

# **Philippine Internet Landscape**

(Peering perspective from a tier-2 carrier)

## **Peering Asia 1.0**

November 2 2017

Kyoto, Japan

**Achie Atienza**

Globe Telecom AS4775



**Vincent Atienza ‘Achie’**



**Globe Telecom**

Senior Product Manager  
CDN & IP Peering

IP Peering, Interconnection & Strategy  
IP Ecosystem

**Internet Society Philippines (ISOC-Ph)**

Member / ex-Board of Trustee

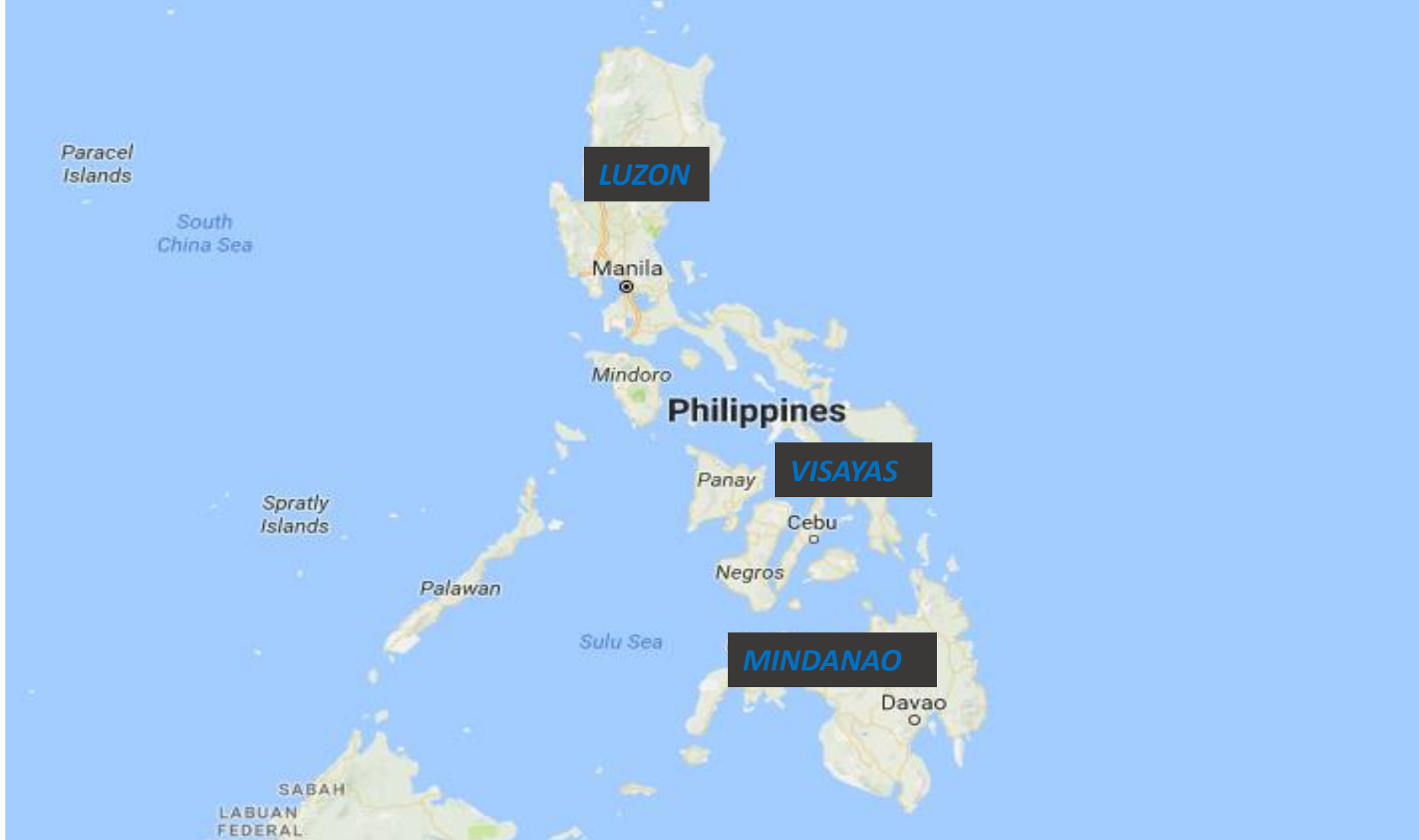
**Philippine Network Operators Group (PhNOG)**

