Lessons Learnt from Peering

Building Africa's digital future

26 August 2015
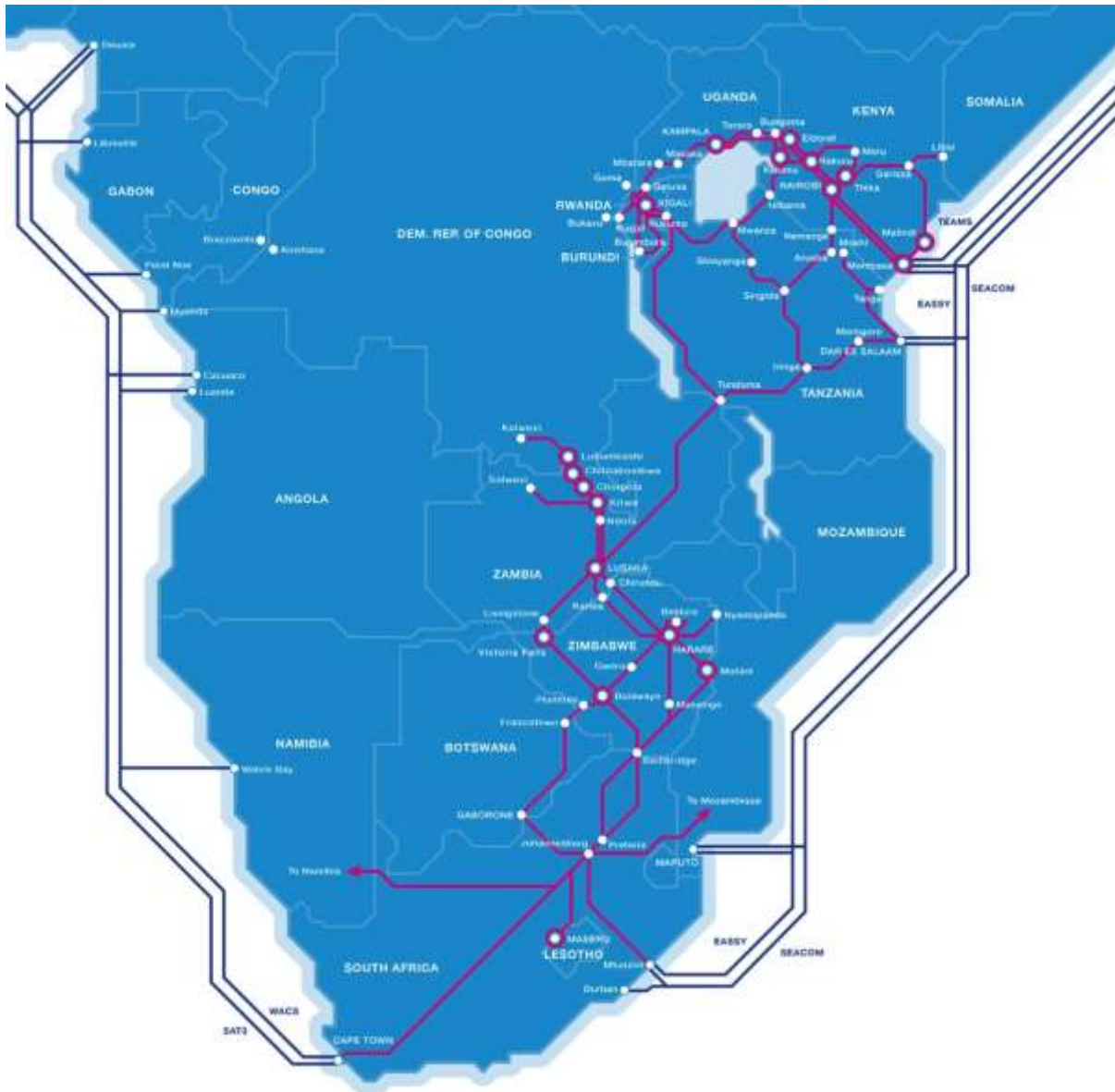
An overview of Liquid Telecom

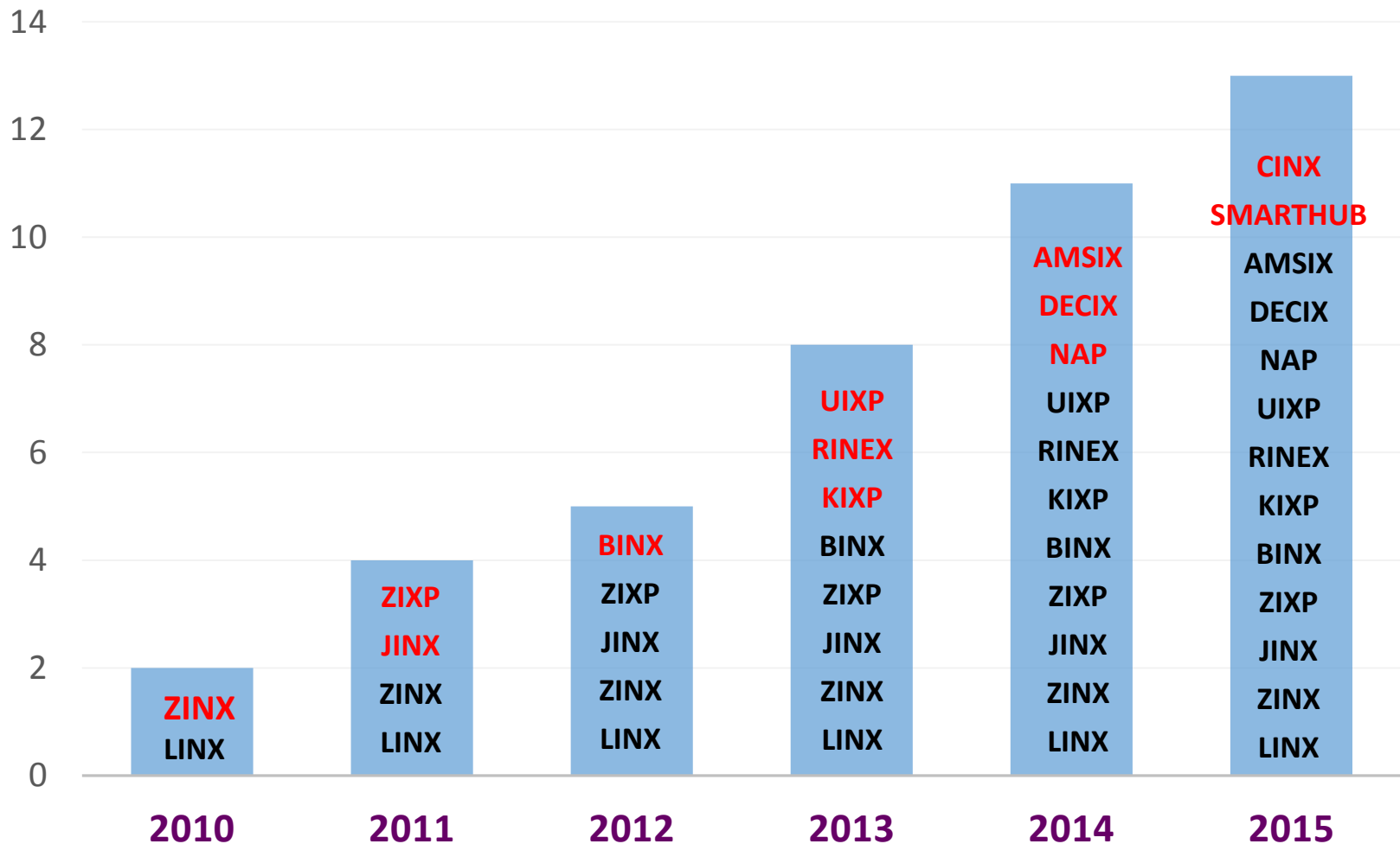# Operating companies

Where we are

- One Network.
- The largest cross-border single fibre network in Africa – 18,000 km
- Fully redundant routes.
- Open-access – the carriers carrier.
- Active connections to 5 sub sea cables.

