

2014 Section 1377 Review
On Compliance with
Telecommunications Trade Agreements



Office of the United States Trade Representative

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I. Introduction

The Office of the United States Trade Representative (USTR) annually reviews the operation and effectiveness of U.S. telecommunications trade agreements and the presence or absence of other mutually advantageous market opportunities, pursuant to Section 1377 of the *Omnibus Trade and Competitiveness Act of 1988*.¹ The list of trade agreements containing requirements relevant to telecommunications and technology includes the General Agreement on Tariffs and Trade 1994 (GATT) and the General Agreement on Trade in Services (GATS), the North American Free Trade Agreement (NAFTA) with Canada and Mexico, the Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR) with Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic, and bilateral free trade agreements (FTAs) with Australia, Bahrain, Chile, Colombia, Israel, Jordan, Korea, Morocco, Oman, Panama, Peru, and Singapore.

The Section 1377 Review (“Review”) is based on public comments filed by interested parties and information developed from ongoing contact with industry, private sector, and foreign government representatives in various countries. This year USTR received four comments and two reply comments from the private sector, and one comment from a foreign government. All public comments are available at the following web site: www.regulations.gov, docket number USTR-2013-0039.

II. Summary of Findings

The 2014 Review addresses several general themes: Internet enabled trade in services, including cross-border data flows and Voice over Internet Protocol (VoIP) services; independent and effective regulators; limits on foreign investment; competition; international termination rates; satellites and submarine cable systems; telecommunications equipment trade; and local content requirements.

Several of the issues in the 2014 Review have been discussed in past reviews, but USTR considers it appropriate to continue to raise these issues and encourage our trading partners to implement appropriate solutions. The 2014 Review describes practices or measures of U.S. trading partners that USTR will actively monitor throughout the year and with respect to which, if warranted, USTR may take further action.

¹ Codified at 19 U.S.C. §3106 (Review of trade agreement implementation by Trade Representative).

III. Discussion of Key Issues

INTERNET- ENABLED TRADE IN SERVICES

Cross-Border Data Flows

Impediments to cross-border data flows remain a serious and growing concern. The dramatic expansion of data flows and the increasing integration of such data into myriad forms of economic activity make addressing barriers to data flows a key trade priority. Restrictions on cross-border data flows can have an impact on trade obligations relating both to the ability to supply telecommunications services and on covered services needing access and use of telecommunications networks.

Two issues cited in comments this year underscore this concern: a new law that in Turkey that has resulted in a massive blocking of websites and Turkey's new privacy laws that severely restricts data exports involving personal information; and the European Union (EU), where a variety of voices, including a leading German telecommunications supplier, are openly advocating for trade-distortive restrictions on data flows, purportedly justified on privacy grounds.

Turkey

In May 2013, Turkey enacted Law 5651 which places broad restrictions on Internet use. According to the UN Office of the High Commissioner for Human Rights, Turkey has closed the operations of approximately 37,000 websites through court orders and administrative blocking orders since the law entered into force.² Some of these closed sites may be platforms for services covered under Turkey's GATS commitments. For example, video sharing services, which appear to have been a target of the blocking effort³, are often platforms for the provision of educational services, for which Turkey has GATS commitments.

On February 6, 2014, the legislature of Turkey passed new amendments to Law 5651 and on February 19, 2014, the amendments were approved by President Abdullah Gul (Law No. 6518). The new law grants Turkey's telecommunications regulator (Turkish Telecommunications Directorate) the authority to order websites blocked pending a court order and to penalize Internet service providers for failing to cooperate. These restrictive laws may affect services covered by Turkey's trade commitments, including commitments to ensure reasonable access by such suppliers to telecommunications networks. Most recently, Turkey took steps to block access to a major U.S.- based messaging platform, but on April 2, 2014, Turkey's Constitutional Court ruled the ban was unconstitutional. USTR will continue to carefully monitor the actions of Turkey regarding such access and, more generally, developments in this area.

² <http://www.un.org/apps/news/story.asp/story.asp?NewsID=47143&Cr=turkey&Cr1=>

³ <http://www.todayszaman.com/news-336326-vimeo-blocked-in-turkey-raising-concerns-over-freedom-of-expression.html>

On January 1, 2014, the *Regulation on Processing and Protection of Confidentiality of Personal Data in the Electronic Communication Sector* took effect in Turkey.⁴ This regulation imposes strict prohibitions on transfers of personal data outside of Turkey by telecommunications providers in Turkey. Turkey's measure appears to be stricter than typical privacy regimes, including that of the EU. The data export restriction also appears to include data stripped of identifying information (such as location data).⁵ It is unclear how either telephone service (*e.g.* satellite-based services, or mobile roaming services), or other Internet-based services, offered on a cross-border basis in accordance with Turkey's WTO commitments, can be offered in compliance with such strict rules. Accordingly, USTR will closely monitor implementation of this law, seeking to identify unjustified limitations on data flows, to ensure that data flows supporting legitimate trade can expand unimpeded.

European Union

Recent proposals from countries within the European Union to create a Europe-only electronic network (dubbed a "Schengen cloud" by advocates) or to create national-only electronic networks could potentially lead to effective exclusion or discrimination against foreign service suppliers that are directly offering network services, or dependent on them.

