



**INTERNATIONAL BUREAU
REPORT**

**2014 U.S. International Telecommunications
Traffic and Revenue Data**

July 2016

Revised December 2017

Stacey Ashton and Linda Blake
Telecommunications and Analysis Division
International Bureau
Federal Communications Commission

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY	1
A. Notable Highlights	1
B. Reporting Requirements	2
II. INTERNATIONAL CALLING SERVICE (ICS) DATA HIGHLIGHTS	4
A. Facilities ICS International Traffic Data.....	4
1. U.S.-Billed and Foreign-Billed Minutes of Calling	4
2. Top Five Routes with Highest International U.S.-Billed Minutes	5
3. Minutes Completed on Foreign Fixed-Line and Foreign Mobile Networks	6
B. Facilities ICS International Revenue Data.....	7
1. Average Revenue Per Minute/Average U.S.-Billed Revenue	7
2. Top Five Routes with Highest International U.S.-Billed Facilities ICS Customer Revenues	8
3. Share of Revenues – Top Five and All Other Providers	9
4. Minutes and Revenues by Customer Class	9
C. Facilities ICS Settlements and Receipts	10
1. Settlement Payouts Completed on Foreign Fixed-Line and Foreign Mobile Networks	12
2. Per Minute Settlement Receipts	13
D. ICS Resale – Minutes and Revenues	14
III. INTERNATIONAL PRIVATE LINE SERVICES – CIRCUITS AND REVENUES	14
IV. INTERNATIONAL MISCELLANEOUS SERVICES – CUSTOMER REVENUES.....	16
V. TOTAL INTERNATIONAL BILLED REVENUES	17
VI. TOTAL SHARES OF BILLED INTERNATIONAL TELECOMMUNICATIONS SERVICES (ITS) REVENUES.....	18
APPENDIX A – Definitions of Terms Used in this Report	
APPENDIX B – Tables	
APPENDIX C – List of Entities that Filed 2014 Traffic and Revenue Data	

U.S. INTERNATIONAL TELECOMMUNICATIONS TRAFFIC AND REVENUE DATA REPORT¹

I. EXECUTIVE SUMMARY

In this U.S. International Telecommunications Traffic and Revenue Data Report (Traffic and Revenue Report), we present information on telecommunications services between the United States and international points as of December 31, 2014.² The Traffic and Revenue Report is based on the new Section 43.62 reporting requirements that were adopted for the purpose of helping the Federal Communications Commission (Commission) better assess the current state of the U.S. international telecommunications marketplace. The new rules have substantially improved the data collection efforts from prior years by streamlining data collections and enhancing the quality of the data.

For the first time, we include data on Voice over Internet Protocol (VoIP) service connected to the public switched telephone network (PSTN) between the United States and any foreign point (Interconnected VoIP Service).³ We also present data on minutes of traffic completed on foreign fixed networks and foreign mobile networks and settlement payouts for call completion on foreign fixed networks and foreign mobile networks.⁴ Additionally, we include certain traffic and revenue data broken down by customer class, namely, residential and business customers.⁵

A. Notable Highlights

- The number of providers filing traffic and revenue reports is up 30 percent, from 1,457 in the previous report to 1,896 in this report, which includes, for the first time, 354 Interconnected VoIP Service providers.
- Although we capture an increased number of providers in this report, the total revenues from U.S. consumers decreased compared to previous years. U.S. International Service Providers billed U.S. customers \$3.87 billion for 73.6 billion minutes in 2013. U.S. International Service Providers billed U.S. customers \$3.7 billion for 84.7 billion minutes in 2014.
- Of the total 84.7 billion minutes billed in 2014, 49.4 billion minutes were completed on foreign fixed-line networks, and 35.3 billion minutes were completed on foreign mobile networks.
- U.S. International Service Providers incurred approximately \$2.6 billion in settlement payouts; \$1.0 billion were for minutes completed on foreign fixed-line networks, and \$1.5 billion were for minutes completed on foreign mobile networks.

¹ This 2014 U.S. International Telecommunications Traffic and Revenue Data Report has been revised to include updated data since it was published on July 1, 2016. In particular, private line 64 kilobits per second equivalent circuits for 2014 and customer revenues for 2000 and 2001 have been revised. We also corrected in Table 6 certain 2014 traffic and revenue data for the U.S.-Canada route, and 2013 and 2014 traffic and revenue data for the U.S.-India and U.S.-Mexico routes.

² 47 CFR § 43.62 (2015). Section 43.62 replaced Section 43.61 of the Commission's rules. 47 CFR § 43.61 (2014); *Reporting Requirements for U.S. Providers of International Telecommunications Services; Amendment of Part 43 of the Commission's Rules*, IB Docket No. 04-112, Second Report and Order, 28 FCC Rcd 575 (2013) (*Part 43 Second Report and Order*); *Federal Communications Commission, International Bureau, Filing Manual For Section 43.62 Annual Reports* (IB Mar. 2015) (*Section 43.62 Filing Manual*), https://apps.fcc.gov/edocs_public/attachmatch/DOC-332732A1.pdf.

³ See *infra* Fig. A1; see *infra* Appx. A for a list of definitions.

⁴ See *infra* Fig. C1.

⁵ See *infra* Fig. B4.

- Calls to five countries account for about 68 percent of outgoing international U.S.-billed minutes. The top five routes with the highest international U.S.-billed minutes in 2014 were U.S.-India (24.8 percent), U.S.-Mexico (23.7 percent), U.S.-Canada (14.2 percent), U.S.-Colombia (2.8 percent), and U.S.-Bangladesh (2.5 percent).
- Private line 64 kilobits per second (kbps) equivalent circuits grew more than one hundred sixty-fold from 687,000 in 2000 to 113 million by 2014.

B. Reporting Requirements

This is the first Traffic and Revenue Report issued under Section 43.62 of the Commission's rules, which became effective on February 11, 2015.⁶ Section 43.62 sets forth traffic and revenue reporting requirements that apply to any person or entity that holds an authorization from the Commission under Section 214 of the Communications Act of 1934, as amended, to provide International Telecommunications Services (ITS)⁷ or is engaged in the provision of Interconnected VoIP Services between the United States and any foreign point (together, Filing Entities).⁸ The information covered in this report includes: (1) International Calling Service (ICS);⁹ (2) International Private Line Service;¹⁰ and (3) International Miscellaneous Services,¹¹ each of which is discussed in turn below. The definitions of these and other relevant terms used in this Traffic and Revenue Report are presented in Appendix A.¹²

In streamlining the reporting requirements, the Commission made several improvements to the annual traffic and revenue data collection and reduced the overall reporting burdens while enhancing the usefulness of the data.¹³ In particular, the Commission eliminated:

- billing codes formerly used for filing traffic and revenue data, and instead required the data to be filed using schedules;

⁶ Federal Communications Commission, Reporting Requirements for U.S. Providers of International Telecommunications Services, 80 Fed. Reg. 7547-01 (Feb. 11, 2015); *Part 43 Second Report and Order*, 28 FCC Rcd at 576, para. 2.

⁷ ITS refers to telecommunications service between the United States and a foreign point. *Section 43.62 Filing Manual* at Appx. B: Definitions.

⁸ 47 CFR § 43.62 (2015). For a list of entities that filed 2014 traffic and revenue data, *see infra* Appx. C.

⁹ ICS is defined as International Message Telephone Service (IMTS) and Interconnected VoIP, including International Call Completion Service for IMTS or Interconnected VoIP Service. *Section 43.62 Filing Manual* at Appx. B: Definitions.

¹⁰ International Private Line Service is defined as Private Line Service between the United States and a foreign point. Private Line Service refers to making available to a customer on a common carrier basis a circuit for a specified period of time for the customer's exclusive use. A circuit refers to a path for electromagnetic transmission of information between two or more points, including transmission by submarine or terrestrial cable, satellite, wire, or radio. *Id.*

¹¹ International Miscellaneous Service refers to any international telecommunications service other than ICS and International Private Line Service. International Miscellaneous Services include high-speed data network services between the United States and a foreign point that are provided on a common carrier basis, except for components of such services that are provided to an individual customer as dedicated U.S. international circuits (and thus classifiable as International Private Line Service). *Id.*

¹² *See also Section 43.62 Filing Manual* at Appx. B: Definitions.

¹³ *See Part 43 Second Report and Order*, 28 FCC Rcd at 575.

- the requirement to report the number of IMTS messages (calls) and regional totals;
- the requirement to report traditional transiting traffic on a country-by-country basis (and instead required traffic be reported on a world-total basis) as well as the requirement to report any fees paid to the U.S. service providers for such traffic;
- separate reporting of reoriginated ICS, country-beyond, and country-direct services;
- reporting of international terminating points for ICS resale traffic;
- reporting of resold circuits on a country-by-country basis and reporting of International Miscellaneous Service on a regional basis; and
- the requirement that Filing Entities disaggregate their Private Line Service data into six categories based on speed (and instead required Filing Entities to report the total number of private line circuits provided, expressed in 64 kbps equivalents).

In addition, the Commission adopted the following requirements:

- Filing Entities are required to disaggregate minutes and payouts by fixed and mobile termination and ICS traffic by customer category and routing arrangement and to identify minutes completed by uncompensated call completion services;
- U.S. International Service Providers that billed \$5 million or more in ICS Resale revenue must file their ICS Resale traffic and revenue data;¹⁴
- U.S. International Carriers must file data for any International Miscellaneous Service offering for which they billed \$5 million or more in revenue; and
- each person or entity that holds a Section 214 authorization, whether or not it provided any ITS during the preceding calendar year, must file a Traffic and Revenue Report.¹⁵

¹⁴ *Part 43 Second Report and Order*, 28 FCC Rcd at 592, para. 61. A U.S. International Service Provider that billed less than \$5 million in ICS Resale revenue and did not bill any Facilities ICS revenue for the reporting period is not required to report data for its ICS Resale on its traffic and revenue report. U.S. International Service Providers that billed less than \$5 million in ICS Resale revenue and also billed Facilities ICS revenue are required to file data for ICS Resale as well as Facilities ICS. *Section 43.62 Filing Manual* at 3, para. 9.

