SEA-ME-WE 5 NEWSLETTER

2016 | Spring | Issue 1

# THE NEW, MATCHLESS, POP TO POP AND MULTI-REGIONAL SUBMARINE CABLE SYSTEM

## MESSAGE FROM THE MC CHAIRPERSON

*Greetings!*

*A thousand years ago, merchants from Western Europe endeavoured to open a trade route to the Middle East and Asia. Conversely, pilgrims from the East turned their masts to the westerly winds and ventured in the direction of the setting sun.*

*Today, the trails blazed by ancient traders have endured, connected not only by sea lanes and land trade routes but by advanced submarine fibre networks, the latest of which is the Southeast Asia - Middle East - Western Europe 5 (SEA-ME-WE 5) system.*

*With the completion of the SEA-ME-WE 5 cable landing in Singapore in March 2016, consortium members have proudly carried on the SEA-ME-WE heritage, born in 1998 with the SEA-ME-WE 3 and strengthened by SEA-ME-WE 4 in 2005. Construction of the 20,000km SEA-ME-WE 5 commenced following the signing of the C&MA on 7 March 2014 and the supply contract which came into force on 29 August 2014. Thanks to the commitment and tight coordination of every consortium member, construction of the SEA-ME-WE 5 was well implemented within the desired technical specifications and timelines.*

*Despite not connecting as many countries as SEA-ME-WE 3, the SEA-ME-WE 5 is a pivotal next generation data superhighway, linking East Asia, the Middle East, Africa and Europe with the lowest latency and highest data rates of any fibreoptic system. The SEA-ME-WE 5's design capacity of 24 Terabits per second on 3 fibre pairs enables it to meet the quadrupling of bandwidth demand for bandwidth intensive applications, such as enterprise data exchange, internet TV and online gaming between Europe and Asia from 2016 to 2021.*

*The next phase for SEA-ME-WE 5 is its commissioning in the end of 2016. We look forward to celebrating this milestone and adding to the rich tapestry of connections that unite Western Europe, the Middle East and Southeast Asia.*

*Regards,*
*Linette Lee*

## SEA-ME-WE 5 HISTORY

The new Southeast Asia MiddleEast Western Europe 5 (SEA-ME-WE 5) submarine cable system is a matchless, PoP to PoP, multiregional, data superhighway.

It is a technological breakthrough which marks a global communications milestone when it launches by the end of 2016.

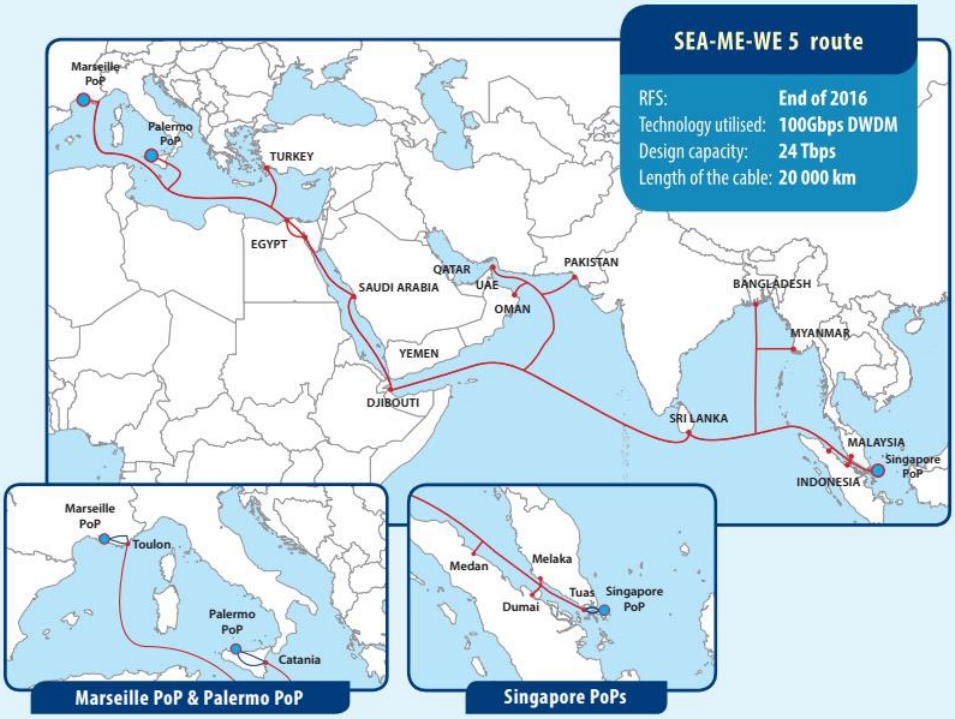
Designed with the latest upgradable 100 Gbps technology enabling initial system capacity of 24 Tbps, it will provide the lowest latency, further enhancing the diversity and resilience to the heavily loaded Asia to Europe route.