In particular, Deutsche Telekom AG (DTAG), Germany's biggest phone company, is publicly advocating for EU-wide statutory requirements that electronic transmissions between EU residents stay within the territory of the EU, in the name of stronger privacy protection.⁶ Specifically, DTAG has called for statutory requirements that all data generated within the EU not be unnecessarily routed outside of the EU; and has called for revocation of the U.S.-EU "Safe Harbor" Framework, which has provided a practical mechanism for both U.S. companies and their business partners in Europe to export data to the United States, while adhering to EU privacy requirements.

The United States and the EU share common interests in protecting their citizens' privacy, but the draconian approach proposed by DTAG and others appears to be a means of providing protectionist advantage to EU-based ICT suppliers. Given the breath of legitimate services that rely on geographically-dispersed data processing and storage, a requirement to route all traffic involving EU consumers within Europe, would decrease efficiency and stifle innovation. For example, a supplier may transmit, store, and process its data outside the EU more efficiently, depending on the location of its data centers. An innovative supplier from outside of Europe may refrain from offering its services in the EU because it may find EU-based storage and processing requirements infeasible for nascent services launched from outside of Europe. Furthermore, any mandatory intra-EU routing may raise questions with respect to compliance with the EU's trade obligations with respect to Internet-enabled services. Accordingly, USTR will be carefully monitoring the development of any such proposals.

⁴ See *Regulation on Processing and Protection of Confidentiality of Personal Data in the Electronic Communication Sector*, Art. 4 (2) ("Personal data cannot be transferred abroad.")

⁵ *Ibid*, Article 12.2: "Location data cannot be exported abroad".

⁶ <http://www.telekom.com/dataprotection>

Voice Over Internet Protocol (VoIP)

VoIP is an important alternative to traditional phone service that can often provide innovative new features to consumers. Restrictions on VoIP services imposed by certain countries, such as prohibiting VoIP services, requiring a VoIP provider to partner with a domestic supplier, or imposing onerous licensing requirements have the effect of restricting legitimate trade or creating a preference for local suppliers, typically former monopoly suppliers. USTR will continue to evaluate the barriers listed in this year's comments and – as appropriate – will engage with countries to ensure that any measures taken regarding the service are consistent with each country's trade commitments.

China

The Chinese government imposes unreasonably strict limitations on companies that wish to offer VoIP services in China. China requires a supplier to have a value-added service (VAS) license to provide VoIP service. Foreign companies may obtain a VAS license only through a joint-venture company. Since such suppliers cannot connect to the PSTN without obtaining a basic telecommunications license, the scope of VoIP service is unreasonably limited (China's requirements for a basic service license (*e.g.* capitalization levels exceeding one hundred million U.S. Dollars) make little sense for a service that requires no investment in or control of transmission facilities). Currently, only a few small pilot VoIP projects -- involving the incumbent state-owned operators -- are allowed to offer PSTN-interconnected VoIP services to Chinese consumers.

India

India currently only allows VoIP to be used in closed user groups (CUGs), which is a communications network between branches of a single company. Furthermore, the CUGs can only link to each other using an Internet Protocol trunk and VoIP, but cannot supplement such links with connectivity to the PSTN. This causes companies to incur higher establishment and operational costs by maintaining separate systems for internal and external communications.

INDEPENDENT AND EFFECTIVE REGULATOR

China

China's regulator, the Ministry of Industry and Information Technology (MIIT), has actively worked to consolidate market participants and has often shielded China's state-owned operators from competition, both domestic and foreign. Assignment of spectrum for new mobile services (*e.g.* LTE) lacks basic transparency, and has resulted in assignments exclusively to state-owned incumbents. Where it has taken steps to promote competition (*e.g.* through recent promotion of mobile resale), MIIT has prevented foreign firms from entering the market. Moreover, the Chinese Government still owns and controls the three major basic telecom operators in the telecommunications industry, and appears to see these entities as important tools in broader industrial policy goals, such as promoting indigenous standards for network equipment.

USTR urges the Chinese Government to implement reforms that (1) protect the independence of the regulator with respect to both basic and value added services and in particular from influence from state-controlled basic telecommunications operators and (2) improve the transparency of its procedures. China should also revise the current draft of its Telecommunications Law to address issues of concern the United States has highlighted, and to make the draft available for a significant public comment period. A clear and effective telecommunications law could represent a significant step towards establishing a better legal framework for the telecommunications sector.

FOREIGN INVESTMENT

Commentators cite foreign investment limits, typically in the form of limits on the percentage of equity a foreign firm can control, as a prevalent trade-distortive barrier. Most countries cited have equity limits that reflect the country's commitments under the GATS. Nevertheless, these comments will help guide U.S. priorities in ongoing and future trade negotiations that further telecommunications liberalization.

China

China's equity restrictions on foreign participation constitute a major impediment to market access in China. These restrictions are compounded by China's broad interpretation of services requiring a telecommunications license (and thus subject to equity caps) and narrow interpretation of the specific services foreign firms can offer in these sub-sectors.

In 2013, MIIT released draft revisions to its *Catalog of Telecommunications Service Categories* (Catalog) and issued draft regulations, *New Types of Telecom Businesses Trial Operation Measures*, which significantly expand the services subject to this licensing regime. The draft Catalog classifies various information and communications technology (ICT) services, including cloud-computing and anti-virus services, as VAS, which subjects them to equity caps, joint venture requirements and capitalization minimums.

