

DELINKING ACCESS FROM NETWORKS THROUGH WIFI ACCESS NETWORK INTERFACE WILL ALLOW ACCESS PROVIDERS—FROM MVNOs TO STREET- AND VILLAGE-LEVEL ENTREPRENEURS—TO THRIVE

# Can WANI be to telecom what UPI is to payments?

**A**N EDITORIAL IN one of the pink papers estimates the valuation of Flipkart-subsidary PhonePe at ~\$10 billion, and says a major reason for its success is Aadhaar-associated India Stack and United Payments Interface (UPI). It highlights the potential of such a development in encouraging Indian start-ups beyond copycat efforts, and creating genuine value. It is encouraging that the government's role in creating and promoting technology, while common in the US, is slowly being recognised in India.

India's telecom sector is fighting for survival. As telcos lobby for minor and major reliefs, the need of the hour is to ensure that the current struggles do not affect India's pace of innovation. UPI's success was largely due to delinking payment from banking. A UPI-like techno-strategic innovation would not only help the sector but also secure India's future in the post-5G and ubiquitous-IoT disruptive world.

The Indian telecom regulator, Trai, recently proposed setting up a Wifi Access Network Interface (WANI) architecture with the ability to delink telecom infrastructure from access services. This bold vision, coupled with a few modifications, can easily be extended to provide access across technologies.

WANI (as recommended by Trai) provides for seamless authentication within the WiFi world. It will allow users from one Wi-Fi network to "roam" on another without need for any repeated authentication. Apart from the convenience of one-time and one-stop authentication, the additional benefit of seamlessness is greater security. Today, many hotspots operate on the principle of "OTP" (one-time passwords) which provide access for a limited time. Such hazards will be done away with the WANI architecture.

With some minor modifications, WANI could provide access across technologies in a truly seamless manner. As an example, connecting operators via an exchange will provide for seamless connectivity, in addition to the above-mentioned authentication. WANI 2.0 could then support device-to-device communication, which could be extremely useful in the IoT space. India could, thus, steal a march over several other countries in designing and imple-

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**RAMACHANDRAN**

President, Broadband India Forum & honorary fellow of the IET (London). Views are personal



menting truly ubiquitous multi-vendor IoT. Establishing WANI across networks is a much simpler exercise than the one undertaken by UPI, which involved connecting across legacy systems of many banks, as the number of network providers are limited and also because they are already used to inter-connecting for seamless roaming.

WANI 2.0 will provide an alternate connection to private IoT networks, so they can enjoy ubiquitous connection with the same levels of security as within private networks. While countries like China are defining standards for IoT, India can continue to rely on its core strengths of using open standards for a multitude of proprietary IoT networks so long as they use WANI standards for inter-operations. Taking the digital payments analogy further, just as any payment technology or standard is allowed in India so long as it can interface with UPI for inter-operability, WANI can ensure India maintains its technological sovereignty while ensuring that our business/consumer requirements are met in an open and transparent manner.

From a business model perspective, delinking access from networks will allow for a proliferation of access providers—from big branded MVNOs to street- and village-level entrepreneurs. This will also benefit operators by allowing them to focus on providing quality services in limited areas rather than spreading themselves thin. From a consumer perspective, quality will be enhanced while competition will help lower the price thresholds. Studies estimate a positive impact of >\$10 billion annually to the Indian economy.

Most industries face disruption every decade or two, but the telecom sector reinvents itself every 3-4 years, given its technological evolution. Unlike the rapid obsolescence of hardware-based technologies, WANI can be further scaled to play a lead role in adapting to emerging

technologies like 5G in defining "network slicing" standards (essentially, a mechanism which determines in which component of the network a certain information will be stored). Given the growing concerns about data security and individual privacy, current network slicing discussions are a long way from being implemented. Ensuring adherence to WANI architecture will enable India to adopt network slicing and other advanced features of 5G while maintaining the security and privacy of its citizenry.

Few issues that WANI architecture and its later iterations can solve are:

**Separation of access from core network can be provided through virtual network operators (VNOs):** WANI is a good example of unbundling/disaggregation—separation of the access from the underlying network through its platform, which could be termed as a perfect 'liberalisation of access'. Again, drawing a parallel with UPI, where digital wallets co-exist with banks, light touch regulation with simpler methods of online registration (as recommended by Trai) can enable many small entrepreneurs become aggregators. As was seen in payments, many larger wallet companies later became payment banks. Such a policy regime will not only enable proliferation of aggregators, but will also allow the larger ones to eventually become VNOs.

**India setting its own IoT standards for multi-vendor IoT like the rest of the world:** Like other countries, India too will be working on setting standards for multi-vendor IoT (mvIoT) platforms and seamless communication across net-

works. While that helps, interfacing any mvIoT platform with WANI 2.0 will benefit IoT systems in functioning seamlessly by accessing nation-wide network across multiple technologies. This will not only enable Indian IoT systems to be mobile but also allow users of IoT systems to economically access alternate networks—very essential in a country like ours, where networks lack ubiquity either in terms of coverage or quality. Access to a nation-wide ubiquitous network will also encourage global IoT providers to comply with Indian standards, much like global payment wallets did with UPI.

**WANI will disrupt an already fragile ecosystem:** Incumbent players across the telecom ecosystem would certainly raise issues regarding the timing and the disruption this will cause. UPI has proven similar fears from banks were unfounded. Additionally, the cost-benefits of seamlessly connecting to alternate networks like WiFi or IoT will allow operators to save on enormous duplication costs with immediate impact on bottom-lines.

**No reasons to intervene in a lowest-cost market:** India, unlike what is popularly held, doesn't offer one of the cheapest rates for data access globally. The total cost of data includes cost of device, cost to deliver, quality coefficient cost, and cost of access to consumer. Taken holistically, cost to deliver at sustainable levels of quality is over two times higher in India than in the US. It is no small wonder that gaping holes have already appeared in India's telecom story.

The good news is that WANI can perhaps mean a change for telecom similar to how UPI revived the payments industry, which was in the doldrums. Trai's WANI recommendation should be seized without further delay, and architecture should be implemented for unleashing Telecom Revolution 2.0.

Co-authored with **Kartik Raja & Debu Bhattacharya**, Broadband India Forum

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