Sri Lanka: Broadband infrastructure & international connectivity

Rohan Samarajiva

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Pro-poor. Pro-market.

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Sri Lanka in relation to neighbors (excluding micro states)

	Bangladesh	India	Myanmar	Nepal	Pakistan	Sri Lanka
Population/ ’000 (2013)	156,595	1,252,140	51,419	27,797	182,143	20,483
Median age of population	24.3	27.7	27.9	22.9	22.6	31.8
Internet users/100- ITU method (2013)	6.5	15.1	1.2	13.3	10.9	21.9
Internet users/ 100- LIRNEasia method (2014)	14.2	15.1	13.6	13.3	10.9	34.8

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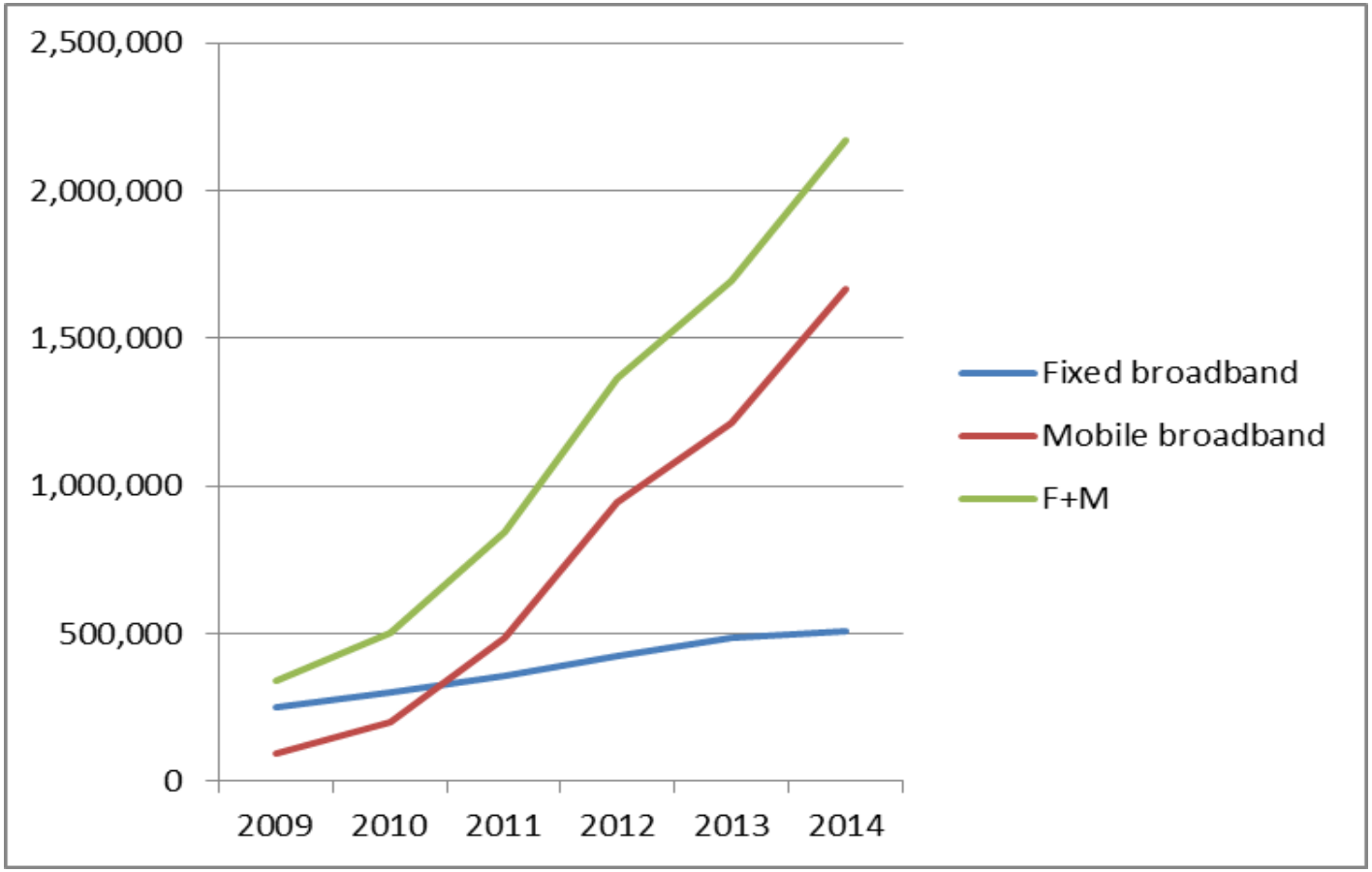
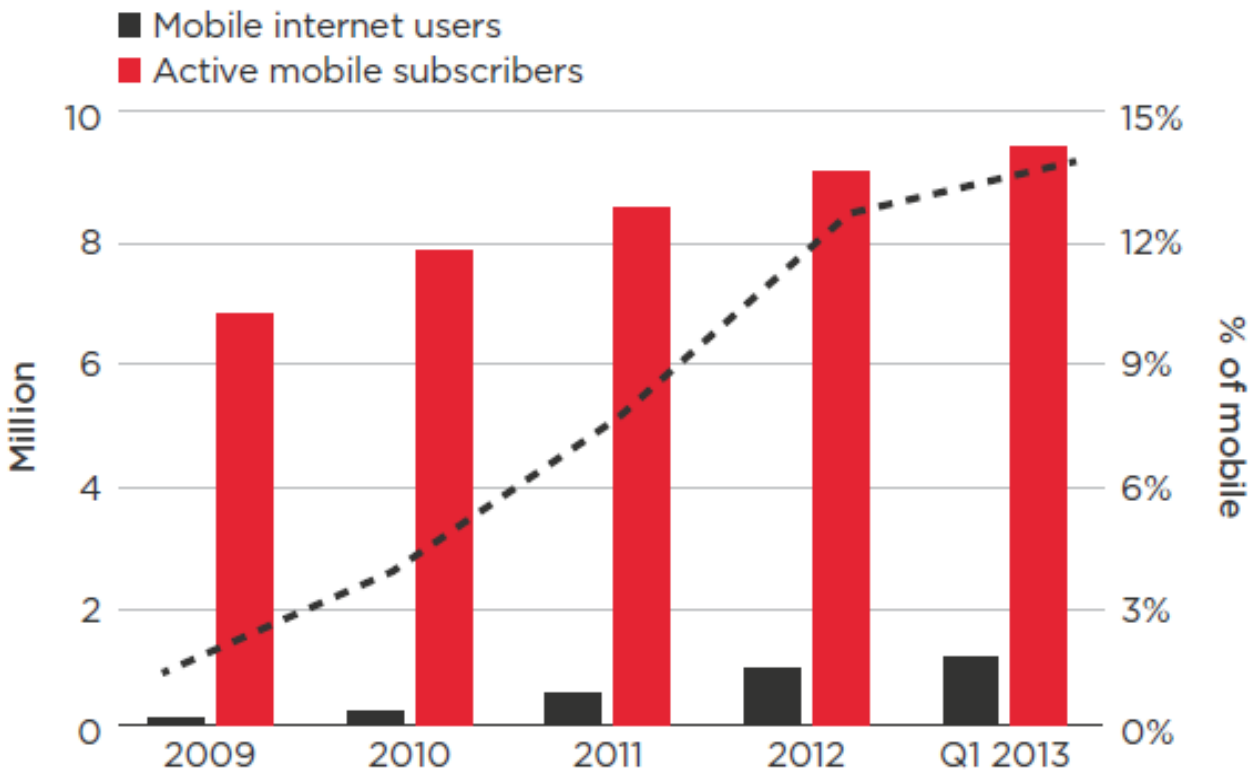
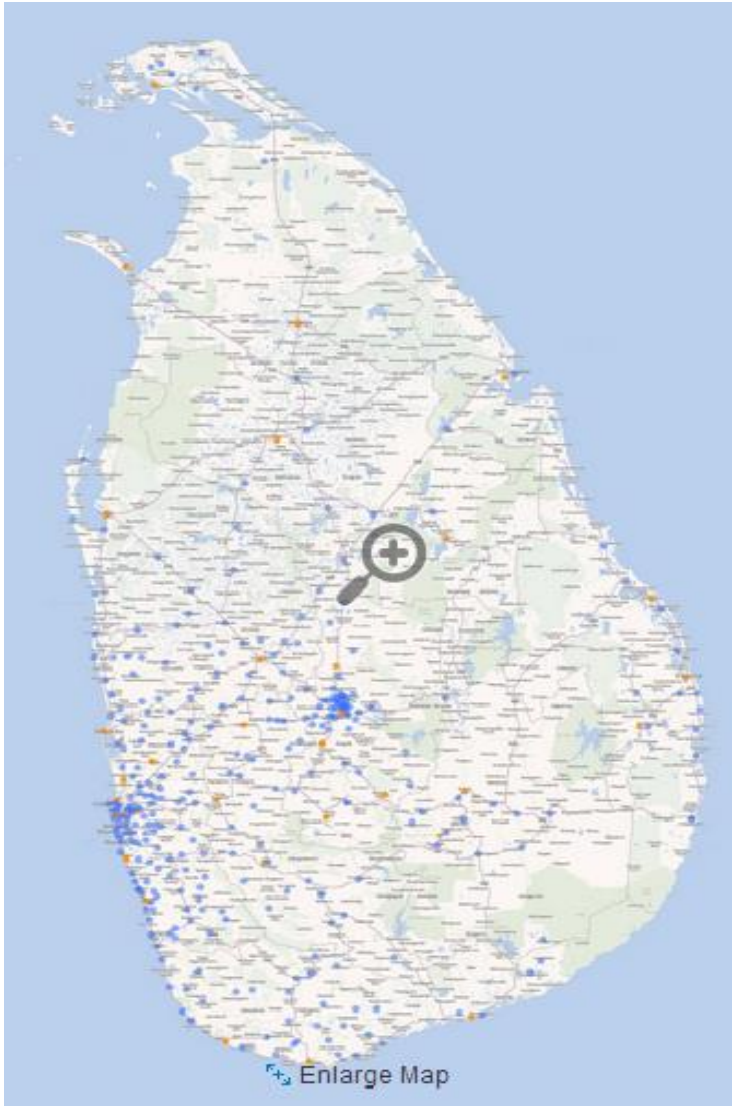
Sri Lanka broadband subscriptions, to 2014 Q1