Co-Chairman

# Agenda

1. Cable systems
2. Internet peers & IXPs
3. Peering perspectives

# Ph Internet in Numbers



**10** International Submarine Cable systems (2 Ongoing)

**7** International Cable Landing Stations (1 ongoing)

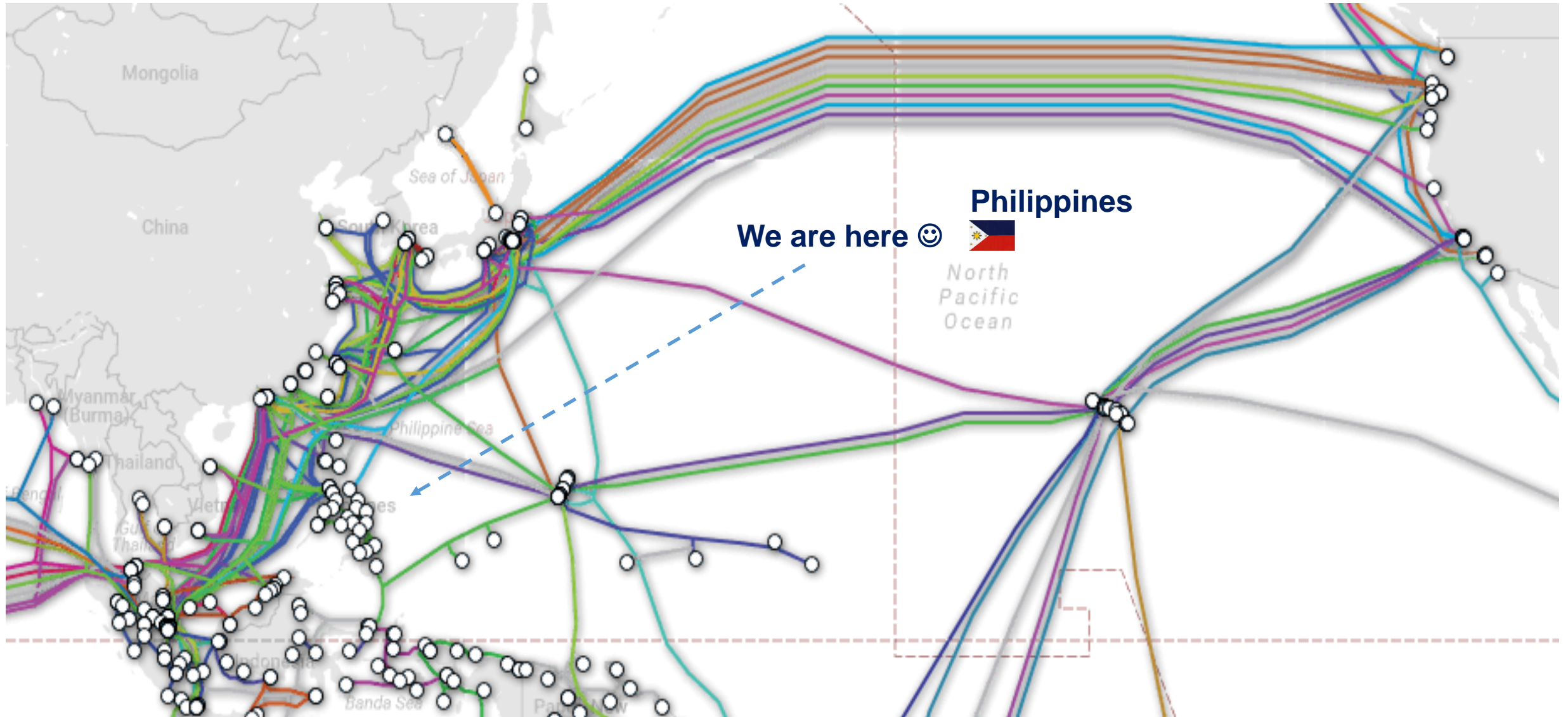
**453** Autonomous System Number (ASNs)

