Development of IIC and Future Trends in Sri Lanka

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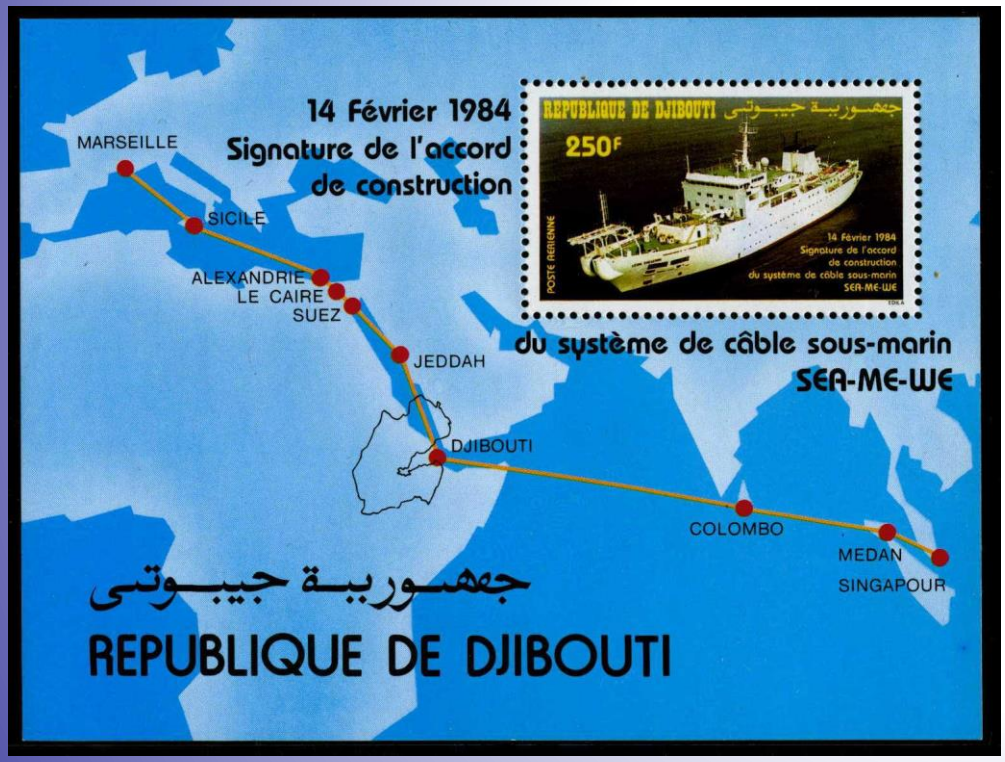
Geographical location as an Island has been beneficial in expeditiously laying down international sea cables

