



**INTERNATIONAL BUREAU**

**REPORT**

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**2002 Section 43.82 Circuit Status Data**

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### **Introduction**

This report contains information on U.S. international facilities-based carriers' circuits as of year-end 2002 that was submitted to the Federal Communications Commission (Commission) by U.S. carriers pursuant to section 43.82 of the Commission's rules.<sup>1</sup> In addition to the year 2002 data, for comparison purposes, this report includes data from previous reports covering 1999 through 2001. Section 43.82 of the Commission's rules directs facilities-based carriers to file an international circuit status report by March 31 each year for circuits used to provide international services as of December 31 of the preceding year. The detailed filing requirements are set forth in the *Manual for Filing Section 43.82 Circuit Status Data* that can be found on the International Bureau's Web site at "<http://www.fcc.gov/ib/pd/pf/csmanual.html>."

The aggregated information in this report is useful for Commission regulatory purposes as well as for the public, including industry members, analysts, and potential new entrants. In addition, this annual circuit status report serves as a database for determining and monitoring the payments that the Commission is required to collect (*i.e.*, annual regulatory fees on active 64 Kbps-equivalent international circuits).

### **Reporting Requirements**

All U.S. international facilities-based common carriers are required to file circuit status information, reflecting both activated (in-service) and idle (available but not in-service) capacity. Although units of circuit capacity have increased to E-1<sup>2</sup> and STM-1<sup>3</sup> levels, all services are reported in 64 Kbps-equivalent circuits, the minimum measurable unit. This is done to accommodate those carriers that have low traffic volume and therefore cannot report in a large capacity unit, such as an E-1 unit, with respect to any particular country.

The Commission's manual on filing circuit status reports defines international facilities-based circuits as "international circuits in which a carrier has an ownership interest which includes outright ownership, indefeasible right of use (IRU) interests, or leasehold interest in capacity in an international facility, regardless of whether the underlying facility is a common or non-common carrier submarine cable or an INTELSAT or other satellite system." This definition is consistent with the definition of "international

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<sup>1</sup> 47 C.F.R. § 43.82.

<sup>2</sup> 1 E-1 = 30 64 Kbps circuits.

<sup>3</sup> 1 STM-1 = 1,890 64 Kbps circuits.

facilities-based carrier" contained in Section 63.09 (a) of the Commission's rules.<sup>4</sup>

This report includes circuits from U.S. domestic points to foreign points as well as to offshore U.S. points. United States and foreign points are identified in the Wireline Competition Bureau Industry Analysis and Technology Division report titled *International Points used for FCC Reporting Purposes (International Points Report)*, released April 1, 1994.<sup>5</sup> U.S. domestic points are the 50 states, the District of Columbia, and Puerto Rico. Foreign points include foreign destinations as well as ships operating in international waters. Offshore U.S. points include U.S. territories such as American Samoa, Guam, Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Navassa Island, the Northern Mariana Islands, Palmyra Atoll, the U.S. Virgin Islands, and Wake Island.

The *International Points Report* uses the following regional codes:

<i>Region</i>	<i>Code</i>
Western Europe	1
Africa	2
Middle East	3
Caribbean	4
North and Central America	5
South America	6
Asia	7
Oceania	8
Eastern Europe	9
International Water Area	10

The services that are covered by this report include International Message Telephone Service (IMTS) (switched voice), International Private Line Service (IPLS) (including voice and data) and Miscellaneous or Other International Services (including any data services and video services, other than private line service).

### **Data Presentation**

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<sup>4</sup> 47 C.F.R. § 63.09 (a).

<sup>5</sup> See <http://www.fcc.gov/wcb/latd/intl.html>.

Table 1 lists 79 carriers that filed circuit status reports, a decrease from the 110 entities that filed in 2001. However, 71 carriers, only three fewer than last year's 74 carriers, filed and reported active or idle capacity in 2002. The remaining eight carriers did not have active or idle capacity in 2002.<sup>6</sup> Among the filings, 12 carriers including the largest three – AT&T, WorldCom, Inc. (dba MCI), and Sprint Communications Company L.P. – requested confidentiality under the Freedom of Information Act.<sup>7</sup> As denoted in Table 1, these carriers' reports are not available to the public. Our aggregated data, as listed in this report, however, reflects all of the carriers' information, including information from those carriers asking for confidential treatment.

Tables 2 through 5 present four years of available data (1999 through 2002)<sup>8</sup> for each category of transmission facility. Table 2 presents undersea cable circuits; Table 3, satellite; Table 4, terrestrial;<sup>9</sup> and Table 5, the combined transmission circuits. All tables include information organized by service type for 1999, 2000, 2001, and 2002 data.

As Table 2 shows, the undersea cable circuits accounted for 76% of the overall active transmission capacity in 2002, compared to 72% in 2001. This reflects the continuing trend of cable's increased share and significance in the international transmission capacity market. Table 3 shows that international satellite circuits only accounted for 3% of overall transmission capacity, a slight decrease from 2001. As Table 4 demonstrates, terrestrial links accounted for 21% of 2002 active circuit capacity, a further 4 percentage point decrease from 2001's 25%.

Table 5 combines all three transmission media. A service mix by region from 1999 to 2002 is calculated and shown on the last page of Table 5. For 2002, IMTS circuits accounted for a steady 16% of the total active capacity. Private Line and other data services continued to show growth in 2002; the combined growth rate (Private Line and other data services) 18% in 2002, was somewhat slower than the 21% growth rate in 2001. However, in 2002, the other (data) services showed a much higher growth rate, 121%, compared to the 8% growth rate for traditional Private Line services.

