

TeleGeography's

Bandwidth Pricing Report

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Who Still Buys IRUs

This edition of TeleGeography's Bandwidth Price Report examines the state of the IRU market. IRUs have understandably fallen out of favor in recent years. Designed as contract vehicles to deliver long-term value in return for upfront capital payments, their attraction waned in an environment where short-term lease prices were plummeting. Nevertheless, the IRU market has not entirely disappeared. During the past few years, IRU sales have occurred on key submarine cable routes (e.g. trans-Atlantic, trans-Pacific, and intra-Asia) and on terrestrial routes in Eastern Europe. In the future, IRUs may again become an attractive option for buyers on select terrestrial routes as a way to lock in current low rates—some of which are being offered at or below the cost of operation. TeleGeography recently surveyed 44 carriers worldwide about current and future demand for IRUs, as well as typical terms and conditions, capacity increments, and routes.

Demand and Duration

Although demand for international IRUs remains fairly low, over two-thirds of the carriers interviewed by TeleGeography stated that they had entertained

proposals for their purchase during 2004. Half of all carriers surveyed actually sold IRUs in the past year. However, the number of transactions remained small—most of these carriers sold only between one and four IRUs in 2004.

The typical duration of the IRUs was 15 years or the life of the system. Fifteen percent of carriers providing IRU services were offering terms as short as ten years. There were also suggestions from others that their IRUs would be offered in shorter shorter terms in the near future.

Popular Capacities

The variety of IRU capacity levels offered can be broken down neatly by two distinct categories of carrier. Fifty-five percent of carriers surveyed offered only unprotected wavelengths and dark fiber, and the remaining 45 percent offered only protected 155 Mbps to 2.5 Gbps circuits. IRU sales are more typical for carriers that constructed their own physical infrastructure.

Twenty-five percent of carriers interviewed had purchased IRUs in the past year. Carriers stated that they were interested in purchasing IRUs almost exclusively for unprotected high-end bandwidth—2.5 and 10 Gbps wavelengths and dark fiber. Only two carriers expressed interest in purchasing 155 Mbps protected capacity. The reasons for the purchase of IRUs ranged from filling regional holes in their networks' distribution, to acquiring backhaul from cable landing stations, to improving core inter-continental connectivity—in particular their trans-Atlantic and trans-Pacific links.

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Figure 1. IRU Prices on Selected Routes, January 2005

Route	Average STM-1 Monthly		
	Lease Price	IRU Multiple	IRU price range
London – Frankfurt	\$3,071	30-36	\$92,125 - \$110,550
London – New York	\$4,063	30-48	\$121,875 - \$195,000
Los Angeles – New York	\$7,388	25-30	\$184,710 - \$221,653
Los Angeles – Tokyo	\$14,372	18-24	\$258,690 - \$344,920
Hong Kong – Singapore	\$15,455	18-24	\$278,196 - \$370,928
Miami – Rio de Janeiro	\$27,319	18-36	\$491,741 - \$983,481

Source: TeleGeography research

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Price Multiples

IRU price multiples, expressed as the up-front IRU payment divided by the monthly recurring charge for annual lease, proved to be quite similar across many regions. Multiples of nearly 36 months are typical for intra-Europe, trans-Atlantic and North to South America routes. IRU price multiples of 24 to 30 months are typical in North America, while 18 to 24 months are common in the Asia-Pacific region. Dark fiber IRUs commanded slightly higher multiples (up to 48 months) than lit capacity.

O&M Costs

Typical operations and maintenance (O&M) charges for IRUs range from 2.5 to 5 percent of the up-front purchase price. However, rapidly falling circuit prices have made the traditional method of basing O&M charges on a fixed percentage of the purchase price increasingly obsolete. Some carriers reported that O&M fees no longer cover their actual maintenance costs. A few carriers are now taking a more practical approach by benchmarking O&M fees for IRUs to their actual costs. However, ninety percent of carriers surveyed by TeleGeography continue to base O&M fees on a fixed percentage of the purchase price.

Regional Differences

Significant regional variations persist in the IRU market. Demand for IRUs on undersea routes may actually increase in the coming year. As it is becoming increasingly evident that lease prices for capacity are approaching cost and don't necessarily recover replacement costs, many carriers feel that IRU prices for intercontinental submarine connections simply cannot fall any lower. Counterparty risk aside, locking in today's price may be an attractive option.

In the Nordic regions of Europe, the market for IRUs is perceived to have entirely flat-lined and carriers believe demand is unlikely to revive in the foreseeable future.

