



Just A Moment...
IT Commentary

All-IP Networks?

by Leon A. Enriquez

When the Internet phenomenon was unleashed on the predominantly circuit-switched world of telecommunications, the prevailing hype of the day favoured all things IP, a seemingly infectious buzz-term that means “Internet Protocol”. Yes, at that time, it seemed that the future of telecommunications networks was going to be dominated by IP technology. Apparently, packet-based communications was going to be the way ahead. Not surprisingly, many IP advocates hedged their future on a fully IP-based infrastructure.

Today, about four years later, the promise land of an all-IP network infrastructure for the telecommunications service provider has not materialised. The question that now arises is an obvious one – Why?

Surely, the far-reaching consequences of the World Wide Web were an astounding hallmark of the rise of data dominance. Therefore, the compelling rationale was the reach of the computing power of data networks overtaking voice traffic. Just the sheer ubiquity exemplified the dynamics of a pervasive protocol at work, thus driving massive data throughput on circuit-switched legacy infrastructures.

By all predictions, the surge of data traffic was growing at an exponential rate that seemed to generally outpace the traditional voice traffic — which had been the exclusive reason for the telecommunications networks thus far. Was it any surprise then that the proponents of an IP world were even predicting the demise of the PSTN (Public Switched Telephone Network) network infrastructure?

Consider today’s situation — and the trends seemed to have turned around — the scenario is not as simple as we would have imagined possible at that time. What has changed? This is especially so for voice which has made a turnaround of substantial magnitude.



Although the Internet has wrought a major impact as an industry trend, what we could not have foreseen has come to light — the rise of the mobile, wireless voice. It's no small wonder that wireless voice shares centrestage as IP with such ideas as WAP (Wireless Application Protocol), voice portals and so forth. Some even pronounce the wireless voice with the awe reserved for the revolution that heralded the World Wide Web and the Net phenomenon!

As a reality check, the rise of mobile voice has in a great measure served to decimate the excitement over data outstripping voice communications. At the same time, it has debunked the analysts' assumptions and predictions upon which the success of an IP-only infrastructure were based.

For practical purposes, in today's environment, mobile operators continue to leverage their present infrastructure to create new revenue streams based on voice services. In addition, because of recent breakthroughs in voice processing technology, voice can now co-exist with data interfaces. Compare this present day situation to the sharp contrast of previously popular thinking that IP and Internet services would rely virtually on wireline services.

So what have we got today? Does it seem to point towards a post-IP phase? It isn't because IP is not important anymore. Yet, the alternative connectivity in the telecommunications world would be dominated not by an all-IP network infrastructure but one where voice has a special part to play.

In fact, the simple logic of attempting to bring the power of the Internet and the intuitiveness of voice closer together remains critical. But the reality of the post-IP environment has caused even the definition of convergence to be changed somewhat.

Here, in the post-IP space, the term convergence seems to encompass a much broader range of elements. For example, convergence had a reference to the merging of different access technologies for the Internet, the merging of different core backbone networks to transport voice and data, and the merging of voice and data to deliver a wholly new experience to the end user. This has occurred but in a totally unexpected turn of events.

In simple terms, the challenge for telecommunications service providers will be to deliver services that can be accessed just as easily by phone, mobile device, PC or other intelligent devices, and that can be deployed as simply over voice, data or fully integrated networks.



Moreover, these services must offer the same service experience to the end user regardless of which network they are deployed upon. More importantly, delivery must be dependent on the combination of voice and data in ways that deliver the best possible functionality that both worlds can offer.

Thus, today's scenario is more about the co-existence of networks for both voice and IP rather than just the previously thought of all-IP perspective. Who would have thought that mobile voice would change the rules again despite the onslaught of data by the Internet wave? This is the way the outcome of technology deployments in a real-life scenario is somewhat unpredictable, no matter what the analysts say.

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