

seem a bleak signpost of difficult days in court for copyright owners. Keep in mind that economic recovery was not even contemplated: all RTC wanted was the prevention of further postings of their material. Where once the smallest defendant in a copyright-infringement action was likely to be a small business

in the retail or publishing sector, computer networks open access to distribution technologies to a new range of participants who (one suspects) will be difficult to identify, (potentially) outside any useful jurisdiction and futile to prosecute. The continued attempts by plaintiffs to place ISPs and network

providers at the heart of infringement actions is a reflection of the awkwardness with which these 'small operators' fit into established patterns of protection and enforcement.

*David Stewart is a solicitor with Minter Ellison, Sydney.*

## "The Brave New World of Telecoms"

**Andrew Lambert advances some ideas on the future structure of the telecommunications industry.**

### **The End of the World As We Know It**

The structure of the telecommunications industry is radically altering from a global structure of traditional state monopoly carriers in an interconnected web of networks. The nature of the structure it will evolve into is difficult to predict. However the processes that are determining it are clearer and involve factors including:

- technological advances;
- artificially high costs;
- accounting imbalances and interconnect pricing;
- deregulation and the introduction of competition;
- globalisation and the growth of multinational corporations.

This has enabled carriers to commence selling capacity to other carriers in an increasingly competitive environment. Carrier refile is becoming widespread and relevant International Telecommunications Union (ITU) rules are often observed more in their breach than their observance. As a result it is becoming possible for entrants to gain some of the benefits of return traffic without formal correspondent relations, by dealing with PTOs which have them.

### **Factors in the Decline**

Technology and the decline of real usage costs

Massive changes in cost capacity ratios gained from new optic fibre integrated circuit technologies have largely removed cost from distance in telecommunications. However many PTOs are able to maintain higher

telecommunications charges based on a market distortion. A number of factors including the legacy of monopolist past practice and international interconnect arrangements support telecommunications tariffing at artificially high levels.

The price of international calls is determined through the interconnect and settlement arrangements between PTOs and international carriers. The technical reality is that sending a call down an international line costs PTOs little more than sending one through a long distance national network. However interconnect arrangements mean that the price of a call from New York to London is nearly four times that of a domestic call from New York to Los Angeles. Calls between EEC countries in Europe cost up to six times as much as long distance national calls.<sup>1</sup> *The Economist* estimates that the world's telephone users in 1993 were paying around \$US10 billion more each year for international calls than they would in a completely free market.

### **Artificially high interconnect pricing**

Interconnect arrangements between PTOs for international calls are based on ITU rules that give recognised "carriers" a right to interconnect with other carriers' networks. However, although the incremental cost of carrying each call is minor, PTOs attempt to secure an adequate return (on call services, international and domestic) to cover their publicly funded fixed capital investment in infrastructure. If international call services were charged on a strictly incremental basis these PTOs would not generate sufficient revenue to recoup their fixed capital costs.

In competition between a PTO with common carriage obligations and a private contract carrier or service provider, the former is at an inherent disadvantage because it may not be able to use differentiated pricing due to

universal service non-discrimination obligations, it cannot prevent arbitrage of pricing differentials by service providers and it cannot select customers on a normal commercial basis. As a result service providers and resellers can "cherry-pick" customers and provide services more cheaply.

One response of PTOs who are common carriers has been to establish their own operational systems as service providers where they can price differentiate. Overseas markets in deregulating telecommunications industries offer an ideal opportunity to do this.

### **International interconnect and accounting imbalances**

As stated above the pricing of international telecommunications bears little relation to usage costs. Accounting rates are generally far larger than the longest trunk tariff for a country.

This accounting rate system benefited monopoly carriers in the past at both ends of international calls. Although the cost possibly lowered demand, PTOs' profits were maintained at high levels through high accounting rates at the expense of subscribers. These high accounting rates also encouraged co-operative construction and sharing of infrastructure, whether by satellite or undersea cable.

However the accounting rate system meant countries with developed telecommunications technology and lowered costs (from competition and liberalisation) developed a growing traffic imbalance with the rest of the world, in turn creating an increasing financial deficit.<sup>2</sup> The United States with its large population, a high level of multinational business activity and significantly lower end user charges, has developed a deficit with most other countries (including those in the OECD).

That financial deficit is now above US\$3.4 billion per annum.<sup>3</sup>

Subsidising developing telecommunications countries is becoming increasingly unattractive to PTOs, especially as accounting rates often indirectly help fund global expansion of competitors with direct foreign investment in developing country PTOs. For example, France Telecom and Southwestern Bell are major investors in the Mexican PTO, whose financial deficit with other US telcos is almost as great as the deficit for all OECD countries combined. As a result of direct investment in and licence arrangements with foreign PTOs almost US\$158 million was paid into the Cable & Wireless group of companies by US carriers in 1993.<sup>4</sup>

Carriers in competitive markets will increasingly attempt to bypass the international accounting rate system by establishing global networks where they occupy both ends of an international link. By doing this and providing end-to-end infrastructure PTOs can minimise transit rates and end the subsidisation of other carriers and developing countries. It also creates opportunities to act as a third party carrier for PTOs without common interconnect agreements, allowing them to act as an intermediate switching centre at an agreed rate.