Several VAS definitions in the draft Catalog also raise trade restriction concerns. First, the draft Catalog created a new category of "Internet Resource Collaboration Services" that appears to covers all aspects of cloud computing. (Cloud computing is a computer service or software delivery model, and should not be misclassified as a telecommunications service.) MIIT approach to cloud computing generally raises a host of broad concerns. Second, the draft Catalog significantly expanded the definition of "Information Services" to include software application stores, software delivery platforms, social networking websites, blogs, podcasts, computer security products, and a number of other Internet and computing services. These services simply use the Internet as a platform for providing business and information to customers, and thus should not be considered as telecommunications services.

The *New Types of Telecom Businesses Trial Operation Measures* seek to further expand the scope of MIIT regulation by adding a filing requirement to service suppliers providing any

information or Information Technology services over the public telecom network in China not currently covered in the existing Catalog.

These draft measures, if implemented, would increase market entry barriers for many new and emerging ICT services and raise concerns about compliance with China's trade obligations. The draft Catalog and the *Trial Operation Measures* would (1) subject a broad set of services to cumbersome, unreasonable, and unnecessary licensing restrictions, (2) impose new conditions on telecommunications service suppliers with longstanding business in that country, and (3) impede market access to foreign suppliers of computer and related services by classifying certain computer and related services such as cloud computing as VAS. USTR encourages China to refrain from implementing these restrictive requirements and to open the market to any company with competitive products and services.

USTR also continues to urge China to lift its foreign equity caps in the telecommunications sector, now 49 percent for basic service licenses and 50 percent for VAS licenses. China also imposes an unreasonably high capitalization requirement of US\$145.9 million as a condition of obtaining a basic service license, which could easily be replaced with a narrowly tailored performance bond to address any financial concerns. Finally, China should eliminate the requirement that a foreign company must enter into a joint venture with a state-owned company in order to obtain a basic service license; requiring foreign telecom service providers to partner with a company that may also be a horizontal competitor of their joint venture is not conducive to competition.

Vietnam

Vietnam's Decree No. 25 limits foreign investment to 49 percent for providing telecommunications network service, and 65 percent for VAS, consistent with its WTO commitments. During the Trans-Pacific Partnership (TPP) negotiations, USTR has encouraged Vietnam to eliminate such restrictions.

COMPETITION ISSUES

Colombia

A U.S.-affiliated operator, Avantel has filed comments relating to its inability to obtain roaming agreements in Columbia with incumbent mobile operators, which it asserts that it needs in order to launch a 4G mobile service based on spectrum it won in an auction last year.

In anticipation of last year's auction of 4G mobile spectrum, the Colombian regulator, the Commission de Regulacion de Comunicaciones (CRC) mandated that incumbent wireless operators allow automatic roaming for voice, SMS messaging, and data services on their networks.⁷ This would allow new entrants, including Avantel, to offer nationwide 4G service as

⁷ In 2013, the CRC issued Resolution 4112, and the Ministry of Communications issued MinTIC Resolution 449, in February and March, respectively, in anticipation of the June 2013 auction. Resolution 4112 required that incumbents enter into roaming agreements with any requesting carrier. General roaming conditions and rates were

they build out their network, a process expected to take years. An inability to offer nationwide service at launch would put a new entrant at a significant competitive disadvantage to the three main incumbent operators. Many countries, including the United States, require some form of roaming and consider roaming as a service that is part of the reasonable access to the public network.

On August 21, 2013, Avantel formally requested roaming of each of the three incumbents and attempted to negotiate roaming agreements with each of them. As of this date, none of the three incumbent operators have completed such agreements with Avantel. The two partially government-owned incumbent operators (Movistar and Tigo) further violated CRC rules when, on December 3, 2013, they launched competing 4G services on spectrum acquired at the same auction. Such launches had been prohibited in the absence of a roaming agreement with Avantel. The third (and largest) operator, Claro, has asserted that it should not be required to offer services in areas where Avantel already operates. While Avantel does maintain a second-generation network for a very small number of subscribers, the technology it uses for this network is incompatible with 4G service, and thus cannot reasonably be considered a substitute for roaming.

Following a December 2013 Avantel petition to the CRC to address the lack of roaming, the CRC has instituted proceedings to resolve the issue. CRC expects to issue a final decision this April. USTR remains concerned that lack of roaming is impeding competitive opportunities in the Colombian market and thus encourages Colombia to redouble its efforts to enforce its rules ensure that such arrangements are available.

Mexico

Both the telecommunications and the video services markets in Mexico continue to be highly concentrated. By some counts, America Movil, the dominant provider of telecommunications services in Mexico, has 70 percent of the mobile services market and 65 percent of the broadband market.⁸ Televisa, the dominant provider of video services in Mexico, owns four of the six major broadcast television networks in Mexico, and has interests in cable provider Cablevision, satellite provider Sky and a number of cable networks, making it the largest pay-TV provider as well.