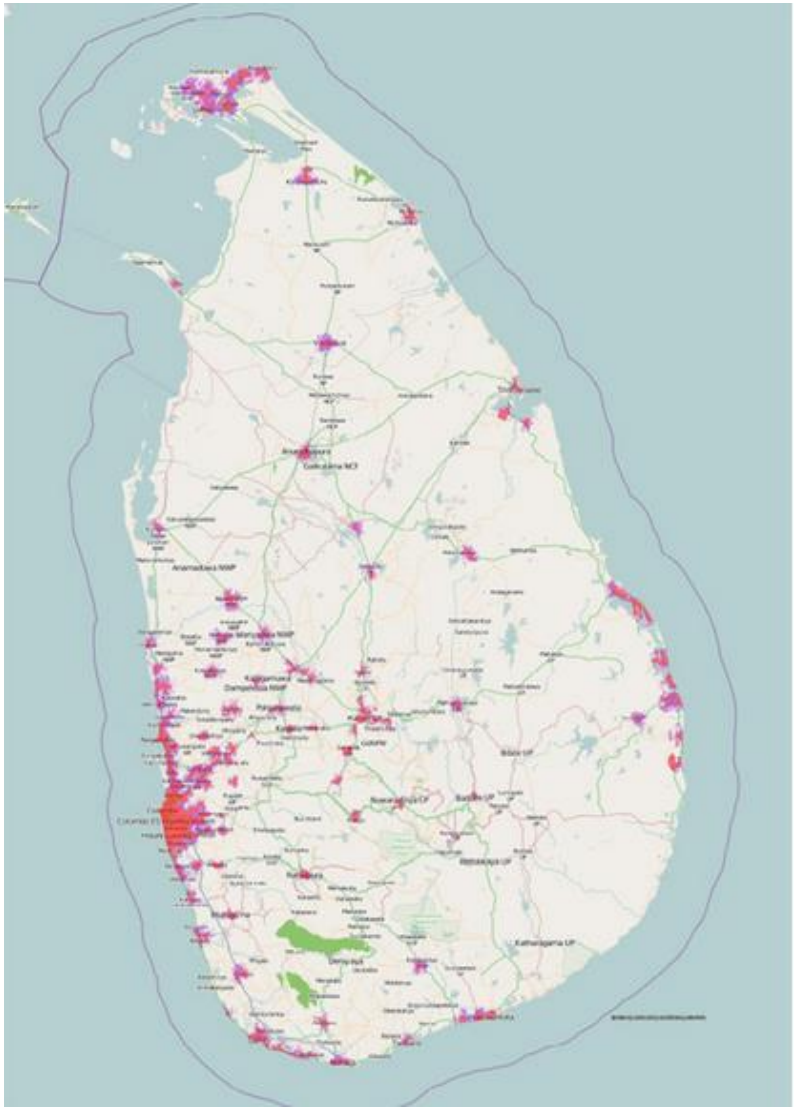


Active mobile Internet users and mobile subscribers, according to GSMA case study (2013)

