IPv6+: Defining the Next Generation of the IP Industry

IPv6 Forum

On April 15th, OMDIA, IPv6 Forum, and Huawei jointly held the webinar " Transform your IP network for the 5G and cloud era ". More than 200 experts from operators, vendors, research institutions, and international standards organization registered and participated in the webinar. Prof. Latif Ladid, Founder & President of the IPv6 Forum and Chairman of the ETSI IPv6 Integration Industry Specification Group, shared the latest innovation from IPv6 to IPv6+ and how to better guarantee new services such as autonomous driving, industrial automation, Artificial Intelligence, Virtual and Augmented Reality in 5G and cloud era.

Latif said that the number of Internet nodes will exceed 100 billion in 5G and cloud era. IPv6 is a fundamental ingredient to address current foreseen evolution, mainly by restoring the end to end Internet paradigm with the clean slate design of IPv6. Emerging services, such as self-driving, industrial automation, VR teaching, smart healthcare, smart power grid, and enterprise cloudification, require massive, high-quality, and low latency access. These new services pose higher requirements on network automation, intelligence, and user experience. To tackle those
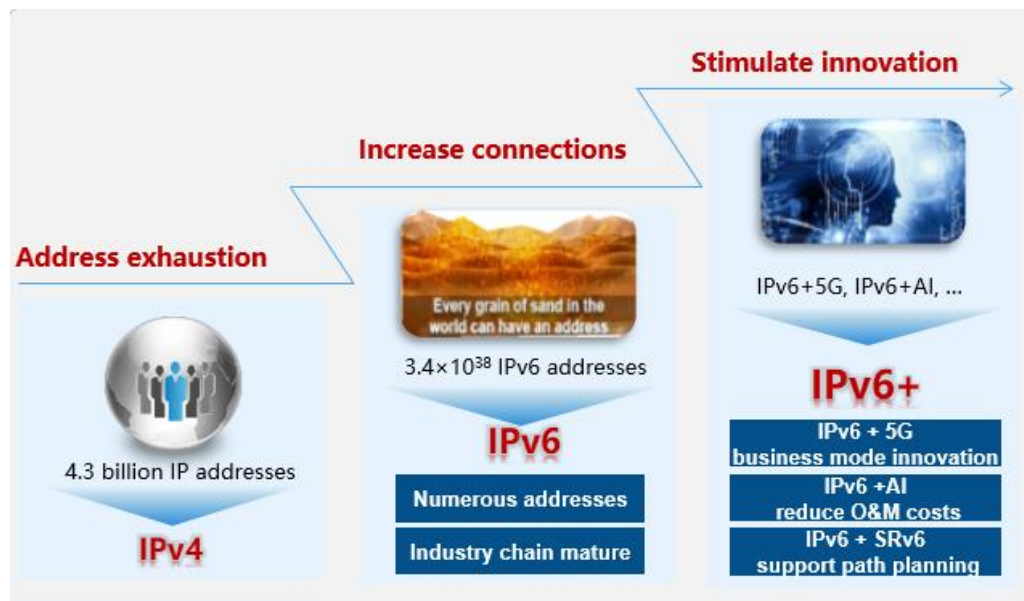
requirements, IPv6 needs to be further combined with other technologies to generate ground-breaking "IPv6+" based networks.

IPv6+ is the next-generation end to end IP network for 5G and cloud era, which uses IPv6+AI+ protocol innovation to support path planning, quick service provisioning, automatic O&M, quality visualization, SLA assurance, and application awareness.

IPv6+ greatly stimulates business model innovation to increases revenue and efficiency. For example, operators use the IPv6+ 5G slicing technology to segment multiple planes on a physical network to carry different types of services and provide dedicated channels for VR, education, healthcare, and power grid, greatly ensuring service experience. Operators transform from offering just bandwidth to offering dynamic differentiated services, empowering new business models, and increasing their revenue streams; IPv6+SRv6 only configures the first and the last ends, accelerates service deployment in various industries, shortening the deployment period from months to days. IPv6+AI improves O&M efficiency in critical and any vertical industries and reduces O&M costs. For example, a bank uses IPv6+AI to detect network deficiencies, locate them and recover services

within a few minutes, improving O&M efficiency by orders of magnitude.

Latif also mentioned that IPv6+ has become a hot topic in the research of international standard organizations. ETSI has started a special and open white paper about IPv6+ in March 2020 and anyone is welcome to contribute and add value to it.

IPv6+, exploiting its end to end model, combined with the new technologies catering for new business innovations, is deepening and empowering IPv6 to become the key base technology of IP networks in 5G and cloud era. The accelerated deployment of IPv6 also provides a broad space for IPv6+ technology, network, and service innovation. It is a common understanding that IPv6+ is a welcome new shot in the arm of IPv6 defining the next generation of the IP industry.