The Mexican government has adopted a series of conditions that America Movil must meet before it will be allowed to provide video services and offer a bundle of voice, data and video services to its customers. The United States Council for International Business (USCIB) asserts that this line-of-business restriction on American Movil limits competition and has led to a low penetration rate for pay television services in Mexico, currently only 40 percent as compared to

set by the CRC. MinTIC Resolution 449 established that: (i) compliance with the roaming obligation was one of the conditions precedent to launching service on specified spectrum won at auction; (ii) failure to comply with the roaming obligation is a cause leading to the cancellation of the permit to use the spectrum¹³; and (iii) “total or partial” breach by incumbent operator of its obligation to enter into a roaming agreement with a requesting carrier causes automatic prohibition of its right to sell, market, or deliver service on the new spectrum.

⁸ America Movil (AM) reported a 10.6 percent increase in net profit for 2012 with a net income of MXN91.441 billion (USD6.95 billion) in FY2012, up from MXN82.698 billion a year earlier, on consolidated revenues that increased by 6 percent to MXN705.507 billion.

an average of 50 percent across Latin America.⁹ USCIB asserts that the lack of competition and low penetration in the Mexican video services market hurts U.S. equipment manufacturers, software developers and content providers seeking to sell goods and services.

In response to USCIB's comment, DirecTV replied that the Mexican government is rightly concerned about the ability of America Movil to leverage its dominant position in telecommunications services into the video services market. DirecTV claims that America Movil, through bundling and cross-subsidizing, will be able to offer pay-television at artificially low prices, which reduces competition and would eventually cause other players to withdraw from the market. However, given their dominance in free-to-air television (still the dominant video platform in Mexico), and control over popular TV content, Televisa and its duopoly counterpart, TV Azteca, would appear well-positioned to withstand competitive entry. Additionally, while America Movil has so far been denied entry into the video market, Televisa established a foothold in the telecommunications market through its acquisition in 2007 of Iuasacell, which is now Mexico's third largest mobile operator.

U.S. suppliers, particularly content suppliers, would benefit from greater competition in Mexico's video market. USTR is concerned about the high level of concentration in both markets and will continue to support efforts of the government of Mexico to promote greater entry into both markets by both domestic and foreign providers.

Uruguay

In December 2012, the Uruguayan government issued Decree 775, which imposed caps on the number of subscribers that pay television providers with a nation-wide footprint may serve. According to the decree, providers that offer service on a national basis are capped at serving 25% of total households. Last year, the Uruguayan President introduced a new Audiovisual Media Services Bill in the national Congress which, among other things, imposes more stringent caps on the number of subscribers. Specifically, article 46 of this bill provides that "the total number of pay television subscribers of television companies in the national territory shall not exceed 25 percent of the total *households with pay television* in the entire country." If adopted, this would further reduce the number of households each pay television provider could serve.

Currently only one pay television provider has a nation-wide footprint in Uruguay--a U.S. supplier that serves approximately 17 percent of the Uruguayan pay television market. (The remaining 83 percent of the market is served by cable companies that cannot reach national coverage because their licensees are geographically restricted. These companies can serve up to 35 percent of total households in their local markets.) Thus, the lower cap imposed affects only one provider in Uruguay. USTR encourages Uruguayan authorities to reconsider the existing market share caps imposed under Decree 775 of 2012 and to withdraw similar provisions included in the Audiovisual Media Services Bill.

⁹ USCIB comment at page 24-25.

INTERNATIONAL TERMINATION RATES

One of the main cost components of an international telephone call from the United States to another country is the rate a foreign telecommunications operator charges a U.S. operator to terminate the call on the foreign operator's network and deliver the call to a local consumer. Both U.S. free trade agreements and the GATS Telecommunications Services Reference Paper include disciplines designed to ensure that the charge for terminating a call on a network of a major supplier (which in most countries is the largest or only fixed-line telecommunications supplier) is cost-oriented. This ensures that a major supplier is not able to gain an unfair competitive advantage from terminating foreign or competitive carriers' calls, and also helps to ensure that U.S. carriers can offer reasonable and competitive international rates to consumers located in the United States.

Termination rates for both fixed and wireless traffic should be set in relationship to the costs of providing termination, as would be reflected in a competitive market. Where competition does not discipline the costs of termination services, governments should ensure that the termination rates charged by its operators are not unreasonably above cost. Unfortunately, in this year and for the last several 1377 Reviews, USTR has seen various governments taking actions that serve to ensure an increase in the termination rates of calls into their countries. These actions adversely affect the ability of U.S. telecommunications operators to provide affordable, quality services to U.S. consumers and may raise questions regarding those governments' international trade obligations. Such cost increases also disadvantage enterprises in those foreign markets for which foreign communications is a key part of business (*e.g.*, traders, hotels). In some cases, the major supplier benefits from the increased rates; in others, the governments in question uses the revenues to fund universal service programs or programs unrelated to telecommunications, or do not account for the use of the funds adequately. Even where these measures do not provide additional revenue to the local operators, the result for U.S. operators and consumers is the same -- higher costs and, consequently, for both the United States and foreign country, lower calling volumes.

Pakistan

Pakistan is a Member of the WTO with commitments under the GATS Annex on Telecommunications, including commitments with respect to international voice services. Section 5 of the Annex on Telecommunications requires Members to provide access, on reasonable terms and conditions, to telecommunications networks and services. The WTO Dispute Settlement Body has found that "access to and use of public telecommunications transport networks and services on 'reasonable' terms includes questions of pricing of that access and use."¹⁰

In August 2012, Pakistan's Ministry of Information Technology and Telecommunications (MoITT) issued a directive supporting the creation of an "International Clearing House" (ICH) agreement, under which thirteen Pakistani carriers assigned Pakistan Telecommunications Company Limited (PTCL) the exclusive right to terminate inbound international calls in Pakistan at a significantly above-cost rate approved by the Pakistani Telecommunications Authority

¹⁰ *Mexico—Measures Affecting Telecommunications Services*, Panel Report, WT/DS204/R (Apr. 4, 2004).

