Panel Topic:
Problems faced by cable planners and installers in laying of cables within a country’s maritime zones

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Tyco Telecommunications conducts cable route planning and engineering, surveys, manufacturing, installation, repair and maintenance of undersea cable systems.
Key Issues Facing Installers

Congested routes and seabed not conducive to burial make it difficult to route and protect cables

Uncontrolled Anchoring and Fishing causing cable damage and service interruption

Unknown and unpredictable permitting process and intervals result in vessel standby and cost

Routes that transit the coastal state EEZ but do not land have no landing party through which to apply for permits

Requirements to use coastal state flag vessel and poor availability of capable vessels result in poor installations and delays

Unknown or unpublished Maritime Claims
Goals of Our Participation in this Workshop

Increase overall reliability of undersea cables in SE Asia for our clients
Route protection (diversity, burial, cable awareness)

Improve project planning and execution.
Strive for well defined, consistent permit process with established timeframes. Help to make it as efficient as possible

Convey supplier’s perspective to government organizations
Typical project cycle and steps
Cable Ship, Plows & ROVs

Listen and understand issues facing government organizations and offer solutions were we can

Key Drivers for Undersea Cable Projects
• Reliability
• Schedule
• Cost
• Safety and Environment

Regulatory Compliance
• UNCLOS used as a guideline
• Coastal State laws/regulations are investigated and complied with (supersede UNCLOS)
Undersea Cable System Project Cycle – Permitting is Critical Path

- Permitting & Marine Liaison
  - Proposal
    - Desktop Study
      - Route Survey
      - Cable Engineering
        - Cable Manufacture & Integration
          - Vessel Load
            - Installation & Test
              - Final Documentation
                - Maintenance

The Desktop Study routes and charts feed the permit application for route approval.

Survey and Installation vessel specifications and crew lists form the operational vessel permit application.
Permit Investigation, Planning, and Tracking

Dedicated organization and in-country agents manage acquisition process.

Permit Matrix and POW used to identify all required Permits (e.g., system landing/operating licenses, rights-of-way, way leaves, environmental studies, crossing agreements, etc.) and to forecast commencement of project activities.
Modern Cable Ship for Installation and Repair

Installation and repair ships equipped with state of the art equipment for navigation, cable handling, jointing and cable deployment

- Range: 25,000 nm or 60 days
- Overall Length: 140.0 m
- Molded Beam: 21.0 m
- Deep Draft: 8.4 m

- Speed: 14 knots
- Gross Reg. Tonnage: 12,184
- Accommodations: 80 personnel
- Deadweight: 9,200 MT ; 9,056 LT
- ABS Class: +ACCU,+AMC,+DPS-2,NBLES, UWILD
- Year Built: 2001 by Keppel Hitachi Zosen, Singapore
Cable Burial – Protection from Fishing and Anchoring

- Burial to 1 m into the seabed protects against most fishing threats.
- Burial to 3 m is used in softer seabed.
- Anchorages and port limits may specify up to 10 m burial (injector plow).
- Burial is dictated by seabed characteristics and operational restrictions of vessel traffic (not all cables can be buried).

Sea Plow

ROV with Jetting
Loading of a cable ship is a costly commitment. Vessels that are forced to standby waiting for permits result in significant costs and impact to current and downstream projects.
Anchor Fault Area South of Johor Port
Key Recommendations – What Can We Do?

Control and police illegal anchoring and fishing activities
- A good start - Ref: anchoring prohibition issued by Indonesia, Malaysia, Singapore

Streamline Permit process and documentation requirements
- Define a standard project documentation package for applications
- Define application review durations; hold to dates
- Review and define maritime jurisdictional claims applicable to undersea cable Permits

*The Permit need not be a document of national sovereignty*
- Identify Govt. agency for Permit application when no in-country landing party is identified
- Include provisions for long-term cable system maintenance and repair in Permit authorizations and process for obtaining expedited repair Permits when necessary
- Consider web based applications and vessel databases
- Suppliers are willing to provide any survey or installation data to address concerns over national security or resource exploration.

Tyco Telecommunications is most appreciative of this opportunity to discuss and work toward improvements for all parties. Please contact us with any questions.

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