



STC IPv6 Services & Users Statistics

IPv6 National Forum – 7th May, 2015

Eng. Salah S. Almofleh
R&D Expert,
Networks R&D,
Saudi Telecom Company



Outline

 **STC IPv6 Strategy**

 **Key Milestones**

 **STC IPv6 Service Status**

 **Statistics – Saudi Arabia**

 **Statistics – STC**

 **IPv6 on Mobile Apps**

 **Conclusion**

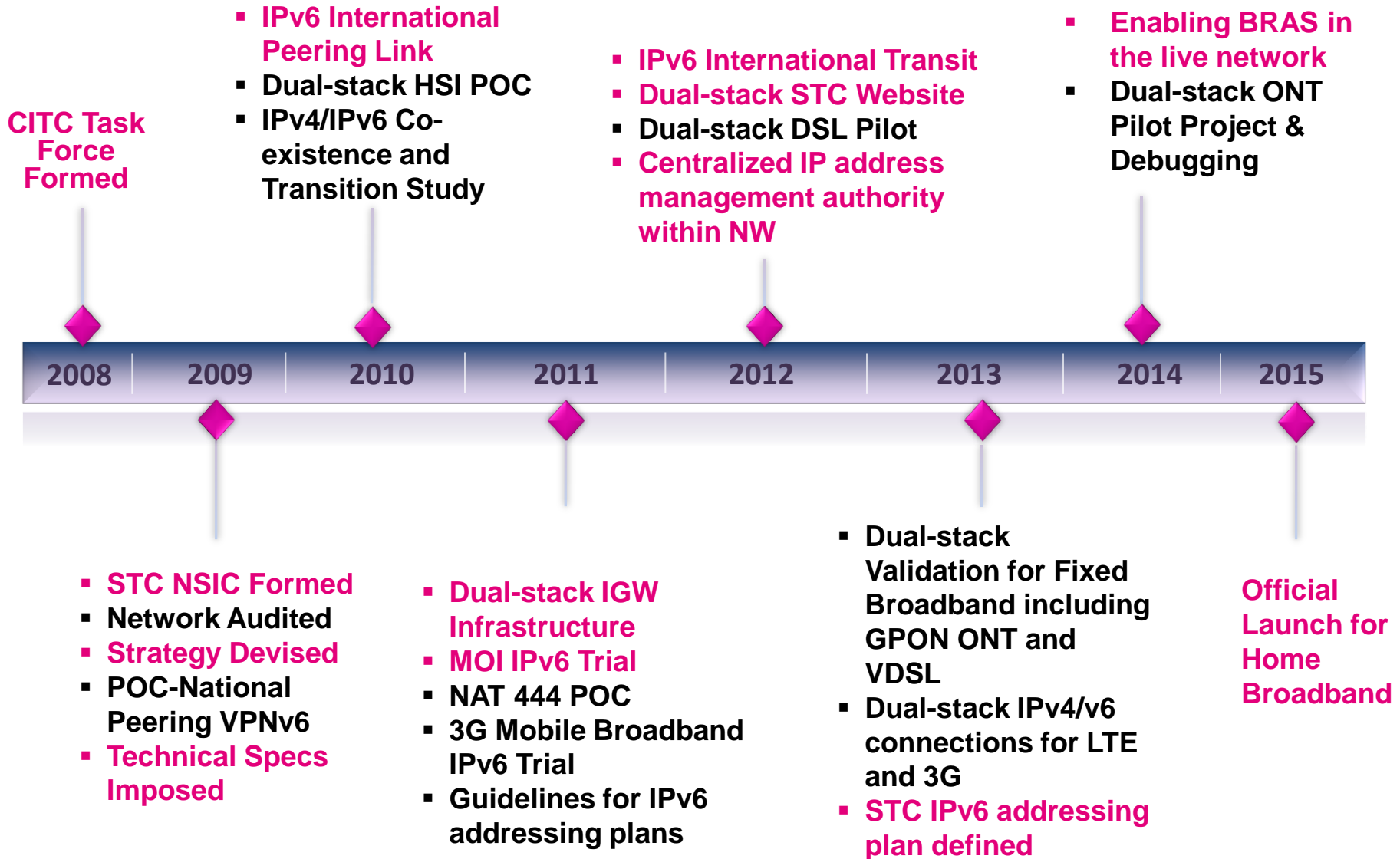


STC IPv6 Strategy

Service-by-Service approach

- **Services impacted by IPv4 exhaustion to adopt IPv6 first (e.g. HSI for fixed and mobile)**
- **Customers demand for IPv6 connectivity (e.g. L3-VPNs, DIA, International Peering)**
- **Wall-gardened services on private IPv4 (e.g. IPTV, VoIP, Mobile VAS) – needs business case**