(PTA). The new international termination rate set by the PTA was \$0.088 per minute, an increase of approximately 400 percent over the competitive market rate that existed prior to the ICH agreement. This increase came without any demonstration of increased costs. This disparity calls into question whether Pakistan has acted consistently with its commitments under the GATS Annex on Telecommunications.

In November 2012, the Lahore High Court suspended the ICH agreement, and the PTA subsequently ordered carriers, including PTCL, to revise their international termination rates back to the levels that existed prior to the ICH agreement. In March 2013, the Supreme Court of Pakistan overturned the Lahore High Court's ruling and remanded the matter back to the Competition Commission of Pakistan, which, in May 2013, annulled the ICH Agreement on the grounds that it violated Pakistan's Competition Act. Despite this, the impact of the MoITT directive persists: PTCL remains the only provider of international termination services in Pakistan and continues to charge a rate of \$0.088 per minute, even though it is no longer mandated by the PTA.¹¹

On March 5, 2013, the U.S. Federal Communications Commission (FCC) ordered all U.S. carriers not to pay termination rates to Pakistani carriers in excess of the rates that were in effect immediately prior to the rate increase on or around October 1, 2012. USTR looks to the Government of Pakistan to ensure the functioning of a competitive market for the termination of international voice calls by taking steps to prevent collusive behavior among international operators and ensuring that the operators deal with international correspondents on a competitive basis. Such actions are necessary to prevent PTCL from maintaining a *de facto* monopoly over international calls into Pakistan.

Tonga

Although the Tongan government has removed its former requirement that all international traffic must pay a minimum rate of US\$ 0.30, Tonga's major supplier of telecommunications services, the government-owned Tonga Communications Corporation (TCC), reportedly refuses to negotiate cost-oriented and reasonable termination rates and continues to block the circuits of U.S. carriers that do not accept its rate demands. Such actions raise concerns about Tonga's commitments under the GATS Reference Paper and the GATS Annex on Telecommunications to ensure that termination rates are cost-oriented and reasonable. USTR urges the Tongan Government to take immediate action to ensure that its carriers restore direct circuits with U.S. carriers and offer reasonable, cost-oriented rates to U.S. carriers.

Fiji

The Fijian government has required Fiji International (Fintel), the major supplier of telecommunications services, to charge U.S. carriers above-benchmark settlement rates since 2011. On March 7, 2013, the International Bureau of the FCC released an order prohibiting U.S. carriers from paying Fintel rates for U.S.-Fiji traffic in excess of the \$0.19 per minute benchmark

¹¹ SEE LETTER FROM ULISES R. PIN, COUNSEL FOR VONAGE, TO MARLENE H. DORTCH, SECRETARY, FEDERAL COMMUNICATIONS COMMISSION, IB DOCKET NO. 12-324 (FILED DEC. 23, 2012).

rate. USTR urges the Fijian government to take immediate action to ensure that Fintel offer reasonable, cost-oriented rates to U.S. carriers.

Uganda

Uganda enacted legislation in 2013 imposing a tax of US\$ 0.09 on inbound international calls. The tax substantially increases international termination rates without any demonstration of increased costs and calls into question Uganda's commitment under the GATS Reference Paper and the GATS Annex on Telecommunications to ensure reasonable terms for access and use of its telecommunications network.

SATELLITE SERVICES

As in previous years, commenters note problems regarding U.S. operators' ability to offer satellite capacity to customers in China and India. Commenters continue to point to a lack of transparency in the rules governing the provision of satellite capacity in these countries and note that the requirement to sell capacity only through government-owned satellite operators is problematic. USTR will continue to raise concerns regarding the barriers to supplying satellite services in China and India and will encourage these countries to consider changes to their respective frameworks.

China

There is currently only one authorized domestic satellite service provider in China – China Satellite Communications Co. Ltd. (China Satcom), a fully-owned subsidiary of the China Aerospace Science and Technology Corporation (CASC). China's satellite industry was restructured in April 2009, with a vertical and horizontal consolidation of all satellite services into China Satcom. There are only two other international companies allowed to provide satellite services directly to end-users in China: Asia Satellite Telecommunications Company Limited (AsiaSat) and APT Satellite Company Limited (APT), both of which are partially owned by the Chinese Government and are based in Hong Kong. No other companies have been granted a license to provide services directly to end users in China.

Without such a license, China requires foreign satellite operators to offer their services through the licensed China Satcom, adding to their cost of doing business and forcing them to rely on a company that will often be their competitor. China should remove such barriers to competition and allow end users in China to contract directly with any satellite operator that has the ability to service China (subject to appropriate non-discretionary licensing requirements). As a first step, China could streamline licensing procedures for international suppliers, eliminating the requirement for full spectrum coordination to be completed prior to authorizing services.

