

Mobile Edge of the Internet Rapidly Moving to IPv6

John Curran, President and CEO





Panelists



John Curran President & CEO, ARIN



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State of IPv6 on Mobile

- According to the Internet Society's 2018 State of IPv6 Deployment, major mobile networks are driving IPv6 adoption
 - Verizon Wireless 84%
 - Sprint 70%
 - T-Mobile USA 93%
 - AT&T Wireless 57%
- 80% of smartphones in the US on the major cellular network operators
- Some mobile networks are taking the step to run IPv6-only to simplify network operations and reduce costs
- <u>https://www.internetsociety.org/resources/2018/state-of-ipv6-deployment-2018/</u>

IPv6 Adoption

Google

- 40.8% of Google traffic in the US
- 26.25% Globally



https://www.google.com/intl/en/ipv6/

IPv6 Adoption

Facebook

- 57.54% of Facebook traffic in the US
- 25.32% Globally



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https://www.akamai.com/us/en/resources/our-thinking/state-of-the-internet-report/state-of-the-internet-ipv6-adoption-visualization.jsp



Mobile & IPv6

Ben Bittfield

Telecom Design Engineer, Sprint January 19, 2020

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Sprint's IPv6 Journey

- Routable IPv4
 - Handsets prior to 2011
 - Data cards, Hot Spot devices, and Wi-Fi Tethering
- Carrier-Grade NAT IPv4
 - Handsets starting in 2011
- Dual Stack IPv4v6
 - Android 2015 2017
 - Apple 2015 2018
- IPv6 + NAT64
 - Android Since Summer 2017
 - Apple Since Fall 2018





Sprint Wireless IP Address Usage



- IPv4 usage peaked in April 2018
- IPv4 address usage declines by 750k/month



Source: Sprint



Sprint Wireless IPv4 vs IPv6 Tonnage Split

• 60% of total wireless traffic is IPv6



Source: Sprint

Mobile IPv6 Growth







Source: Internet Society

https://www.worldipv6launch.org/measurements/

https://www.worldipv6launch.org/new-years-resolution-deploy-ipv6/



Latency Improvements with IPv6



Source: Akamai

https://www.akamai.com/es/es/multimedia/documents/technical-publication/a-case-for-faster-mobile-web-in-cellular-ipv6-networks.pdf

Mobile Performance Benefits On IPv6



United States mobile performance (US)



Source: LinkedIn https://www.linkedin.com/pulse/ipv6-measurements-zaid-ali-kahn/



Brighter Future For All



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