Historical Overview

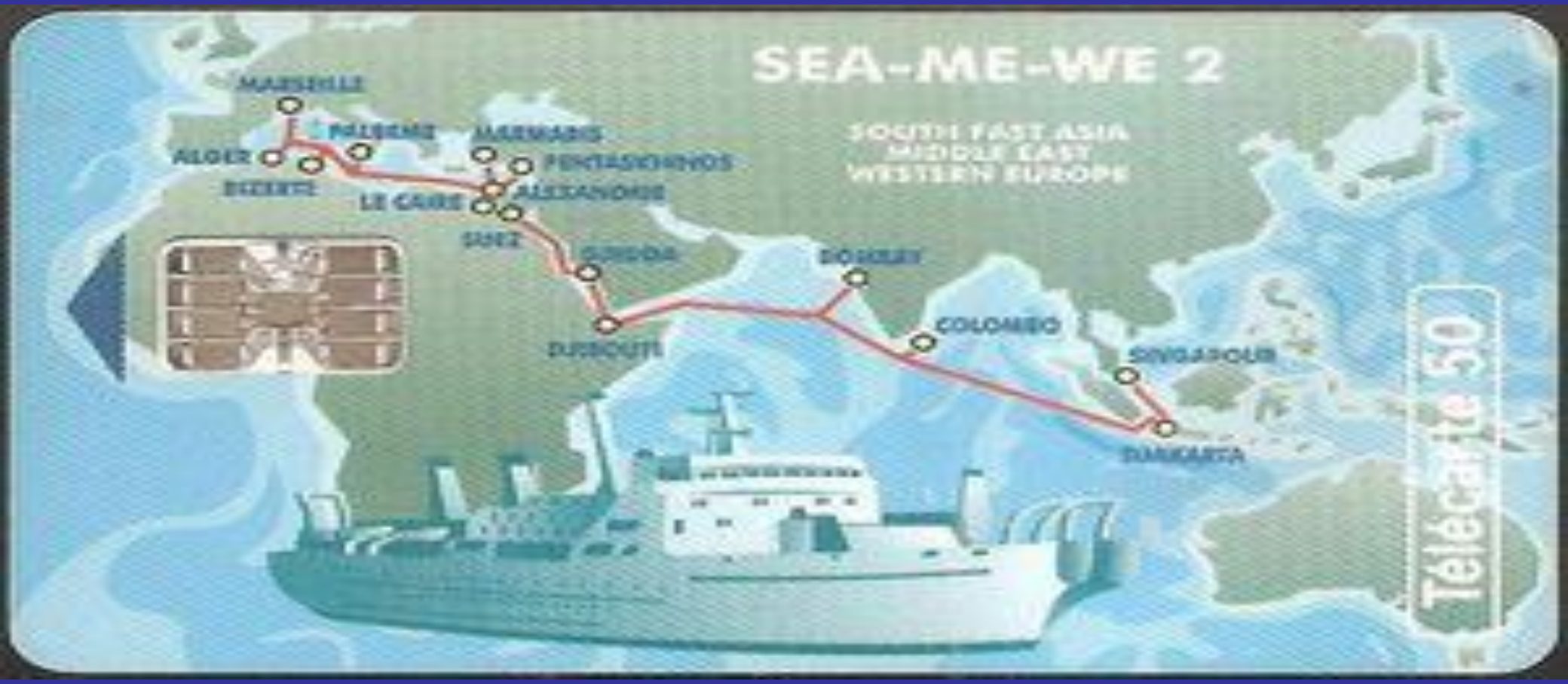
The first satellite earth station commissioned -1976

SEA-ME-WE 1 Commissioned - 1985



- The coaxial cable
- Eight parties

SEA-ME-WE 2



- Commissioned in 1994
- Optical fiber cable
- 52 consortium members
- 565Mbps bandwidth
- Internet connectivity was established

SEA-ME-WE 3

Sri Lanka Telecom

Commissioned in 1999

WDM optical fiber cable

33 countries

70Gbps bandwidth

SEA-ME-WE 4

Sri Lanka Telecom

Commissioned in 2005

DWDM optical fiber cable

16 parties

1.2 Tbps bandwidth

Monopoly Pricing

The availability of International bandwidth at globally competitive rates is key to the growth of the ICT sector and to enhance internet penetration and the overall competitiveness of the BPO industry in Sri Lanka

SMW3 and SMW4 are two main consortium cables landing in Sri Lanka that provides connectivity from Sri Lanka to the rest of the world

Three (03) International Gateway Operators SLT, Dialog and VSNL possess consortium membership based access rights to the SMW cables

The SMW Landing station is owned and operated by SLT.

- **International bandwidth charges (SMW3/SMW4)****
- **Landing Station Charges**
- **Back haul from Landing Station**

Falcon FLAG

Lanka Bell

Commissioned in 2008

1.2 Tbps bandwidth

Competition and Growing demand

Due to the competition in the data market, offering high volume to end customers.

