming increasingly clear that the access network is going to be a focus for new innovation because it will need to keep up with increasing demands. ❖

Pravin S. Bhandarkar is the CEO at RtBrick, which provides cloud-native routing software for carrier networks.