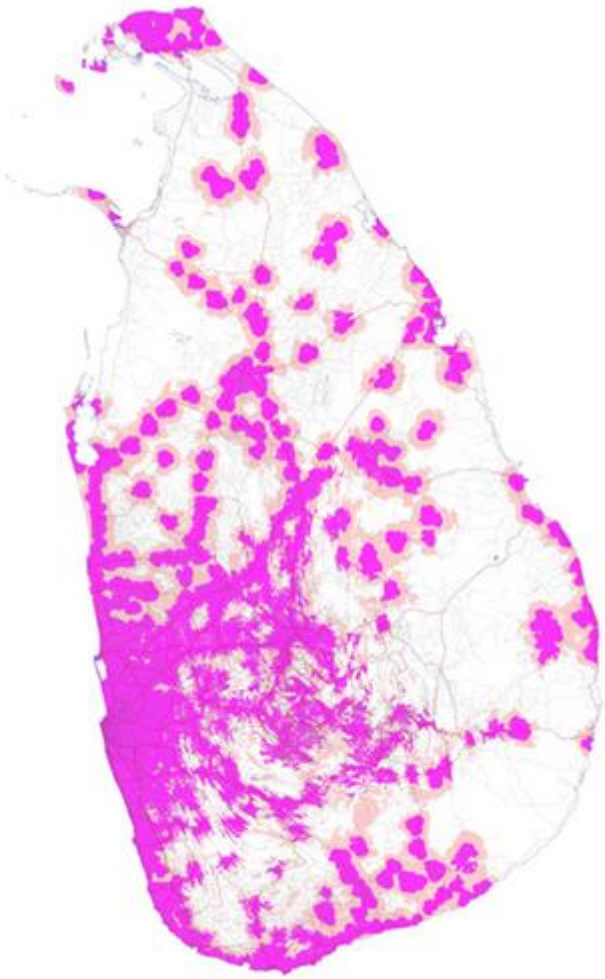
SLT broadband coverage map



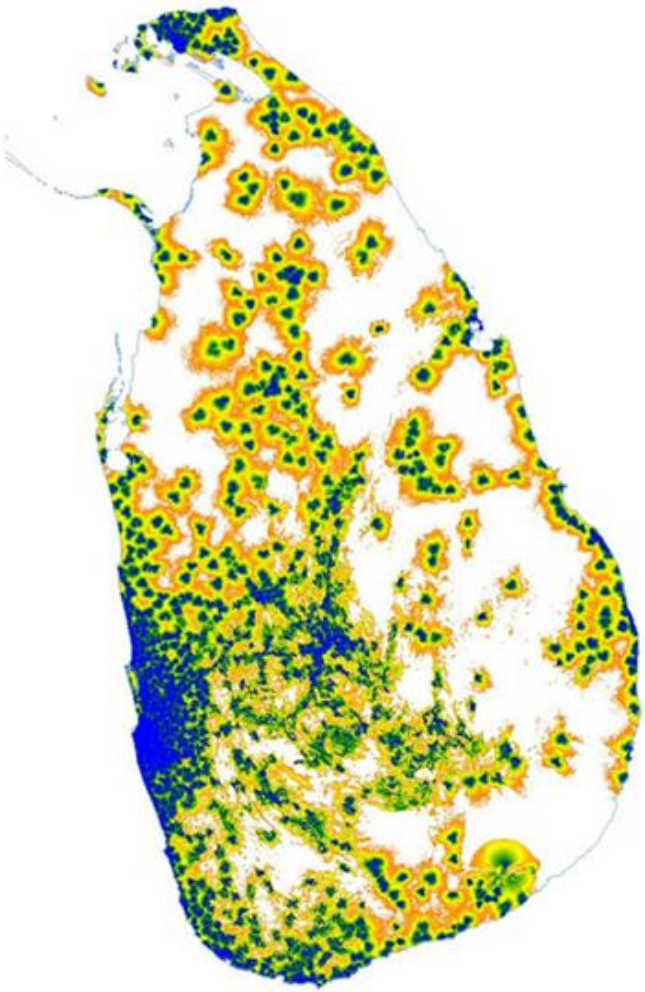
Dialog fixed 4G coverage map



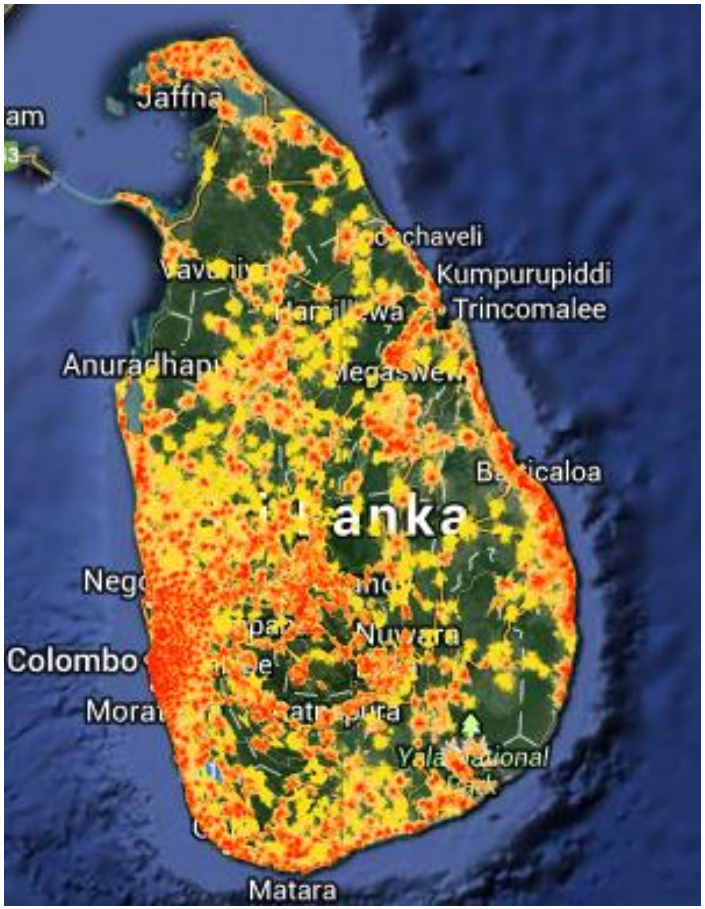
Mobitel 3.5G coverage map



Dialog 3G coverage map



Hutch 3G coverage map



Etisalat 3G coverage map

National backhaul

- Government did not agree with terms of World Bank credit (possibly, competitive procurement and open access) and declined USD 10m +
- Decided to use own resources to build National Backbone Network (NBN) through incumbent 49.5% government-owned operator, Sri Lanka Telecom (SLT) which already owned most of the fiber (14,656 km at end 2012) in the country
- Issued 10-year NBN license to SLT in 2013 June

Sri Lanka Telecom's NBN Plan

To cover all 329 Divisional Secretariats within the next 5 years.