**5.6M** IPv4 addresses

**66** IPv6 addresses (in /32)

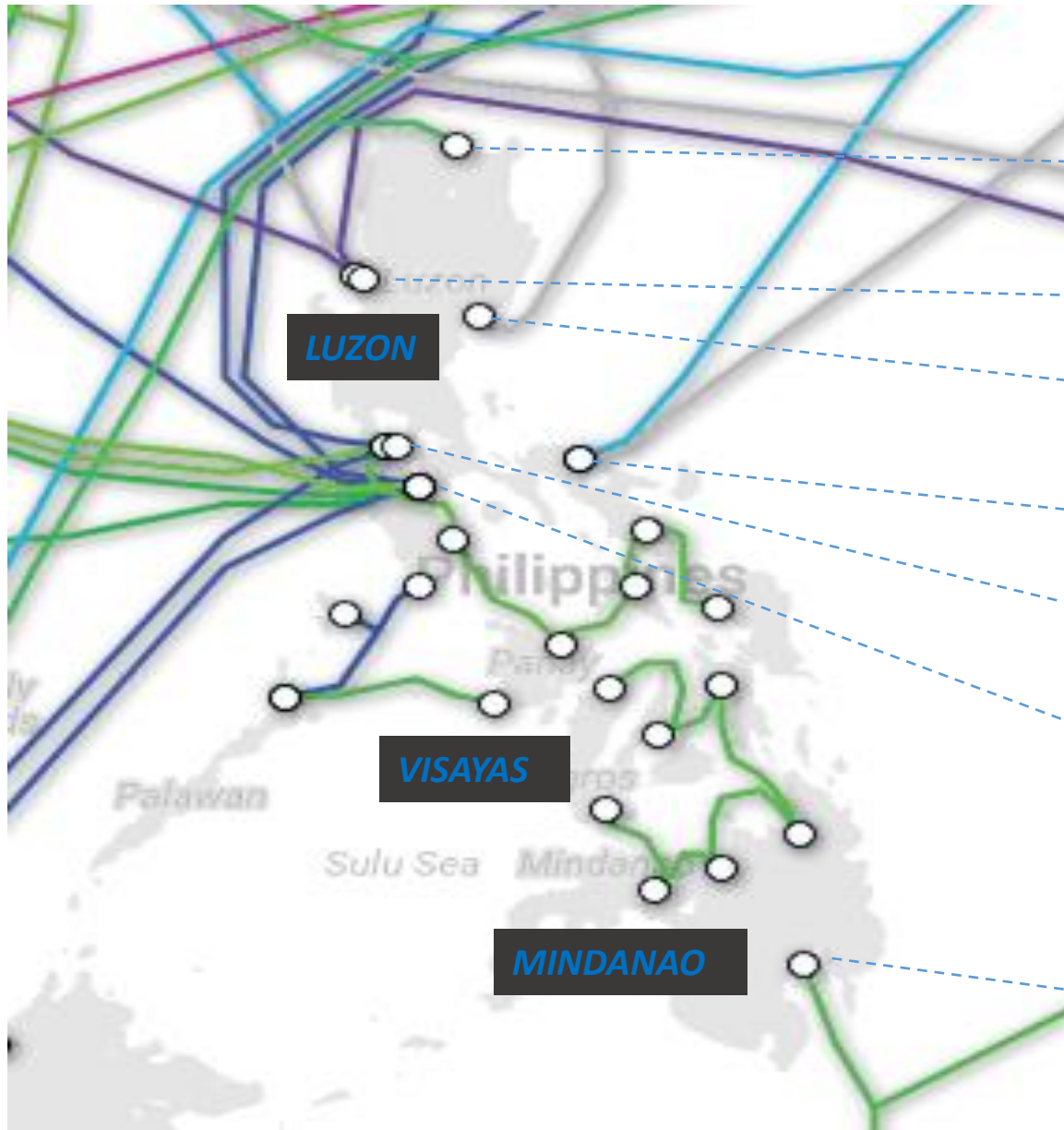
**7** Local IX

## Submarine Cable Systems reference:



Reference:  
<http://www.submarinecablemap.com/#/>

## Submarine Cable Systems reference: Ph landing points



Ballesteros: TGN-IA  
RFS: Mar 2009

La Union: AAG  
RFS: Nov 2009

Aurora: PLCN  
RFS: Q4 2018

Daet: ASE  
RFS: Aug 2012

Daet: JUPITER  
RFS: 2020

Nasugbu:  
SJC, Jun 2013  
APCN2, Dec 2001  
SMW3, Sep 1999

Cavite: EAC  
RFS: Nov 2002

Davao: SEA-US  
RFS: Aug 2017



# Recent Cable cut

## SE Asia undersea cables got cut; slower internet ensues

by [Carl Lamiel](#) · September 2, 2017



Experiencing slower internet lately? You're not alone: Several undersea cables have been cut in the wake of the recent typhoons in the region, leaving most ISPs in the country with slower connections.

