

# GSR 2008

Discussion  
Paper

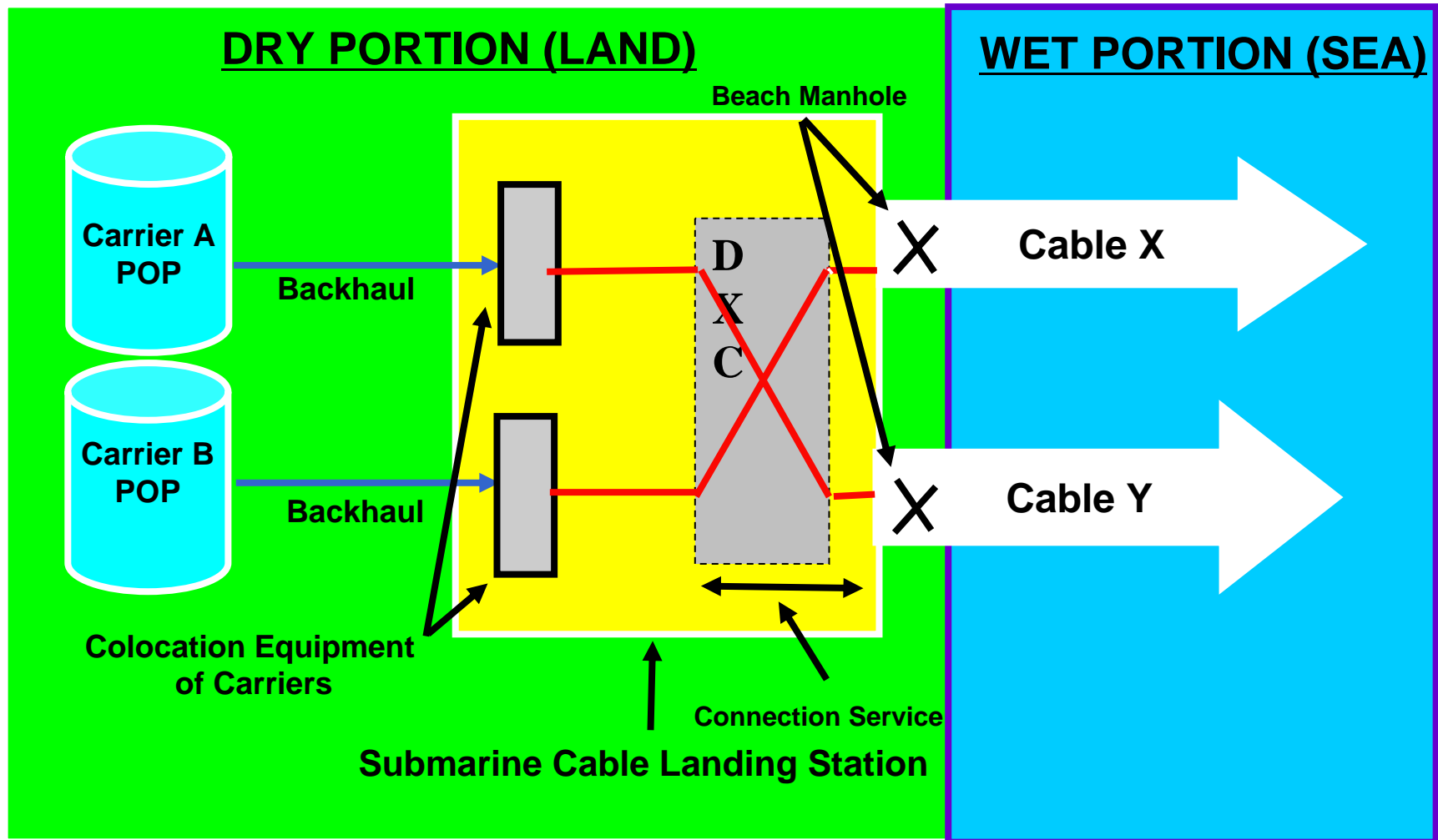
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## **GSR 08: Session 2** **INTERNATIONAL GATEWAY** **LIBERALIZATION:** **SINGAPORE'S EXPERIENCE**