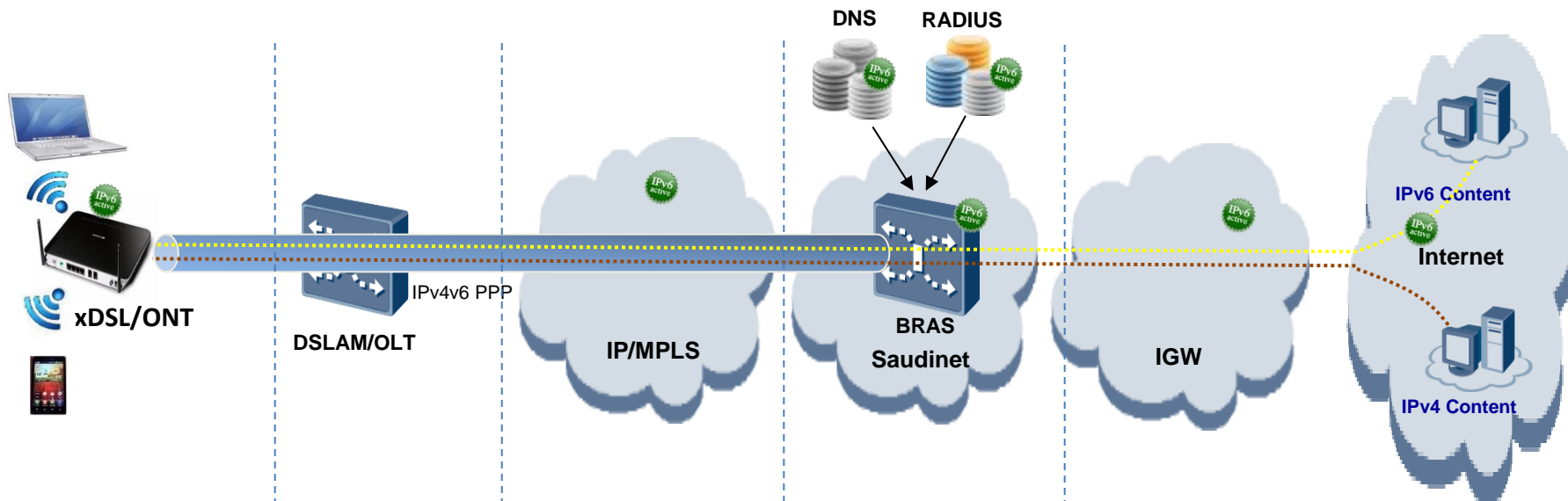
Key Milestones



STC IPv6 Service Status

IPv6-Enabled Service	Status	Remarks
International Transit	Launched	<ul style="list-style-type: none">• Live customers
DIA	Launched	<ul style="list-style-type: none">• Live customers
ISP National Peering VPNv6	Launched	<ul style="list-style-type: none">• Live customers
Business L3-VPNv6	Launched	
HSI (DSL)	Launched	<ul style="list-style-type: none">• Current subscriber count approx 380K; and growing.
HSI (FTTH)	Pilot Project Launched	<ul style="list-style-type: none">• Live customers.
HSI (Mobile)	PoC trials	<ul style="list-style-type: none">• Dual-stack PDN/PDP PoC trial done• 464XLAT PoC Trial Planned for Q2/2015• MAP-E/T & 4rd under study

STC IPv6 Network Topology (Fixed Broadband)



- Dual-stack PPPoE
- WAN P2P = /64 P2P (via SLAAC)
- /56 (via DHCPv6-PD)
- DNS (A, AAAA) via IPv4 transport

