2013 Section 1377 Review

On Compliance with
Telecommunications Trade Agreements

Office of the United States Trade Representative

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I. Introduction

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 (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 comments from nine companies and trade associations and reply comments from five companies and trade associations and one foreign government. All public comments are available in docket number USTR-2012-2013 at the following website: http://www.regulations.gov.

II. Summary of Findings

This 2013 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; satellite services and submarine cable systems; telecommunications equipment trade; and local content requirements.

Although several of the issues in the 2013 Review have been discussed in past Reviews, USTR considers it appropriate to continue to raise these issues and encourage U.S. trading partners to implement appropriate solutions. The 2013 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 of Concern

INTERNET-ENABLED TRADE IN SERVICES

Cross-Border Data Flows

The United States and other countries have benefitted greatly from the growth in trade in digital goods and services enabled by the Internet. Open access to networks and the free flow of data across borders are critical to the success of the Information and Communications Technology (ICT) services sector. Restrictions on the movement of data can present significant barriers to trade in services. While there may be legitimate reasons for governments to impose certain restrictions on the data flows, such as the protection of privacy, such restrictions can be overbroad, having the unintended effect of unnecessarily restricting trade. In some instances, the restrictions are intended to create a preference for local suppliers. Whether intended or not, these restrictions can have an impact on trade obligations relating both to the ability to supply an underlying service and specifically on access to and use of telecommunications networks for covered services.

The economic benefit of innovative cross-border services that are in high demand, such as cloud services, is diluted when countries impose policies that block, filter, or otherwise restrict those services to within national boundaries. These policies undermine the economic benefits of scale, high resource utilization rates, and demand aggregation as well as the legal certainty and consistency necessary to provide a truly global service. Accordingly, USTR will continue to focus on identifying unjustified limitations on cross-border data flows, and to use and develop available trade tools to ensure that any limitations on data flows do not unnecessarily restrict trade.

Voice-Over-Internet Protocol

Voice-Over-Internet Protocol (VoIP) services uses the Internet in whole or in part to transmit voice signals.[2] It is a competitive alternative to traditional phone services. VoIP services are another example of Internet-enabled services where regulations imposed by certain countries have the effect of restricting trade or creating a preference for local suppliers. Government restrictions that block VoIP services, require VoIP providers to partner with a domestic supplier, or impose onerous licensing regimes for the provision of VoIP services unnecessarily restrict trade and investment. 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.

INDEPENDENT AND EFFECTIVE REGULATOR

Commentators cite the lack of independence and the ineffectiveness of telecommunications regulators as trade barriers. Under U.S. FTAs and WTO Members' commitments under the

[2] In contrast, traditional phone services use the public switched telephone network (PSTN) to transmit voice signals.

GATS Annex on Telecommunications and Basic Telecommunications Services Reference Paper,[3] an independent regulator must be separate from and not accountable to any supplier of public telecommunications services, and the decisions and the procedures used by regulators shall be impartial with respect to all market participants. Additionally, under several U.S. FTAs, the regulator must not own equity or maintain an operating or management role in any such public telecommunications supplier. Where national regulators are not carrying out these commitments, it can result in barriers to trade.

China

China's regulator, the Ministry of Industry and Information Technology (MIIT), makes little attempt to act as a neutral arbiter among market participants and has effectively shielded state-owned Chinese operators from competition, both domestic and foreign. The Chinese Government still owns and controls the three major basic telecommunications operators and appears to use these entities as important tools in broader industrial policy goals, such as promoting indigenous standards for network equipment. USTR urges China to implement reforms to reinforce the independence of MIIT from any government interest in the basic telecommunications operators.

To improve the effectiveness of MIIT as a regulator, USTR urges China to reconcile the administrative conflicts between MIIT and other agencies with regulatory authority in telecommunications, the Internet, and broadcast industries. Conflicts arising from overlapping regulatory authorities can cause serious impediments to market access.

Furthermore, China should revise the current draft of its Telecommunications Law to strengthen the industry's confidence in the telecommunication regulatory process and make such a draft available for a significant public comment period. Revisions should address concerns from the industry (*e.g.*, elimination of foreign equity restrictions and more emphasis on transparency in rulemaking). A clear and effective telecommunications law could represent a significant step towards establishing a more certain 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 is allowed to control, as a prevalent trade-distortive barrier. Most countries cited have equity limits that are consistent with the country's commitments under the GATS. Nevertheless, these comments could help guide the U.S. agenda in future GATS or FTA negotiations on furthering telecommunications liberalization (*e.g.*, in the ongoing Trans-Pacific Partnership (TPP) negotiations).

[3] Reference Paper, Negotiating Group on Basic Telecommunications, Job No. 2104 (24 April 1996), reproduced in S/C/W/337 (July 13, 2011).

Canada

In 2012, Canada took an important step towards removing its foreign ownership restrictions for the telecommunications sector. Canada currently maintains a 46.7 percent limit on foreign investment in facilities-based telecommunications providers operating in Canada.[4] On June 30, 2012, however, Canada amended its law to remove foreign ownership restrictions in new entities or any telecommunication provider that controls less than ten percent of total Canadian telecommunications services revenues at the time of the investment. Canada will allow businesses under ten percent market share to expand operations through organic growth, mergers or acquisitions, until the carrier reaches the 10 percent market share threshold. Subsequently, a carrier may continue to grow organically, but may not expand further through acquisitions of other Canadian carriers, or through acquisitions of assets used by other Canadian carriers to provide telecommunications services. These rules apply to both wireline and wireless telecommunications carriers in Canada.