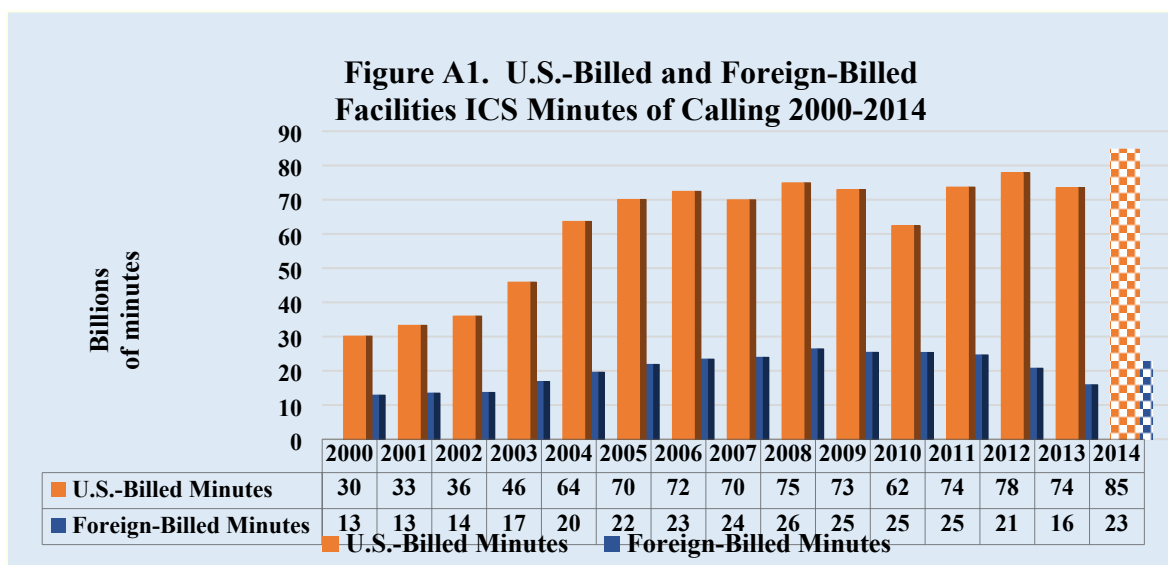
¹⁵ *See generally Part 43 Second Report and Order*, 28 FCC Rcd 575; 47 CFR § 43.62.

II. INTERNATIONAL CALLING SERVICE (ICS) DATA HIGHLIGHTS

A. Facilities ICS International Traffic Data

1. U.S.-Billed and Foreign-Billed Minutes of Calling

The number of international U.S.-billed minutes¹⁶ increased 15.2 percent from 73.6 billion minutes in 2013 to 84.7 billion minutes in 2014. These minutes increased over 181 percent from 30.1 billion minutes in 2000 to 84.7 billion minutes in 2014. Foreign-billed minutes¹⁷ increased 42.5 percent from 15.9 billion minutes in 2013 to 22.7 billion minutes in 2014. These minutes increased over 75 percent from 12.9 billion minutes in 2000 to 22.7 billion minutes in 2014. From 2009 to 2014, U.S.-billed and foreign-billed minutes to Other Regions (Antarctica and International Mobile Satellite Systems) rose the most, namely, 10.2 percent and 236.7 percent, respectively.¹⁸ We note that the 2014 data in the figures below are depicted in a different color from data for previous years to reflect the inclusion of Interconnected VoIP Service data.¹⁹



Sources: Figure A1 was derived from data in Tables 5, 8 and 9 and *Trends in the International Telecommunications Industry: Summary through 2010* (Table 2) (*2010 IB Trends Report*), <http://transition.fcc.gov/ib/sand/mniab/traffic/>. Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS (IMTS and Interconnected VoIP Service and International Call Completion Service for IMTS or Interconnected VoIP Service).

¹⁶ A U.S.-billed ICS call is: (1) an ICS call that originates or terminates in the United States and that is billed by a U.S. International Service Provider to an end-user customer or to a U.S. International Service Provider that is taking the service for resale; (2) a reoriginated Foreign ICS call that is billed by a U.S. International Service Provider to a Foreign Service Provider; (3) or a country-beyond call. *Section 43.62 Filing Manual* at Appx. B: Definitions.

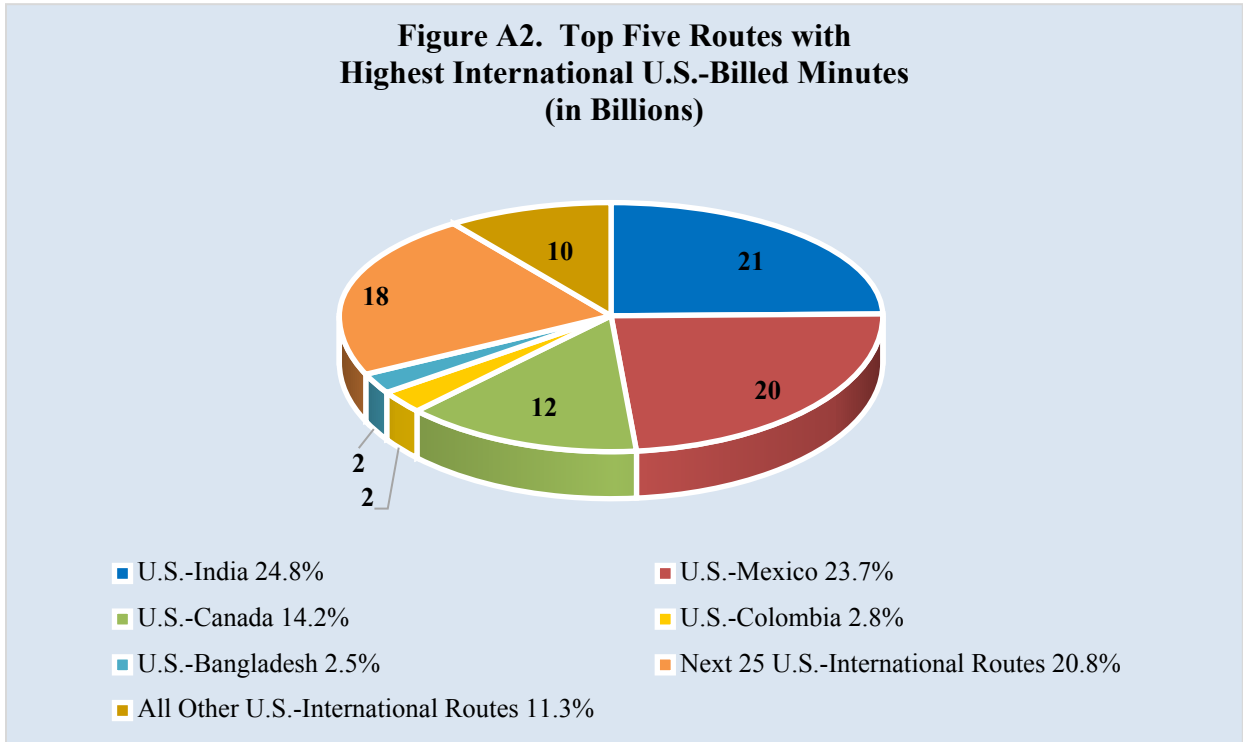
¹⁷ A Foreign-billed ICS call is an ICS call that originates or terminates with an end-user in the United States, and that is billed by a Foreign Service Provider. The U.S. International Service Provider that provides International Call Completion Service to the United States for a Foreign-Billed ICS call must report the call as Foreign-Billed ICS pursuant to section 43.62 of the Commission's rules. *Id.*

¹⁸ See *infra* Tbl. 5 and *International Points Used for FCC Part 43 Reporting Purposes*, <https://www.fcc.gov/general/section-4362-online-filing>.

¹⁹ *Section 43.62 Filing Manual* at 2, para. 8.

2. Top Five Routes with Highest International U.S.-Billed Minutes

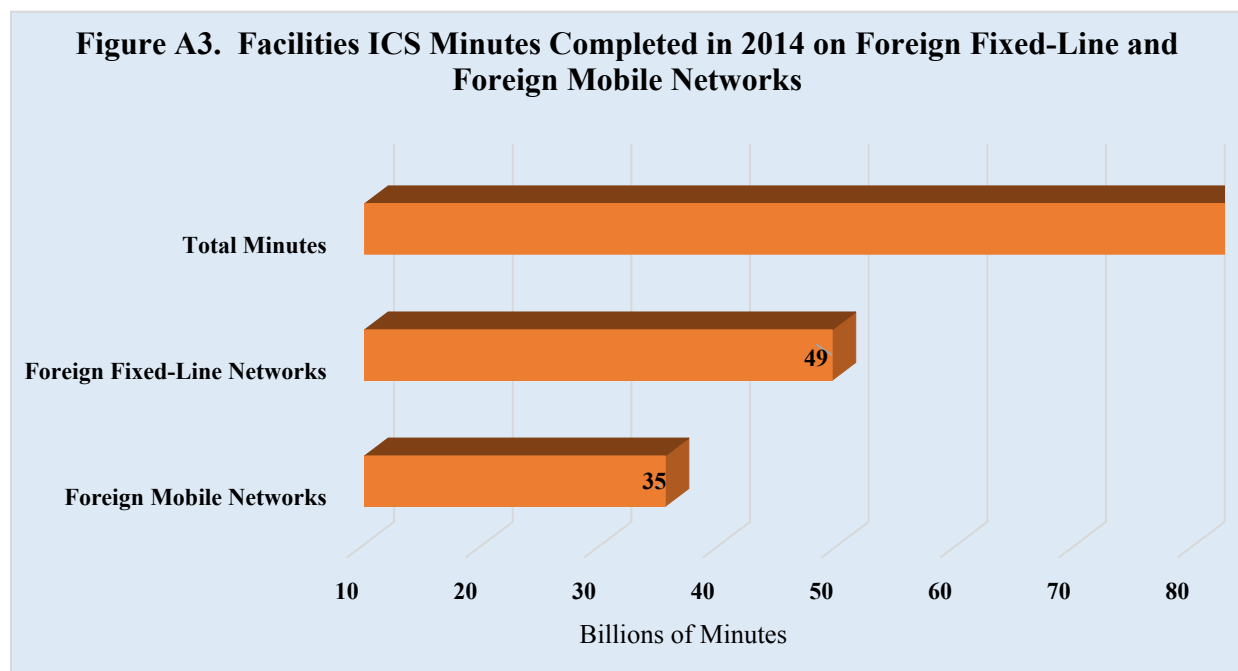
The top five routes with the highest international U.S.-billed minutes in 2014 were U.S.-India (21 billion or 24.8 percent of total outgoing international U.S.-billed minutes), U.S.-Mexico (20 billion or 23.7 percent), U.S.-Canada (12 billion or 14.2 percent), U.S.-Colombia (2 billion or 2.8 percent) and U.S.-Bangladesh (2 billion or 2.5 percent), accounting for 57 billion minutes, or 67.9 percent of total outgoing international U.S.-billed minutes.



