

# INTERNATIONAL WHOLESALE AND THE CHANGING CAPACITY MARKETS

## Why Asian carriers are turning to outsourcing

### REACH CORPORATE DEVELOPMENT

**R**EACH is a carrier's carrier, one of the world's top wholesale connectivity providers to Asia and the rest of the world. REACH has over 130 years of experience in international connectivity, with substantial assets pooled from the merger of the international networks and wholesale operations of PCCW and Telstra. In this paper REACH presents its thoughts on where the international business is heading, how the capacity markets are changing, and how carriers can best respond.

As a result of market liberalisation, international business models have changed – margins have fallen dramatically and the key component of success is now scale. Some carriers are attempting to become both retailer and wholesaler, while others are moving away from self-provision and instead purchasing services from dedicated wholesalers. Carriers who purchase international services can avoid the cost and complexity of operating an international network and can focus resources on gaining market share in the more profitable broadband and mobile retail markets. We believe that industry consolidation will result

in the emergence of one or two truly regional suppliers of international wholesale services. The ultimate form of wholesale is the complete outsource. We will explore the reasons carriers outsource and conclude by examining PCCW and Telstra, two incumbent operators who have outsourced their international business to REACH.

### Agents Of Change

**T**he current telecom environment is a result of three key factors: regulatory changes, cheap capital and technology. These agents of change have been largely responsible for both shaping the international wholesale market as it is today and the current condition of many distressed telecommunication companies.

### *Regulatory – The Genesis*

Market liberalisation has encouraged new players to enter the international business, and enabled global service providers to build global networks, often by purchasing

services from wholesalers. The award of new FBO<sup>1</sup> licenses has allowed carriers to operate and wholly own end-to-end communications infrastructure.

As deregulation gathers pace, and customers increasingly demand end-to-end provision and management of services, REACH believes there will be a continuing shift from bilateral relationships among international carriers towards partnerships and single carrier services provided in multiple markets. Already, there are signs that this reduction is underway:

- The move from half-circuits to full circuits
- The continuing evolution of the accounting rate system

*The Shift To Full Circuits*

Consider the following scenario. A British enterprise wishes to establish a private line<sup>2</sup> with its branch office in Hong Kong. Traditionally, two carriers would be involved in providing the private line. The carrier in Britain would match a half-circuit with the carrier in Hong Kong, and each carrier would bill the customer for its portion of the service provided. In a world of national monopolies, no other arrangement was possible, but the customer faced the dilemma of who to contact if the service was disrupted and was unable to get the full discount benefit of their aggregate spend. Thus as markets have liberalised, carriers are increasingly offering end-to-end provisioning of full circuits, as a means to control their cost structure, increase speed of provisioning, maintain quality, retain all the retail margin and to own the customer relationship. Customers benefit from a simpler product and a single point of contact for billing and service enquiries. However, end-to-end provisioning is difficult for many national operators, including incumbents, particularly those without their own international networks or limited international networks. Instead, regional wholesalers with scale will drive the shift to full circuits.

*Bypassing The Accounting Rate System*

Traditionally, voice traffic has been sent from

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<sup>1</sup> Facilities based operator

<sup>2</sup> A private line is a non-switched circuit between two end points

country to country based on bilateral relationships between carriers. These relationships are operating agreements specifying accounting rates, settlement rates and proportional return where applicable. In essence, the agreements state that the carrier sending more traffic will pay the other an agreed rate per minute on the balance between inbound and outbound traffic.

However, competition and the introduction of international callback, refile, resale and voice over IP have reduced voice margins and, on liberalised international routes or where by-pass is available, confined the use of the accounting rate system to cases where it is cost effective for the carrier to exploit balanced traffic routings.

*Bilateral Relationships Diminishing In Importance*

International carriers looking to offer regional services on a competitive basis will find it necessary to own infrastructure in most countries of operation. It is expensive to own and operate capacity, backhaul<sup>3</sup> and PoPs<sup>4</sup>. REACH believes that over time, only a few wholesale carriers can achieve the necessary economies of scale. As a result, the bilateral relationships that exist between carriers will further diminish as national operators interconnect with one or two big regional players.