New Technologies like 4G with 100 Mbps speeds require better and faster inter national **bandwidth**

Corporates have complex software and systems connecting global offices and sharing information on **real time** basis

Existing cables are **struggling** to meet these new requirements

Bay of Bengal Gateway (BBG):
Gateway to the Future

- The BBG Project commenced on 30th April 2013 with the signing of the Consortium Agreement
- **First submarine system** to use the 100G coherent DWDM Technology to link SL with rest of the world

- Project members:

vodafone

Jio
Reliance Jio (India)

TM
Telekom Malaysia

etisalat

Omantel

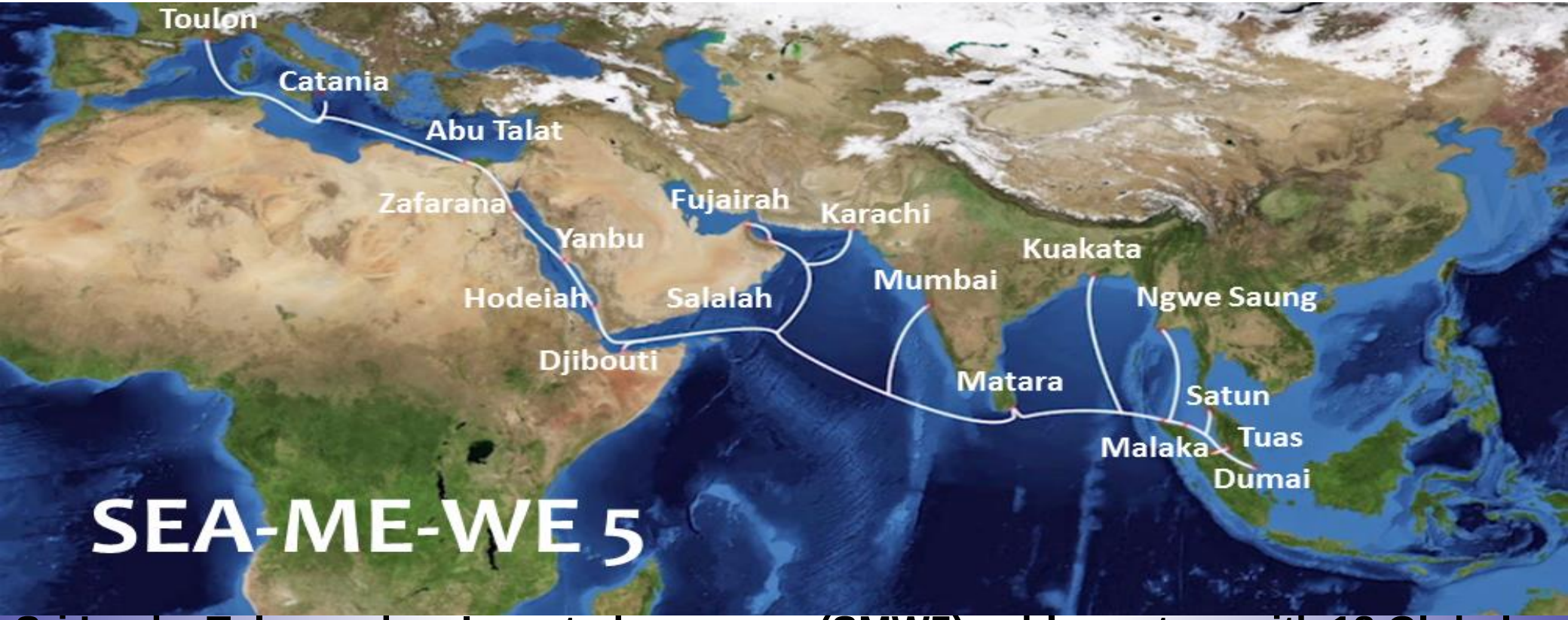
Dialog

Bay of Bengal Gateway (BBG)