Sources: Figure A2 was derived from data in Tables 5 and 6.

3. Minutes Completed on Foreign Fixed-Line and Foreign Mobile Networks

In 2014, of the 84.7 billion U.S.-billed Facilities ICS minutes reported, 49.4 billion were completed on foreign fixed-line networks and 35.3 billion were completed on foreign mobile networks. The Commission collects this data because it has an interest in monitoring the settlement rates for both fixed and mobile networks to protect consumers.²⁰ Many foreign carriers have significantly different settlement rates for call completion services for fixed-line and mobile networks, and these differences vary substantially by route.²¹ To track effectively the different settlement rates for fixed and mobile networks, the new Section 43.62 rules require Filing Entities to disaggregate the minutes terminated on foreign networks and settlement payouts between calls terminated on fixed-line networks and those terminated on mobile networks, in any situation where the rates are different.²²



Source: Figure A3 was derived from data in Table 5.

²⁰ *Part 43 Second Report and Order*, 28 FCC Rcd at 587, para. 43.

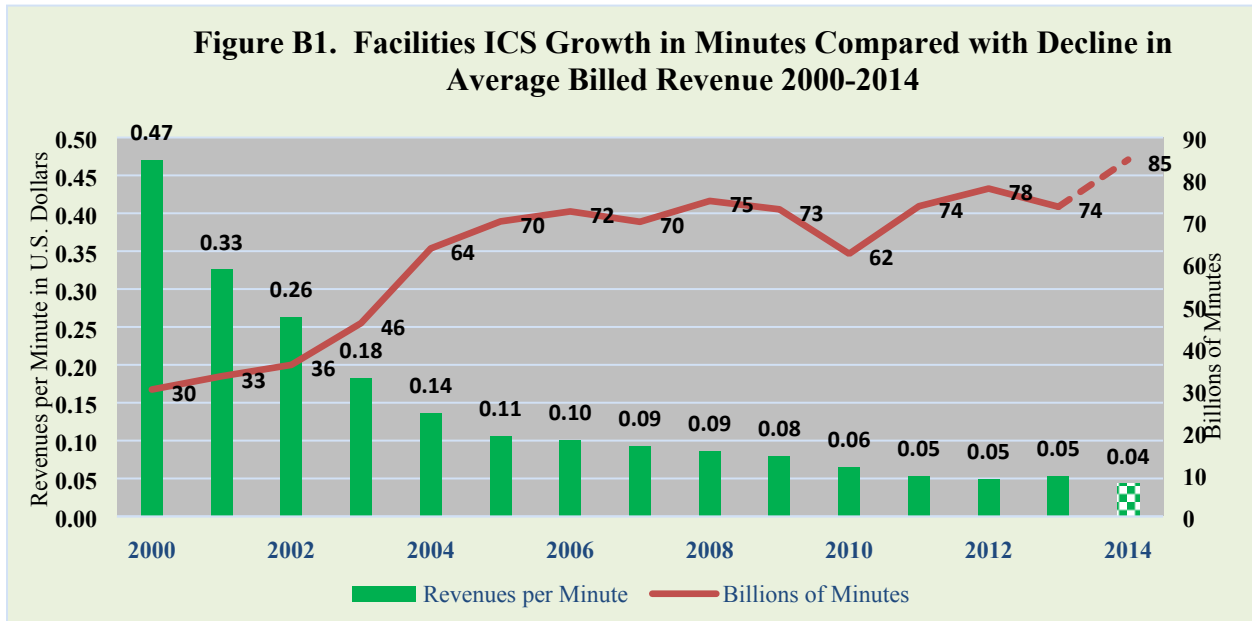
²¹ FCC, International Bureau, Cathy Hsu and Mark Uretsky, *The Effect of Foreign Mobile Termination Rates on U.S. Carriers and Consumers* (IB Dec. 2013), <https://www.fcc.gov/reports-research/reports/international-foreign-mobile-termination-rates/foreign-mobile-termination>.

²² *Part 43 Second Report and Order*, 28 FCC Rcd at 587, para. 44.

B. Facilities ICS International Revenue Data

1. Average Revenue Per Minute/Average U.S.-Billed Revenue

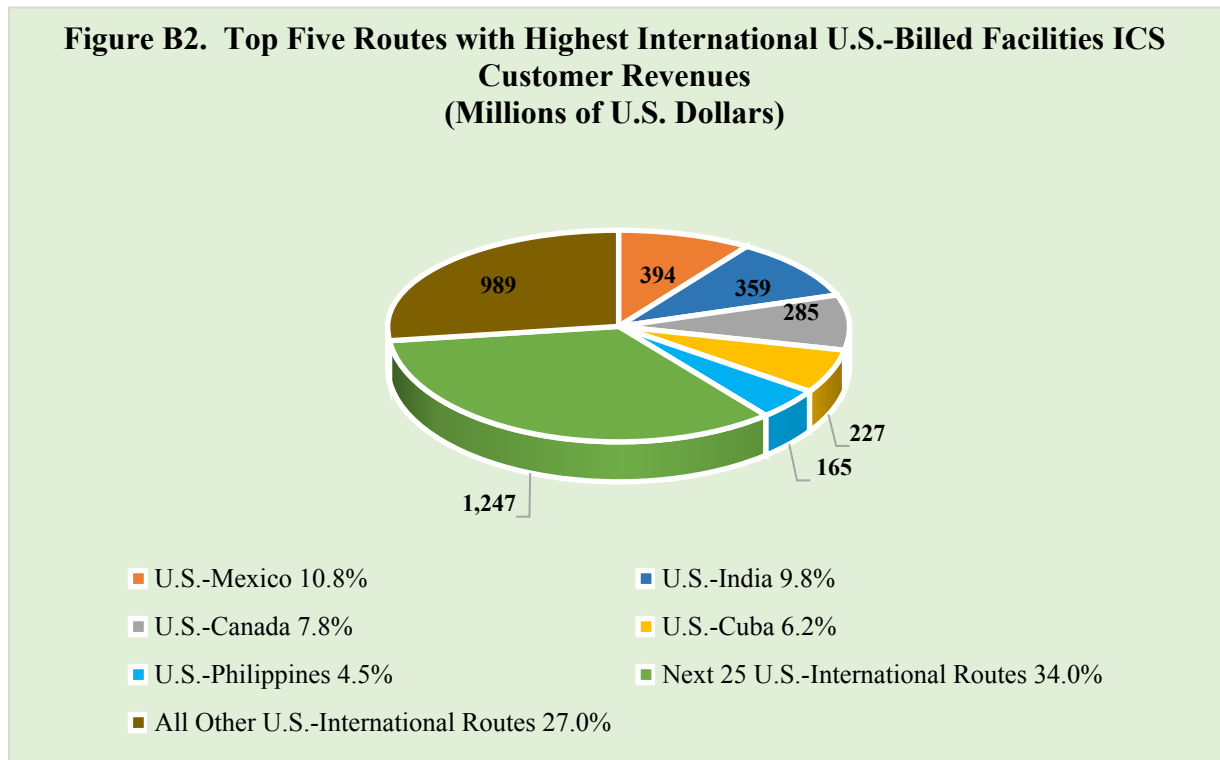
The average revenue per minute for international calling charged by U.S. International Service Providers offering Facilities ICS declined 17.8 percent from \$0.053 in 2013 to \$0.043 in 2014. From 2000 to 2014, the revenue per minute decreased 92 percent, from \$0.47 per minute to \$0.043. On average, comparing 2009 to 2014, the U.S.-billed revenue per minute increased most in the Caribbean region. Revenue per minute to the Caribbean region rose 43.3 percent from \$0.12 in 2009 to \$0.18 in 2014.



Sources: Figure B1 was derived from data in Tables 1, 5, 8, 11, and *2010 IB Trends Report* (Tbl. 2). Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

2. Top Five Routes with Highest International U.S.-Billed Facilities ICS Customer Revenues

The top five routes with the highest international U.S.-billed Facilities ICS customer revenues in 2014 were U.S.-Mexico (\$394 million or 10.8 percent of total international U.S.-billed Facilities ICS customer revenues), U.S.-India (\$359 million or 9.8 percent), U.S.-Canada (\$285 million or 7.8 percent), U.S.-Cuba (\$227 million or 6.2 percent) and U.S.-Philippines (\$165 million or 4.5 percent), accounting for \$1,430 million, or 39.0 percent of total international U.S.-billed Facilities ICS customer revenues.

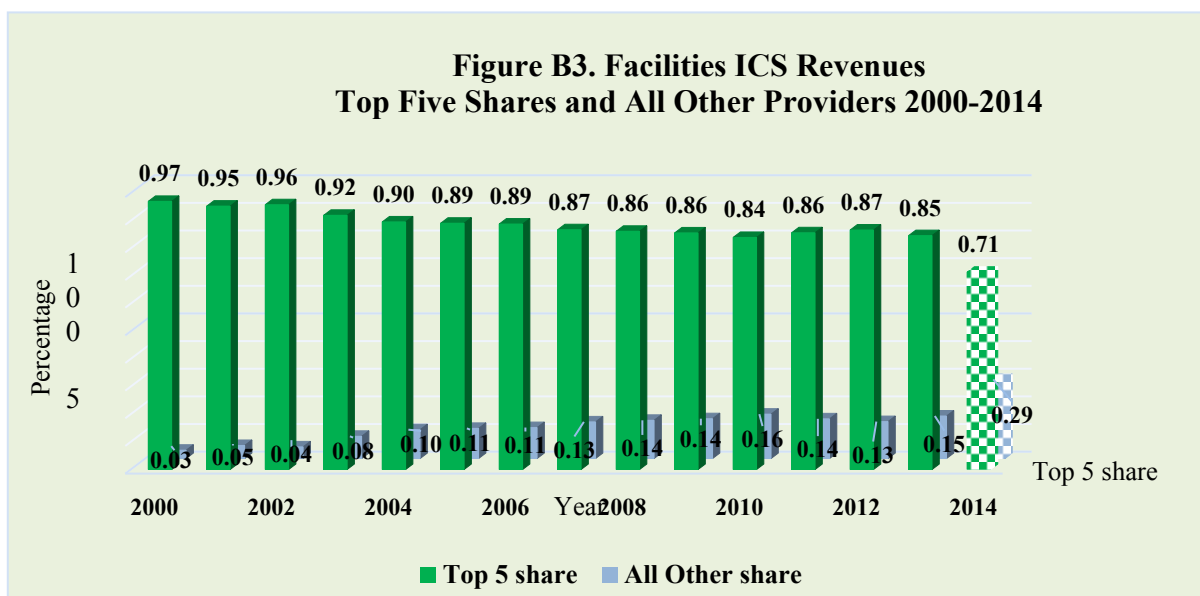


Sources: Figure B2 was derived from data in Tables 5 and 6.

