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IPv6-based New Internet empowering Super IoT, Next Generation Wireless, SAT and Aerospace

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Abstract

The IANA central IPv4 address space has been fully depleted back in February 2011 making the deploying of new large-scale IoT networks especially IoT networks not scalable and not what IoT really stands for. Hence the new IP protocol IPv6 has been designed to cater for this already back in the 90s and waiting for its killer apps to take off. 4G was the first one to adopt IPv6 in larger scale.The IPv6 Deployment worldwide is becoming a reality now with some countries achieving more than 50% user penetration, with Belgium (58%) at the top ranking) and reaching double digits v6 coverage on Google IPv6 stats. Many Autonomous Networks (ASN) reach more than 50% with v6 preferred or v6 capable penetration: Over 500 Million users are accessing the Internet over IPv6 and probably not even knowing it.The US was by far the biggest adopter of IPv6 with some 100 Million users, but India has surpassed the US with over 250 M IPv6 users, followed by Germany, Japan and China with some 20 + M users. Worldwide IPv6 deployment has passed the 20 % Google usage bar doubling every 12 months If this trend continues, we should achieve 50% by 2020 which would be the inflection point when the full roll-out of IPv6 becomes a strategic plumbing decision of the networks, a topic that is avoided so far due to many strategic and resources issues (lack of top management decision-making, lack of v6 skilled engineers and v6 deployment best practices, very limited ISP v6 access deployment. The deployment of Carrier-grade NAT is in full swing making networking and user experience more brittle. IPv6 will kick in big time for IoT and 5G to take them to the next level which are "Things-to-Things" beyond the current network of things under the non-IP IoT umbrella as Kevin Ashton coined the term IoT for RFID back in 1990 before even RFID supported the IP stack and still today don't. This is another technology myth or fake news. IoT will suffer immensely under lack of built-in security which together cyber security issues are like always brushed over at this stage due mainly to lack of IPv6 security skills.

Biography:

Prof, Latif Ladid holds the following positions: Founder & President, IPv6 FORUM Emeritus Trustee, Internet Society ,Board Member IPv6 Ready & Enabled Logos Program and Board Member World Summit Award Latif is also a Member of 3GPP PCG (Board, since 1999) 3GPP2 PCG Member of IEEE 5G Initiative Steering Committee (Future Networks Initiative) and IEEE IoT Steering Committee.

Speaker Publications:

1. Latif Ladid, Technical Specification Group Services and System Aspects; Feasibility Study on New Services and Markets Technology Enablers - Enhanced Mobile Broadband; Stage 1 (Release 14), 2016.
2. Latif Ladid, IEEE 1609 - Family of Standards for Wireless Access in Vehicular Environments (WAVE), [online] Available:https://www.standards.its.dot.gov/Factsheets/Factsheet/80.
3. Latif Ladid Quality of Experience for Streaming Services: Measurements, Challenges and Insights. IEEE Access 8: 13341-13361 (2020).
4. Latif Ladid Enhanced Mobile Broadband as Enabler for 5G: Actions from the Framework

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