The new SEA-ME-WE 5 submarine cable system relies on a strong commitment, proven financial stability and recognized technical knowhow from its consortium members, enjoying the highest level of flexibility in utilizing their capacity entitlement over the system.

| | SEA-ME-WE | SEA-ME-WE 2 | SEA-ME-WE 3 | SEA-ME-WE 4 | SEA-ME-WE 5 |
|---|---|---|---|---|---|
| Commissioned in: | June 1985 (Decommissioned June 1999) | October 1994 (Decommissioned October 2006) | August 1999 | November 2005 | End of 2016 |
| Capacity: | 12 MHz | 2x560 Mbps | 8x2.5 Gbps | 64x2x10 Gbps | 24 Tbps |
| Lenght: | 13,500 km | 18,000 km | 39,000 km | 20,000 km | 20,000 km |
| No. of Owners: | 22 | 52 | 92 | 16 | 18 |
| Total Investment: | USD800M | USD800M | USD1500M | USD500M | USD700M |
| Technology: | Analog/Copper | PDH/Optical | SDH/WDM/Optical | SDH/DWDM/Optical | 100GDWDM/Optical |

## THE SEA-ME-WE 5 ROUTE

The core system of the SEA-ME-WE 5 is designed to span from Singapore to France & Italy in the most optimized route with parties connecting into the core system by branch via ROADM-BU. The system terminates at carrier neutral PoPs in Singapore, Italy & France for cross connecting with other cable systems, interconnecting with other carrier and acquire services in a competitive environment. The system has been planned with field proven DWDM (Dense Wavelength Division Multiplexing) 100G Coherent Technology.



# SEA-ME-WE 5

## SEAMEWE 5 HIGHLIGHTS AND ADVANTAGES

Spanning more than 20,000 km, our cable system offers offers businesses an impressive range of features and advantages.

### ADVANTAGES

- **PoP to PoP**
- **Multi-Regional**
- **Matchless**
- **Technological breakthrough**
- **Open system**
- **Future upgradability**
- **Solid design**
- **Low latency**
- **Financially stable**

### PROJECT HIGHLIGHTS (as of end of April 2016)

- RFS: end of 2016
- Manufacturing – 100% completed
  - SLTEs – 100% manufactured and tested
  - PFEs – 100% manufactured and tested
  - Cables & wet plant - 100% manufactured, tested and loaded
- Marine Installations have started
  - Route surveys - 100% completed
  - Cable main lay installations – 60% completed
  - Cable landings – 60% completed (11 out of 18 landings completed)
  - System final splice expected in Jul/Aug 2016.
- Equipment Installation in Cable Stations
  - 75% completed

### PROJECT ATTRIBUTES

- The core system includes fully protected terrestrial extensions to major carrier-neutral PoPs. The list of the PoPs which are connected to SEA-ME-WE 5 without additional costs includes:
  - Marseille: Interxion (formerly Net Center)
  - Palermo: new carrier neutral Sicily Hub PoP
  - Singapore: Equinix, Global Switch
- SEA-ME-WE 5 will also secure outstanding cross connection possibilities with other submarine cables in Egypt, Saudi Arabia, Djibouti and Sri Lanka.
- Marmaris CLS in Turkey will also be opened without extra costs for members to increase the options for terminating capacities in Europe.
- The SEA-ME-WE 5 NOC is located in Catania, Italy and managed by TIS.

*Our cutting-edge technology will help improve business channels for countless companies!*

### TECHNICAL HIGHLIGHTS

- Low latency
  - Examples: Singapore – France route, RTD:
    - SMW3, Singapore – Penmarch : 179 ms
    - SMW4, Singapore – Marseille : 163 ms
    - SMW5, Singapore – Marseille : expected 140 ms
- Marine routes designed along proven routes with low fault history
- True coherent cable
  - QPSK, 100Gbps
  - Upgradability agnostic to vendors
- Future proof upgradability
  - Longest DLS < 6000km
  - Able to adopt newer transponder technology

# SEA-ME-WE 5

## THE SEA-ME-WE 5 CONSORTIUM

With the historically successful experience of implementing four submarine cable systems in the past, SEA-ME-WE 5 submarine cable system is going to be the 5th milestone of the SEA-ME-WE family. SEA-ME-WE 5 has received strong commitment and support from the associated parties which in turn would help to complete the project successfully. This project includes 18 international operators, namely: Bangladesh Submarine Cable Company Limited (BSCCL), China Mobile International Limited (CMI), China Telecom Global Limited (CTG), China United Network Communications Group Company Limited (China Unicom), Djibouti Telecom SA (Djibouti Telecom), Emirates Integrated Telecommunications Company (du), Myanmar Post and Telecom (MPT), Ooredoo, Orange, PT Telekomunikasi Indonesia International (Telin), Saudi Telecom Company (STC), Singapore Telecommunications Limited (Singtel), Sri Lanka Telecom PLC (SLT), Telecom Egypt (TE), Sparkle, Telekom Malaysia Berhad (TM), Türk Telekom International (TTI) and Trans World Associates Limited (TWA) Pakistan.