3. Share of Revenues – Top Five and All Other Providers

In 1980, AT&T Corp. billed more than 90 percent of total U.S. International Telephone Service revenues and had a virtual monopoly on service from the U.S. mainland. Other providers entered the market in the mid-1980s. In 2000, the five largest facilities message telephone providers accounted for 97 percent of the marketplace. By 2008, the five largest providers' shares dropped to around 86 percent where they basically remained until they dropped again in 2013 to 85 percent. By 2014, the five largest providers' shares dropped another 14 percentage points from 85 percent in 2013 to 71 percent in 2014. This is likely due to the inclusion of Facilities ICS Interconnected VoIP and International Call Completion Service providers as part of the data collection.

Although the five largest providers in 2014 – AT&T, Sprint, Verizon Business Global LLC d/b/a Verizon Business, IDT Telecom Inc., and Reliance Communications, Inc. – reported the most Facilities ICS revenues, all other Facilities ICS providers' revenues continue to grow. Facilities ICS revenues for providers other than the five largest providers jumped from 14 percent in 2008 to 29 percent by 2014. This also may be due to the inclusion of Facilities ICS Interconnected VoIP and International Call Completion Service providers as part of the data collection.



Sources: Figure B3 was derived from data in Tables 3, 5, and *2010 IB Trends Report* (Tbl. 2). Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

4. Minutes and Revenues by Customer Class

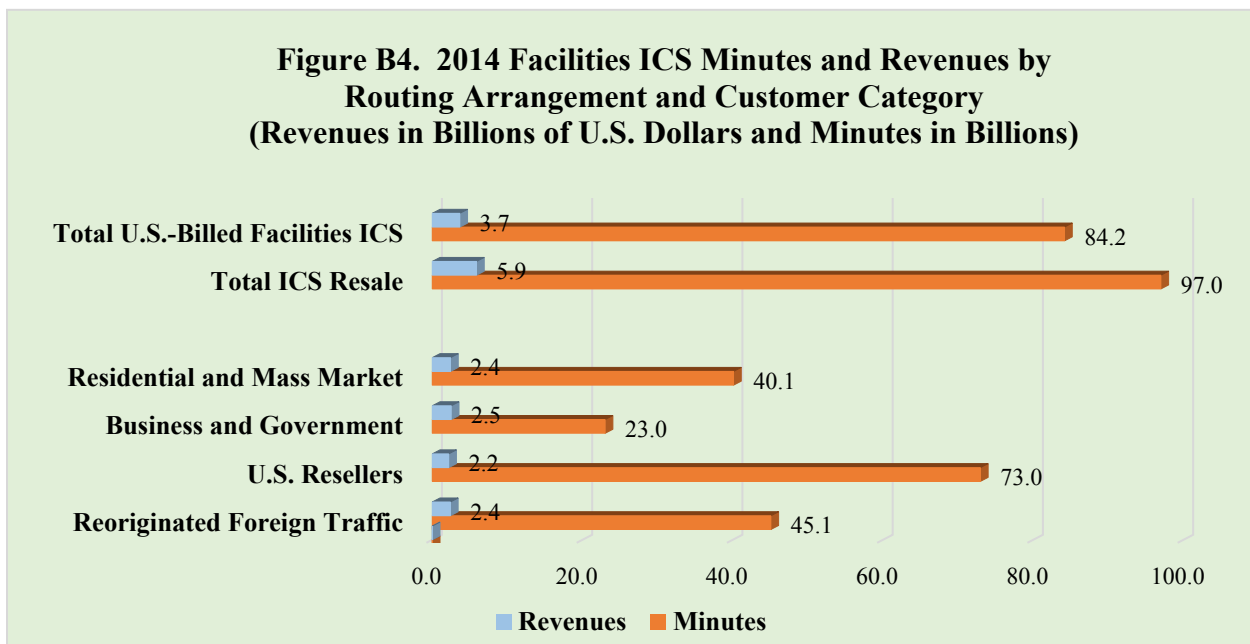
In the *Part 43 Second Report and Order*, the Commission required Filing Entities to disaggregate world-total ICS traffic and revenue data by customer class in order to improve the accuracy and relevance of key statistics derived from the data and bring the report into conformance with the market definitions used in various analyses, including merger reviews.²³ Therefore, filers are now required to disaggregate world-total ICS traffic and revenue data by: (1) residential and mass market; (2) business and government; (3) U.S. resellers; (4) reoriginated foreign traffic; (5) U.S.-billed Facilities ICS; and (6)

²³ *Part 43 Second Report and Order*, 28 FCC Rcd at 590-91, paras. 56-59.

ICS Resale.²⁴

In 2014, filers reported that they billed, on a world-total basis by routing arrangement, \$3.7 billion for 84.2 billion minutes at an average revenue of \$0.04 per minute for U.S.-billed Facilities ICS traffic. In 2014, filers reported that they billed on a world-total basis, \$5.9 billion for 97.0 billion ICS Resale²⁵ minutes at an average revenue of \$0.06 per minute. Broken down by customer category, filers reported that they billed, on a world-total basis:

- Residential and mass market: \$2.4 billion for 40.1 billion minutes at an average revenue of \$0.06 per-minute
- Business and government: \$2.5 billion for 23.0 billion minutes at an average revenue of \$0.11 per-minute
- U.S. Resellers: \$2.2 billion for 73.0 billion minutes at an average revenue of \$0.03 per minute
- Reoriginated foreign traffic: \$2.4 billion for 45.1 billion minutes at an average revenue of \$0.05 per minute



Source: Figure B4 was derived from data in Table 13.

C. Facilities ICS Settlements and Receipts

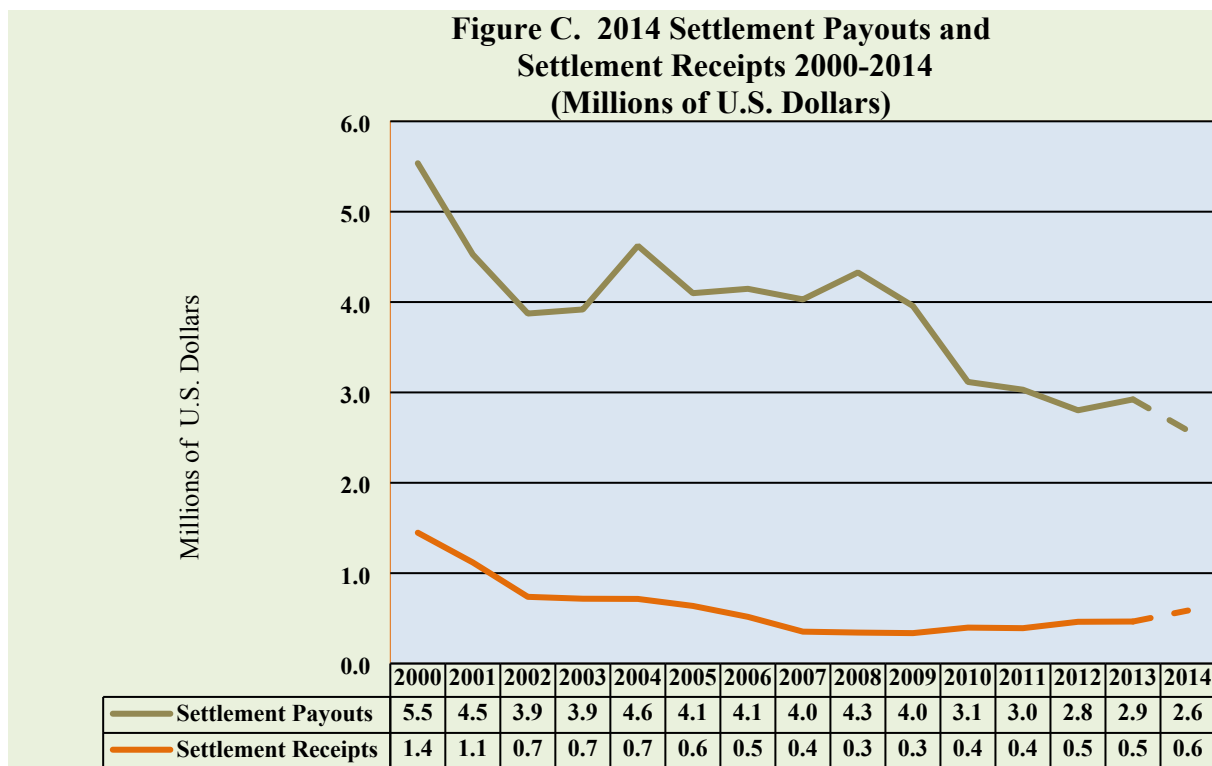
Settlement Payout refers to the expense (including any transiting fees) that a U.S. International Service Provider incurs for International Call Completion Service to a foreign point obtained from a Foreign Service Provider. Settlement Receipts refer to the revenue that a U.S. International Service Provider bills for International Call Competition Services to the United States provided to a Foreign

²⁴ *Id.* at 591, para. 59.

²⁵ ICS Resale is the provision of U.S.-billed ICS by a U.S. International Service Provider through the resale of ICS purchased from another U.S. International Service Provider. *Section 43.62 Filing Manual* at Appx. B: Definitions.