Peering Points

- We love peering!
- Present at more African IXPs than most
- NAP, JINX and KIXP most significant
- Also present at ZINX, BINX, ZIXP, UIXP, RINEX and CINX
- We support IXPs and participate in them actively
- We peer in Europe at LINX, AMSIX, DECIX
- London – strategic hub because of sub sea cable routes

Peering Points used by Liquid Telecom Over 5 Years

Highest Ranked by Renesys Peering Index

LIQUID TELECOM

- Top 100 Globally
- Highest Ranked in Africa by far

Challenges of Peering At Multiple POPs

Traffic Challenges

- Routing Problems when Peers advertise different prefixes at each IXP

- uRPF – some Peers need symmetric traffic flows

- Cross-border Capacity Management

- Issues with CDN routing

Benefits of Peering

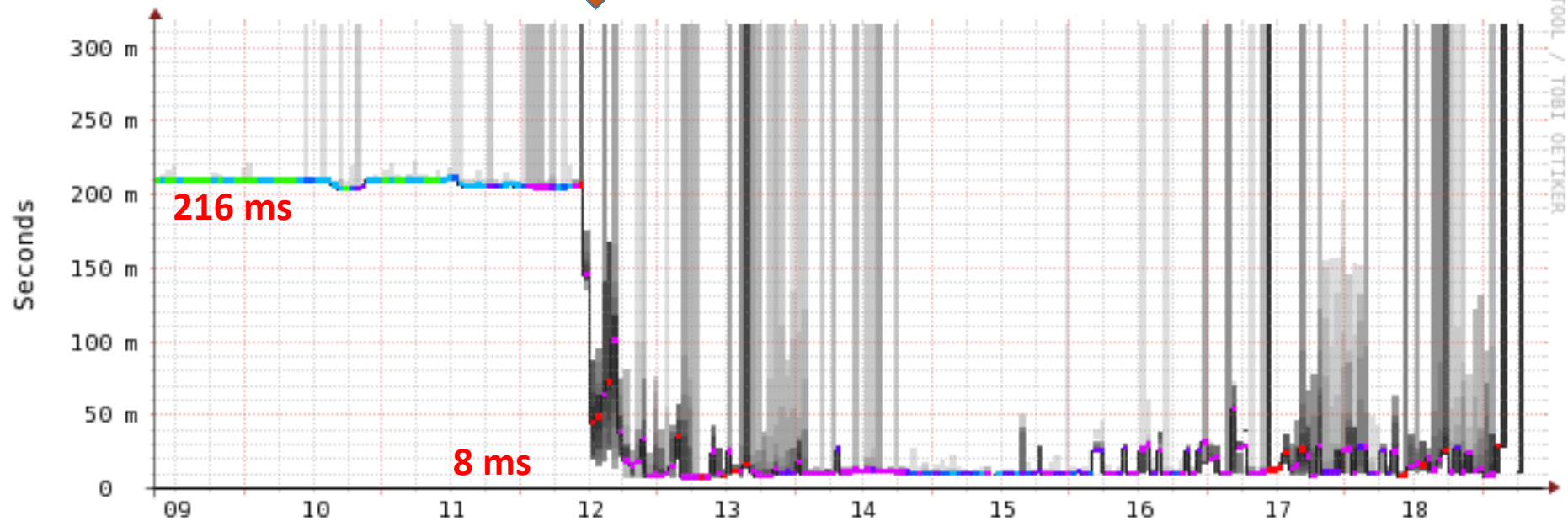# In Africa Sometimes Elephants take a long time to come to the party

But they enjoy the benefits when they get there

Latency - Example

Lessons Learnt Along the Way

Growth in Intra- African Transit Capacity is Consistently higher than Africa-Europe!

| International Bandwidth By Region - Source Telegeography									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Africa-Africa	0	0	1	2	4	11	22	125	162	296
Africa -Europe	20	39	66	133	333	472	697	1153	1757	2411

