

Panel Topic:

Problems faced by cable planners and installers in laying of cables within a country's maritime zones

NUS – Centre for International Law

Workshop on Submarine Cables and Law of the Sea

14-15 December, 2009

Singapore

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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Unknown or unpublished Maritime Claims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 where we can

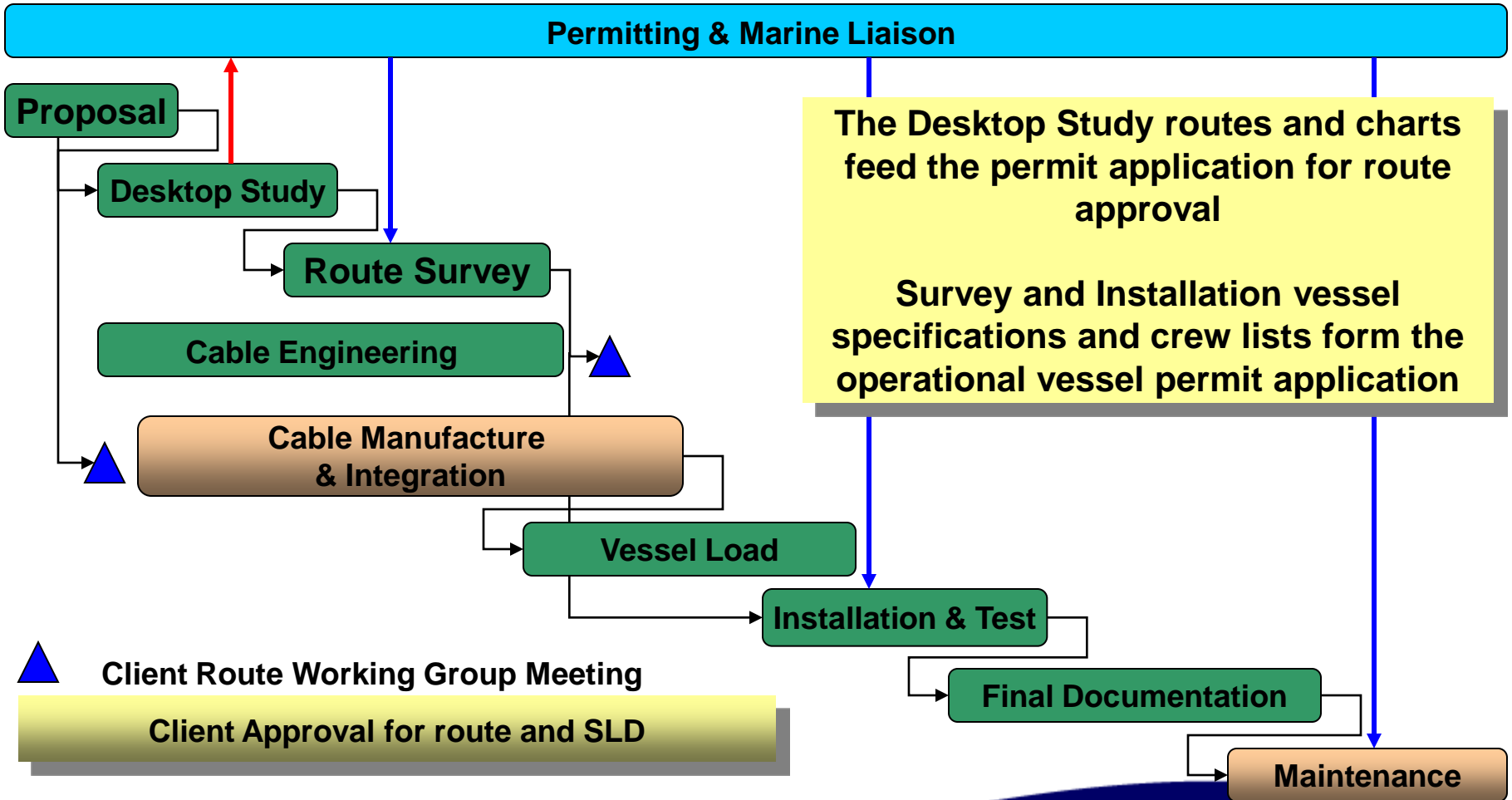
Regulatory Compliance

- UNCLOS used as a guideline
- Coastal State laws/regulations are investigated and complied with (supersede UNCLOS)