### Southeast Asia Suffers Slow Internet Due to Broken Undersea Cables



## Undersea internet cable repairs may continue until October

ABS-CBN News  
Posted at Sep 07 2017 11:24 PM



References:  
News, PRs



**Converge ICT Solutions Inc.** ✓  
about 2 weeks ago



Update as of September 1, 2017, 9 AM:

Dear Customers,

Our international backbone providers are still finalizing the estimated time to repair the submarine cable cuts. It usually takes 4-6 weeks to fix issues of such nature. Restoration is still dependent on weather conditions, availability of cable ships and permits. ... [See More](#)



**PLDT** ✓  
about 2 weeks ago



### PLDT Advisory

September 2, 2017

We're sorry to inform you that you may experience a slowdown of your PLDT Home broadband service, particularly during peak hours. This is due to cuts in the international cable systems serving PLDT. We are working with our overseas cable system partners to expedite the repair of these facilities and shall provide further updates. Thank you for your patience and understanding.

[See More](#)

Globe Telecom has also issued their statement regarding the incident:



Globe Telecom takes its internet routing responsibilities seriously, and over the years have invested significant amounts of capital in a variety of subsea cable systems, including the recent SEA-US system, to ensure diversity. Globe has successfully rerouted its data traffic that goes through the affected cable systems, to its other subsea cable capacity routes. In so doing, the multiple subsea cuts had no adverse impact to our enterprise clients and mobile and broadband customers.

Our technical teams are closely monitoring the network to ensure voice, SMS and data services are operating at normal levels.

– Yoly Crisanto, Senior Vice President for Corporate Communication, Globe Telecom

# Internet Providers

## Country Info



### Networks: Philippines

ASN	Name	Adjacencies v4	Routes v4	Adjacencies v6	Routes v6
<a href="#">AS4775</a>	Globe Telecoms	175	681	38	3
<a href="#">AS9299</a>	Philippine Long Distance Telephone Company	169	1,424	20	26
<a href="#">AS6648</a>	Bayan Telecommunications, Inc.	110	324	8	5
<a href="#">AS17639</a>	Converge ICT Solutions Inc.	73	200	9	9
<a href="#">AS9658</a>	Eastern Telecoms Phils., Inc.	71	445	15	3
<a href="#">AS23930</a>	IP-Converge Data Center, Inc.	43	216	8	1
<a href="#">AS23944</a>	SKYBroadband SKYCable Corporation	34	172	9	4
<a href="#">AS9821</a>	Department of Science and Technology	32	29	12	6

Reference:

<https://bgp.he.net/country/PH> as of October 2017



# ISP draft ...

## San Miguel-Telstra joint venture talks terminated

By Louella Desiderio (The Philippine Star) | Updated March 15, 2016 - 12:00am

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"Both SMC and Telstra worked hard to come up with an acceptable resolution to some issues. However, we agreed we can no longer continue with the talks. I believe this is best for all parties," Ramon Ang, SMC president and COO, said in a statement. [File photo](#)

## Lucio Tan Jr's group acquires PT&T

By: Miguel R. Camus - @inquirerdotnet Inquirer Business / 07:27 PM August 25, 2017



Eton Properties president Lucio Tan Jr.

A group led by businessmen Lucio Tan Jr., Salvador Zamora II and Benjamin Bitanga is entering the telco business and has taken control of Philippine Telegraph & Telephone Corp. (PT&T).