**Bangladesh Submarine Cable**
Company Limited (BSCCL)
Kuakata CLS
http://www.bsccl.com.bd/

**Myanmar Post and Telecom**
(MPT)
Pathein CLS
http://www.mpt.com.mm/en/

**Sri Lanka Telecom PLC**
(SLT)
Matara CLS
http://www.slt.lk/

**China Mobile International Limited**
(CMI)
http://www.chinamobileltd.com/

**Ooredoo**
Oman
Qalhat CLS
http://www.ooredoo.com/en

**Telecom Egypt**
Zafarana CLS
Abu Talat CLS
http://te.eg/en_home

**China Telecom**
Global Limited (CTG)
http://en.chinatelecom.com.cn/

**Orange**
Toulon CLS
Marseille PoP
http://www.orange.com/en/home

**Sparkle**
Catania CLS
Palermo PoP
http://www.tisparkle.com/

**China United Network**
Communications Group Company Limited (CU)
http://eng.chinaunicom.com/

**PT Telekomunikasi**
Indonesia International (Telin)
Dumai CLS
Medan CLS
https://www.telin.co.id/

**Telekom Malaysia Berhad**
(TM)
Melaka CLS
https://www.tm.com.my

**Djibouti Telecom**
Djibouti CLS
http://www.djiboutitelecom.dj/

**Saudi Telecom Company**
(STC)
Yanbu CLS
http://www.stc.com.sa

**Türk Telekom International**
(TTI)
Marmaris CLS
http://www.turktelekomint.com/

**Emirates Integrated**
Telecommunications Company (Du)
Kalba CLS
http://www.du.ae/en

**Singapore Telecommunications Limited**
(Singtel)
Tuas CLS
Singapore PoPs
http://info.singtel.com/

**Trans World Associates (Pvt)**
**Limited Pakistan**
(TWA)
Karachi CLS
http://www.tw1.com/

# SEA-ME-WE 5

## SEA-ME-WE 5 STATUS UPDATE

We are happy to announce that our project is on schedule and will be completed by the end of 2016!

## DEPLOYMENT PHOTOS





## INVITATION TO LEARN MORE ABOUT SEA-ME-WE 5

This May in Chicago, Illinois at the **International Telecoms Week**, we will be conducting a roundtable discussion for business to learn about how they can benefit from SEA-ME-WE 5. We hope that you will join us. Below you will find further details and if you have any additional questions, please send an email to **edina.rozsahegyi@turktelekomint.com** and we'll get back to you promptly.

# INVITATION

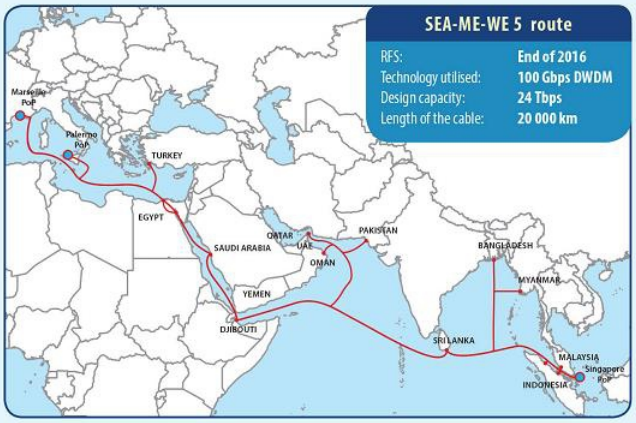
SEA-ME-WE 5 **EXCLUSIVE ROUNDTABLE DISCUSSION**

### Discover how SEA-ME WE 5 can enrich your business!

Date: **10th May 2016 (Tuesday)**
Time: **11:00 – 12:30 (90 min session)**
Venue: **Lucerne 3, Gold Level, Swiss Tower**

*The new Southeast Asia-Middle East-Western Europe 5 (SEA-ME-WE 5) submarine cable system is a matchless, PoP to PoP, multi-regional data superhighway.*

Find out how SEA-ME-WE 5 is on schedule and what that means to you from:
**Dr. Homoud Al Kussayer** - STC - Global VP for Wholesale
**Yves Ruggeri** - Orange - VP Submarine Network Business Development
**Pasquale Fiorillo** - Sparkle - Head of Capacity Services
**Albert Kis** - Türk Telekom International - CMO
**Steven Tan** - CTG - VP of Global Carrier
**Kamran Malik** - TWA - President
**K. A. Kiththi Perera** - SLT - Chief Enterprise and Wholesale Officer
Moderated by **Julian Rawle** - Principal - Julian Rawle Consulting




**SEA-ME-WE 5 members:** BSCCL, CMI, CTG, CU, Djibouti Telecom, du, MPT, Ooredoo, Orange, Singtel, SLT, STC, TE, Telin, Sparkle, TM, Türk Telekom International, TWA

**www.seamewe5.com**

## FURTHER READING

For more information about our project and the latest news, please visit our website: **www.seamewe5.com**