India

The Indian Space Research Organization (ISRO) is the primary space agency of the Indian government and operates the government-owned Indian National Satellite System (INSAT). For C-band VSAT¹² services on a foreign satellite, India requires that VSAT operators route their connectivity through ISRO, which adds a 7.5 percent surcharge. For Ku-band services, end users in India are only allowed to uplink through Indian satellites. No foreign satellite operator is allowed to provide any Ku-band capacity to an end user in India unless it does so via ISRO, an entity with which foreign satellite operators are in direct competition. India should allow end users in India to contract directly with any satellite operator that has the ability to serve India. Doing so would enable non-discriminatory market participation and complying with other relevant non-discrimination requirements.

India's Ministry of Information and Broadcasting (MIB) has also established guidelines that establish a preference for Indian satellites to provide capacity for delivery of Direct-to-Home (DTH) subscription television services. In practice, authorized DTH licensees have not been permitted to contract directly with foreign operators and encounter procedural and contracting delays when seeing to do so. Instead, any foreign satellite capacity must be procured through ISRO which, in turn, only permits such procurements if it does not have available capacity on its own system. This issue is compounded by a lack of visibility into ISRO's plans for future transponder capacity. If ISRO does permit the use of foreign satellite capacity, the foreign satellite operator must sell the capacity to ISRO, which then resells, after adding a surcharge, the capacity to the end user. Preventing foreign suppliers from developing direct relationships with DTH licensees is of concern to USTR, as it puts U.S. suppliers at a competitive disadvantage and prevents DTH licensees from offering a fuller range of services.

For satellite infrastructure, the United States and many WTO members have adopted policies permitting users of satellite services to work directly with any satellite operator that has the ability to serve them, without government constraints on their choice of operator. USTR will continue to encourage India to adopt such an "open skies" satellite policy to allow consumers the flexibility to select the satellite capacity provider that best suits their business requirements.

SUBMARINE CABLE SYSTEMS

India

Last year, USTR commended TRAI, the national regulator, for taking positive steps to reduce access and collocation charges at India's submarine cable landing stations. Subsequently, however, Tata Telecommunications Ltd. and Bharti Airtel Ltd., which own the majority of cable landing stations in India, appealed this decision in the Madras High Court. The Madras High Court stayed the implementation of the TRAI decision. We look forward to an immediate and expeditious resolution of this matter in the broader interest of the growth of affordable broadband and data services in India.

¹² VSAT or "very-small-aperture terminal" service is a satellite service that utilizes a dish antenna that is smaller than 3 meters.

TELECOMMUNICATIONS EQUIPMENT

China

Multi-Level Protection Scheme

Starting in 2012, both bilaterally and during meetings of the WTO's Committee on Technical Barriers to Trade, the United States raised its concerns with China about framework regulations for information security in critical infrastructure known as the Multi-Level Protection Scheme (MLPS), first issued in June 2007 by the Ministry of Public Security (MPS) and the Ministry of Industry and Information Technology (MIIT). The MLPS regulations put in place guidelines to categorize information systems according to the extent of damage a breach in the system could pose to social order, public interest, and national security. The MLPS regulations also appear to require buyers to comply with certain information security technical regulations and encryption regulations that are referenced within the MLPS regulations.

If China issues implementing rules for the MLPS regulations and applies the rules broadly to commercial sector networks and IT infrastructure, they could adversely affect sales by U.S. information security technology providers in China. USTR has, therefore, urged China to notify to the WTO any MLPS implementing rules laying down equipment-related requirements, in accordance with China's obligations under the Agreement on Technical Barriers to Trade. In addition, USTR will continue to urge China to refrain from adopting any measures that mandate information security testing and certification for commercial products or that condition the receipt of government preferences on where intellectual property is owned or developed.

At the December 2012 U.S.-China Joint Commission on Commerce and Trade (JCCT) meeting, China indicated that it would begin the process of revising the MLPS regulations. China also agreed that, during that process, it would enter into discussions with the United States regarding U.S. concerns. Throughout 2013, using the JCCT process, the United States pressed China to implement fully and quickly its JCCT commitment to revise the MLPS regulations. To date, however, China has not yet revised those regulations.

4G Telecommunications ZUC Encryption Algorithm Standard

At the end of 2011 and into 2012, China released a Chinese government-developed 4G Long-Term Evolution (LTE) encryption algorithm known as the ZUC standard. The European Telecommunication Standards Institute (ETSI) 3rd Generation Partnership Project (3GPP) had approved ZUC as a voluntary LTE encryption standard in September 2011. According to U.S. industry reports, MIIT, in concert with the State Encryption Management Bureau (SEMB), informally announced in early 2012 that only domestically developed encryption algorithms, such as ZUC, would be allowed for the network equipment and mobile devices comprising 4G TD-LTE networks in China. It also appeared that burdensome and invasive testing procedures threatening companies' sensitive intellectual property could be required.

In response to U.S. industry concerns, USTR urged China not to mandate any particular encryption standard for 4G LTE telecommunications equipment, in line with its bilateral commitments and the global practice of allowing commercial telecommunications services providers to work with equipment vendors to determine which security standards to incorporate into their networks. Any mandate of a particular encryption standard such as ZUC would contravene a commitment that China made to its trading partners in 2000, which clarified that foreign encryption standards were permitted in the broad commercial marketplace and that strict “Chinese-only” encryption requirements would only be imposed on specialized IT products whose “core function” is encryption. Additionally, a ZUC mandate would contravene China’s 2010 JCCT commitment on technology neutrality, in which China had agreed to take an open and transparent approach with regard to operators’ choices and not to provide preferential treatment based on the standard or technology used in 3G or successor networks, so that operators could choose freely among whatever existing or new technologies might emerge to provide upgraded or advanced services.