References:  
News, PRs

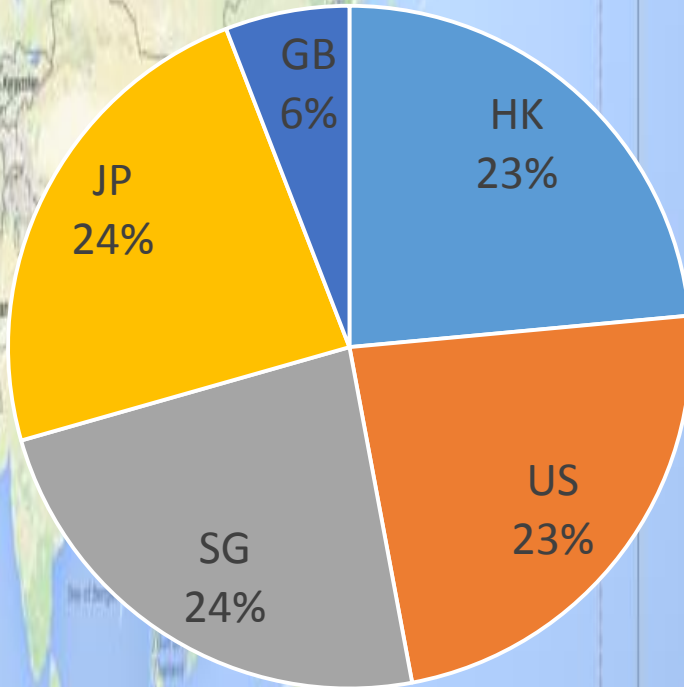


# Local IX (7)

Operator	Exchange
ASTI/DOST	PhOpenIX
BayanTel	NIGX
Converge ICT	ComclarkIX
Eastern Communications	MIX
Globe Telecom	GIX
PLDT	PHIX
Vitro	VIX

Reference:  
Peeringdb, HE, third party

# International IX (18)



Exchange	CC
AMS-IX Hong Kong Hong Kong	HK
Any2 Los Angeles United States	US
Any2 NY United Sates	US
BBIX SG	SG
BBIX Tokyo Japan	JP
Equinix Hong Kong Hong Kong	HK
Equinix Singapore Singapore	SG
Equinix Tokyo Japan	JP
HKIX Hong Kong	HK
iAIX	HK
JPIX Tokyo Japan	JP
JPNAP Tokyo	JP
LAIX United States	US
LINX	GB
NYIIX United States	US
SGIX Singapore	SG
SIX United States	US
SOX Singapore Singapore	SG