Service Provider. In recent years, U.S. International Service Providers and Foreign Service Providers have increasingly provided ICS under a variety of non-traditional interconnection arrangements. Previously, the Commission’s International Settlements Policy (ISP) governed the exchange of traffic,²⁶ until the Commission reformed its rules in 2012 by removing the ISP from all U.S.-international routes, with the exception of the U.S.-Cuba route to which the nondiscrimination requirement of the ISP continues to apply.²⁷ The Commission recently issued a Further Notice of Proposed Rulemaking seeking comment on removing the nondiscrimination requirement from the U.S.-Cuba route.²⁸

In 2014, for U.S.-billed Facilities ICS, U.S. Service Providers reported that they paid foreign carriers \$2.6 billion in settlement payouts and received \$586.6 million in settlement receipts. Settlement payouts dropped 53 percent from \$5.5 billion in 2000 to \$2.6 billion in 2014. During the same period, settlement receipts dropped 59 percent from \$1.4 billion to \$587 million. Between 2013 and 2014, payouts dropped from \$2.9 billion to \$2.6 billion, while receipts rose from \$465 million to \$587 million.



²⁶ The ISP required that: (1) all U.S. carriers must be offered the same effective accounting rate and same effective date for the rate (nondiscrimination); (2) all U.S. carriers are entitled to a proportionate share of U.S.-inbound, or return traffic based upon their proportion of U.S.-outbound traffic (proportionate return); and (3) the accounting rate is divided evenly 50-50 between U.S. and foreign carriers for U.S.-inbound and outbound traffic so that inbound and outbound settlement rates are identical (symmetrical settlement rates). In 2004, the Commission lifted the ISP requirements from all U.S.-international routes that the U.S. carriers negotiated rates below benchmark. *International Settlements Policy Reform; International Settlement Rates*, IB Docket Nos. 02-234, 96-261, First Report and Order, 19 FCC Rcd 5711, 5723-25, paras. 2, 27-28 (2004).

²⁷ *International Settlements Policy Reform*, IB Docket Nos. 11-80, 05-254, 09-10, RM-11322, Report and Order, 27 FCC Rcd 15521 (2012).

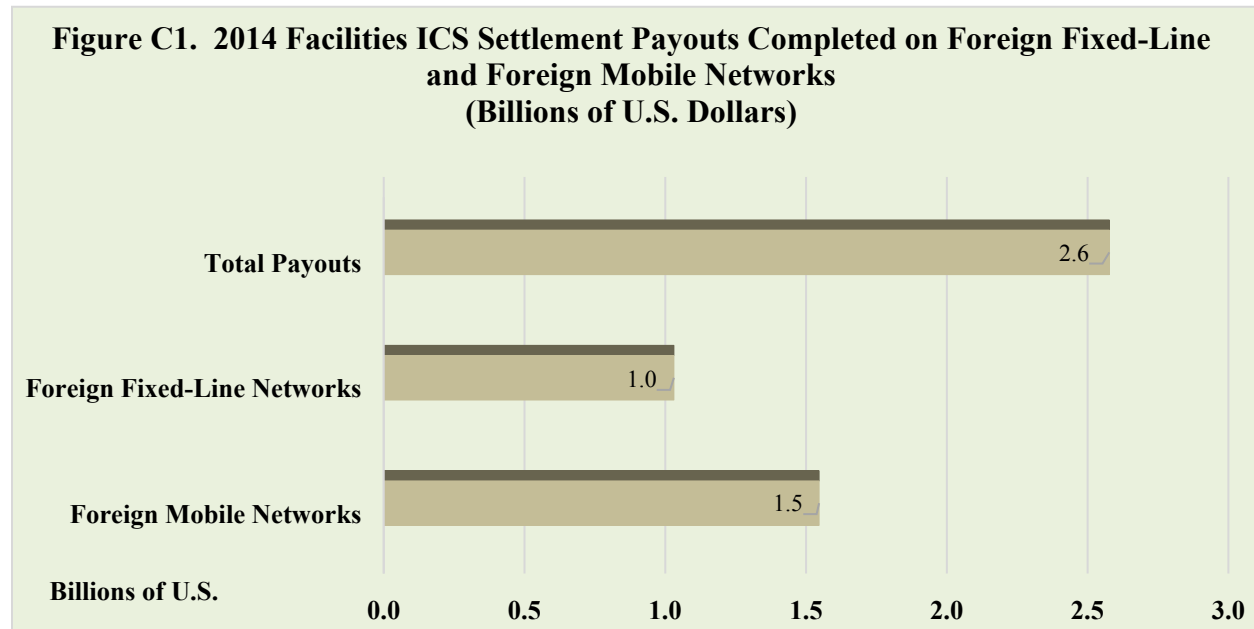
²⁸ *International Settlements Policy Reform*, IB Docket Nos. 11-80, 10-95, 05-254, RM-11322, Further Notice of Proposed Rulemaking, 31 FCC Rcd 1390 (2016).

Sources: Figure C was derived from data in Table 5 and *2010 IB Trends Report* (Tbl. 2). Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

1. Settlement Payouts Completed on Foreign Fixed-Line and Foreign Mobile Networks

As mentioned above, to enable the Commission to monitor better the settlement rates for fixed and mobile networks, Filing Entities are now required to disaggregate settlement payouts between calls terminated on fixed-line networks and those terminated on mobile networks in any situation where the rates for terminations on fixed-line networks and the rates for terminations on mobile networks are different.²⁹

In 2014, of the \$2.6 billion settlement payouts completed on foreign fixed-line networks, \$1.0 billion were for 49.4 billion Facilities ICS minutes at an average rate of \$0.02 per minute. With respect to payments for minutes completed on foreign mobile networks, \$1.5 billion were for 35.3 billion minutes at an average rate of \$0.04 per minutes. Although U.S. service providers terminated more minutes on foreign-fixed line networks (49.4 billion) than foreign mobile networks (35.3 billion), there were higher settlement payouts for minutes terminated on foreign mobile networks.

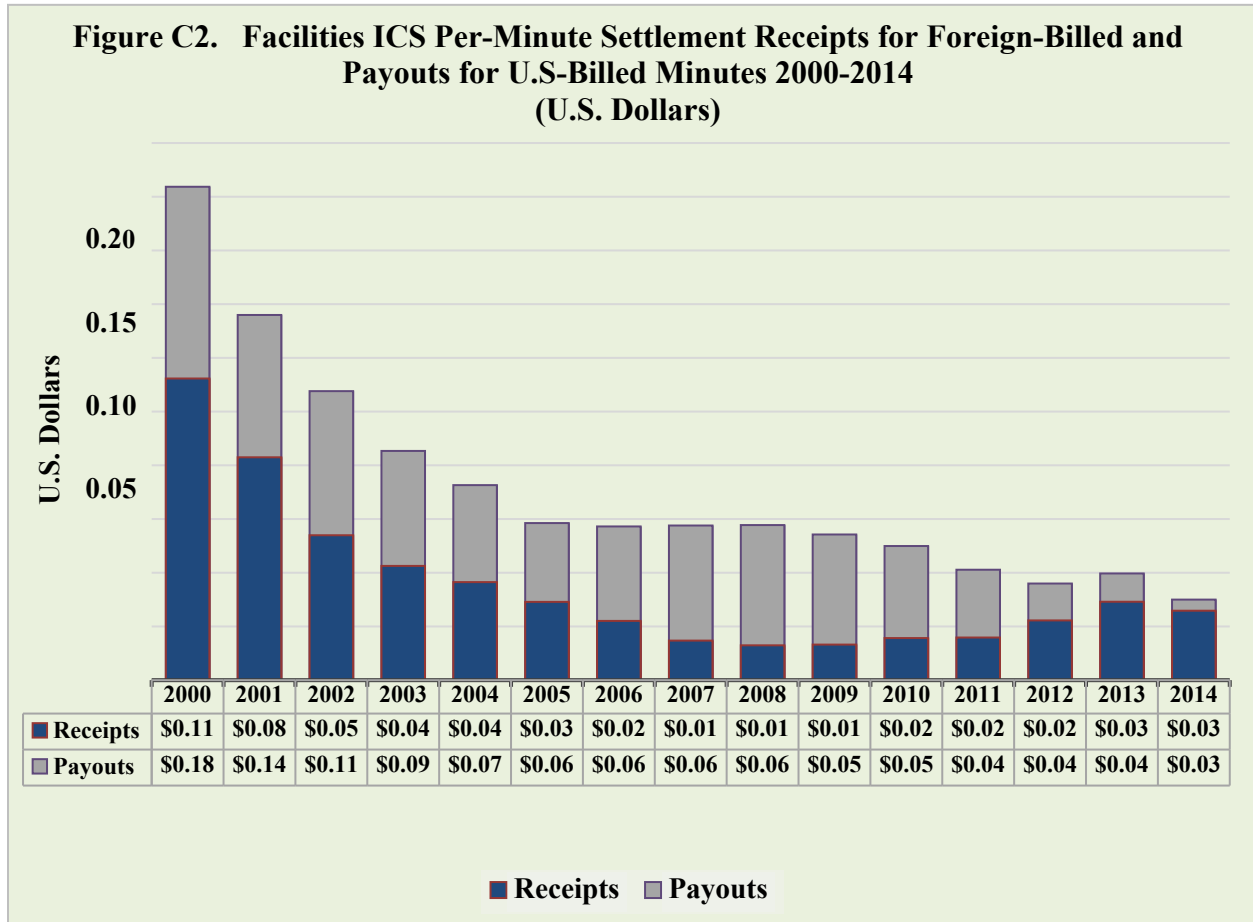


Source: Figure C1 was derived from data in Table 5.

²⁹ *Part 43 Second Report and Order*, 28 FCC Rcd at 587, para. 44.

2. Per-Minute Settlement Receipts

Settlement payments per minute to foreign carriers for Facilities ICS traffic dropped 78 percent, from \$0.184 per minute in 2000 to \$0.041 in 2011, where they remained until payments per minute dropped to \$0.030 in 2014.³⁰ During the same period, receipts per minute to U.S. carriers from foreign carriers dropped 86 percent, from \$0.112 per minute in 2000 to \$0.016 per minute in 2011, where receipts per minute remained until they rose to \$0.029 in 2013. In 2014, receipts per minute dropped to \$0.026.