Facilitate Backbone connectivity across Sri Lanka for all operators.

- High-speed connectivity.
- Uninterrupted access to services. (e-learning, e-health, e-commerce)
- Highest redundancy

Broadband Access to Services

- xDSL, Metro Ethernet/ IP-VPN, Wi-Fi, LTE
- Improved accessibility to services
- More affordable services

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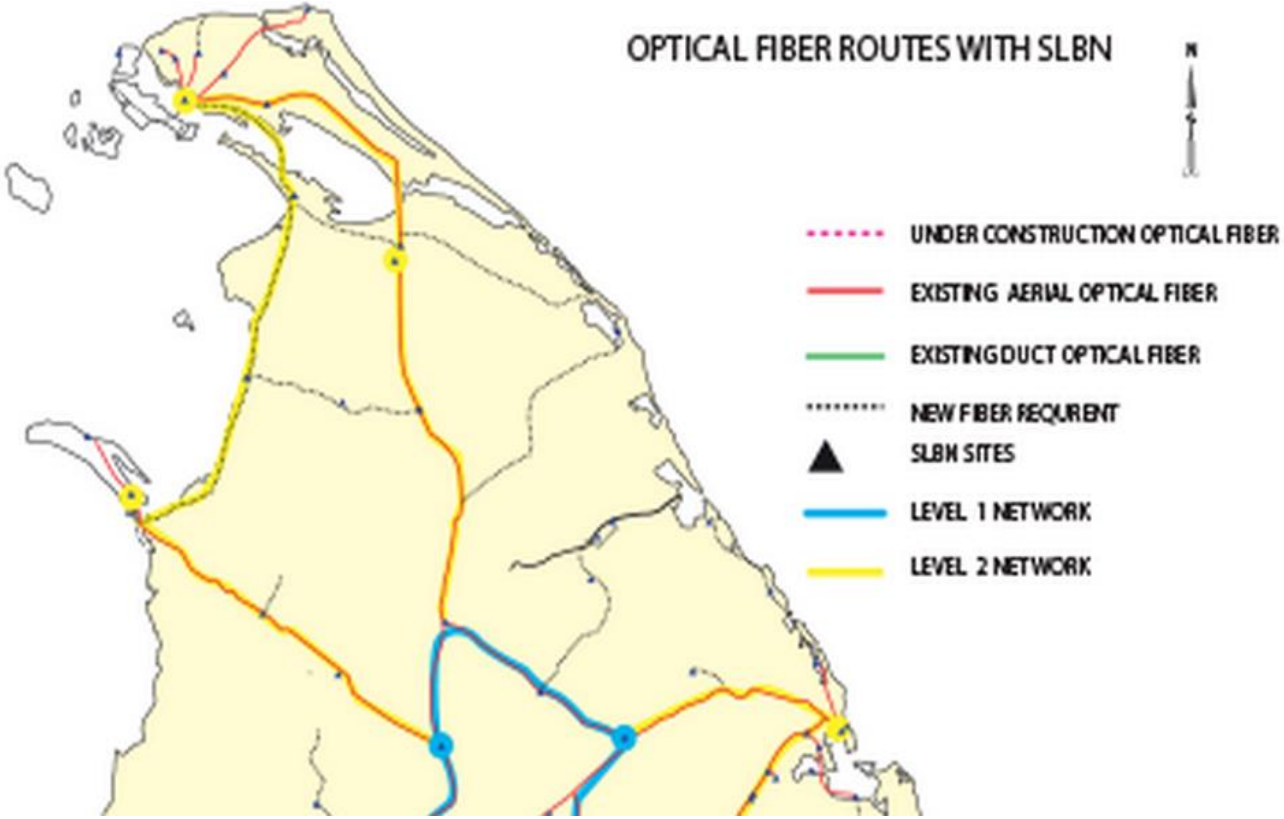

OPTICAL FIBER ROUTES WITH SLBN
N
UNDER CONSTRUCTION OPTICAL FIBER
EXISTING AERIAL OPTICAL FIBER
EXISTING DUCT OPTICAL FIBER
NEW FIBER REQUIREMENT
SLBN SITES
LEVEL 1 NETWORK
LEVEL 2 NETWORK

Oct 2011

Figure 1- Annual cost, 2Mbps, 2km DPLC (tail cost)