*Growing Importance Of Relative Cost*

Historically, carriers' relative cost position for the international business has not been hugely important. In many cases a monopoly of international business made it irrelevant, and in most cases very high margins made it a secondary concern. However, as prices plummet, costs are suddenly important and fixed costs can become very significant indeed. Many carriers are finding out that it is entirely possible to lose money in the international business if your cost base does not match that of your competitor. Scale is a critical driver of unit cost.

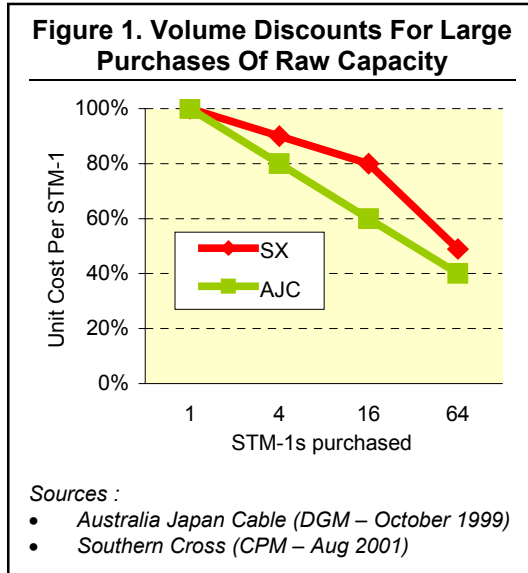
Big operators benefit from steep volume discounts, thereby purchasing capacity at

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<sup>3</sup> Backhaul links a submarine cable landing station to a Point of Presence in a metropolitan area

<sup>4</sup> Point of Presence

lowest cost. Small operators do not receive bulk discounts and therefore compete in the provision of wholesale products and services with an inferior cost base (see Figure 1. Volume discounts for large purchases of raw capacity).



**Cheap Financing**

Booming stock markets of the 1990s gave international players access to cheap financing. Many carriers took on enormous amounts of debt to build private, global IP networks and to purchase operations and networks outside their home markets. While many of these freshly funded private cable operators are no longer in business, their investments (and those of older players) have increased trans-Pacific capacity 23-fold over the last five years (TeleGeography Inc., Press Release, 12 March 2002). This has been destructive in terms of pricing and the health of many suppliers, and has highlighted the risk of owning capacity.

**Technology**

Volatile pricing is not the only risk of cable ownership. Advances in cable design, the advent of optical switching and technology such as DWDM<sup>5</sup> have increased capacity on cables. Capacity is no longer measured in the Gigabits, but the Terabits (1,000 Gigabits/second).

*Risks Of Owning Cable Assets*

This accelerates the depreciation of soon-to-be obsolete systems. For example, it may be uneconomical to pay O&M<sup>6</sup> for a cable with a capacity of 1 Gigabit/second, when one could be using cables with capacity in the 1 Terabit/second range for similar total O&M costs. While you may have recovered the sunk costs of the older asset, the running costs may still lead to a higher ongoing unit cost of capacity than a new cable. Before building a new international network, you need to consider the economic lifetime of the cable systems involved and ask whether over that period, there is enough traffic to cover payback and financing costs.

*The Conundrum*

The conundrum is why own international capacity at all? As an alternative to the high up-front cost and uncertain returns of purchasing capacity outright, buying in the open market lets one take advantage of volatile prices.

To make a reasonable return from owning capacity, a carrier must buy big and have a solid customer base. Only by purchasing large amounts of capacity that are in line with demand predictions can a carrier benefit from the lowest unit cost, ensure a high rate of utilization, and avoid lock-in of unused and depreciating assets. It is a game of scale, and REACH believes that only a handful of carriers will be capable of staying in the game at a regional level.