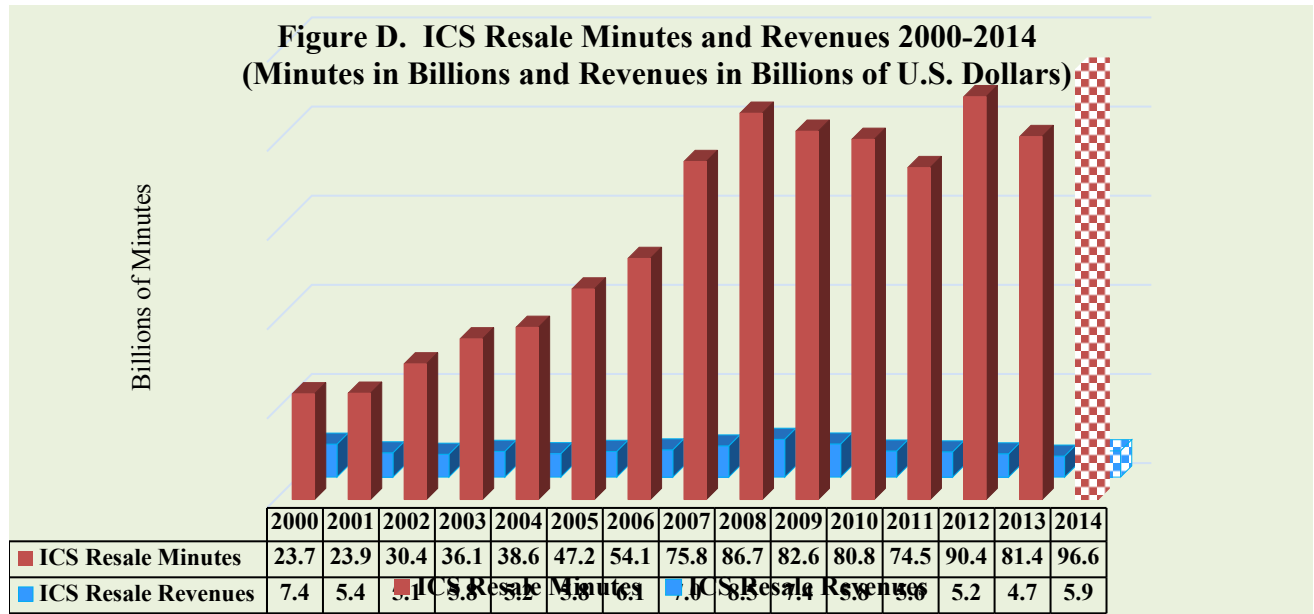
Sources: Figure C2 was derived from data in Table 5, Figure B4, and *2010 IB Trends Report* (Tbl. 2). Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

³⁰ Settlement payments per-minute figures for 2014 have been revised since they were published in 2016 (from \$0.043 to \$0.030). The change reflects the data in Table 6.

D. ICS Resale – Minutes and Revenues

ICS Resale is the provision of U.S.-billed ICS by a U.S. International Service Provider through the resale of ICS purchased from another U.S. International Service Provider.³¹ Under the new Section 43.62 reporting requirements, the Commission established a \$5 million revenue threshold below which Filing Entities need not file annual traffic and revenue data for international resale services.³²

In 2014, 1,489 carriers reported that they provided ICS on a resale basis. Of these 1,489 ICS Resale carriers, 70 carriers reported, in the aggregate, that they billed customers \$5.9 billion for 96.6 billion minutes. ICS Resale minutes increased over 300 percent from 23.7 billion in 2000 to 96.6 billion in 2014. During the same time, ICS Resale revenues decreased 20 percent from \$7.4 billion to \$5.9 billion. On average, U.S.-billed ICS Resale revenues per minute decreased over 80 percent from \$0.31 in 2000 to \$0.06 in 2012, where they have since remained.



Sources: Figure D was derived from data in Table 4 and *2010 IB Trends Report* (Tbl. 1). Data for 2000-2013 is for resale IMTS only. Data for 2014 is for ICS Resale (IMTS and Interconnected VoIP Service and International Call Completion Service for IMTS or Interconnected VoIP Service). U.S.-billed ICS Resale revenue per minute is calculated by dividing the ICS Resale revenues by ICS Resale minutes.

III. INTERNATIONAL PRIVATE LINE SERVICES – CIRCUITS AND REVENUES

Private Line Service refers to making available to a customer on a common carrier basis a circuit for a specified period of time for the customer’s exclusive use.³³ A circuit refers to a path for

³¹ *Section 43.62 Filing Manual* at Appx. B: Definitions.

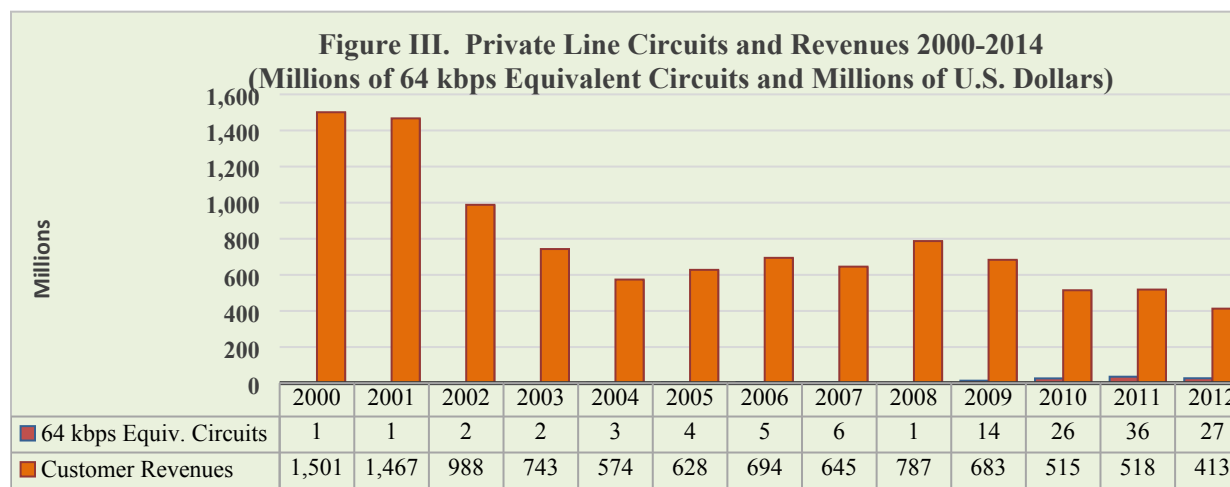
³² *Part 43 Second Report and Order*, 28 FCC Rcd at 579-80, para. 12. A U.S. International Service Provider that billed less than \$5 million in ICS Resale revenue and did not bill any Facilities ICS revenue for the reporting period is not required to report data for its ICS Resale on its traffic and revenue report. U.S. International Service Providers that billed less than \$5 million in ICS Resale revenue and also billed Facilities ICS revenue are required to file data for ICS Resale as well as Facilities ICS. *Section 43.62 Filing Manual* at 3, para. 9.

³³ *Section 43.62 Filing Manual* at Appx. B: Definitions.

electromagnetic transmission of information between two or more points, including transmission by submarine or terrestrial cable, satellite, wire, or radio.³⁴ In addition to a dedicated channel, a service guarantee for electromagnetic transmission of information between two or more points at an agreed-upon data speed is also considered a circuit for the reporting of International Private Line Service.³⁵

In the *Part 43 Second Report and Order*, the Commission eliminated the requirement that Filing Entities disaggregate their Private Line Service data into six categories based on speed. Filing Entities are now required to report the total number of private line circuits provided, expressed in 64 kbps equivalents.³⁶ Although Filing Entities would continue to be required to report Private Line Services provided over owned facilities on a route-specific basis, circuits and revenues for services over resold circuits would be reported on a world-total basis.³⁷

While most international carrier-billed revenues continue to come from ICS, the vast majority of international circuits now are used for less expensive international services such as private line and data services. Private line circuits grew more than one hundred sixty-fold from 687,000 in 2000 to 113 million by 2014.³⁸ Customer revenues, during the same period, dropped 75 percent from \$1.5 billion to \$374 million. Private line circuits, between 2013 and 2014, grew more than 150 percent from 43 million to 113 million while customer revenues declined 15 percent. Although we cannot ascertain the exact reason for the increase in private line circuits from 2013 to 2014, the increase could be a result of the changes in our collection and the accompanying clarifications in the *Section 43.62 Filing Manual*. The *Section 43.62 Filing Manual* clarified that components of high-speed data network services between the United States and a foreign point that are provided on a common carrier basis to an individual customer as dedicated U.S. international circuits should be reported as International Private Line Service.³⁹



Sources: Figure III was derived from Table 7 and *2010 IB Trends Report* (Tbl. 23).

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Part 43 Second Report and Order*, 28 FCC Rcd at 592, paras. 64, 66.

³⁷ *Id.* at 592, paras. 65-66.

³⁸ Private line 64 kbps equivalent circuits for 2014 have been revised since they were published in 2016 (from 494 million to 113 million). The change is due to revised data received by the Commission.

³⁹ *Section 43.62 Filing Manual* at 19, para. 91.

IV. INTERNATIONAL MISCELLANEOUS SERVICES – CUSTOMER REVENUES

International Miscellaneous Service refers to any ITS other than ICS and International Private Line Service.⁴⁰ International Miscellaneous Services include high-speed data network services between the United States and a foreign point that are provided on a common carrier basis, except for components of such services that are provided to an individual customer as dedicated U.S. international circuits (and thus classifiable as International Private Line Service). U.S. International Carriers must file data for each International Miscellaneous Service provided during the reporting period except when customer revenues for the International Miscellaneous Service are less than \$5 million.⁴¹