### Competition and deregulation

Policy objectives of competition and free trade have led to moves by governments towards deregulation and reconfiguration of national telecoms networks including the breaking up of national monopolies.

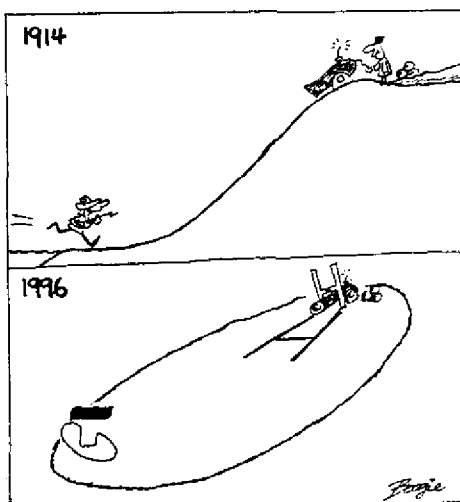
Arguments in favour of open competition are tempered by national policy objectives including support of technical innovation and the development of a domestic telecommunications technology industry, universal service obligation (USO) and common carriage.

This leads to the establishment of regulatory models such as the Australian duopoly, which impose market constraints on the dominant national carrier, attempting to foster competition whilst accommodating other national policy objectives. Shared features of this form of asymmetric regulation include:

- pricing constraints necessary to support cross subsidisation;

- geographically averaged rates structures that do not reflect their actual cost;
- common carriage obligations that require the incumbent carrier to provide capacity on demand and on a non-discriminatory basis; and
- public tariffing and information disclosure requirements that force the incumbent carrier to reveal plans for service offerings, associated prices and strategies.<sup>5</sup>

### Globalisation and the growth of multinationals



Multinational corporations now aim to integrate their disparate operations and locations in order to achieve efficiencies from the sharing of information as part of the process known as "Globalisation". As companies attempt to promote competitive advantage by integrating their geographically dispersed units of operation at an international level, access to reliable, seamless and secure communication networks is an imperative. It is estimated that demand for international voice traffic carried over the world's public telephone networks (from all sources) will have increased from 42 billion minutes in 1992 to 60 billion in 1995.<sup>6</sup>

Setting up private international corporate networks requires complex negotiations with a large number of equipment suppliers and maintainers and with numerous PTOs. In addition the creation of such private networks is becoming risky in terms of rapidly changing technology. This has led to the growth of outsourcing which allows multinational corporations to access

PTO's expertise in the management and operation of such infrastructures and minimise this risk.

### Global alliances of PTOs

#### Reasons why PTOs are forming the alliances

PTOs still operate around 90% of the world's satellite and submarine cable capacity and account for more than 80% of international telecommunications services, as measured by outgoing minutes of telephone traffic. Moreover PTOs in the form of the traditional monopoly carrier are still firmly entrenched in many countries around the world and operate at all levels of provision of telecoms services. In consequence new entrants to some of these markets, coming in either as carriers or service providers, have found they cannot truly compete against governments or PTOs except in market niches.

An example is the state owned telecommunications monopolies in Europe such as Deutsche Bundespost Telekom and France Telecom, which have been criticised for pursuing international call markets in the US and other countries whilst restricting entry into their home markets.

A trend of international carrier collaboration has emerged in which major PTOs enter into joint ventures to create seamless, global end-to-end networks. The new global alliances of PTOs and international carriers access the facilities and resources of various telecommunication service suppliers in order to serve geographically diffuse corporates in a more cost effective way.

The economic rationale for this lies in the US\$10 billion spent every year by the top 2,500-3,000 multinational companies on international calls. The PTO alliances are attempting to become "one stop" providers of international Telecom services for multinational companies, carrying voice, data and video around the world.

#### Competing against PTO alliances in open market

Some commentators consider that in an openly competitive telecoms market internal redistribution is not sustainable once competing PTO service providers and carriers without these redistributive burdens target the subsidising telecoms users as their most likely customers.<sup>7</sup> In telecommunications industries where the PTO is no longer protected by regulation

incoming carriers or service providers will automatically focus on the most lucrative share of the market, corporate services and international calls, leaving the dominant carrier with the unprofitable routes under USO and common carrier obligations.