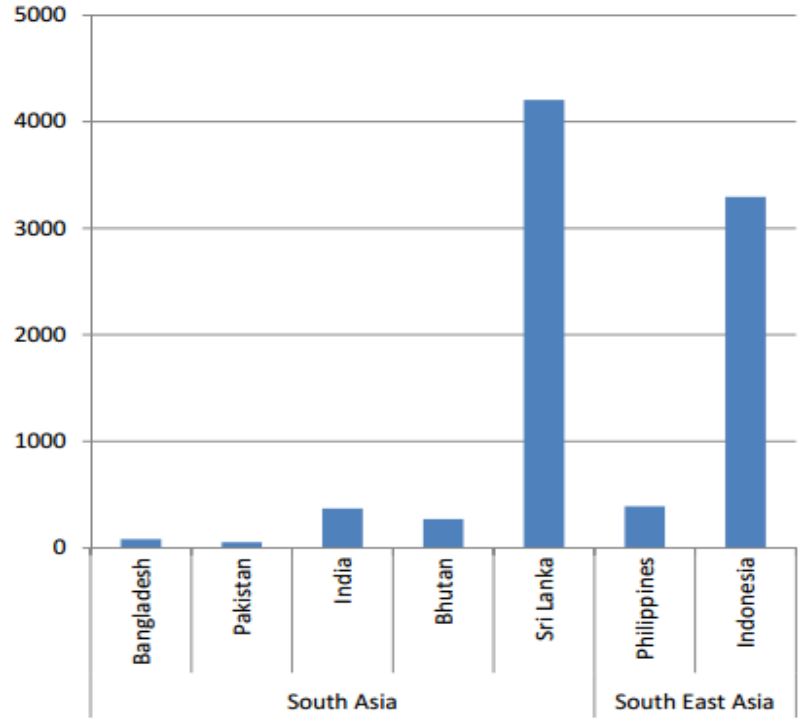
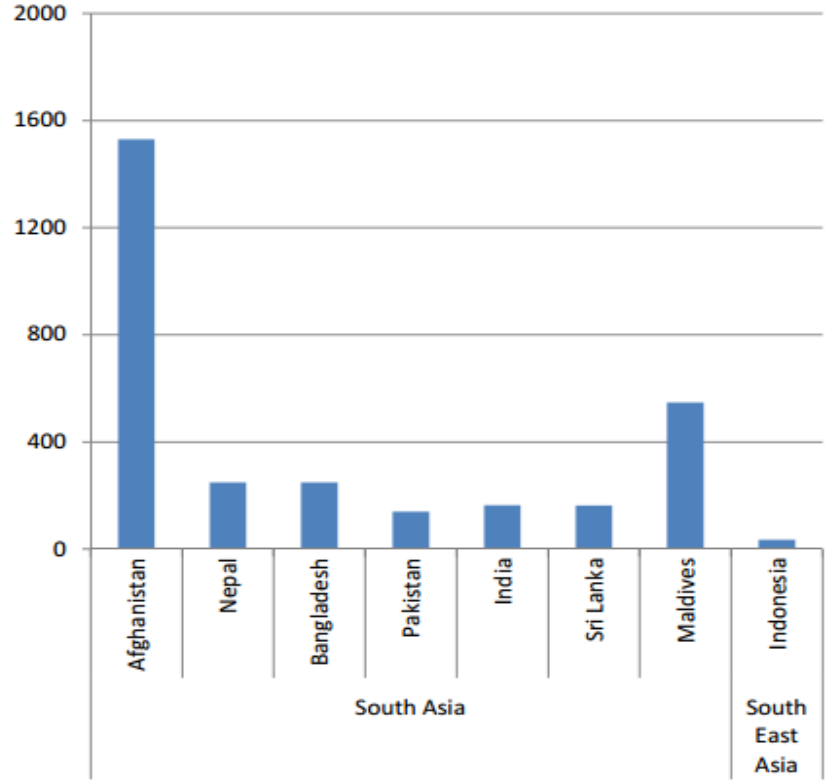
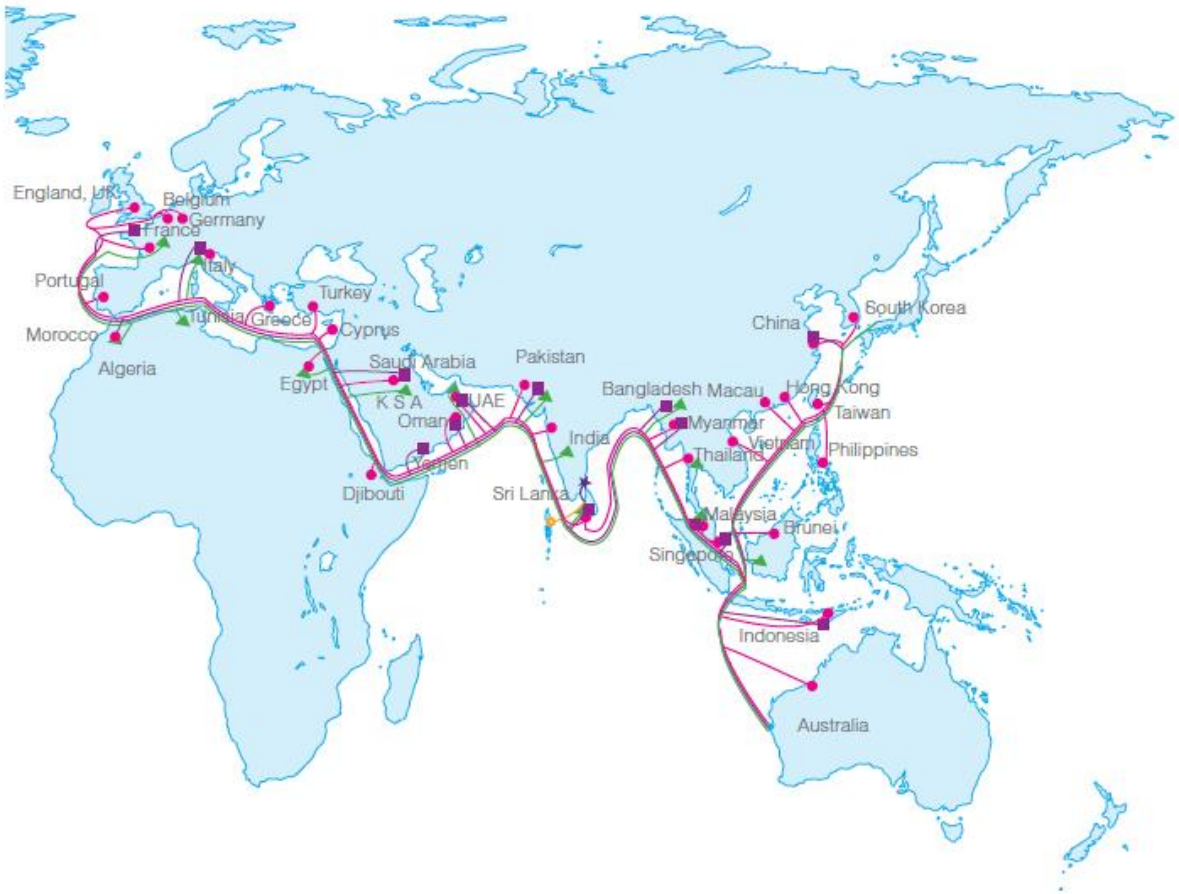