**Last Man Standing**

So-called next generation carriers, laden with debt, soon discovered that they could not sell their capacity in time to meet their financial repayment schedule. Many added data centre services, while others moved further downstream and offered Internet value-added services to the corporate market, thereby cannibalising their very own customers, the local carriers and global service providers. In desperation, some capacity owners resorted to dumping into the market, sending prices plummeting. Some even turned to abusing legitimate capacity

<sup>5</sup> Dense wave division multiplexing

<sup>6</sup> Operating and maintenance expenses

swaps to boost revenue and profits. However, as the evidence shows, this was not sustainable.

360° Networks, FLAG, Global Crossing, GTS, Teleglobe, Williams Communications, WorldCom, Viatel, and others have filed for chapter 11 or its equivalent with billions of dollars of shareholder value potentially wiped out. Distressed assets have come onto the market and the few healthy carriers left are able to take advantage. Many global service providers are now searching for suitable partners to service their customers' Asian needs - aware that it is not economic to self-provide and that many operators within the Asia region are teetering on the brink of collapse.

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### New Business Models

**A**gainst this tumultuous market background, national operators are asking themselves hard questions about their approach to international networks.

- Is owning and operating their own assets the optimal approach to a market with declining asset values, and diminishing importance to overall revenues?
- Does it still make sense to self-provide, when the trend to end-to-end circuits requires a further investment in B-end facilities?
- How can a single operator maintain the operational costs of running an international network with multiple points of presence and local support staff, based primarily on the traffic generated from their own national region?
- In a world of volatile, unpredictable demand, how can a single operator achieve the high utilization of international capacity that is critical to a competitive cost position?
- How can they avoid lock-in to aging systems?
- How can they access the low unit cost of capacity available to the largest players?
- How can they reduce the burden on their balance sheet from

international assets that dilute return on invested capital?

These are substantial issues for the traditional voice and data business, but in the IP world there is a further challenge. The structure of the international voice and IPLC<sup>7</sup> business is still heavily influenced by an assumption of reciprocity and regulated interconnect rates. Carriers offer matching half circuits and expect to pay each other for termination of voice, often at matching rates.

However, the IP arena operates very differently. The financial flows are based much more directly on market dynamics. If carrier A has more customers than carrier B, it can refuse to interconnect with B unless it is paid, knowing that if there is no connection, B's customers will suffer more than A's, because they will be deprived of direct access to a greater part of the internet. This simple logic drives the structure of large players peering with each other<sup>8</sup> and smaller players paying them for transit.

This dynamic presents a further challenge to Asian carriers seeking to self-provide. Any one national Asian player will likely have very small volumes of IP traffic relative to the largest, tier-one operators in the US, and therefore will have to pay full price for transit.

Tackling these challenges, the traditional model of each carrier self-providing its own international facilities is proving cumbersome, and operators are beginning to consider alternatives.

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### Why Do Companies Outsource?

**O**ne such alternative is outsourcing. Across many industries for many services it is increasingly seen by managers as an efficient means to free capital for focus on core strategic activities. Many companies outsource the running of their IT networks to service providers such as IBM, while others choose to outsource their payroll, HR and benefits administration services to providers such as Automatic Data Processing.

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<sup>7</sup> International Private Leased Circuit

<sup>8</sup> Exchanging traffic on a 'sender keep all' basis

The Outsourcing Institute concludes that the top reasons<sup>9</sup> why companies outsource are in order to:

- Reduce and control operating costs
- Improve company focus
- Gain access to world-class capabilities
- Free internal resources for other purposes
- Resources are not available internally
- Accelerate reengineering benefits
- Function is difficult to manage / out of control
- Make capital funds available
- Share risks
- Cash infusion

*Outsourcing And Telecommunications*

Outsourcing is not a new phenomenon in the telecommunications industry. For example, as an MVNO<sup>10</sup>, Virgin Mobile outsource their cellular network requirements. They focus on their core competencies of brand extension, market entry and cross selling of products – instead of rolling out a cellular network and competing at the network level. Virgin benefit from the scale economies of the network provider, and lower risk, since their costs are volume driven.