In Central and Western Europe, IRUs tend to be sold at the infrastructure rather than service level—2.5 and 10 Gbps wavelengths, dark fiber, and even ducts. The highly competitive nature of this market, containing so many aggressive facilities-based carriers, drives even the highest level of optical service towards commoditization. As network capacity is consumed in the long term, provisions will have

to be made for capacity upgrades. IRU prices will eventually have to reflect the cost of these upgrades. Since current prices in many cases reflect operational but not replacement costs, from a buyer's perspective this may be a good time to purchase IRU contracts.

Lease prices in Central and Eastern Europe are increasingly falling in line with Western European circuit prices. Circuits to Central European cities, such as Vienna, Bratislava, and Prague, already command very little premium over circuits to Western European cities. The purchase of IRUs now would only be attractive if deep discounts were attained and if the purchase was for a strategic asset (wavelength or fiber) that would be important for long-term expansion of the business.

The IRU market for capacity in North America is virtually non-existent. Carriers interviewed by TeleGeography believe it will take at least one to two more years before lease prices stabilize enough for IRUs to become attractive again.

In Latin America, IRU prices continue to fall to exceptionally low multiples of monthly lease prices.

The Asia-Pacific region remains the most active regional market for IRU contracts. Carriers have successfully sold multi-route intra-Asian and trans-Pacific IRUs. Most IRU contracts are written for very high-capacity circuits (STM-16 and above).

Outlook

While IRU sales are desirable to most carriers for the upfront cash injection they provide, inherent dangers exist when selling a long-term asset. As specific ring upgrades are required, carriers are finding that the prevalent market price won't support the cost of adding new equipment and capacity. Second, the counterparty risk is substantial. Will the buyer be able to make O&M payments for the next fifteen years? Will the supplier be operational?

For the time being, most buyers are opting for short-term leases of one, two, or three years. Looking forward, it seems unlikely that price multiples for IRUs will fall any lower, leaving monthly lease rates as the principal influence on both their future value and desirability.

Price Watch

PriMetrica's Price Watch service allows market participants to track recent pricing developments at a glance. Price Watch tracks pricing changes on nine key routes worldwide. Because pricing in some regions, particularly on terrestrial routes, is distance-sensitive, prices are stated both in absolute terms and in dollars per Mbps per mile.

Price Watch information is drawn from TeleGeography's *Bandwidth Pricing Database* (http://www.telegeography.com/products/bandwidth_pricing/).

The online database provides access to capacity prices on over 80 separate routes and capacities between 2 Mbps and 2.5 Gbps.

Monthly lease figures are an average of the median price over the previous three months.

December 2003 (USD)

	Monthly Lease Price			Monthly Lease Price/Mbps/Mile		
	E-1	OC-3	OC-48	E-1	OC-3	OC-48
Intra-European Routes						
London - Paris	\$600	\$3,400		\$1.408	\$0.103	
London - Frankfurt	\$600	\$3,500		\$0.761	\$0.057	
London - Milan	\$825	\$4,800		\$0.692	\$0.052	
London - Madrid	\$825	\$5,150		\$0.527	\$0.042	
Transoceanic Routes						
London - New York	\$700	\$3,800		\$0.101	\$0.007	
Los Angeles - Tokyo	\$1,600	\$14,500		\$0.146	\$0.017	
Trans-American Routes						
New York - Los Angeles		\$10,500	\$95,000		\$0.0028	\$0.015
Los Angeles - San Francisco		\$2,000	\$17,500		\$0.038	\$0.020
New York - Washington, DC		\$500	\$12,500		\$0.047	\$0.025

December 2004 (USD)

	Monthly Lease Price			Monthly Lease Price/Mbps/Mile		
	E-1	OC-3	OC-48	E-1	OC-3	OC-48
Intra-European Routes						
London - Paris	\$475	\$2,750		\$1.115	\$0.083	
London - Frankfurt	\$475	\$2,750		\$0.603	\$0.045	
London - Milan	\$620	\$4,000		\$0.520	\$0.043	
London - Madrid	\$750	\$4,500		\$0.479	\$0.037	
Transoceanic Routes						
London - New York	\$700	\$3,000		\$0.101	\$0.006	
Los Angeles - Tokyo	\$1,400	\$12,000		\$0.128	\$0.014	
Trans-American Routes						
New York - Los Angeles		\$7,500	\$70,000		\$0.020	\$0.011
Los Angeles - San Francisco		\$1,900	\$14,500		\$0.036	\$0.017
New York - Washington, DC		\$1,300	\$12,500		\$0.041	\$0.025