Key Drivers for Undersea Cable Projects

- *Reliability*
- *Schedule*
- *Cost*
- *Safety and Environment*

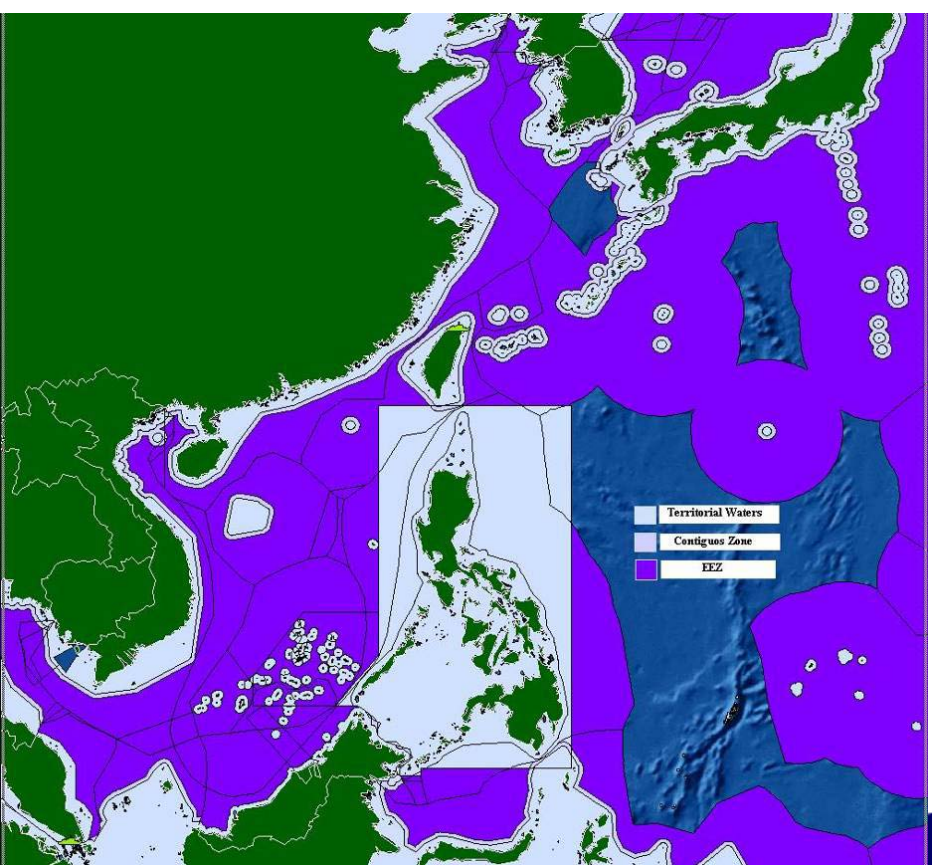
Undersea Cable System Project Cycle – Permitting is Critical Path



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.



