October 18, 2001

To: Interested Colleagues

From: Lloyd Etheredge

Re: Update: Expanding Submarine Cable Capacity by Region

A breakthrough in fiber optic technology, which permits many colors of lasers to share each fiber simultaneously, helped to spur an extraordinary period of worldwide construction of new communications capacity, beginning in the late 1990s. This new capacity is now becoming available for global linkups via a new generation of undersea fiber optic cables connecting all continents and driving wholesale prices downward at 50% - 60%/year. About 95%+ of the world s new terabit capacity is unused and not required for current applications. I thought that you might be interested in the enclosed update: Figures are in Gbps.

Region	2000	2003	Max. Potential*
North America - Europe	547	5,648	12,322
Americas	291	3,696	8,756
Asia - North America	244	5,117	16,904
Intra-Asia	15	8,438	20,220
Europe - Africa - Asia	51	75	131
TOTAL	1,148	22,975	58,333

* The new undersea fiber optic cables use DWDM technology which can currently be upgraded to this capacity. For comparison: a commercial quality television channel requires about 2Mbps. All of the holdings of the Library of Congress could probably be transmitted globally in less than 30 seconds - a statistic that would be even more impressive if any significant portion of the holdings of the Library of Congress were available online.

Source: Telegeography Inc. in Wired Magazine, October 2001, p. 77.