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APEC TEL IPv6 Guidelines

September 2010

Drafted by APEC DSG

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1. **Objectives**
   The objective of the APEC TEL IPv6 Guidelines is to support the timely deployment of Internet Protocol version 6 (IPv6) in coexistence with IPv4 in APEC member economies in order to facilitate broadband infrastructure, ubiquitous network development, and economic growth.

2. **Background**
   2.1   Need to expand Internet access in the APEC region, in keeping with APEC TELMIN7 Declaration and the goal of universal access to broadband by 2015.
   2.2   Recognition that IPv6 is the path forward to ensure the Internet can continue to expand to serve the needs of APEC economies.
   2.3   Recognition that the available pool of IPv4 addresses is expected to reach exhaustion around 2012. (ensure that this aligns with the TELMIN8 Declaration document text.)
   2.4   Continued reliance on IPv4 will only lead to more complexity and possible degradation of the Internet's key functions without providing the capacity that will be needed in the future.
   2.5   APEC TEL Workshops on IPv6 that explored the issues and determined that positive steps to encourage the transition from IPv4 to IPv6 can be taken by a broad range of stakeholders, in their individual capacities but also in collaboration. These include:
   - Governments and public authorities
   - Private sector entities, including:
     - ISPs
     - Content providers
     - Application developers
     - Network equipment vendors
     - Business users
     - System integrators
   - The Internet technical community, including:
     - Regional Internet Registries
     - Internet standards organizations
     - Civil society groups including the Internet Society, etc.

3. **Guidelines**
   The following guidelines have been developed to encourage and facilitate actions by APEC TEL member economies as appropriate to support effective deployment of IPv6.

Category	Guidelines
Overall planning	Each economy to review the impact of IPv4 address exhaustion and develop an IPv6 deployment plan including deployment strategy, scope, schedule, assessment, public relations (PR), management and coexistence of IPv4, and staff training, while working with all relevant stakeholders, based upon each economy's impression of the importance of IPv6 deployment.

Category	Guidelines
Technical management	- Each economy to assess the possibility of IPv4 and IPv6 co-existence with any desired technology to assure smooth transition from IPv4 to IPv6. - Each economy to assess IPv6 readiness of public ICT system including applications. - Each economy to assess security implication of IPv6 deployment and to adjust their security plans appropriately. - Each economy to work as appropriate with groups such as APNIC and ISOC to further their technical capacity. - Each economy to work within DSG to identify existing test labs in the APEC region and develop plans for information exchanges and cooperation. - Each economy to continue using APEC TEL as a forum to promote information exchange and cooperation between existing test labs in the region and other relevant groups within the APEC economies
Human capacity development	- Each APEC economy to strive to work with experts from the private sector, the Internet technical community, and academic institutions to enhance IPv6 skills of technical staff in relevant entities in their economies, and to exchange information and best practices through APEC TEL. - Each economy, as possible and appropriate, to develop IPv6 e-learning software and/or other training programs which can be shared by other APEC member economies.
International and Cross-Agency Cooperation	- APEC economies to encourage sharing information and best current practices of IPv6 deployment with each other as well as collaborating to enhance IPv6 skills of technical staff. - The government of each economy to encourage information exchange and sharing among its agencies and ministries in order to establish best practices and to avoid duplicating efforts in each IPv6 implementation.
Lead the industry by example in adopting IPv6	Government of each economy to lead IPv6 deployment by example, for instance by ensuring that governments' online presence is accessible by both IPv4 and IPv6 and/or by working with relevant government agencies to advise new procurement requirements as applicable.
Partnership between governments and industry	Each economy to conduct periodic information exchange and other collaboration initiatives with the industry on IPv6 deployment plans.