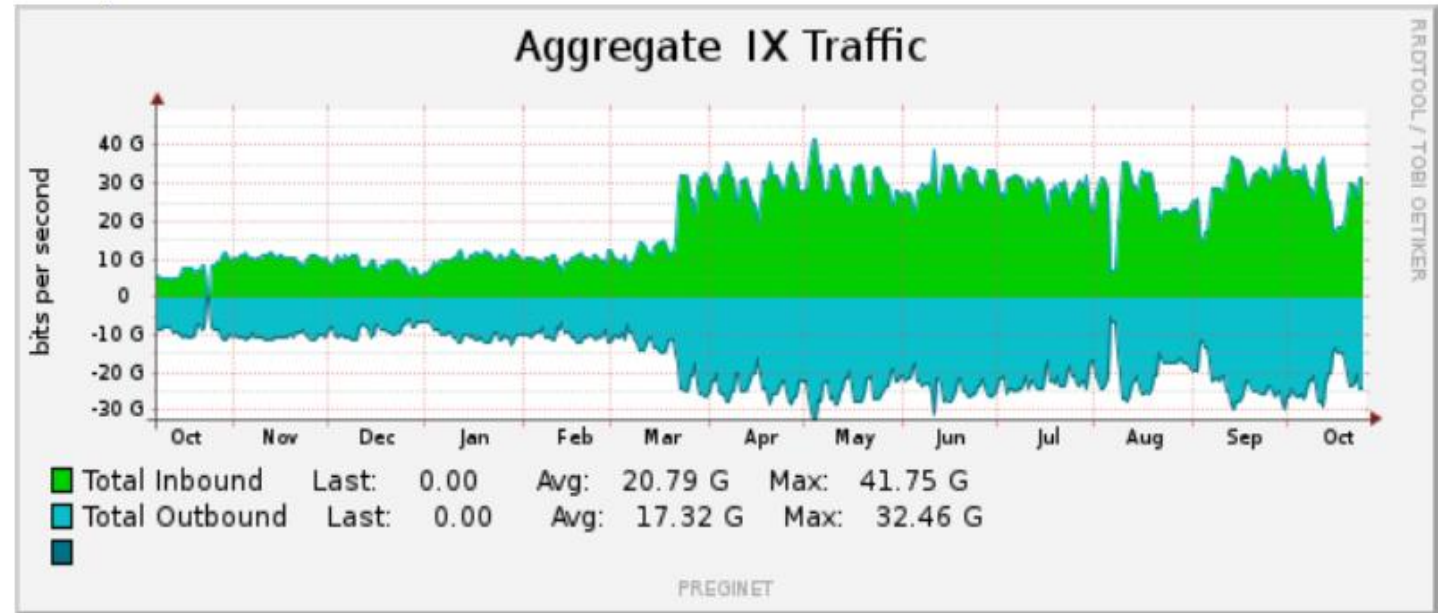
Reference:  
Peeringdb, HE

# Open IX

## About PhOpenIX

- AS4779
- Carrier-neutral IPv4 and IPv6 Multilateral Peering Exchange
- Not for profit
- Bottom up management approach
- Layer 2 exchange (supports 1Gb/10Gb interconnect)

Reference:  
<http://phopenix.net/traffic/>





# Nation Building

Game!

Globe - PLDT Domestic IP Peering.

We try to make it better 😊

(cheers to the fathers of our Philippine Internet)



Rationale of peering:

Local traffic should stay local.

Then regionalize

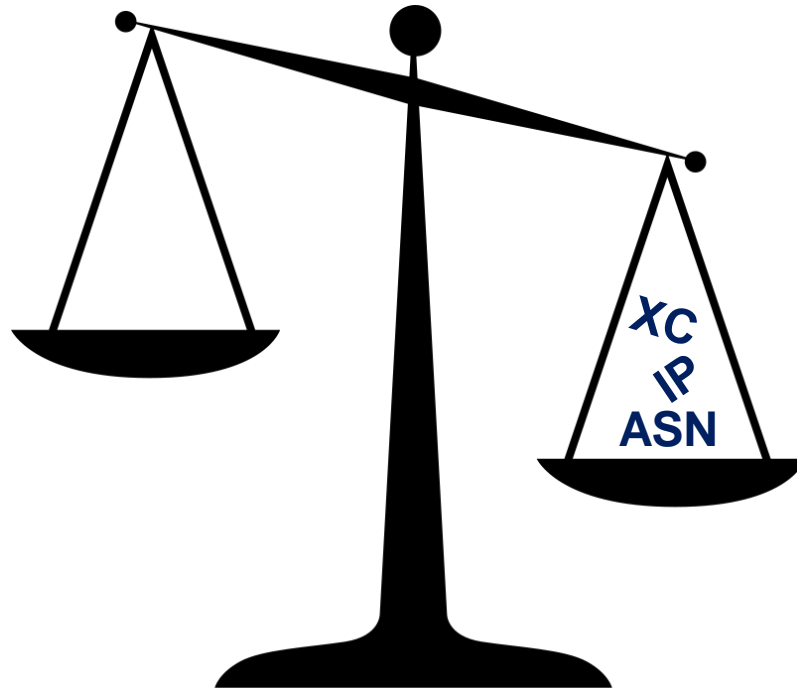
Towards the improvement of our Philippine Internet!



