28/09/15

IPv6 in the EE Network

Balbir Singh – Test Manager

VoWifi

IPv6 already in live EE network for VoWifi

Data network implementation on the way

IPv6 Data Network Progress

Test Network

2 to 3 Testers

Validated all Network Systems

Several Months – Important not to underestimate the time required

Implement in live network

Sanity Tests 1 to 2 testers

Trial

Validate IPv6 network

3 Months

20 Triallists

Android Devices

Pilot

Several Hundred Users

Validate business systems as well as customer experience

V4 to V6

The internet is not yet fully IPv6 enabled so we use functionality called 464XLAT which consists of Network and Device implementations to enable an IPV6 SSB to communicate with IPv4 only websites.

Device – CLAT
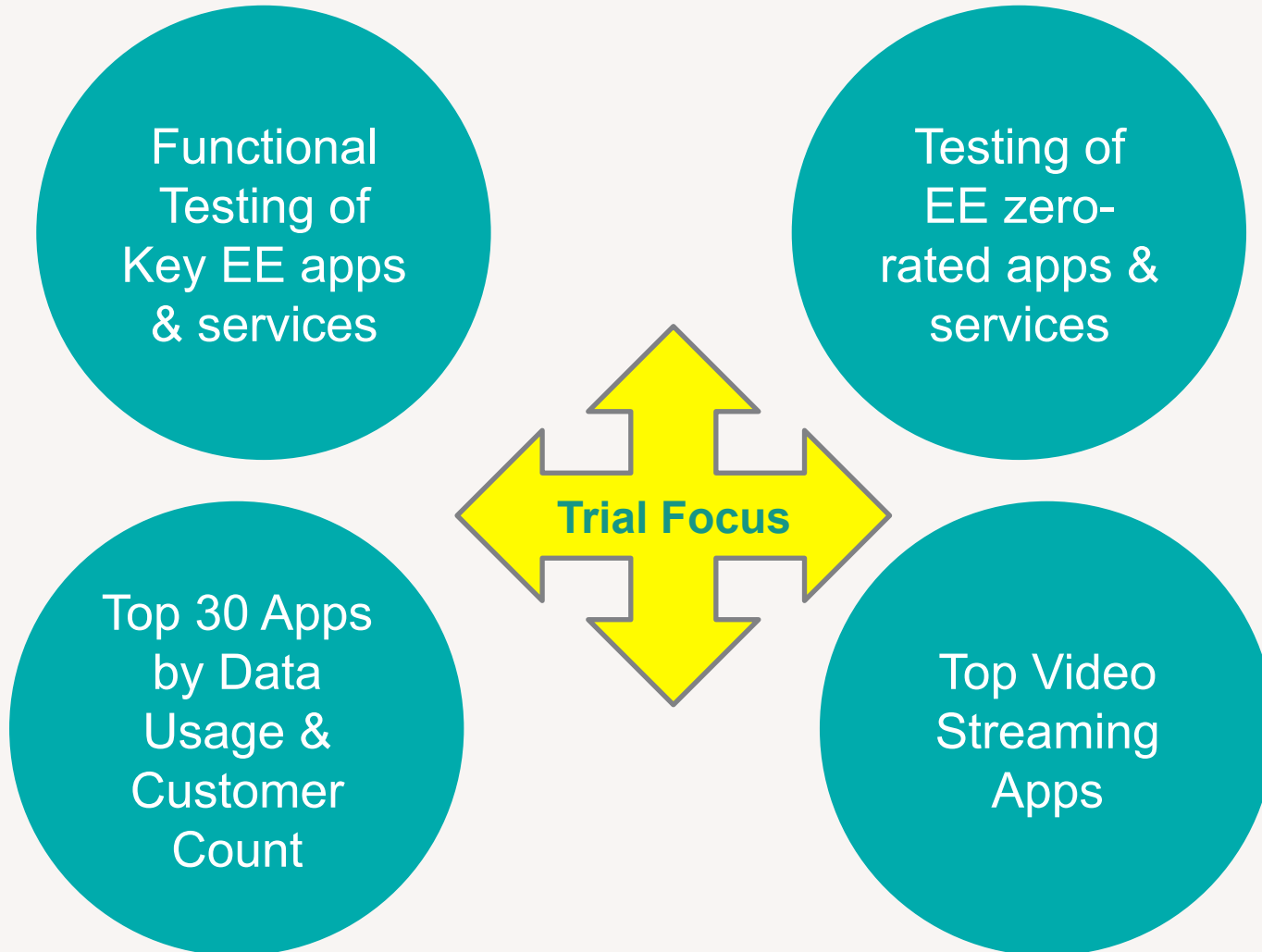
Network – PLAT - DNS64

Network – NAT64

http://www.rfc-editor.org/info/rfc6877

http://www.rfc-editor.org/rfc/rfc7050.txt

Some Network Components updated for IPv6

Function: Networks	Access RAN FEMTO	Core	HSS					
Function: IT	Billing	Provisioning						
Function: Transport	Firewall NAT64	DNS DNS64						
Function: Operations	Monitoring Systems							

IPv6 Technical Trial test approach

Analysis has been carried out on the top 3rd party apps & services used by consumers. Along with this, key EE apps & services with these were tested during the testing phase & the trial

Functional Testing of Key EE apps & services

Testing of EE zero-rated apps & services

Trial Focus

Top 30 Apps by Data Usage & Customer Count

Top Video Streaming Apps

IPv6 Test and Trial Focus

We couldn't test the whole internet but we had a pretty good go at it

Browsing – V4 and V6

EMAIL

Video

Audio

Voice and Messaging

Tethering

Data Storage and File Transfer

Gaming

Mapping

Business

App Stores

Social Networking

Banking

Gambling

Business

Challenges

90% of network components impacted

Take step by step approach and build up the network

Devices

Focus on Android

Outbound Roaming

Network components not with IPv6 on roadmap

e.g, FEMTO (signal box in peoples homes connects to broadband to provide 3G coverage) doesn't currently support IPv6 so workaround implemented to fall back to v4

Useful IPv6 apps & websites

Test-ipv6.com

www.kame.net

Ipv6-test.com

Thinkbroadband.com

Ipv6 & more

EE IPV6 READY

28/09/15

Any Questions