No.	Permit Name	Name of Permitting Authority	Responsible Party	Approximate Timescale for Application and Granting	Necessary Document for Application	Supported Land or Marine Activity	Permit Filing Date		Permit Approval Date		Status/Notes	Dependencies (Predecessors)
							Target	Actual	Target	Actual		
1	TPE System Approvals	Ministry of Information Industry, People's Republic of China (MI)	PO	40 working days	Project Description, System Configuration, MOU, POW, Investment Budget, Background of Investment Party, Investment Share of Each Party, Analysis on Utilization of Natural Resources & Consumption of Resources	All	15-Aug-06		30-Sep-06			
2	TPE System License	National Development & Reform Commission, People's Republic of China (NDRC)	PO	60 working days		All	09-Oct-06		15-Dec-06	carried after #1	Permit 1 must finish before Permit 2 can start	
3	DTS Coordination Meeting (before applying the survey permits)	State Oceanic Authority, People's Republic of China (SOA)	PO	10 working days	Project Description, RPL, DTS	Route Survey	08-Feb-06		08-Feb-07	SOA has agreed in principle to SIS & S2. SA got SIN to go. Must submit 60 days before survey after SOA SIS, Article 5. PO POC reports to EGS that		
4	Cable Route Survey Permit (a.k.a. "Application for Investigation and Survey of the Route")	State Oceanic Authority, People's Republic of China (SOA)	PO with the Tyco input needed	30-40 working days ("within 30 days" per SOA '90, Article 5(5))	Purchaser provide TPE System License, DTS Contractor provide Survey Vessel Spec, Qualification Certificate for Survey Sudder, MOP, POW, SOA	Route Survey	28-Feb-07	20-Mar-07	08-Apr-07	10-Apr-07		Permit 3 must finish before Permit 4 can start
	Complete "Report on Investigation and Survey of Route" for SIS & S2 West (Chinese vessel data only)	Not Applicable	Tyco	3 working days		Route Survey	01-Jul-07		N/A		Report must be translated into Chinese	
	Complete "Report on Investigation and Survey of Route" for SIS & S2 West (Complementary Data from survey MOP to generate HDB)	Not Applicable	Tyco	3 working days		Route Survey	05-Aug-07		N/A		Report must be translated into Chinese	
5	Fishery Compensation	Local Fishery Administration	PO	60 working days	RPL	Marine Installation	05-Apr-07	(CNC, please provide)	15-Jun-07	(CNC, please provide)		
6	Environment Impacting Assessment (EIA) and protection report (before installation)	State Oceanic Authority, People's Republic of China (SOA)	PO with the Tyco input needed	TBD (60 working days?)	Project Description, RPL + others TDA	Marine Installation	10-Apr-07	(CNC, please provide)	15-Jun-07	(CNC, please provide)	data will be collected during POA & SOA surveys. Report covers all of EEZ.	Permit 5 must finish before Permit 6 can finish
7	Cable Landing Permit	Local Water Authority	PO with the Tyco input needed	30 working days	Purchaser provide TPE System License, Farm compensation contract	BBH to CS	05-Apr-07	(CNC, please provide)	15-Jun-07	(CNC, please provide)	Per MOP Push, this permit is not required as a pre-	
8	Compensation for NAVY cable crossing (CMI)	Concerned local Administration	PO	depends (45 working days?)	RPL	Marine Installation	05-Apr-07	(CNC, please provide)	15-Jun-07	(CNC, please provide)		
9	Cable Route Survey Evaluation Meeting (before applying the marine installation permits)	State Oceanic Authority, People's Republic of China (SOA)	PO	10 working days	Cable Route Survey Report	Marine Installation	02-Jul-07		13-Jul-07	CNC requests that Tyco notify 10 days prior to completion of survey so that	Investigation and Survey and Permits 5, 6, and 8 must finish before Permit 9 can start	
10	Permit for Laying of Submarine Cables or Pipelines	SOA	PO with the Tyco input needed	60 working days officially	Report on Investigation and Survey of Route, demonstrate that Fishery Compensation has been completed, Environment Contractor provide	Marine Installation	15-Jul-07		13-Sep-07		Permit 9 must finish before Permit 10 can start	
11	Non-open Waters Entry Approvals	Maritime Safety Authority, People's Republic of China (MSA)	Tyco	30 working days	Application Report, POW, MOP, Cable ship Spec, RPL, SOA	Marine Installation	14-Sep-07		23-Oct-07		1200' to 1800' 1200' can apply for Permit 11 for Laying of	Permit 10 must finish before Permit 11 can start
12	Marine Installation Permit	State Oceanic Authority, People's Republic of China (SOA)	Tyco	30 working days (in parallel)	Contractor provide MOP, Cable Ship Spec, RPL, SOA, Non-open water entry Approvals, POA, Survey Description, TPE System License	Marine Installation	14-Sep-07		23-Oct-07		Use note above.	Permit 11 must finish before Permit 12 can start
13	Shore Line Used License	Local Port Administration Centre	PO with the Tyco input needed	40 working days		Post Installation	03-Dec-07		25-Jan-08		This permit is required after main lay or PLEB.	
14	Cable Route License	State Oceanic Authority, People's Republic of China (SOA)	PO	50 working days	Final RPL, TPE System License	Post Installation	03-Dec-07		08-Feb-08		This permit can be start after main lay or PLEB.	