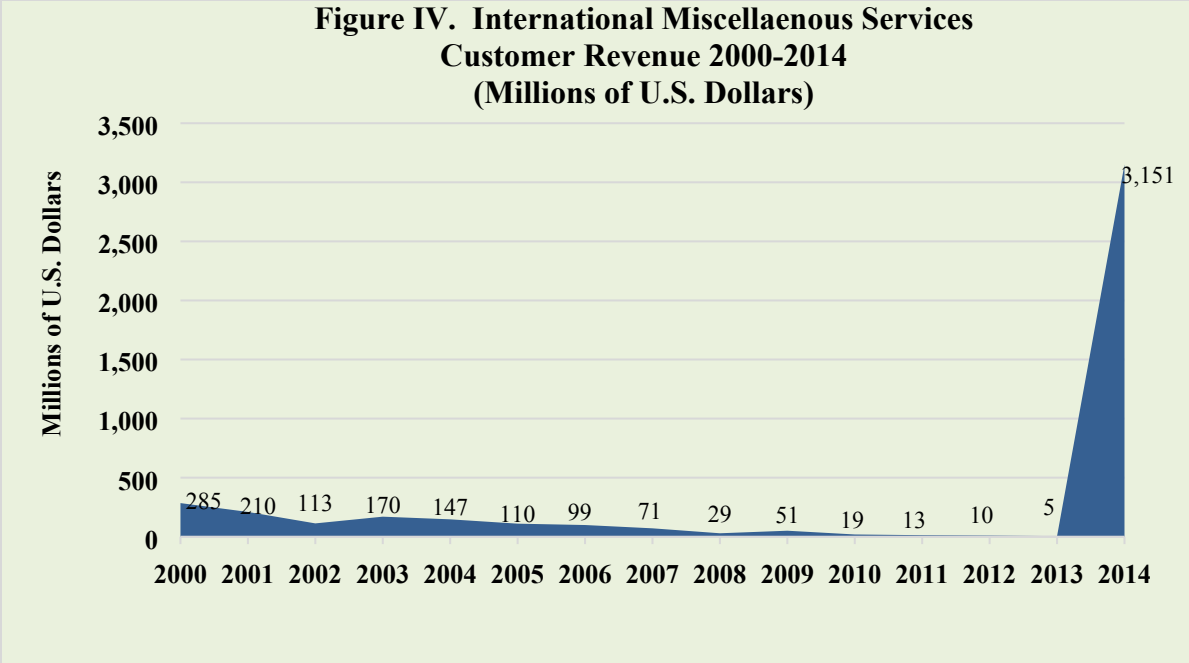
Examples of high-speed data network services that may be classified as an International Miscellaneous Service are Frame Relay, Asynchronous Transport Mode (ATM), Internet Protocol (IP), and other packet-switched services that are offered on a common carrier basis between the United States and a foreign point. Other examples include switched video service, occasional television service, and point-to-multipoint satellite service offered between the United States and a foreign point.⁴²

International Miscellaneous Services customer revenues grew from \$285 million in 2000 to \$3.2 billion in 2014. Revenues, between 2013 and 2014, grew from \$5 million to \$3.2 billion. The increase in reported revenue may be a result of the changes in our collection and the clarifications in the *Section 43.62 Filing Manual*. In 2014, U.S. service providers reported ATM, Data, Frame Relay, OPT-E-Wan, Virtual Private LAN Service (VPLS), and Virtual Private Network (VPN) services as International Miscellaneous Service. Not all of these services were reported by U.S. service providers under the previous Section 43.61 rules.

⁴⁰ *Id.*

⁴¹ *Id.* at 19-20, para. 92.

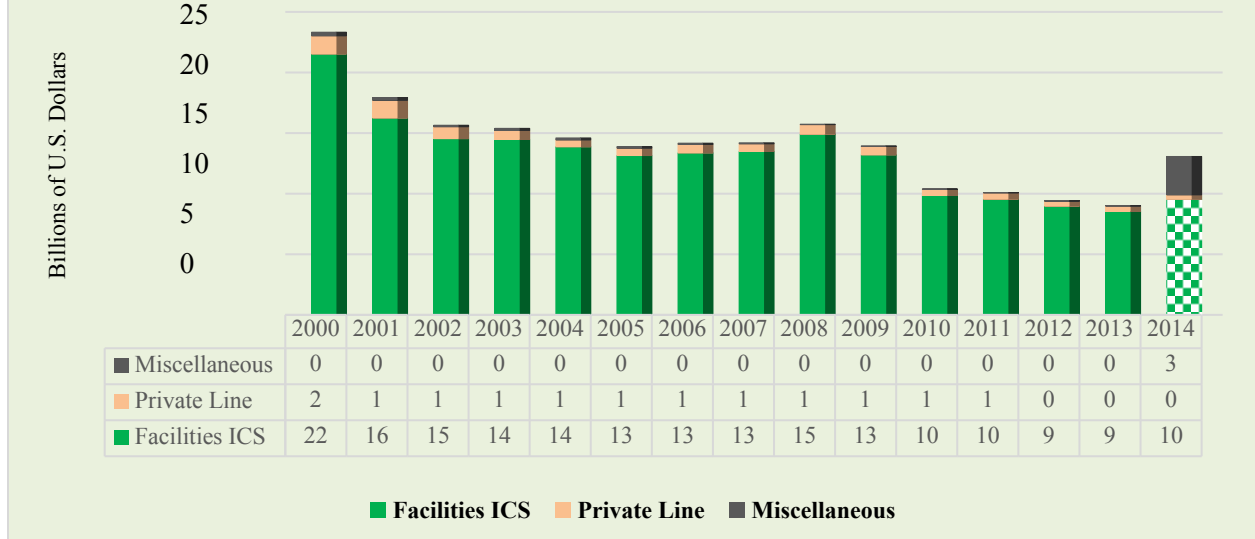
⁴² *Id.* at 19, para. 91.



V. TOTAL INTERNATIONAL BILLED REVENUES

The total international billed revenues charged to U.S. consumers by U.S. service providers declined 44 percent from \$23.3 billion in 2000 to \$13.1 billion in 2014. Billed revenues, between 2013 and 2014, increased 45 percent from \$9.0 billion to \$13.1 billion. In 2014, reported International Miscellaenous Services billed revenues between 2013 and 2014 increased from \$5 million to \$3.2 billion. Although we cannot ascertain the exact reason for the increase in international billed revenues, the increase could be a result of our clarifications in the *Section 43.62 Filing Manual*. In 2014, U.S. service providers reported the following International Miscellaenous Services: ATM, Data, Frame Relay, OPT-E-Wan, VPLS, and VPN services. On a regional basis, North and Central America accounted for most of the U.S.-billed revenues for Facilities ICS (26.5 percent) while Western Europe accounted for most of the U.S.-billed revenues for International Private Line Services (23.2 percent).

**Figure V. Total International Billed Revenues 2000-2014
(Billions of U.S. Dollars)**

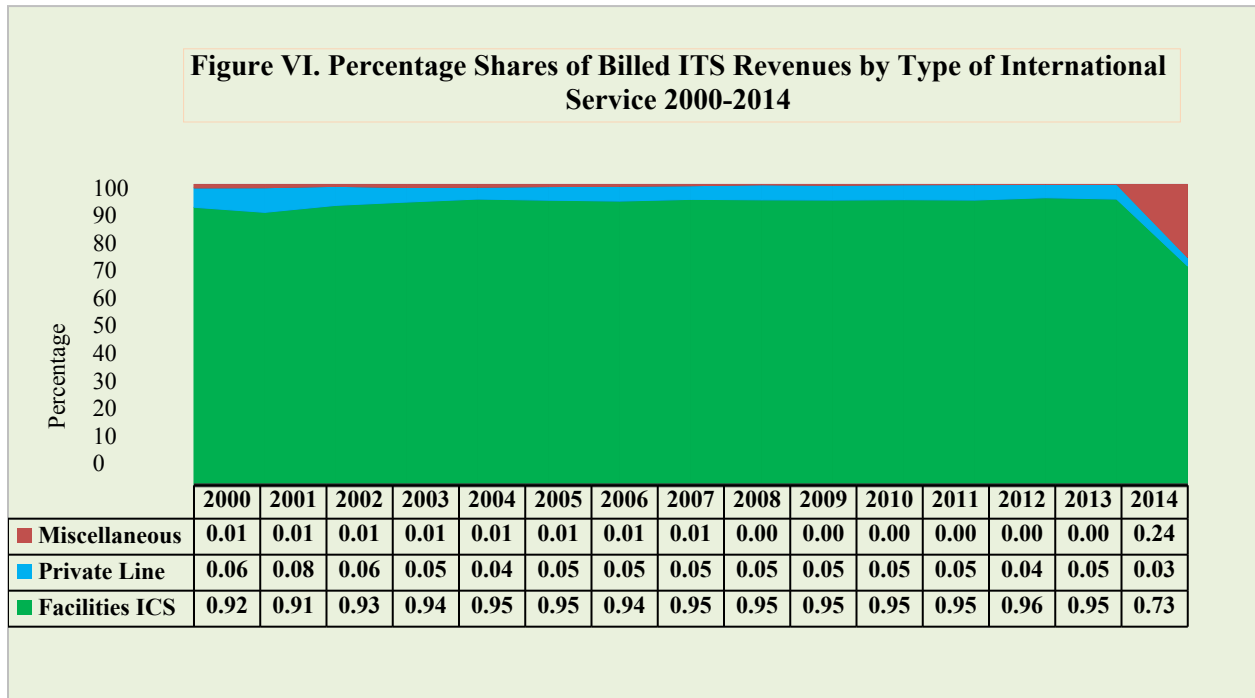


Sources: Figure V was derived from data in Tables 1, 10, 14, and Figure III. Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

VI. TOTAL SHARES OF BILLED INTERNATIONAL TELECOMMUNICATIONS SERVICES (ITS) REVENUES

Telephone service, in the past, comprised a large and growing share of reported total international billed revenues. In the 1980s, around 80 percent of reported international billed revenues were for international telephone service. By 2000, it accounted for 92 percent, and then grew to 95 percent by 2007 where it remained until 2014. In 2014, Facilities ICS accounted for only 73 percent of reported total ITS billed revenues. International Miscellaneous Services had never accounted for more than 1 percent of reported revenues. By 2014, however, although Facilities ICS continued to account for most of the revenues, International Miscellaneous Services grew to 24 percent of reported revenues. Although we cannot ascertain the exact reason for the increase in International Miscellaneous Services, the increase could be a result of the changes in our collection and the clarifications in the *Section 43.62 Filing Manual*. International Private Line Services, from 2005 to 2013, had accounted for about 5 percent of reported

revenues. The chart below shows the percentages of ITS by type of service.



Sources: Figure VI was derived from data in Table 1 and Figure V. Data for 2000-2013 depict IMTS only. Data for 2014 depict Facilities ICS.

Appendix A

Definitions of Terms Used in this Report

Circuit. A circuit refers to a path for electromagnetic transmission of information between two or more points, including transmission by submarine or terrestrial cable, satellite, wire, or radio. In addition to a dedicated channel, a service guarantee for electromagnetic transmission of information between two or more points at an agreed-upon data speed is considered a circuit for reporting International Private Line Service under section 43.62 of the Commission's rules.