The logic for outsourcing international traffic is even stronger than that for mobile. International outsource providers are able to build scale across a region, giving a great relative cost advantage versus a player operating across only part of a single market. Moreover, international network quality is decreasingly a significant differentiator between national operators and therefore a carrier can outsource without losing a competitive advantage, particularly since smaller players are themselves tapping into the diverse networks of the outsource providers.

**The Golden Goose**

In the past, before the international wholesale market emerged and when

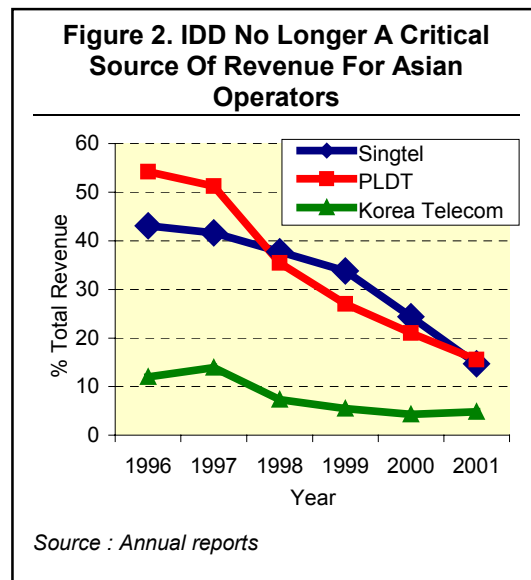
<sup>9</sup> Survey of Current and Potential Outsourcing End-Users, The Outsourcing Institute Membership, 1998

<sup>10</sup> Mobile Virtual Network Operator

margins were high, there were good reasons not to outsource:

- "International is the golden goose"
- "I don't want to be dependent on a single supplier"
- "International is highly synergistic with my other operations"

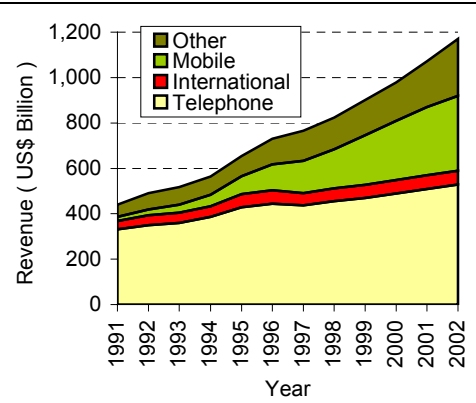
But in today's market, these reasons are no longer compelling.



*The Golden Goose Myth*

The golden goose no longer exists. International revenues are no longer a critical revenue source for most national operators (see Figure 2. IDD no longer a critical source of revenue for Asian operators). It is clear that revenue from IDD has been steadily falling over the years as a percentage of overall revenue. According to ITU estimates, the global telecom services market is worth over US\$ 1 trillion, of which the provision of international voice services is only worth US\$ 60 billion. While the number of voice minutes being transmitted has increased over the last few years, the decrease in prices has almost eliminated revenue growth. Carriers today create most value in national services, such as cellular, fixed data and value-added corporate services (see Figure 3. Telecom services revenue, 1991-2002). These, and new services such as wireless data, will be the key battle-grounds for the coming decade. International increasingly represents a distraction for all but the specialists.

**Figure 3. Telecom Services Revenue, 1991 - 2002**



Since 1991, the telecom services market has grown to be worth more than US\$ 1 trillion annually. International voice revenue has fallen as a percentage of the total market revenue, from 8.4% in 1991 to 5.1% in 2002.