Figure 2 - Annual cost, 512kbps Broadband (unlimited downloads)



Three-years old data; indicative only

SLT's consortium & bilateral cables



Sri Lanka's Global Connectivity

- SEA-ME-WE - 3
- SEA-ME-WE - 4
- SEA-ME-WE - 5 (New cable system scheduled to commence operations by 2016)
- Dhiraagu - SLT
- Bharat - Lanka

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Status of consortium cables

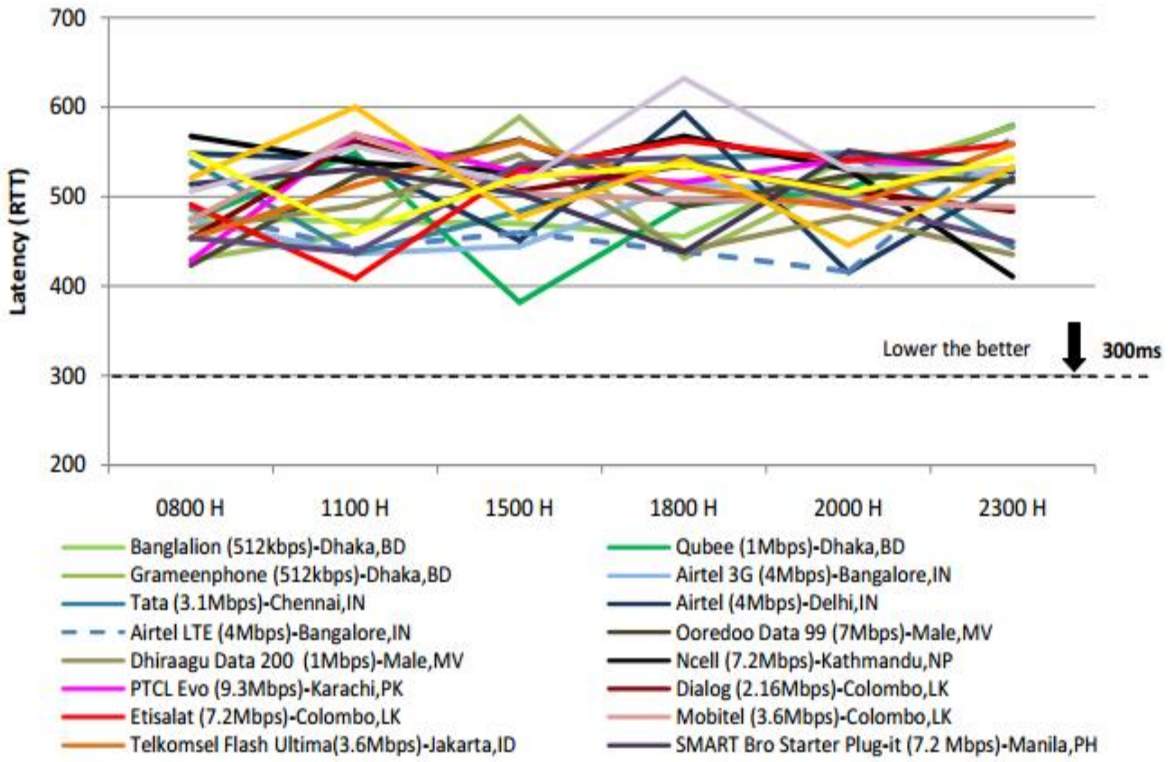
- Capacity-purchase rules were increasingly relaxed from SEA-ME-WE 2 to 4
- In February 2004, government compelled SLT to permit Tata (then VSNL) to use SEA-ME-WE 3, though colocation rules which had been drafted were not adopted
  - VSNL was a member of the consortium
- Parents of Dialog Axiata & Etisalat Lanka are also members of the SEA-ME-WE 3,4,5 consortia