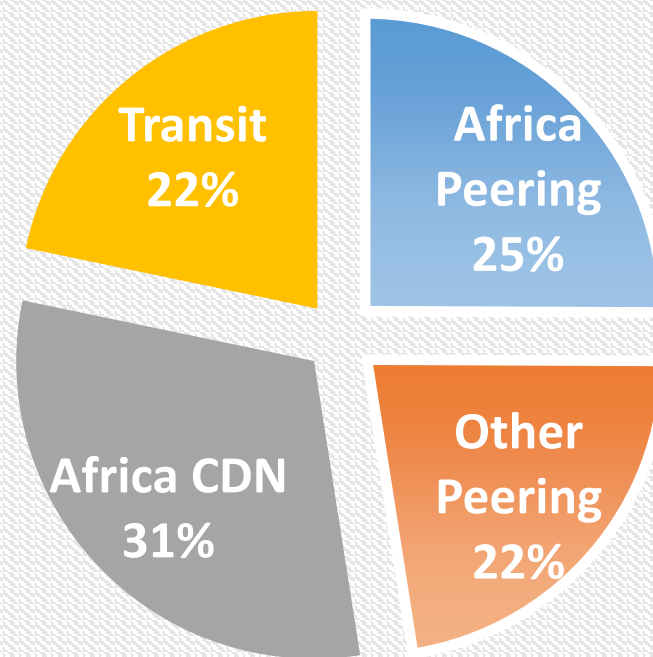| Percentage Growth									
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Africa-Africa			100%	100%	100%	175%	100%	468%	30%	83%
Africa -Europe		95%	69%	102%	150%	42%	48%	65%	52%	37%
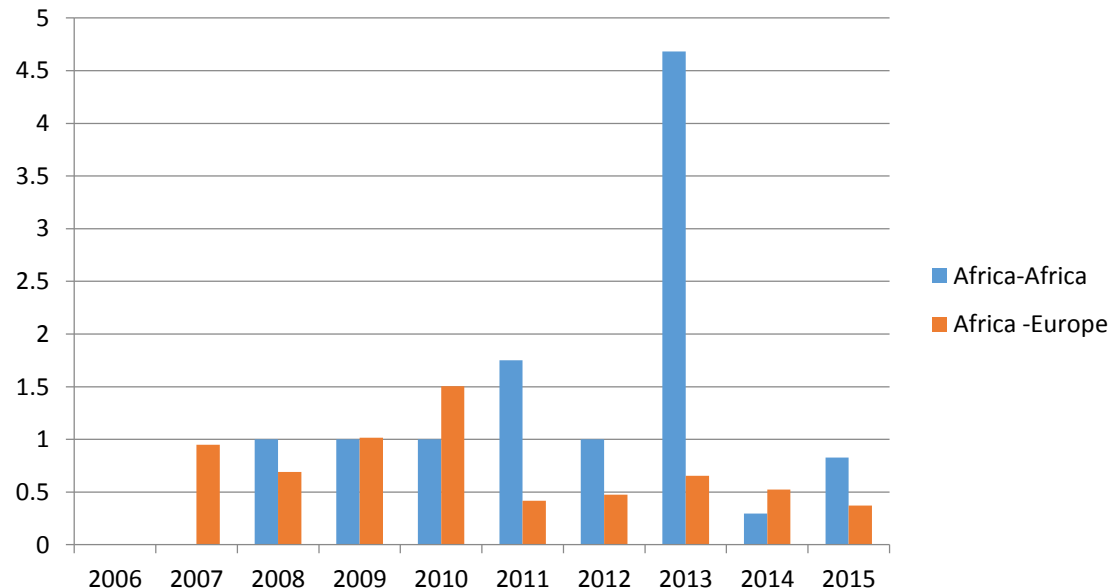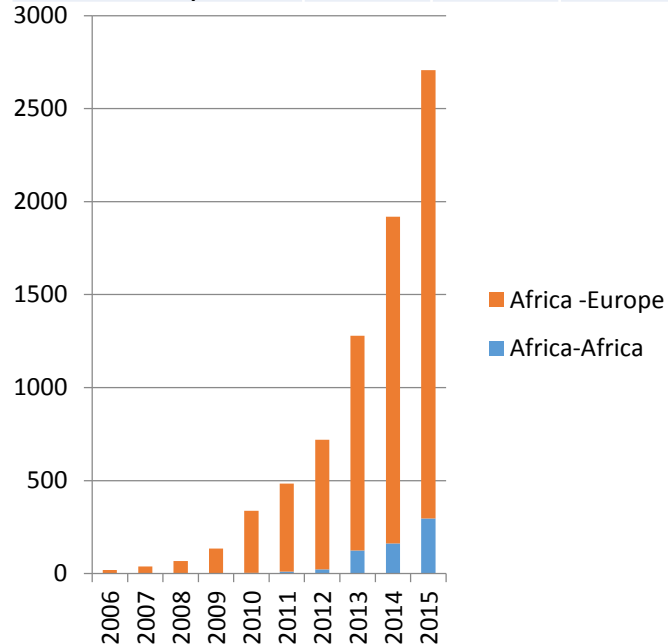
Increase in Throughput