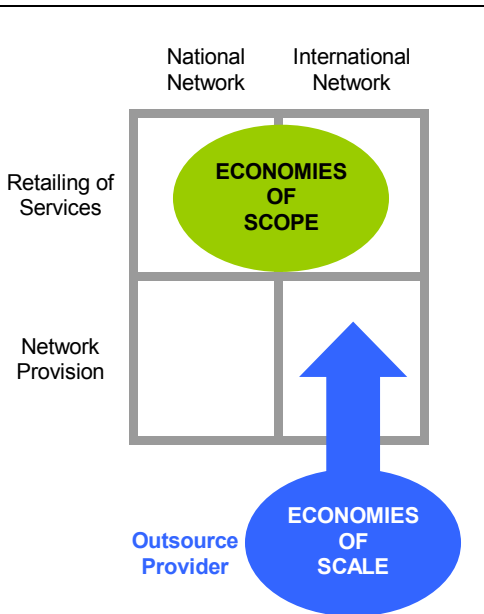
Source : International Telecommunication Union 2001. Data for 2001 based on estimates. Data for 2002 on forecast. International revenue consists of retail revenue only.

supplier – becoming dependent on a sole provider might be worse than a sub-optimal in-house operation. However, there are already a number of alternatives, with several regional carriers responding to the reshaping of the industry with wholesale offerings aimed at national operators. These alternatives substantially de-risk the decision to outsource.

*Understanding The True Synergies*

Increasingly national carriers are seeing the synergies between international and national services as real, but limited to the retailing of the services, not the provision of networks. The economies of scope in the retailing of both international and national services includes spreading fixed costs, deepening the customer relationship and depriving competitors of a route to the customer. However on the facilities side, the vendors, operating techniques and network management are quite different between international and national networks. Thus there is no reason to self-provide the underlying international network. Instead, an outsourcing solution captures the retail synergy, and provides the economies of scale of the large outsource provider (see Figure 4. Synergies between national and international networks).

**Figure 4. Synergies Between National And International Networks**



For national operators, there are few synergies between national and international networks on the facilities side. An outsource provider brings significant economies of scale to the international network, and retains the economies of scope from retailing national and international services to customers.

**Outsourcing Defined**

REACH defines outsourcing as a commercial agreement to deliver most if not all of a customer's international traffic across an entire product line.

The national operator retains complete customer ownership and controls retail processes such as branding, billing and pricing. The national operator pays the outsource provider wholesale rates based on total volumes of traffic used, thus retaining all of its retail margin on international traffic.

The outsource provider takes over operation of the network from a city PoP or cable station outwards. The outsource provider is responsible for all international operations including any capital expenditure, operations and maintenance of the system and negotiation of IP and voice connectivity.

*Dependency On A Single Supplier*

Nonetheless, a decision to outsource would be dangerous if there was only a single

**Why Should You Outsource ?**

National operators should consider the actions of PCCW and Telstra, incumbent national operators in Hong Kong and Australia respectively, who have outsourced their international requirements to REACH. (see Figure 5. PCCW and Telstra outsource to REACH, 2001). As a result of this move, both PCCW and Telstra have been able to more strongly focus on their core business.

**Figure 5. PCCW and Telstra Outsource To REACH (2001)**

- REACH provides the majority of the international capacity needs of Telstra, PCCW and CSL.
- Pricing is capable of regular reviews of market rates
- PCCW and Telstra have injected all their international infrastructure into REACH for cash and equity
- International usage commitments by PCCW and Telstra
- Domestic usage commitments by REACH
- PCCW and Telstra have complete control of their respective retail channels in Australia and HK
- Telstra acts as primary wholesale channel in Australia

By outsourcing your international business, you stand to reap the same benefits as PCCW and Telstra. This strategic move will bring you many of the benefits discussed earlier, such as:

- Taking international assets off the balance sheet
- Realisation of value from those international assets
- Improve cash-flow by reducing capital expenditure and O&M obligations
- De-risk the business with management focus on core operations
- Eliminate over-investment and impact of forecasting
- Improve time-to-market with the outsource provider's comprehensive product set
- Access to lower cost stemming from the outsource providers' economies of scale
- Move from fixed to variable costs

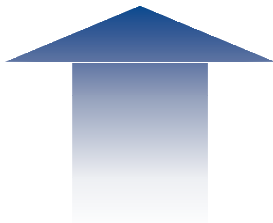
**Conclusions**

**D**eregulation, technology and cheap financing have conspired to present opportunities and threats. Many Asian carriers are reassessing their international strategy, even to the point of divesting their international assets completely. Outsourcing is one option that carriers are increasingly turning to.