- L2 (VLAN)

- Tunneling (PWE3)

- PPPoE termination
- User Authentication
- IP address assignments
- BW management
- DNS
- Native IPv6 routing

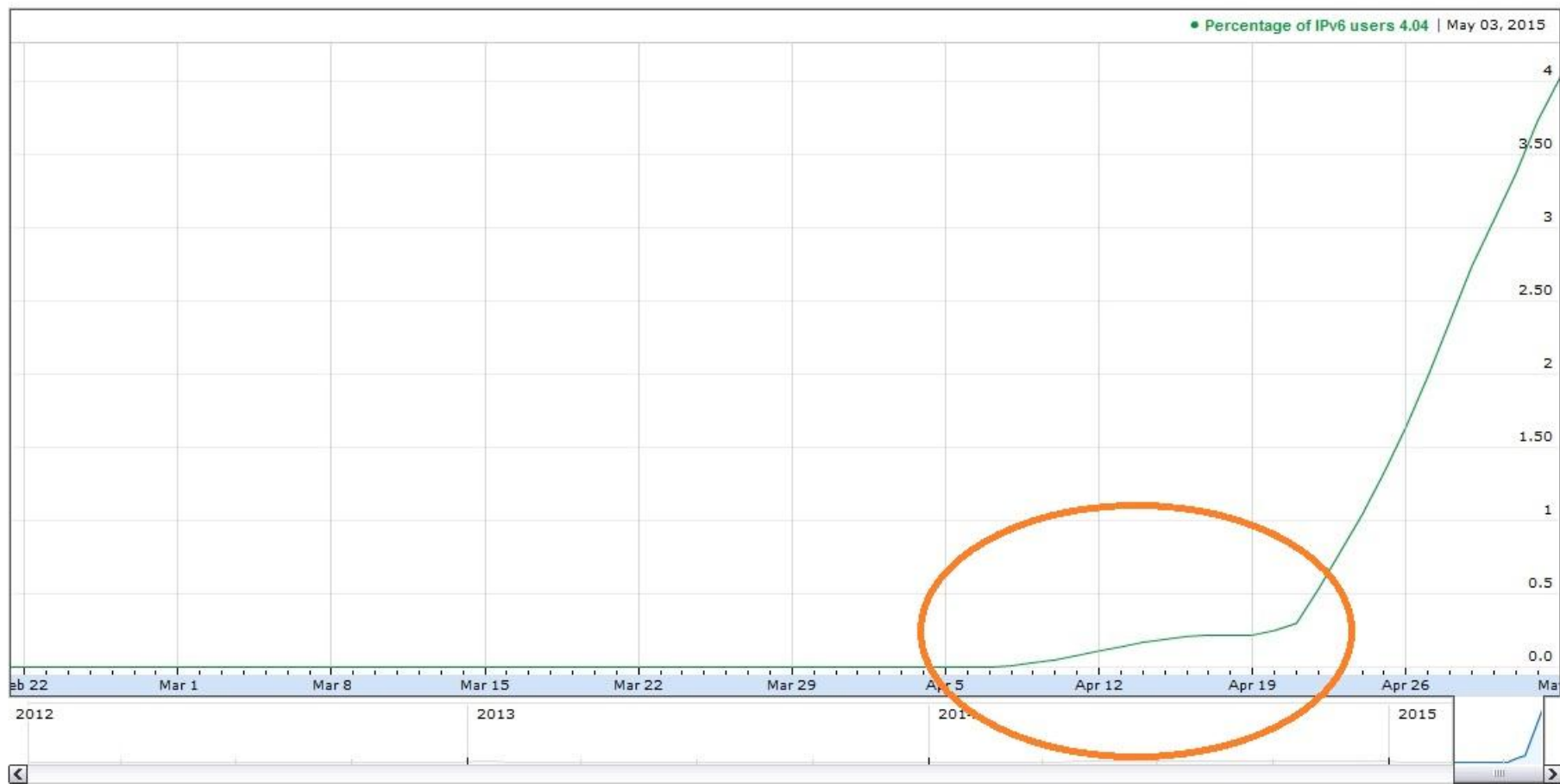
- Native IPv6 routing
- WireFilters
- Firewalls
- International peering