- When latency is lowered, throughput increases.
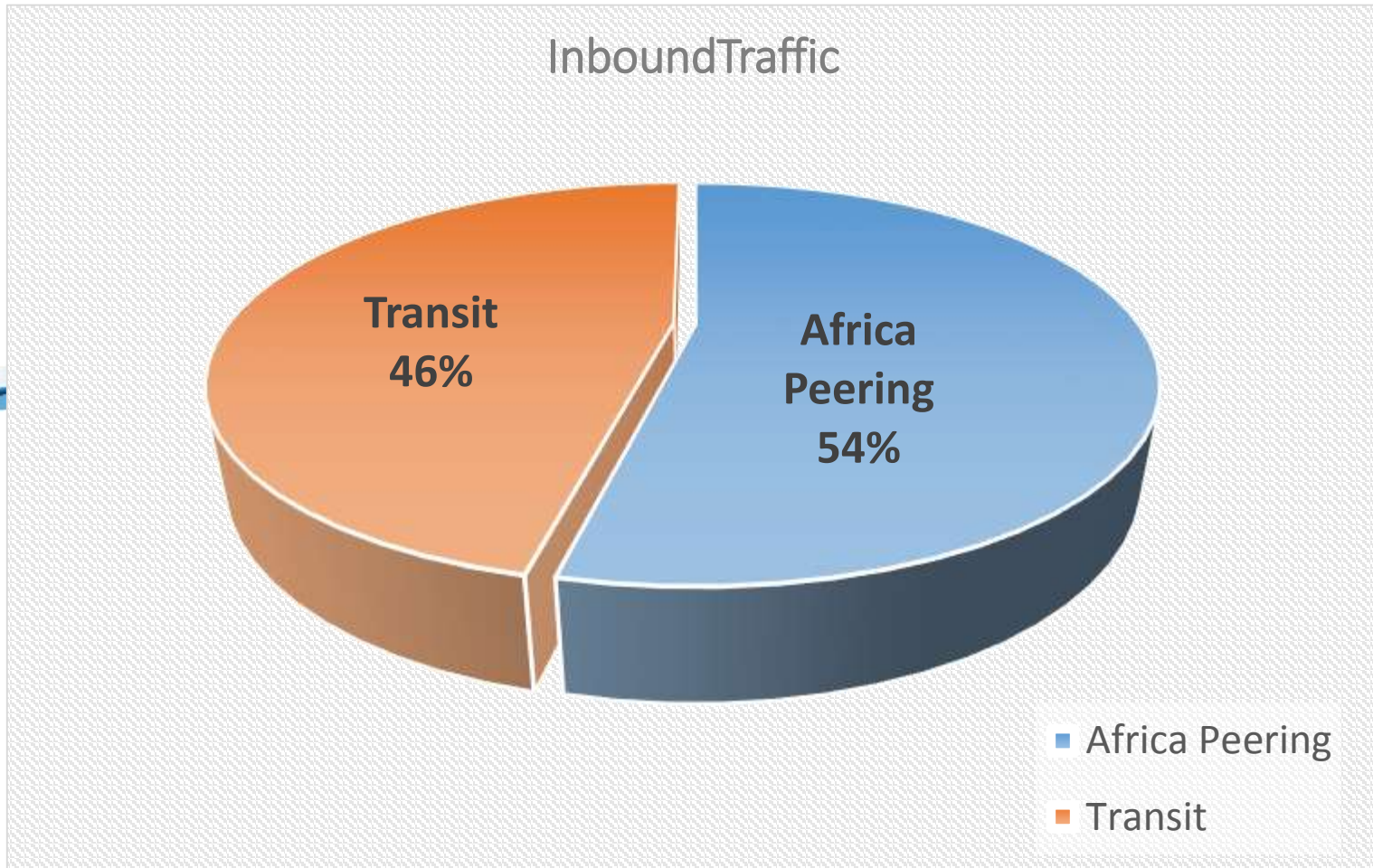- Local traffic volume increases
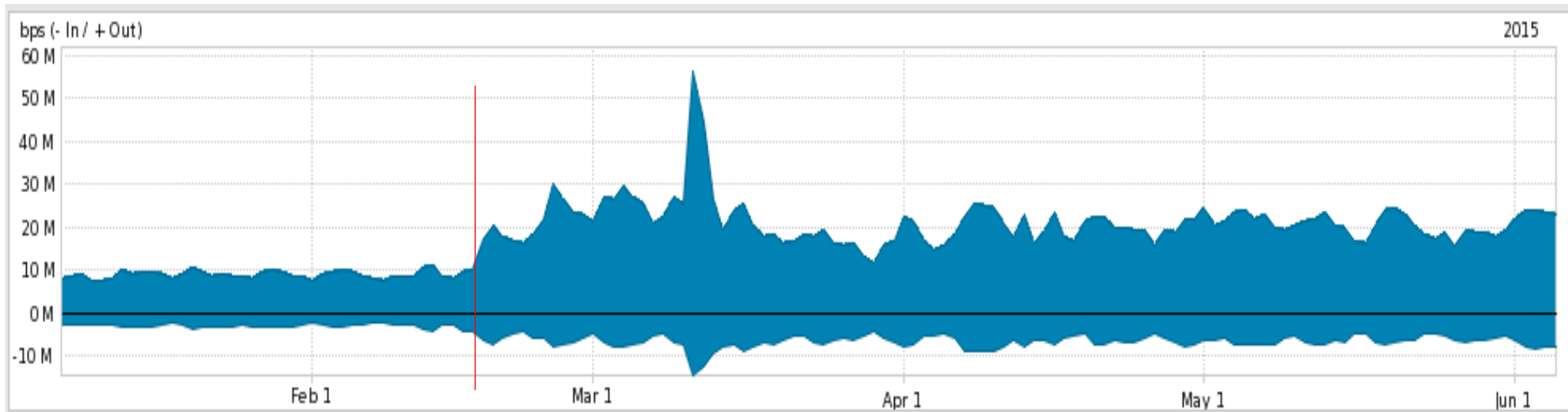
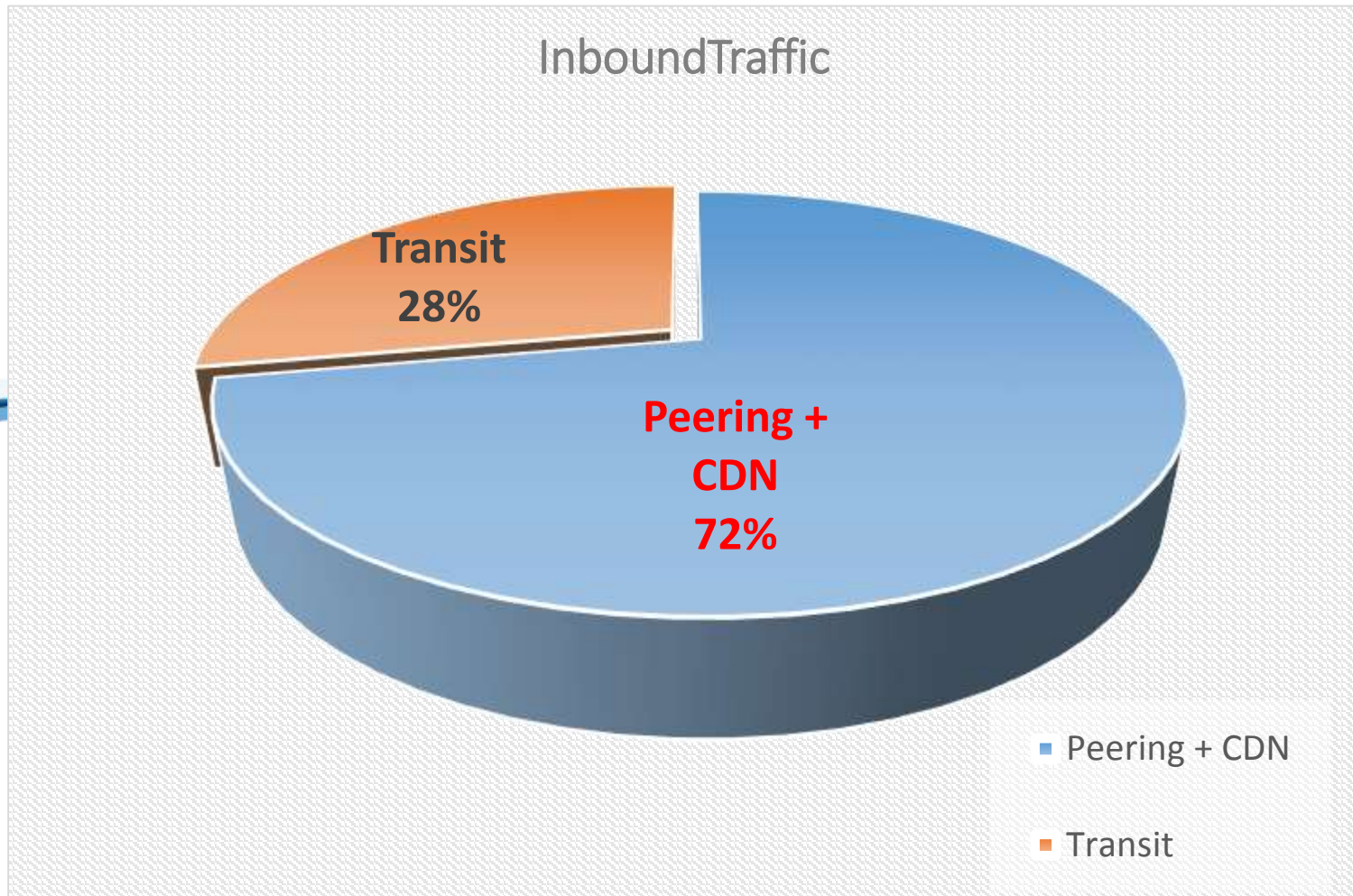**Peering Established**
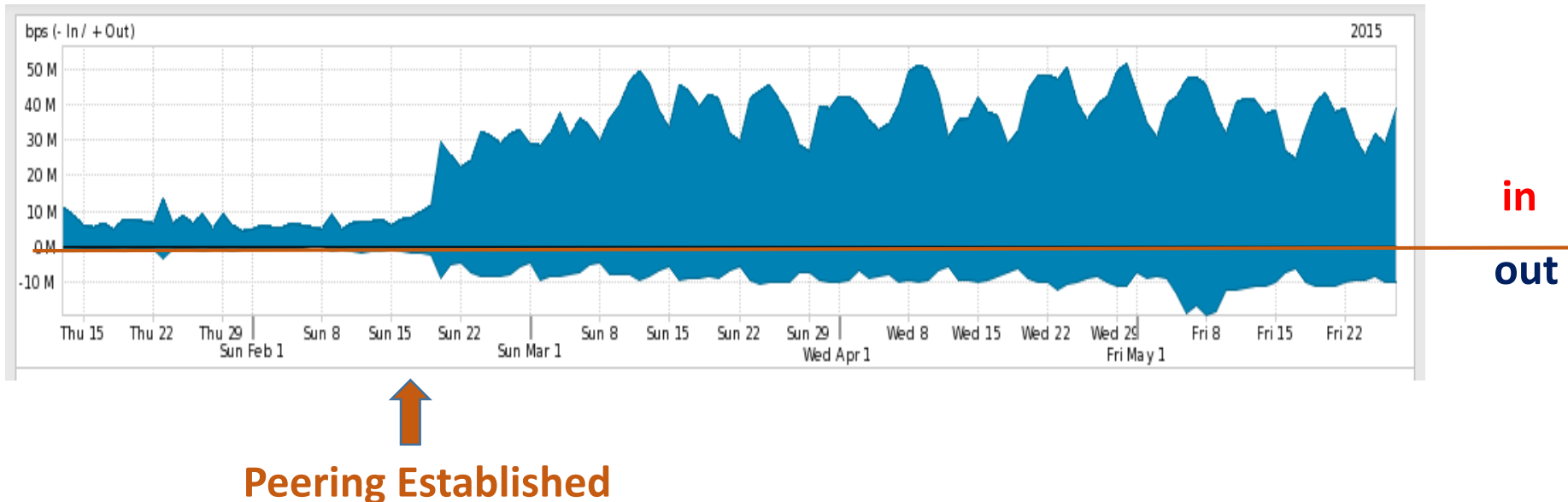
Inbound Traffic Sources

Peering Vs Transit

Peering+ CDN Vs Transit

InboundTraffic

Transit
28%

Peering +
CDN
72%

- Peering + CDN
- Transit

Traffic Balance

- Traffic balancing surprises:
- Difficult Peers do not always have more traffic to offer!

Peering Established

Customers Bypass Peering

- Some customers are using VPN to access content they are restricted from – so bypassing peering

- Lack of enforcement on Intellectual Property Laws - hindrance to those interested in streaming business

Thank You,
Peer On …