Commissioned in 2016

6.4 Tbps bandwidth

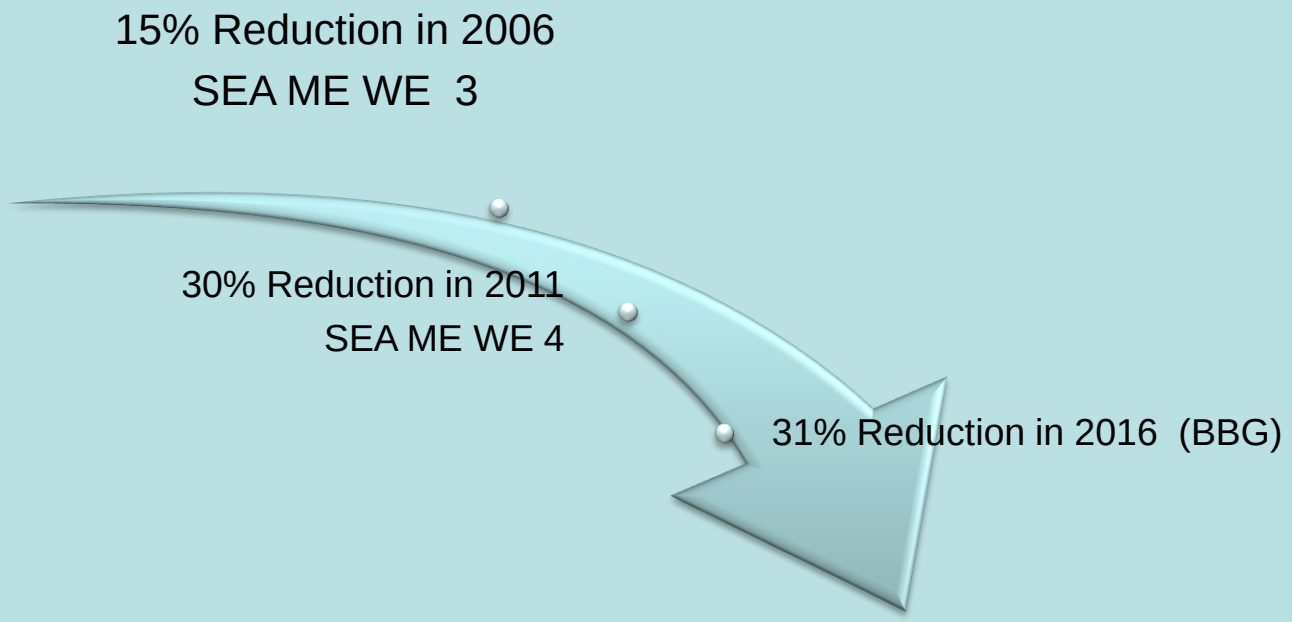
First Cable Landing Station in Sri Lanka which will be opened to all licensed backhaul operators to co-locate.



Sri Lanka Telecom has Invested on a new (SMW5) cable system with 18 Global partners to cater anticipated long term capacity.

- **Connecting South East Asia with Europe with 20 destinations along the Submarine cable Spanning 20,000 km**
- **Initial Capacity 24 Tbps**
- **A full Landing station Establishment at Matara.**
- **Building Construction at Matara is almost completed and Marine Installation and Cable landing shall be started in 2017.**

International bandwidth price reduction



Immerging Issue

- Lack of Peering agreements between carriers

some carriers bring traffic in to (say any country) the country using a submarine cable (say, SEA-ME-WE 4) and want to send traffic to another country using a different cable (BBG) In this case, Sri Lanka works as a peering hub. It offloads traffic from SEA-ME-WE 4 and uploads in to BBG for delivery. In this example two operators are involved. Namely Dialog and SLT

In this process we need to find the best possible path (less number of nodes) to interconnect two networks. (international traffic) This helps to reduce latency which is critical in International traffic peering.

If two carriers are not in a common peering agreement sometimes traffic goes through a number of local nodes before they reach the other operators network. This process will add extra latency to overall routing. This will discourage certain parties to use some cables and prefer to rely on cables of dominant carriers.

Some common policy is need for International peering and interconnection. (submarine to submarine)

Benefits:

1. **Global performance will increase**
2. **Encourages deployment of short-length submarine cables which has direct impact on pricing due to widely available cables**
3. **Global bandwidth capacity will grow**
4. **International submarine redundancy will increase**

Thank You