Reference:  
Press Release, FB

# Peering perspectives

**“Peering is Economics”**



# Peering perspectives

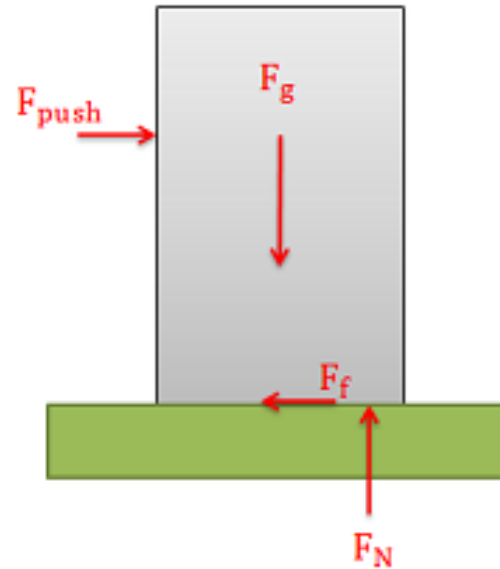
**“Peering is Sociology”**





# Peering perspectives

## “Peering is Physics”



$$F_{f(\text{max})} = \mu_s * F_N$$

If

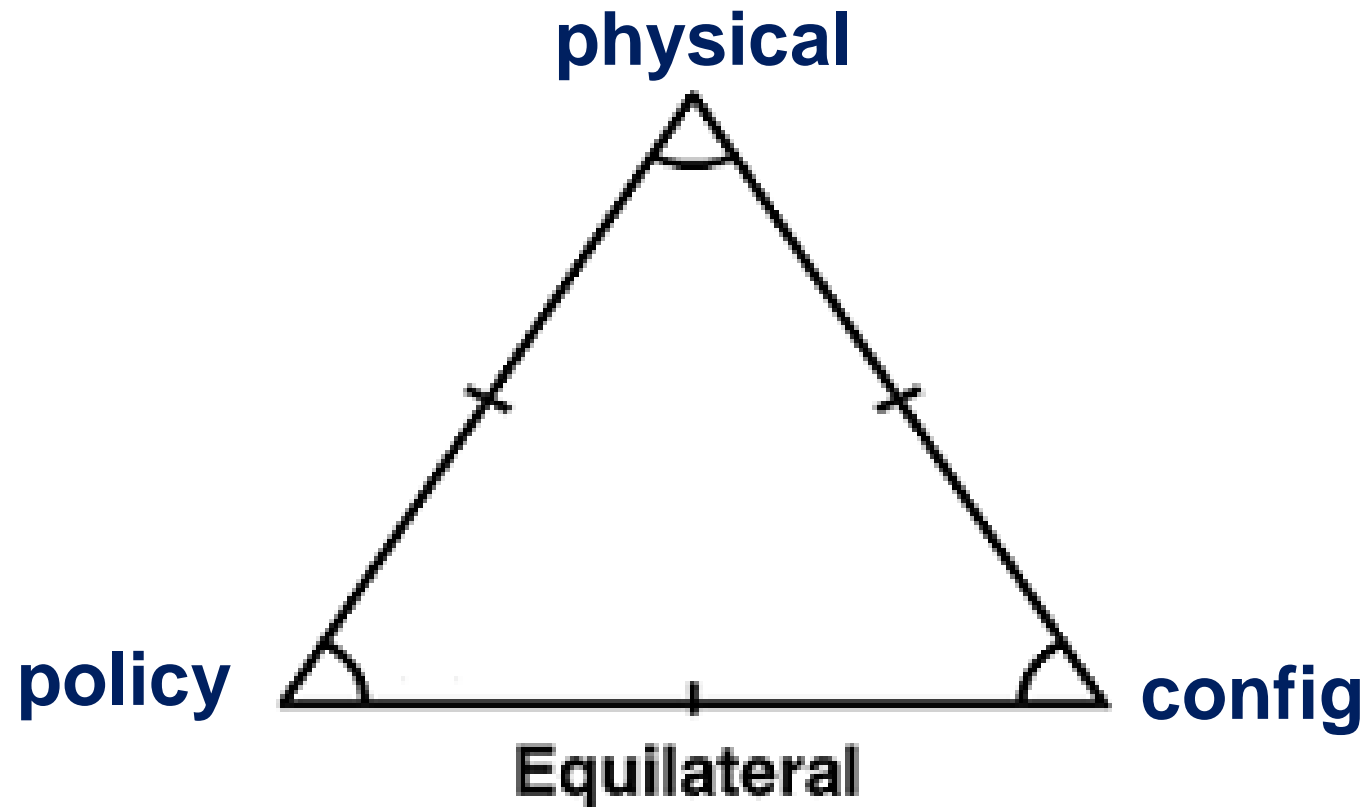
$$F_{\text{push}} > F_{f(\text{max})}$$

Then the box will  
begin to slide

**“Slip point”**

# Peering perspectives

**“Peering is ...”**



## Peering perspectives

**“Peering is Perspective”**

# PhNOG

**Cebu – 11.29.2017**

**Manila – 03.05-09.2018**

# **Salamat!**

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