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: 8.4m

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

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Cable Burial – Protection from Fishing and Anchoring



Sea Plow

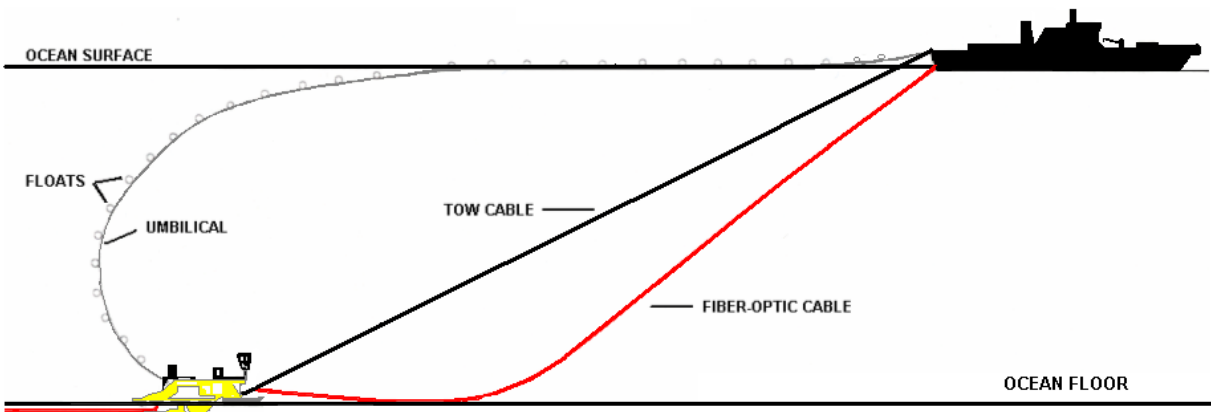
Burial to 1 m into the seabed protects against most fishing threats

Burial to 3 m is used in softer seabed

Anchorage and port limits may specify up to 10m burial (injector plow)

Burial is dictated by seabed characteristics and operational restrictions of vessel traffic (not all cables can be buried)

