



Submarine System Owner's View

A Presentation to NANOG45 • January 27, 2008
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So, you want to build an undersea cable...

- **Cost:** Minimally cost \$10's of millions to construct (short repeaterless), up to hundreds of millions for the very long ones,
- **Operations:** Hundreds of thousands/year to operate
- **Time:** Take 18-36 months to plan & construct
- **Capacity:** Huge or small; can grow over time

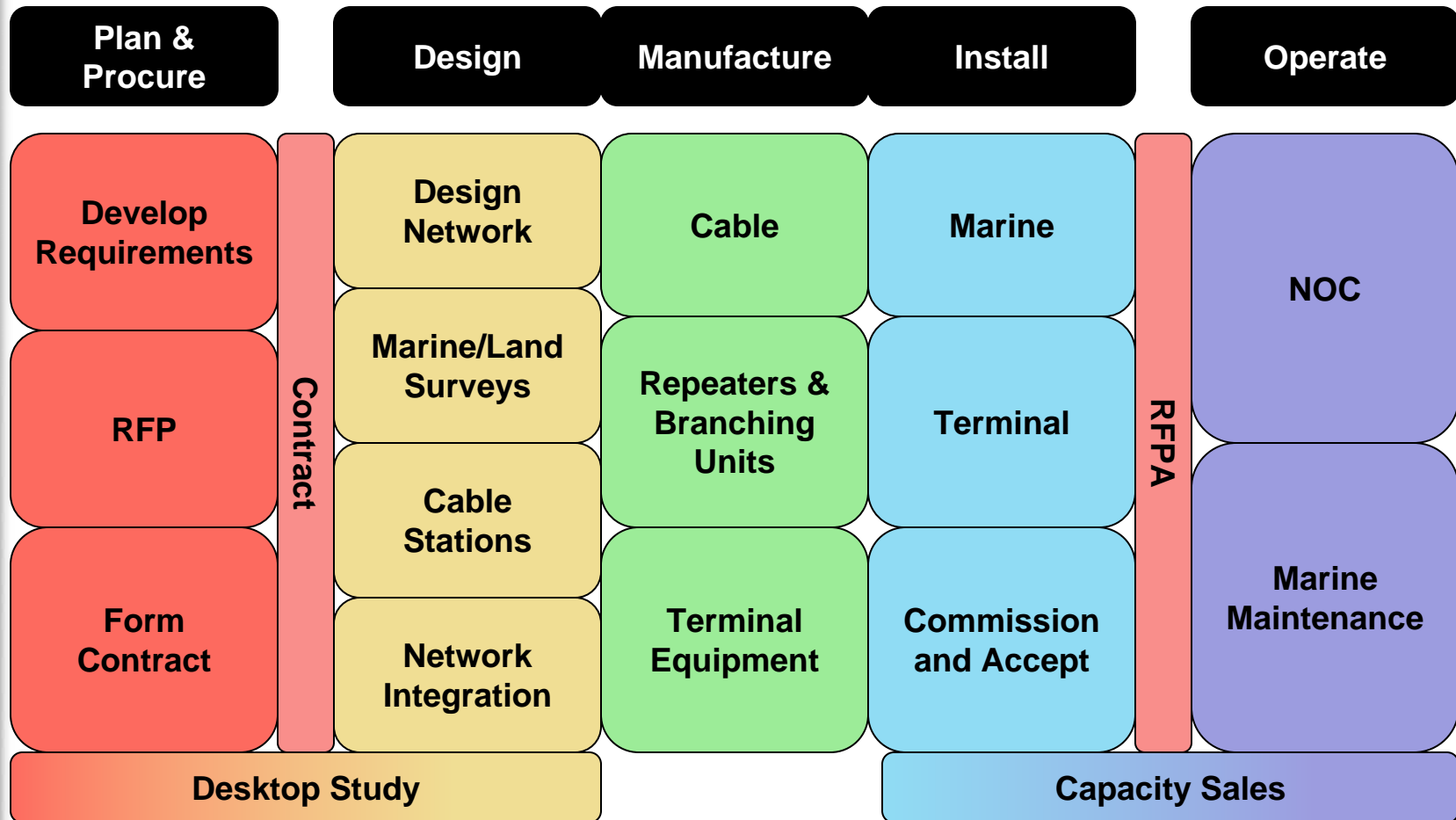
Do not forget:

- Regulatory issues, and time to get licenses/permits and form agreements with landing parties in other countries
- The time it takes for financing, and the need to fund initial work with seed capital
- The cost and importance of access (backhaul & onward connectivity) options
- The schedule risks of civil construction & environmental permits

What do you need to get started?

- A great idea
 - Business
 - Technology
 - Geography
 - Regulation
- Customers
- Realistic expectations
- Good business sense
 - Avoid the herd instinct
 - Choose your partners wisely
 - ... all of the other good management stuff

Timeline for a Cable System



Who Are The Players?

- Telcoms – Biggest customers; also are biggest investors
- Private Investors – May be project driver or passive
- Government Ministries – May participate in development; may also be a hindrance
- Lenders – If you need them
- Regulators – Define rules for development and access
- Environmental Agencies -
- Equipment Suppliers - Design, manufacture, install, and test. May provide maintenance
- Maintenance Administration – Ships and expertise for marine repair
- Consultants – Variety of services from studies to full project responsibly
- Lawyers - Develop commercial agreements, license and permit applications

Methods of Ownership

- Traditional Consortium
- Private Ownership
- Hybrids

Traditional Carrier Consortium

- Joint development by carrier owners who share the facility
- Dates to first undersea telecom cables of 1950s
- Originally developed during pre-liberalization, one- carrier- per- country conditions
- Financed by carriers primarily for own use
- Philosophy: cooperate on facilities, compete on services
- United Nations – style arrangement
 - Requires unanimous or majority agreement
 - Detailed Request for Quotations
 - Rigid competitive bidding
 - Lengthy Q&A, “Best & final offer” process
- Carriers own capacity in proportion to investment
- IRU sales by individual owners
- Capacity Pricing: Determined by consortium

Private Development

- Development by private investors who sell capacity to carriers and enterprises, otherwise known as carriers' carriers
- Flourished in the late 1990s telecom boom
- Well suited to a liberalized, competitive market
- Model has been applied worldwide in large and small markets
- Philosophy: compete on facilities
- Fast moving RFQ process
 - Competitive offers and/or direct contract award
- Entrepreneurs own network
- Suppliers may share in ownership
- IRU sales or capacity lease strategy, published pricing
- Deals for volume purchasers
- Sales could be through agents
- Capacity Pricing: Determined by market conditions

Big Topics for Owners to Consider

- Many system are studied; less are built
- Network Planning is Important
- Funding, Permitting, etc. often most important
- Undersea Cables are a Specialist Field



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