Country-Beyond Service. Country-beyond service is an International Calling Service (ICS) provided and billed by a U.S. International Service Provider to a customer located in a foreign point in which case the customer, using a credit card or calling card issued by the U.S. International Service Provider, calls a telephone number in another foreign point.

Country-Direct Service. Country-direct service is ICS provided by a U.S. International Service Provider to a customer located in a foreign point in which case the customer, using a credit card or calling card issued by the U.S. International Service Provider, calls a telephone number in the United States.

Customer Revenue. Customer revenue refers to revenue billed for the provision of U.S.-Billed Facilities ICS, ICS Resale, Traditional Transiting ICS, International Private Line Service, and International Miscellaneous Services, including revenues derived from the connection, activation, provision, and termination of such services, unadjusted for uncollectibles.

End-User. An end-user refers to a calling party or called party.

Facilities ICS. Facilities ICS refers to the provision of ICS through a commercial arrangement between a U.S. International Service Provider and a Foreign Service Provider (including a foreign affiliate of the U.S. International Service Provider) for International Call Completion Service.

Filing Entity. A filing entity refers to a person or entity that is required to file information with the FCC pursuant to section 43.62 of the Commission's rules.

Foreign-Billed ICS. Foreign-Billed ICS refers to ICS that originates or terminates with an end-user in the United States, and that is billed by a Foreign Service Provider.

Foreign Carrier. A foreign carrier refers to any entity that is authorized within a foreign country to engage in the provision of international telecommunications services offered to the public in that country within the meaning of the International Telecommunication Regulations, see Final Acts of the World Administrative Telegraph and Telephone Conference, Melbourne, 1988 (WATTC-88), Art. 1, which includes entities authorized to engage in the provision of domestic telecommunications services if such carriers have the ability to originate or terminate telecommunications services to or from points outside their country. The term "Foreign Carrier" does not refer to the nationality of the employees or owners of a communications entity. An affiliate of a Foreign Carrier that operates in the United States as a common carrier is a U.S. Carrier.

Foreign Point. A foreign point refers to a foreign country or other geographic location outside the United States.

Foreign Service Provider. A Foreign Service Provider refers to a Foreign Carrier; or any person or entity in a foreign point that provides VoIP service connected to the PSTN in a foreign point or between a

foreign point and the United States; or any person or entity in a foreign point that provides International Call Completion Service to a U.S. International Service Provider or obtains International Call Completion Service from a U.S. International Service Provider.

ICS. See “International Calling Service.”

ICS Resale. ICS Resale refers to the provision of U.S.-Billed ICS by a U.S. International Service Provider through the resale of ICS purchased from another U.S. International Service Provider.

IMTS. See “International Message Telephone Service.”

Interconnected VoIP Service. Interconnected VoIP Service refers to a service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user’s location; (3) requires Internet Protocol-compatible customer premise equipment; and (4) permits users generally to receive calls that originate on the public switched telephone network (PSTN) and to terminate calls to the PSTN.

International Call Completion Service. International Call Completion Service refers to a service provided through a commercial arrangement between two service providers in which a service provider in Country A pays another service provider to complete an ICS call to an end-user in Country B. The service provider selling the service may be in Country A, Country B, or another country. In some instances, International Call Completion Service may be provided or obtained free of charge.

International Calling Service (ICS). ICS refers to International Message Telephone Service (IMTS) and International VoIP Service Connected to the PSTN, including International Call Completion Service for IMTS or International VoIP Service Connected to the PSTN.

International Message Telephone Service (IMTS). IMTS refers to the provision of message telephone service (MTS) between the United States and a foreign point. The term “message telephone service” refers to the transmission and reception of speech and low-speed dial-up data over the public switched telephone network (PSTN). IMTS includes international services with dedicated access if the calls are routed through the PSTN in the United States or a foreign point. International Call Completion Service for IMTS is included within the definition of IMTS.

International Miscellaneous Service. International Miscellaneous Service refers to any International Telecommunications Service other than ICS and International Private Line Service.

International Private Line Service. International Private Line Service refers to private line service between the United States and a foreign point. Private line service refers to making available to a customer on a common carrier basis a circuit for a specified period of time for the customer’s exclusive use.

International Telecommunications Service. International Telecommunications Service refers to telecommunications service between the United States and a foreign point. Section 3(46) of the Communications Act of 1934, as amended, 47 U.S.C. § 153(46), defines telecommunications service as “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used” (i.e., the provision of telecommunications on a common carriage basis).

International VoIP Service Connected to the PSTN. International VoIP Service Connected to the PSTN refers to service between the United States and any foreign point that: (1) enables real-time, two-

way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet Protocol-compatible customer premise equipment; and (4) permits users generally to receive calls that originate on the public switched telephone network (PSTN) or to terminate calls to the PSTN. International VoIP Service Connected to the PSTN consists of Interconnected VoIP Service and "one-way" VoIP services, between the United States and any foreign point. (One-way VoIP services enable users to terminate calls to the PSTN but do not permit users to receive calls that originate on the PSTN, or enable users to receive calls from the PSTN but do not permit the user to make calls terminating to the PSTN.) International Call Completion Service for International VoIP Service Connected to the PSTN is included within the definition of International VoIP Service Connected to the PSTN.

Non-Route-Specific Revenue. Non-route-specific revenue refers to customer revenue that is associated with reportable section 43.62 services or with individual foreign points but that cannot be directly identified.

Reoriginated Foreign ICS. Reoriginated Foreign ICS refers to ICS traffic from a foreign point that is transmitted to the United States for retransmission to a destination foreign point, but that is not handled as Traditional Transiting ICS.

Settlement Payout. Settlement payout refers to the expense (including any transiting fees) that a U.S. International Service Provider incurs for International Call Completion Service to a foreign point obtained from a Foreign Service Provider.

Settlement Receipt. Settlement receipt refers to the revenue that a U.S. International Service Provider bills for International Call Completion Service to the United States provided to a Foreign Service Provider.

Spot Market. A Spot Market refers to a market where service providers can buy or sell call completion services for immediate delivery.

Spot Market Customer. A Spot Market Customer refers to a service provider that enters into a contract to buy or sell call completion services by interconnecting at a spot market point of presence.

Spot Market Owner. A Spot Market Owner refers to a person or entity that facilitates the transaction between Spot Market Customers (who may not know each other's identity) by physically interconnecting the customers and acting as their commercial intermediary.

Traditional Transiting ICS. Traditional Transiting ICS refers to ICS from a foreign point that (a) transits the United States prior to completion at a foreign point and (b) is settled at a rate agreed upon by the Foreign Service Provider in the origination foreign point and the Foreign Service Provider in the destination foreign point. The U.S. International Service Provider that provides the transiting service is reimbursed for its handling and transmission of the traffic by the Foreign Service Provider in the origination foreign point.

United States. The United States refers to the several States and Territories, the District of Columbia, and the possessions of the United States, but does not include the Canal Zone.

U.S.-Billed Facilities ICS. U.S.-Billed Facilities ICS refers to U.S.-Billed ICS that a U.S. International Service Provider provides as Facilities ICS.

U.S.-Billed ICS. U.S.-Billed ICS refers to an ICS call that originates or terminates in the United States and that is billed by a U.S. International Service Provider to an end-user customer or to a U.S.

International Service Provider that is taking the service for resale; or a Reoriginated Foreign ICS call that is billed by a U.S. International Service Provider to a Foreign Service Provider; or a country-beyond call.

U.S. Carrier. A U.S. Carrier refers to a person or entity in the United States that provides telecommunications services (i.e., telecommunications on a common carrier basis) in the United States or between the United States and a foreign point or holds a U.S. section 214 license to do so. The term “U.S. Carrier” does not refer to the nationality of the employees or owners of a communications entity. An affiliate of a U.S. Carrier that operates in a foreign point as a common carrier is a Foreign Carrier.

U.S. International Authorization Holder. A U.S. International Authorization Holder refers to a person or entity that has received authorization from the FCC under section 214 of the Communications Act, 47 U.S.C. § 214, to provide International Telecommunications Service.

U.S. International Carrier. A U.S. International Carrier refers to a person or entity in the United States that provides International Telecommunications Service (i.e., telecommunications on a common carrier basis between the United States and a foreign point) or holds a U.S. section 214 authorization to do so.

U.S. International Service Provider. A U.S. International Service Provider refers to a U.S. International Carrier or a person or entity in the United States that provides VoIP service connected to the PSTN between the United States and any foreign point (International VoIP Service Connected to the PSTN). Included within the definition of a U.S. International Service Provider is any person or entity in the United States that provides International Call Completion Service to or from a foreign point for International Message Telephone Service or International VoIP Service Connected to the PSTN.

Appendix B Tables

- Table 1. Total – All Carriers’ Data, U.S.-Billed Revenues by Service
- Table 2. Total – All Carriers’ Data for 2014, U.S.-Billed International Telecommunications Traffic Measures and Revenues
- Table 3. Facilities ICS Revenue Per Minute Data for Top Five and All Other Providers
- Table 4. Total – All Carriers’ Data, 2000-2014 ICS Resale Minutes and Revenues
- Table 5. Total – All Carriers’ Data for 2014, U.S.-Billed and Foreign-Billed Facilities ICS Traffic
- Table 6. Top Ten International Routes for Facilities ICS
- Table 7. Total – All Carriers’ Data for 2014, International Private Line Service
- Table 8. U.S.-Billed Minutes of Facilities ICS by Region of the World
- Table 9. Foreign-Billed Minutes of Facilities ICS by Region of the World
- Table 10. U.S.-Billed Revenues for Facilities ICS by Region of the World
- Table 11. Average U.S.-Billed Revenue Per Minute for Facilities ICS by Region of the World
- Table 12. Net Settlement Payouts for Facilities ICS by Region of the World
- Table 13. Total – All Carriers’ Data for 2014, World Total Data for U.S.-Billed and Traditional Transiting ICS and Customer Class
- Table 14. U.S.-Billed Revenues for International Private Line Service by Region of the World
- Table 15. Total – All Carriers’ Data for 2014, International Miscellaneous Services

The Tables can be found on the FCC’s website at <https://www.fcc.gov/general/international-traffic-and-revenue-report>.

Appendix C
List of Entities that Filed 2014 Traffic and Revenue Data

The List of Entities that Filed 2014 Traffic and Revenue Data can be found on the FCC's website at <https://www.fcc.gov/general/international-traffic-and-revenue-report>.