ROV with Jetting

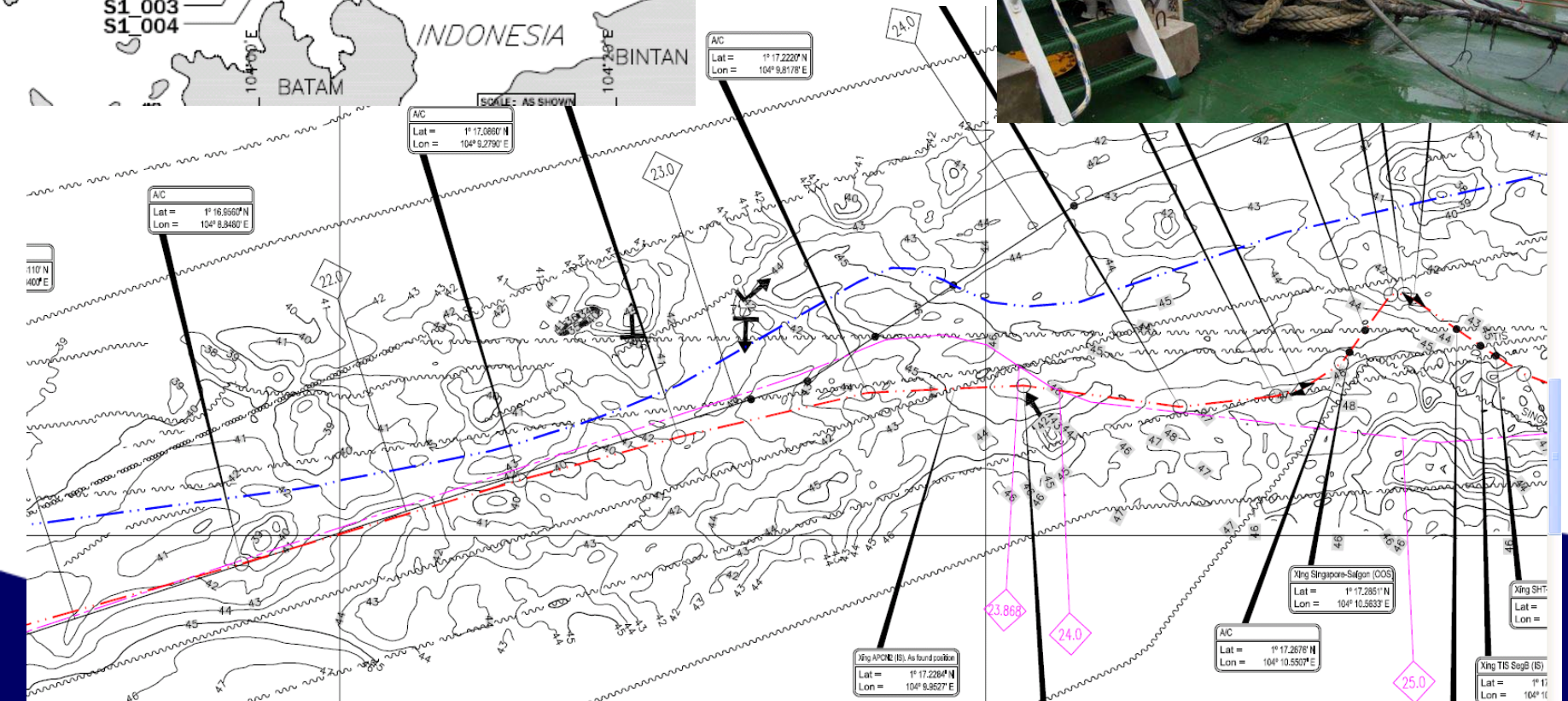
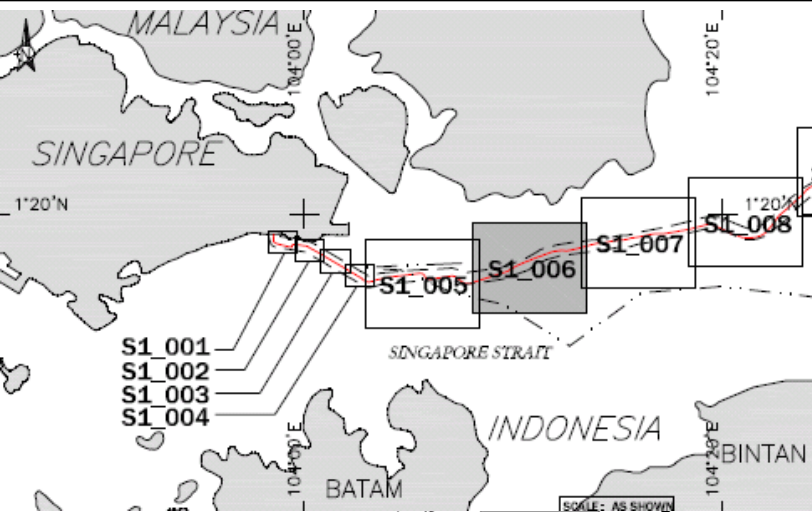