Statistics – Saudi Arabia

Saudi Arabia

Display Users Data 

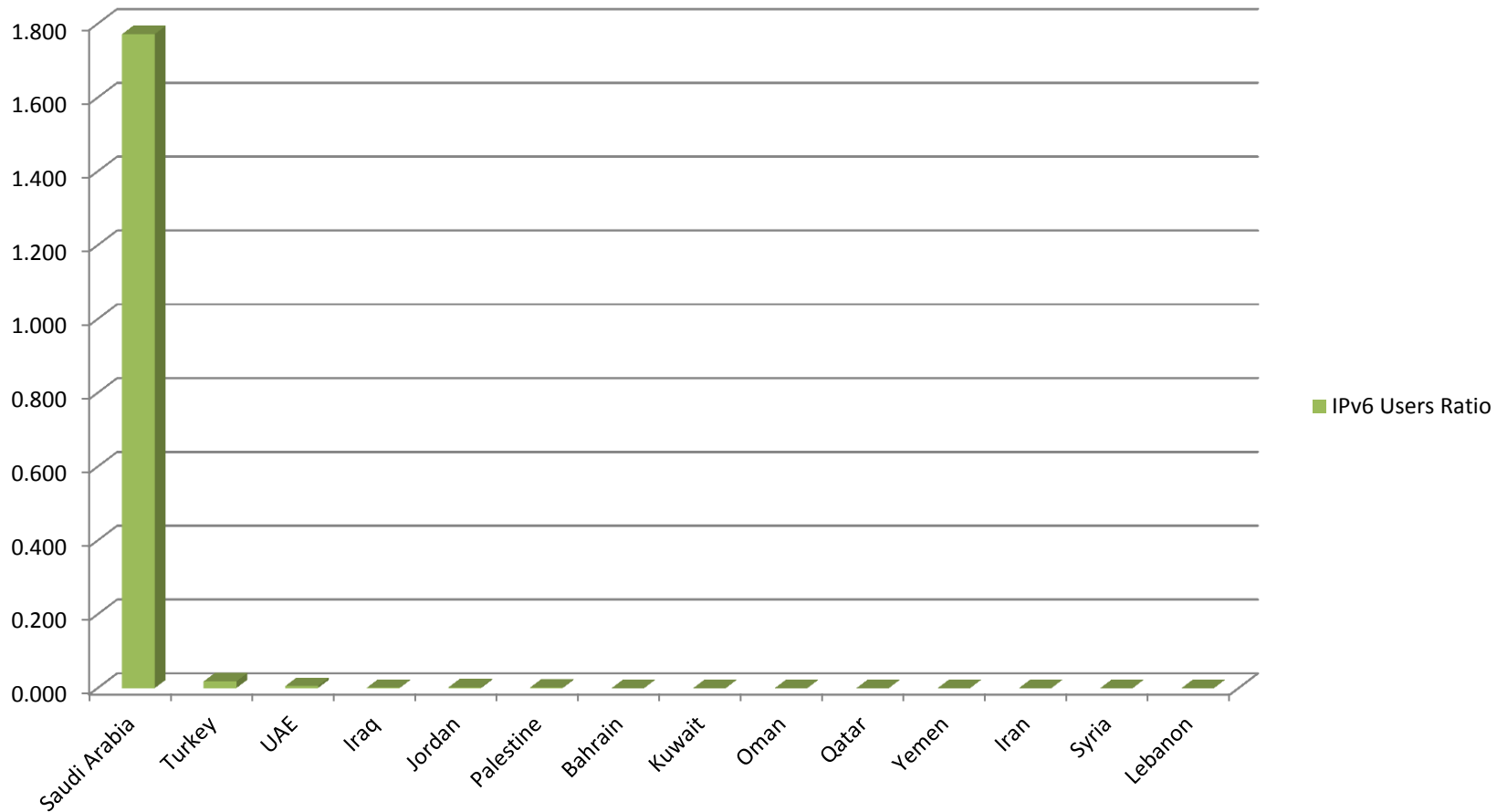


Source: <http://6lab.cisco.com/stats/cible.php?country=SA&option=all> Dated: 3rd May, 2015