REACH believes that we are moving into an era where vertically integrated operators will be challenged by horizontal excellence. One or two large regional wholesalers will exist in Asia, dedicated to international wholesale. They will not compete with their customers. Operators who lack the scale and resources required for self-provision will be unable to compete on a regional basis. Instead, operators will turn to the purchasing of wholesale products and services from dedicated wholesalers, and focus management on high-margin retail services. The actions of PCCW and Telstra clearly indicate that a shift from the ownership of capacity to the purchasing of services has already begun.

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## Considering Outsourcing and Choosing An Outsource Supplier



If you would like further discussion regarding outsourcing and your international strategy, please contact REACH Corporate Development.

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### Considering Outsourcing

In today's challenging international market, it is likely that a national operator is not optimising their cost base if they are self-providing. A review with an experienced wholesale provider is a realistic test of your current business. REACH is capable of conducting such a review to enable your company to make an informed decision. Choosing a credible and suitable outsource provider is critical.

You can trust in REACH to work with you and not against you. REACH is a dedicated wholesaler of capacity products and services, and will not compete with its customers. With over 130 years of experience in Asia, and a huge presence in the region, REACH believes it is the outsourcing partner of choice for Asian carriers.

### Choosing An Outsource Supplier

#### A dedicated wholesaler

*Q. Are you a wholesaler supplier or a competitor?*

REACH is a dedicated wholesaler – we are not your competitor. While some carriers have confused and cannibalised their customers, REACH's strategic direction is focused exclusively on international wholesale and outsourcing.

#### Economies Of Scale

*Q. What is your cost of capacity in Asia?*

REACH probably has the lowest cost of capacity in Asia, having brought together the existing International networks of PCCW and Telstra, and recently acquiring the assets of Level 3 Asia at a discounted price. Our strategy of purchasing capacity in a just-in-time (JIT) fashion, and maintaining high-utilisation of our pipes gives REACH a low unit cost of utilised capacity.

*Q. Can you sustain low prices?*

Some carriers are spending billions of dollars to build new cable systems. REACH's strategy of JIT purchasing (take advantage of volatile prices) and our economies of scale (take advantage of volume discounts) gives REACH a low cost base and the financial flexibility to engage in future acquisitions of distressed assets. REACH is confident about sustaining low prices.

#### Comprehensive Network

*Q. Is your network fully meshed and diverse?*

REACH's substantial network is the combination of the International networks of Hong Kong Telecom International (formerly owned by PCCW) and Telstra's Global Wholesale business. We have ownership shares in over fifty worldwide submarine cables extending over 160,000 km and offer satellite connectivity to remote regions. REACH's network is highly meshed and diverse.

*Q. How reliable is your network?*

REACH's highly meshed and redundant network is monitored around the clock by our specialist staff at our 24x7 network operations centres. Quality of service is assured in our service level agreements.

*Q. Do you have the best network and facility coverage in Asia?*

REACH operates in 15 countries and holds more Type 1 licenses than any other regional player. Our relationships with over 270 carriers ensure that we have superb network and facility coverage.

*Q. Do you have superior global IP connectivity?*

REACH has Tier 1 status in Asia. REACH is the largest IP backbone operator in the Asia-Pacific region (based upon Gartner Asia-Pacific IP Backbone Study, July 2002)

#### Full set of services for customers

*Q. Do you offer a full range of wholesale products and services?*

REACH offers a comprehensive range of wholesale products and services for fixed-line operators, cellular operators and other service providers. REACH welcomes suggestions on new and innovative products.

*Q. Are you an experienced outsourcer with existing customers?*

REACH has substantial experience in comprehensive outsourcing for PCCW, Telstra, and CSL - Hong Kong's leading mobile operator. Many of our customers take part in partial outsourcing where REACH provides a substantial amount of their international service requirements.