Table 6 lists the top 30 destinations that accounted for almost 96% of the total U.S.-activated circuits at year-end 2002. The United Kingdom, Canada, Mexico, Netherlands, and Japan are the top five countries. The previous years' rankings of those 30 countries are also included in the table for comparison. Denmark, Austria, Dominican Republic, El Salvador, and Belgium are new among the top

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<sup>6</sup> Starting last year, we instructed carriers not to file a report if they did not have any activated or idle circuits as of December 31. The number of reporting carriers, therefore, is lower than previous year's total due to a decrease in non-reporting carriers (those with no active or idle circuits). See *Annual International Circuit Status (and Addition) Reports Due on March 31*, Public Notice, DA 02-550 (rel. March 7, 2002)

<sup>7</sup> 5 U.S.C § 552. See also 47 C.F.R. §§ 0.457, 0.459.

<sup>8</sup> Although this report excludes 1995 – 1998 data, that information is available in our previous reports, which are available on the FCC website <http://www.fcc.gov/ib/pd/pf/csmanual.html>.

<sup>9</sup> Terrestrial circuits include circuits carried both by microwave facilities and by terrestrial cables. Terrestrial circuits do not include circuits carried by undersea cables.

30 destinations in 2002, replacing Spain, Malaysia, Argentina, Turkey, and Chile.<sup>10</sup> In 2002, most of the top 30 destination countries reported capacity use for IMTS that was significantly lower than for private lines and other data services. However, three top 30 destinations, France, Philippines, and Belgium, reported larger capacity use for IMTS than for private lines and other data services. Due to the technology change, more and more services are placed in a larger transmission unit, such as STM-1 circuit rather than a 64 kbps circuit or E-1 circuit. Thus, any new services may start with a relative large capacity unit, even though it may not fill up the whole unit at once, particularly for voice circuits. As a consequence, the ratio between IMTS and Private Line circuits has become less meaningful. Nonetheless, the ratios of IMTS to private line and other data services for the top 30 destinations, as well as for each region, are also listed in Table 6 for further reference.

### **Supplementary Data**

Table 7 lists all operational trans-oceanic fiber optic cables, both common carrier and private carrier cables, in 64 Kbps units from 1995 to 2004.<sup>11</sup> The reported total construction cost of each cable (if available) also is included in Table 7 for further reference. In 2002, the combined cable capacity (activated and idle circuits) reported by U.S. carriers for the trans-Atlantic region was 3,364,259 64 Kbps circuits (Regions 1, 2, 3 and 9), a 13% increase from the 2,989,630 circuits reported in 2001. Those accounted for 15.5% of the total available cable capacity. In the Americas region (regions 4, 5 and 6), the activated and idle cable capacity accounted for 11.7% of the total available cable capacity. For the trans-Pacific region, the reported activated and idle cable capacity accounted for 24% of the total available cable capacity. The reported activated circuits as a percent of total available circuits for three regions are also included in Table 7. Overall, the total reported activated circuits accounted for 7.0% of total available capacity world wide.

As indicated in our previous reports, cable capacity (activated plus idle circuits) reported here likely understates the actual amount of capacity that is in use for the reasons cited in the footnote below.<sup>12</sup> This year's data shows a pattern that is similar to previous years: the overall reported cable capacity accounted for 16.8% of the total available cable capacity; it improved from 13.8% of last year's ratio.

The same discrepancy between reported and available capacity may exist for satellite data because many private satellite operators market their capacity directly to end-users and, thus, are not subject to our

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<sup>10</sup> There are some big swings in reported capacity usage from last year's reported circuits for some countries. We have verified that those changes are real changes in capacity and are not caused by input errors.

<sup>11</sup> There are no pending cable landing applications before the Commission.

<sup>12</sup> We identified three reasons in our previous reports that caused the discrepancy between reported capacity (activated plus idle circuits) and available capacity. First, foreign carriers hold significant amounts of the U.S. international cable capacity and are not required to report their capacity under section 43.82 unless they use their capacity for the provision of U.S. international service. Second, for any new cable system, a substantial amount of capacity that is actually activated or idle may be under-reported, particularly in the year in which many new cables come on line. Third, an increasing number of non-common carrier cables have been built, and much of the capacity on those private cables is sold to end-users, such as Internet Service providers (ISPs) or to foreign carriers or foreign ISPs. Under those circumstances, neither cable owners nor cable users are required to report those capacities that are either activated or idle.

reporting requirements.<sup>13</sup>

We have updated cable capacity information from 2000 to 2004 with additional information on Southern Cross, TAT-14, Tyco Atlantic, Tyco Pacific, and Apollo cables. We also included the Hibernia Atlantic (formerly 360atlantic cable), which became operational in 2003 after being restructured by the new owner. Due to the lack of concrete information on initial capacity, we have based our calculations on the planned initial capacity if no additional data sources are available. Our estimates of total available capacity for 2003 and 2004, therefore, are conservative.

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<sup>13</sup> The calculation for total U.S. satellite available capacity is done differently from the calculation for total U.S. available cable capacity. Due to the flexible nature of satellite coverage, each satellite can cover various countries and can be available to all those countries within its footprint. Therefore, there is no accurate way to calculate the fixed amount of capacity that can be allocated to any given country at any specific time frame. On the other hand, fiber optic cables are fixed because they are deployed only to their planned cable stations, making it possible to calculate the total available cable capacity on a particular route at any given time frame.