In a competitive environment service providers would only agree to pay a competing PTO a price based on the latter's short-term marginal cost which they can pass onto their customers. Yet the bulk of cost in a capital intensive industry such as telecommunications networks is the fixed publicly funded infrastructure costs, which would not be compensated in such an arrangement. To survive in the long term the PTOs will need to preserve their share of the lucrative corporate international market.

### Imperative towards cartels

PTOs seem to be following a pattern of striving to maintain competitiveness in markets with corporate customers where it is already competitive in terms of both geographical coverage and services, while at the same time co-operating with other PTOs to enter the international call markets in other regions. The wide geographical coverage offered by an alliance is a means for a PTO to attract large customers in its home or near home markets.

All the global alliances target the same needs and interests of the same group of transnational corporations. Although this may initially entail ferocious competition amongst the alliances in the long term there is also considerable potential for the growth of oligopolistic market arrangements given their anticipated market share.

### Who is who in the global alliances

Of the global alliances three, Concert (BT and MCI), WorldPartners (AT&T, KDD, Singapore Telecom and Unisource) and Phoenix (otherwise known as Atlas - Sprint, France Telecom and Deutsche Telekom) are the front runners. They have established networks with dense coverage and local support through national carriers in many countries.

MCI's Concert alliance with BT was officially launched in June 1994. BT's deal with MCI has given it a long sought strategic partner after it was involved in unsuccessful alliance discussions with AT&T, France Telecom and Deutsche Telekom. Concert will provide the platform for setting up the global services

with the parent companies maintaining responsibility for sales and marketing. MCI will target the Americas and the Caribbean, BT will target the rest of the world.

AT&T, in the form of the new international call company shown of its network systems and hardware elements, is regarded as the only US carrier with financial resources to lead a global alliance. MCI and Sprint are both involved in other alliances which are led by European concerns.

With WorldPartners, AT&T's approach is to form partnerships with local and regional telecom providers in targeting the multinational business market. Apart from its equity partners, WorldPartners associate members include Telstra, Hong Kong Telecom, Unitel and Telecom New Zealand. In Europe Unisource is itself an alliance of four European PTO equity partners each with a 25% stake. As with Concert, sales and marketing for WorldPartners is carried out by parent companies and associated members.

The third alliance, Phoenix, results from an understanding signed by all participants - Sprint, France Telecom and Deutsche Telekom. Each will be responsible for its own region, with two other joint ventures covering the rest of Europe and the world.

### The Impact on Australia

Austel's recent findings in favour of continuing to restrict Telstra from competing in the international call market on a discriminatory basis reinforces the favouring of competition from foreign PTOs and their alliances. Although not yet significant, these groups are starting to enter the Australian international call and hubbing markets dominated by Telstra and may soon provide a real competitive threat. Telstra's response (apart from intensive government lobbying) has been to join the WorldPartners alliance and energetically compete in overseas markets.

The post 1997 environment will exacerbate the competition from foreign PTOs and their alliances as the Australian telecoms market becomes open to further competition. However, the "privileges" of being a carrier may be progressively undermined by the competitive advantages service providers have in terms of cost against the incumbent carrier.

The possibility of the national carrier losing its most profitable markets due to a "tilted" playing field would seem to be an unacceptable outcome were competition from foreign PTOs to become threatening.

---

## The New Telecommunications World Order

---

The growth of global alliances of PTOs and the tendencies toward oligopolistic relationships between them could lead to a new network of cartels. PTOs will increasingly construct alliances to create end-to-end global networks to maintain market share in the lucrative multinational corporate international services market. At the same time they will attempt to maintain their dominant positions in their home markets against intrusions by PTOs and their alliances.

Unless a co-ordinated international regulatory response attempts to curtail this oligopolistic movement, national regulators will face increasing tension between free trade and competition considerations and the need to preserve an incentive for investment in domestic telecoms infrastructure and policy objectives such as universal service and common carriage.

---

### References:

---

1. *The Economist* 24 April 1993 pp 16-19
2. cf Frieden, R "International Toll Revenue Division - Tackling the Inequities and Inefficiencies" *Telecommunications Policy* April 1993 pp 221-233.
3. Frieden, R "Accounting Rates: The Businedd of International Telecommunications and the Incentive to Cheat" *Federal Communications Law Journal* Vol 43 No 2 April 1991 pp 111-139.
4. Both examples quoted in Paltridge, Dr S "Globalisation - Is the Medium the Munition?" *Australian Communications* August 1993 pp 95-104 at 102.
5. cf. Weisman, Dennis L "Asymmetrical Regulation: Principles for Emerging Competition in Local Service Markets" *Telecommunications Policy* 1994 18 (7) pp 499-505 at 503.
6. *Financial Times* 9 December 1993, page 23.
7. Noam, Eli M "Beyond Liberalisation - Reforming Universal Service" *Telecommunications Policy* 1994 18 (9) pp 687-704.

*Andrew Lambert is a solicitor with Deacons Graham & James.*