SEA-ME-WE 5

- New landing station in Matara, close to southernmost point of Sri Lanka, will
  - Reduce latency because for first time, Sri Lanka will be directly connected to the consortium cable (previous connections through branch cables)
  - Reduce vulnerability
- Hambantota Port will host the submarine cable depot, which may improve speed of recovery from cable breaks in region

3.6 Broadband via USB Modem - Latency[vii] / Round Trip Time (RTT)

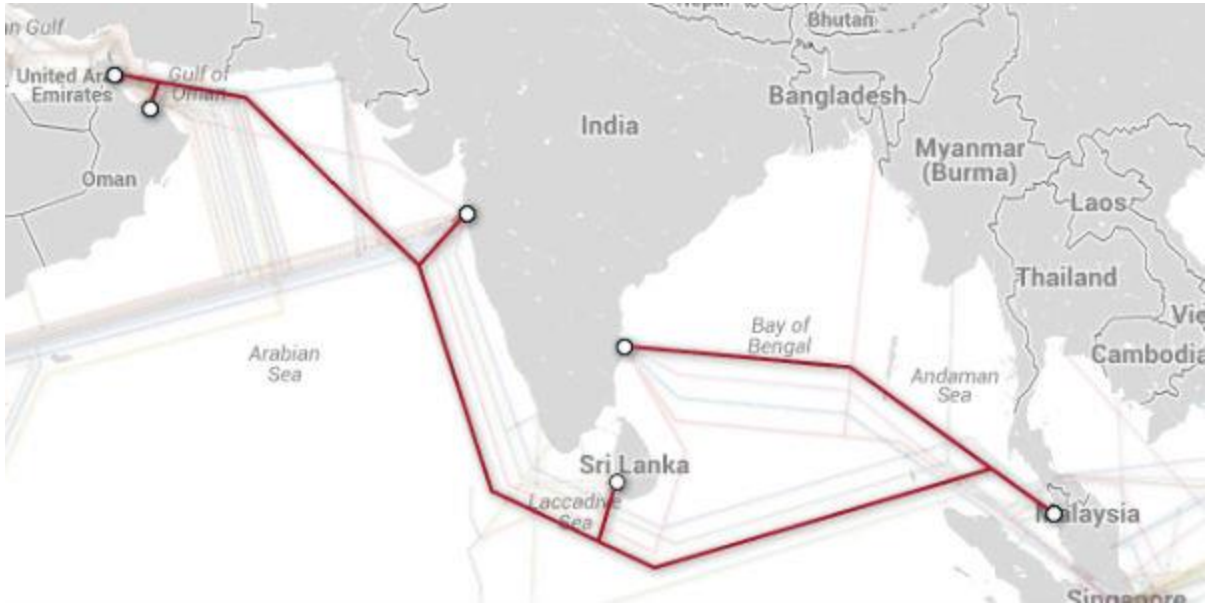
Figure 8 - RTT when pinged to an International server



Like most other ISPs in region, Sri Lanka ISPs perform poorly on latency

Lanka Bell has landing station for Reliance' FLAG, but has made little impact possibly because nature of LB

Bay of Bengal Gateway, with Dialog Axiata as local partner



Partners: Alcatel-Lucent, Vodafone Group, Omantel, Etisalat, Reliance Infocom, Dialog Axiata, Telecom Malaysia
Landing stations: Barka (Oman); Fujairah (UAE); Mumbai & Chennai (India); Ratmalana (Sri Lanka); Penang (Malaysia); Singapore

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Bay of Bengal Gateway

- Hybrid terrestrial and submarine cable that bypasses Malacca, Suez and Hormuz choke points
- Will be commissioned by end 2014
- USD 30 million commitment from Dialog Axiata

In conclusion

- Sri Lanka is doing well is building new cables; facilities-based competition is occurring
- Regulatory action is inadequate
  - Prices too high
  - Quality problematic