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# Schematic of Submarine Cable System



# IDA's Methodology for Making Regulation

- > **Determine desired policy/regulatory Outcomes**
- > **Apply IDA's Regulatory Principles throughout (Transparency, Non-discrimination, Timeliness, etc)**
- > **Consult interested parties/stakeholders (including research on domestic and international practices)**
- > **Address concerns and analyze findings**
- > **Make preliminary recommendations**
- > **Consult interested parties on preliminary recommendations**
- > **Make decision, explain the reasons behind the decision**
- > **Implement decision (ensure legislation, enough resources, training)**
- > **Monitor that policy/regulatory objectives are being met. If not, take corrective action**
- > **Review regulation after 2-3 years**

# Step One

## > Determine desired regulatory/policy outcomes:

- Vibrant international market, with multiple players landing in Singapore
- Substantial increase in Singapore's international bandwidth capacity
- Significant drops in IPLC rates (International Private Leased Circuits) and IDD rates

# Step Two

- > **Establish the Reference Interconnection Offer (RIO)**
  - **Dominant Licensee must provide a Reference Interconnection Offer to its competitors.**
  - **Sets out in transparent manner: IDA-approved prices, terms and conditions for telecom operators to colocate equipment and access the incumbent's SCLS.**
  - **Reduces timeframe for interconnection negotiations and expedites market entry**

# Step Three

- > **Allow and encourage other submarine cable landing stations (SCLS) in Singapore.**
  - **Four operational SCLS in Singapore currently**

## Step Four

- > **Allow and encourage competing operators to build backhaul from submarine cable landing stations to the operators' points of presence.**

# Step Five

- > **Mandate colocation at Dominant Licensee's SCLS**
  - **Dominant licensee must allow any operator who owns capacity in a submarine cable system landed at Dominant Licensee's SCLS to obtain colocation space.**



# Step Six

## > Mandate Connection Services

- **Connection Services found to be a bottleneck.**
- **Required Dominant Licensee to provide Connection Services under the RIO and at prices that are cost-based and determined by IDA using FLEC/LRAIC methodology.**

# Step Seven

- > **Allow operators to provide to any third party backhaul service to that third party's capacity on any submarine cable system landing at that SCLS, and to provide transit service to enable a third party to transit traffic between submarine cable systems landing in Singapore.**
  - This is irrespective of whether the operator owns capacity in the submarine cable system which it seeks to provide backhaul and transit services

# Step Eight

- > **Establish a one-stop shop to facilitate submarine cable landings**
  - Landing of cables require close coordination with multiple government agencies (URA, MPA, SLA). IDA facilitates the process as a “one-stop point” to interface with all relevant agencies.
  - Involves guiding licensees on steps and processes necessary to land the cables so as to reduce administrative inconvenience.
  - Role of coordinator to resolve any issues that arise from licensee’ application.

# Impact

<b>Total Submarine Cable Bandwidth Capacity</b>	<b>53Gbps (1999) to 28,000 Gbps (2007)</b>
<b>IPLC Rates (International Private Leased Circuits)</b>	<b>Dropped &gt;90%</b>
<b>IDD Rates</b>	<b>Dropped &gt;90%</b>
<b>No of Outgoing International Telephone Minutes per month</b>	<b>64 million (1999) to 581 million (2007)</b>
<b>No of ISPs</b>	<b>&gt;10 (1999) to &gt;70 (2007)</b>
<b>Broadband Penetration (Households)</b>	<b>&lt;5% (1999) to 77% (2007)</b>
<b>Revenue of Incumbent</b>	<b>S\$4.4 billion (1997) to S\$13.2 (2007)</b>

# Lessons

- > **IGW competition needs a lot nurturing by regulator in the early days**
- > **There are many potential ‘bottlenecks’ – regulator needs to uncover and address them quickly and effectively**
- > **Consultation with industry is crucial**
- > **Following a consultative rulemaking methodology helps to spot problems early and minimise them**

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**Thank you!**

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