

IPv6 Policies

By Alain Fiocco, May 13, Zurich, for the Swiss IPv6 Council

The pool of IPv4 addresses, that has sustained the tremendous growth the Internet, over the last 30 years, has been exhausted at global level. Regional level pools are also exhausted in Europe and APAC. Meanwhile, the number of devices to be connected is exploding (19 Billions Internet connected devices by 2016, 50 Billions by 2020), and new applications such as the Internet of Things will only make the situation more challenging.

Sharing scarce Public IPv4 addresses will be used to conserve IPv4 address space. However, such address conservation schema may seriously impact WEB application delivery, end user quality of experience, application innovation, Security and the overall fairness of the environment for reaching end-users anytime, anywhere and on any device. It presents a risk of market distortion and could hinder network neutrality.

The economical impact is uncertain, but more complexity and a fragmented Internet that will be the result of broadly deployed CGN (Carrier Grade NAT) will undoubtedly hinder innovation, emergence of new business models while increasing operational cost. The end-users experience could potentially suffer, and consumers need to be informed, on how Internet service is being delivered.

The market, which has been the fantastic driving force behind the creation and the tremendous growth of the Internet since the 90's, has failed to drive the transition to IPv6, in order to overcome the limitations of the core technology it has relied on. In order to maintain the openness, global reach and market fairness and prevent the fragmentation of the Internet (both Wireline and Wireless) **IPv6 has to be deployed** broadly as soon as possible, while transition technologies such as CGN will maintain connectivity to the legacy applications and content for years to come.

The future of the Internet, as the global end-to-end communication system is at stake. The Internet should remain the open, fair, non-fragmented global communication system that has enable tremendous innovations and new business model, changing for ever the way we all work, live, learn and play.

Alain Fiocco's presentation will explain the technical and business risks and will detail the potential impact of public policies on the deployment of IPv6. He will propose a few examples of public policies or incentives that could create a virtuous circle to accelerate the deployment of IPv6, and manage through this challenging transition.