The United States pressed China on this issue throughout the run-up to the December 2012 JCCT meeting. At that meeting, China agreed that it will not mandate any particular encryption standard for commercial 4G LTE telecommunications equipment.

In 2013, the United States worked to ensure that MIIT’s voluntary testing and approval process for the ZUC 4G telecom equipment standard fully protects applicants’ intellectual property by not requiring source code or other sensitive business confidential information to be provided during the approval process. At the December 2013 JCCT meeting, China committed that it will not require applicants to divulge source code or other sensitive business information in order to comply with the ZUC provisions in the MIIT application process for 4G devices. In 2014, the United States will closely monitor developments in this area.

India

License Amendments Affecting Importation of Telecommunications Equipment

Beginning in December 2009, India issued a series of requirements for telecommunications service providers (TSP) and equipment vendors, which were designed to maintain the security of India’s commercial networks. In response to concerns raised by industry and trading partners, including the United States, in May 2011, India amended the licenses required for telecommunications service providers. Although these amendments eliminated many of the most concerning aspects of the previous proposed license amendments, they still contain provisions of concern to the United States.

These include: (1) the requirement for telecommunications equipment vendors to test all imported ICT equipment in laboratories in India beginning in July 2014; (2) the requirement to allow the telecommunications service provider that contracted with the vendor and Indian government agencies to inspect the vendor’s manufacturing facilities and supply chain, and to perform security checks for the duration of the contract to supply equipment to the telecommunications service provider; and (3) the imposition on vendors, without the right to appeal and other due process guarantees, of strict liability and possible “blacklist[ing] for doing

business in the country” when the vendor has taken “inadequate” precautionary security measures.

In September 2013, India obtained Common Criteria (CC) “authorizing nation” status for ICT product testing. As a result, Indian testing will be recognized by other CC countries as long as Indian testing labs adhere to specified standards. However, India has not revoked the domestic testing requirement for imported ICT equipment, which is scheduled to take effect in July 2014; nor has India consulted stakeholders on a number of issues critical to industry’s compliance with this requirement, including how implementation can take place without adequate testing facilities in India. USTR will continue to engage India to seek ways to ensure that U.S. telecommunications companies can continue to participate meaningfully in the Indian market, while also respecting security concerns of the Indian Government.

General Concerns with Conformity Assessment Requirements

U.S. industry continues to identify conformity assessment procedures relating to ICT equipment as a significant barrier to trade, focusing in particular on certain electromagnetic compatibility (EMC) testing and certification requirements. Mandatory certification requirements maintained by China, Costa Rica, India, and Brazil, as well as requirements maintained by Brazil, China, and India that equipment be tested domestically, are areas of concern. Requirements that telecommunications and information technology equipment be tested domestically can lead to redundant testing, particularly where a product is required to undergo testing to the same standard in both the exporting and importing country (e.g., for EMC).

U.S. industry has identified several specific redundant testing requirements that China imposes with respect to mobile phones, as well as a lack of transparency in China’s testing and certification procedures for mobile phones. China’s three main approval processes for mobile phones—the Network Access License (NAL), the Radio Type Approval (RTA), and the China Compulsory Certification (CCC) mark—often overlap. For example, the NAL and RTA processes both require electromagnetic interference tests, and the NAL and the CCC both require EMC testing and product safety tests. In addition to redundancy, China does not consistently publish its requirements for mobile phones. For example, the requirement that mobile phones be WLAN Authentication and Privacy Infrastructure (WAPI)-enabled, is unpublished.

Those requirements that are published are often unclear and subject to change without written notification and adequate time for companies to adjust. In some cases, testing requirements for products can change on an almost monthly basis. The United States and China have discussed these issues bilaterally, including working group meetings held under the auspices of the JCCT. At the JCCT Plenary in November 2011, China announced its plan to build on its earlier 2010 JCCT commitment to develop a one-stop shopping mechanism for telecommunications NALs and RTAs by agreeing to publish these procedures by the end of 2011.

In December 2011, MIIT announced the implementation of its December 2010 JCCT commitment through the establishment of a single application window for both RTA and NAL testing and certification. In February 2012, a one-stop-shopping mechanism became operational

on MIIT's website, with MIIT's Telecommunications Equipment Certification Center appointed to process applications for both testing and certification processes. Based on industry's experience to date, however, it does not appear that MIIT's new approach is meaningful in terms of streamlining the MIIT processes.

USTR remains concerned that the new mechanism does not actually eliminate any redundancies or unnecessary elements of the testing and certification processes. It also does not appear to address a fundamental concern that unnecessary functionality testing results in burdensome processes. In addition, the lack of transparency in the NAL testing and certification process remains a concern, as NAL requirements are not readily available to the public. As described earlier, USTR has made progress on specific elements of the NAL testing and certification process, i.e., the ZUC encryption algorithm requirement, but it will monitor developments in this area closely and continue to pursue progress in enhancing transparency and streamlining China's telecommunications testing and certification requirements throughout 2014.