Statistics – Saudi Arabia

IPv6 Users Ratio (Percentage) within MENOG



Source: <http://labs.apnic.net/dists/v6dcc.html> Dated: 5th May, 2015



Statistics – Saudi Arabia

APNIC

[Home](#) [IPv6 Measurement](#) [Blog](#)

[Home](#) / [IPv6 Measurement](#) / [Economies](#) / [Sa](#)

IPv6 measurements for Saudi Arabia

image size: small medium large

data type: IPv6 Preferred IPv6 Capable

datasource: flash js both

sample accumulated over: 30 day 7 day interval

[IPv6 Capability by Interval](#) [Select an Economy](#) [Sample Count by Month](#) [ASN in this Economy](#)

Economy	ASN	AutNum	AS Name	# samples	v6 capable	v6 preferred
SA	25019	SAUDINETSTC-AS	Saudi Telecom Company JSC	220619	1.61%	1.49%
SA	29684	NOURNET-ASN	Nour Communication Co.Ltd - Nournet	3356	0.09%	0.06%
SA	35819	MOBILY-AS	Etihad Etisalat Company (Mobily)	62982	0.00%	0.00%
SA	30981	HSS-MOO-AS	Horizonsat FZ LLC	218	0.00%	0.00%
SA	39432	AHI-AS	AlHarbi International for Telecom..	218	0.00%	0.00%
SA	28938	MEDUNET-AS	Sultan Bin Abdulaziz Foundation	204	0.00%	0.00%
SA	15505	KAU	King Abdulaziz University (KAU) - Deanship of Information Technology	342	0.00%	0.00%
SA	35753	ITC	ITC AS number	6071	0.00%	0.00%
SA	34397	CYBERIA-RIIH	Cyberia Rivardh Autonomous System	2280	0.00%	0.00%

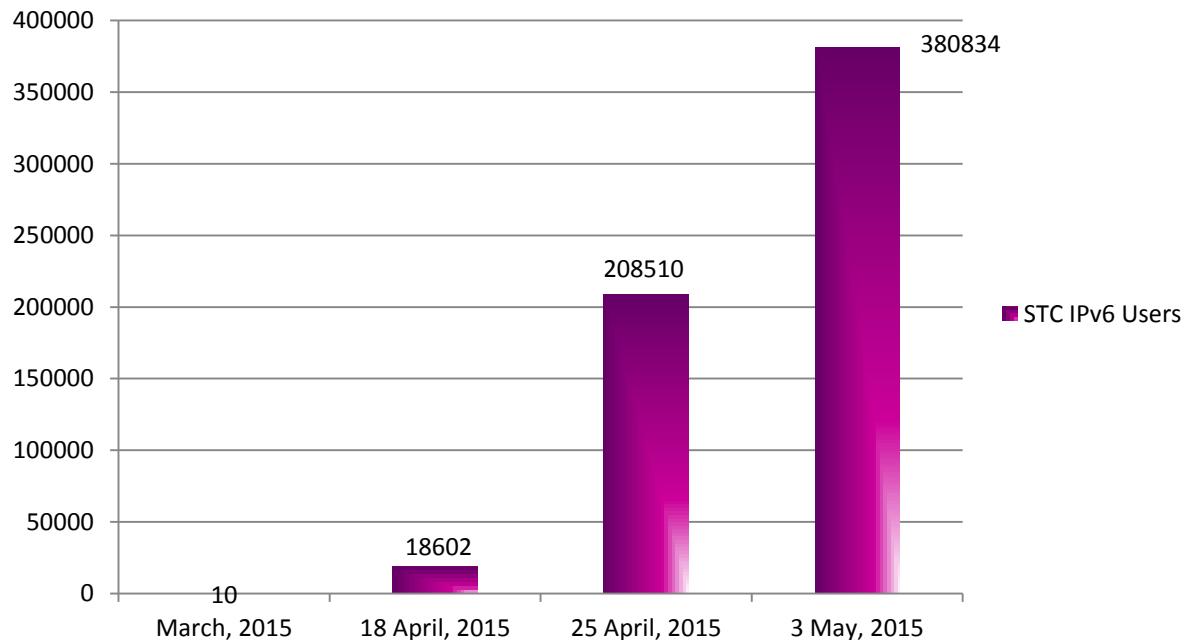


Statistics – STC

➤ Current Stats:

- IPv6 Modems Count stands at approx. 380K
- GGC IPv6 Egress Traffic around 40 Gbps → 10% of the overall GGC Egress traffic
- GGC IPv6 Ingress Traffic around 2.7 Gbps

STC IPv6 Modems Count (Historical)





Statistics – STC (IPv6 Peers)

AS39386 Saudi Telecom Company JSC

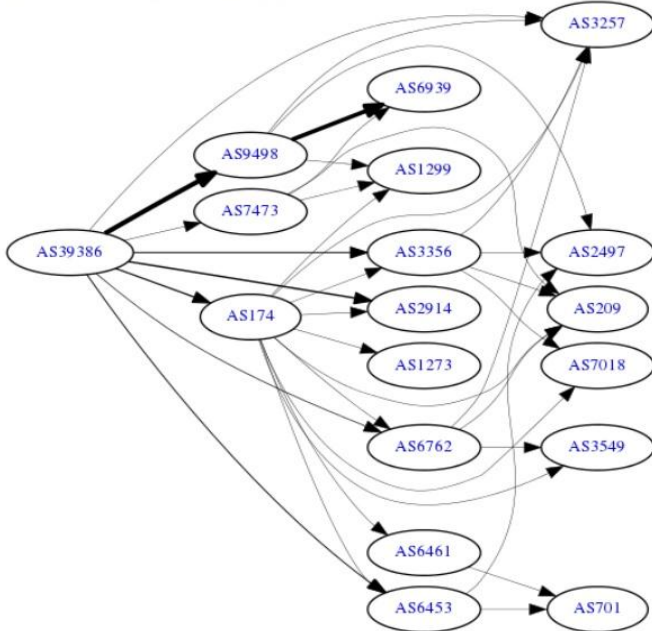
AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6 Whois IRR

Rank	Description	IPV4	Peer
1	Bharti Airtel Ltd	X	AS9498
2	Cogent Communications	X	AS174
3	Singapore Telecommunications Ltd	X	AS7473
4	NTT America, Inc.	X	AS2914
5	Level 3 Communications, Inc.	X	AS3356
6	TATA COMMUNICATIONS (AMERICA) INC	X	AS6453
7	Tinet SpA	X	AS3257
8	TELECOM ITALIA SPARKLE S.p.A.	X	AS6762
9	Saudi Telecom Company JSC	X	AS41426
10	Arab Company For Internet & Communications Services (AwalNet)LLC	X	AS25233
11	Autonomus System number for Shabakah Net	X	AS34426
12	Nour Communication Co.Ltd - Nournet	X	AS29684
13	nLayer Communications, Inc.	X	AS4436
14	Swisscom (Switzerland) Ltd	X	AS3303
15	Applied Technologies Co	X	AS31416
16	Saudi Telecom Company JSC	X	AS25019
17	SPSNET Saudi Arabia	X	AS42428
18	Communications and Information Technology Commission (CITC)	X	AS30857
19	QualityNet General Trading & Contracting Co.	X	AS9155
20	Sudatel Telecom Group	X	AS15706

AS39386 Saudi Telecom Company JSC

AS Info Graph v4 Graph v6 Prefixes v4 Prefixes v6 Peers v4 Peers v6

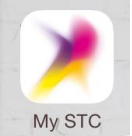


















AS39386 IPv6 Route Propagation





IPv6 on Mobile Apps

- IPv6 support status by most common mobile Apps

Yes	NO
        	         



Conclusion

- **STC is leading the IPv6 transition in the region**
- **STC's Fixed Broadband Network is fully IPv6 capable**
- **Mobile broadband network will soon be fully IPv6 capable.**
- **STC Enterprise services (L3-VPN, DIA, Int. Peering, ...) are IPv6 enabled.**



Thank you