Loading Cable & Wet Plant – Permits should be in Place

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



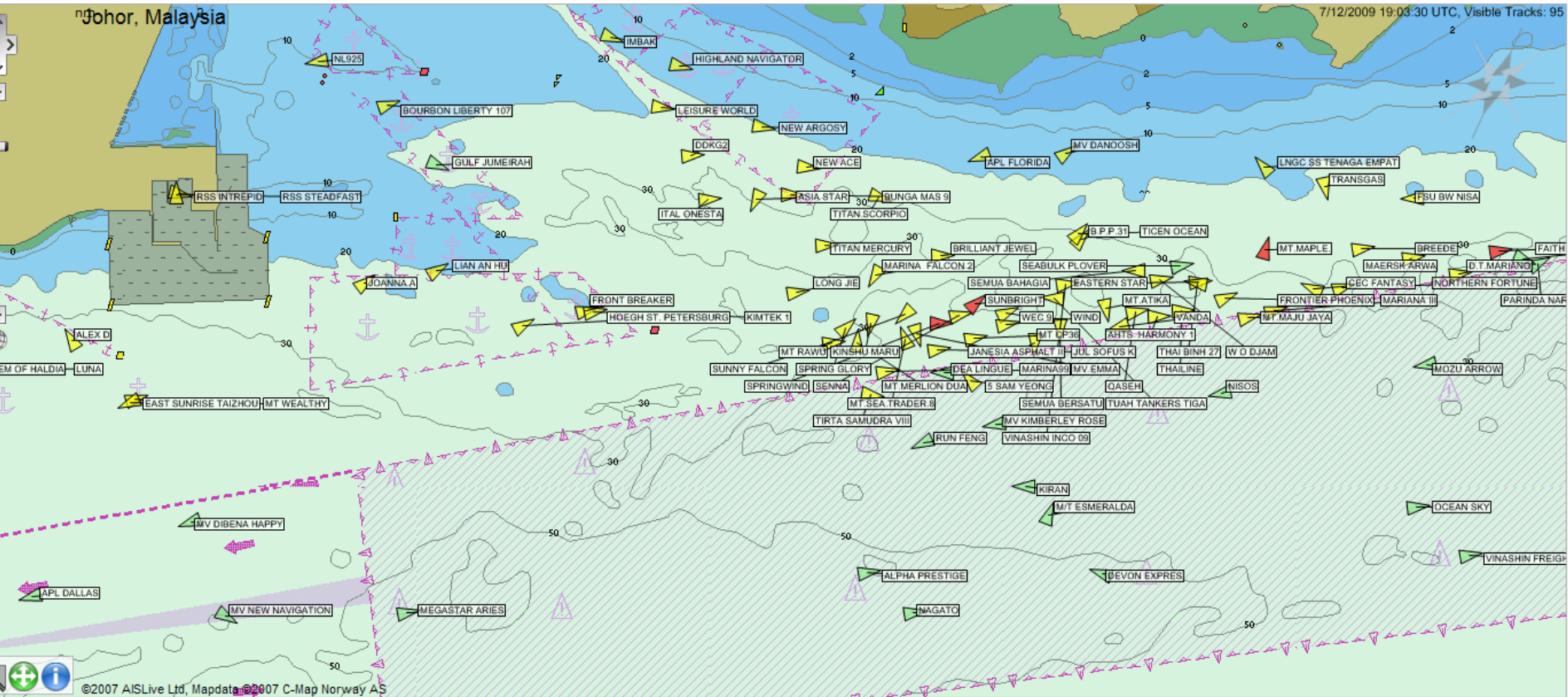
Vessel Anchoring South of Johor Port

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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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