Mutual Recognition Agreements

Mutual Recognition Agreements (MRAs) can help address restrictions countries maintain on equipment testing outside their territories, and eventually can lead to countries permitting equipment sold in their markets to be certified in the United States. In May 2011 the United States and Mexico signed a bilateral telecom MRA, fulfilling a long outstanding NAFTA obligation. This agreement has not yet entered into force. Although the agreement allowed for an 18-month confidence-building period, work remains to ensure Mexico has the necessary system in place to accept test results from U.S. labs. USTR is committed to working with Mexico to ensure the agreement enters into force as soon as possible.

In December 2013, the United States -Israel telecom MRA entered into force, permitting recognized U.S. laboratories to test telecommunications products for conformity with Israeli technical requirements, and vice versa. The Agreement also provided that, in the future, the United States and Israel can agree to the mutual acceptance of equipment certifications by recognized conformity assessment bodies in the United States and Israel.

LOCAL CONTENT REQUIREMENTS

Various countries have proposed or adopted policies that require the use of local content in their telecommunications sector infrastructure. Governments often pursue such policies as a way to boost their respective domestic manufacturing sectors, despite the fact that these policies undermine that long-term objective. Building a globally competitive and sustainable manufacturing sector, and ensuring world-class service suppliers in telecommunications and in sectors that use such services, are key goals of most major economies, including the United States. International experience demonstrates that achieving this goal requires the adoption of open, market-oriented policies that encourage the establishment of manufacturing facilities that can be incorporated into the global supply chains that are a central feature of manufacturing in the telecommunications sector. Policies that discriminate against imported products, in contrast,

interfere with the operation of these global supply chains and discourage firms from establishing new manufacturing facilities.

Policies requiring the use of local content also raise serious questions of consistency with multilateral and bilateral trade rules, including the GATT and the WTO Agreement on Trade-Related Investment Measures (TRIMs) and U.S. FTAs. USTR will continue to engage with the economies that have proposed or adopted local content requirements to explore ways of achieving their manufacturing goals without recourse to discriminatory, trade distorting policies that hamper competition and limit the growth potential and the competitiveness of their telecommunications sectors. The United States will also continue to raise this as a serious issue for ongoing consideration by WTO Members in the WTO TRIMs Committee, and explore additional mechanisms, including in APEC, for addressing these concerns.

Specific policies of concern include:

Brazil 450 MHz and 2.5 GHz Spectrum Auction

On June 12, 2012 ANATEL, Brazil's National Telecommunications Agency, held an auction for spectrum frequencies in the 450 MHz and 2.5 GHz bands. Applicants were required to accept, as a condition for bidding on the spectrum, a commitment to give preferences to locally-produced equipment in building out a network to use this spectrum. Applicants were also required to commit to meet specific milestones over time to ensure specific local content of the infrastructure, including software, installed to supply the licensed service. Applicants were also required to commit to purchase goods, products, equipment and systems for telecommunications and data networks with national technology, and ensure a 70 percent local content ratio in its infrastructure deployment after 10 years. USTR has raised its concerns with Brazil's localization policy both bilaterally and at the WTO.

This issue has taken on renewed urgency in light of the upcoming 700 MHz spectrum auction which is expected to be put out to bid in 2014. The 700 MHz spectrum is considered much more attractive by U.S. industry. Although there has been no formal announcement yet, there is concern that Brazil will seek to include similar local content requirements for companies seeking to bid on the 700 MHz spectrum.

India Revision of Preferential Market Access (PMA)

India's November 2011 National Manufacturing Policy (NMP) calls for increased use of local content requirements in government procurement in certain sectors (*e.g.*, ICT and clean energy). Consistent with this approach, India issued the Preferential Market Access (PMA) notification in February 2012, which required government entities and private firms to meet their needs for electronic products in part by purchasing domestically manufactured goods. India issued a revised PMA policy in December 2013. The revised policy continues to require that domestically manufactured goods constitute a certain percentage of the electronic products procured by government entities. The revised PMA policy also applies the same requirement to "procurement of electronic products made under all Centrally Sponsored Schemes and grants made by [the] Central Government." USTR will continue to seek clarification on the scope and

application of the revised PMA policy from the government of India and closely monitor its implementation in 2014.

Indonesia Domestic Manufacturing Requirements

Indonesia has been working on implementing domestic content requirements for licensed telecommunication services suppliers since at least 2006. In 2009, Indonesia's Ministry of Communications and Information Technology issued two new measures outlining requirements. In January 2009, Decree 07/PER/M.KOMINFO/01/2009 imposed local content requirements of 30 to 40 percent in the wireless broadband services, increasing to 50 percent in five years. Regulation 19/PER/M.KOMINFO/09/2011 issued in September 2011 contains the same provisions for wireless broadband services in the 2.3 GHz radio frequency band. In October 2009, Decree 41/PER/M.KOMINFO/10/2009 required Indonesian telecommunication operators to expend a minimum of 50 percent of their total capital expenditures for network development on locally-sourced components or services. Decree 41 also requires companies to annually report the percentage of local content and have that information "authenticated" by the government or a survey institute appointed by the government. USTR remains concerned about these requirements and will continue to raise these issues both bilaterally and at the relevant WTO committees.

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