Based on the most recent report from the Canadian Radio-television and Telecommunications Commission (CRTC), the exemption would not apply to Bell Canada, TELUS, and Rogers Communications, which would continue to be limited to 46.7 percent foreign investment. While USTR welcomes Canada actions in 2012 as a step in the right direction, we continue to urge Canada to lift its remaining restrictions on foreign investment and control in its telecommunications sector, and remove impediments to foreign suppliers using telecommunications networks to supply content services.

China

USTR has repeatedly urged China to lift its foreign equity caps in the telecommunications sector, which is 49 percent for basic service licenses and 50 percent for Value-Added Service (VAS) licenses. China also imposes an unreasonably high capitalization requirement of US$145.9 million as a condition of obtaining a basic service license, even though a narrowly tailored performance bond could address any financial concerns. China should also 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. The joint venture requirement forces foreign telecommunications service providers to partner with a company that may also be a horizontal competitor of their joint venture.

China recently announced plans to open its market to resale of mobile services to private sector companies, beginning with a pilot project for such services. Currently, only three state-owned companies are authorized to provide basic telecommunication services. Such market opening would enable both incumbent and new entrant carriers to acquire capacity at wholesale rates and interconnect their networks to deliver services to a broader customer base. Unfortunately, China's draft rules for the pilot project suggest that foreign companies would not be allowed to participate in such liberalization. USTR is concerned with this restriction and encourages China to remove it.

[4] With exceptions for the ownership and operation of international submarine cables or earth stations that provide telecommunications services via satellite.

Mexico

Mexico continues to maintain a ceiling of 49 percent on foreign direct investment in wireline carriers authorized to own and operate basic telecommunications facilities. This restriction constitutes a major impediment for foreign carriers interested in entering and investing in the market. Legislation to remove the remaining foreign investment restrictions in this sector was recently introduced in Mexico's Congress, and USTR urges Mexico to pass this expeditiously, given the benefit additional investment could offer to both foreign and domestic suppliers.

COMPETITION ISSUES

Colombia

This is the first Section 1377 Report since the entry into force last year of the United States – Colombia Trade Promotion Agreement ("United States – Colombia TPA"). A number of parties submitted comments concerning competition issues in Colombia, including Avantel, DirecTV, America Movil, and a number of other Colombian carriers. The Colombian government also filed an extensive response to issues raised in our record.

Regulatory Parity

Avantel is a mobile operator offering services in Colombia. Avantel began operations as a provider of trunking services.[5] In 2005, Avantel was granted a modification of its license that allowed it to offer mobile services in competition with other mobile operators in Colombia.[6] Because Avantel acquired its current allocation of spectrum under its previous license to provide trunking services, it is required to pay an annual fee for the use of spectrum. In contrast, cellular and personal communications service providers in Colombia acquire the use of spectrum for a license period of 10 years with the opportunity for renewal.[7] Colombia uses an auction process to assign new spectrum for cellular and personal communication services (see subsection on Auctions below) so the fee for such spectrum is set on a market basis.

Avantel asserts that, in light of its license modification that allows it to compete with other providers of cellular and personal communications services, Colombia is discriminating against it. Specifically, Avantel calculates it is paying an annual per MHz fee for its spectrum that is higher than what Avantel calculates an annual per MHz fee would be for its competitors, if those competitors paid for their spectrum in the same manner as Avantel.[8] Thus, Avantel asserts that the nondiscrimination requirements of Article 14.10 of the United States – Colombia TPA, as

[5] Trunking refers to telecommunications between switching systems, which includes central office (CO) equipment and private branch exchange (PBX) equipment.
[6] Avantel explains that after 2005, it was eligible for direct interconnection with cellular and personal communication services operators and access to numbering resources. Avantel comment at page 2.
[7] Claro (America Movil) and Movistar (Telefonica) are licensed under the cellular regime; Tigo is licensed under the personal communications regime.
[8] Avantel stated that it has obtained two reductions in its annual fee as a result of engagement with Colombia in November 2009 and in May 2010. Avantel comment at page 3.

well as Colombia's obligations under the GATS Reference Paper, require the Colombian government to reduce the annual per MHz fee it requires Avantel to pay.

Avantel also asserts that upon its most recent renewal, its license was converted to an "administrative act" license, while its competitors continue to hold "concession contract" licenses, which purportedly provide greater rights to the licensee.[9] Avantel, in its view, competes with other providers of cellular and personal communications services in Colombia, but it remains subject to a different, less favorable legal regime than its competitors.

Maintaining different licensing regimes for different services is not *per se* evidence of discrimination, as there may be legitimate legal and policy reasons to apply differing rights, obligations, and other requirements to different services. For example, a broadcasting service licensee would not expect to be treated in an identical manner as a telecommunications service licensee. Legitimate issues of nondiscrimination may arise, however, where different legal and regulatory regimes apply to what are or have become essentially similar services. Governments should review the basis for the application of different standards to what are essentially similar services, and where appropriate, should allow operators to opt into the same legal regime in order to provide regulatory parity to all competitors in a market.

USTR recognizes the difficulty of instituting uniform fees for the use of spectrum, as such fees can reflect historical conditions, varied rules for service provision, and the use of auctions to assign market-based values. Nonetheless, USTR encourages Colombia to consider offering licensees, as its comments suggested was possible, the opportunity to renegotiate the terms of their licenses to maximize competitive neutrality among like service suppliers. This may include undertaking additional commitments in exchange for lower fees; and, possibly, the opportunity to convert an annual fee into a one-time payment.

Roaming

Avantel and other non-dominant carriers in Colombia have expressed concerns that they are not able to obtain roaming agreements with the dominant operator, Claro, owned by America Movil, on reasonable terms and conditions.[10] More generally, Avantel expresses concerns that, although Colombia is engaged in addressing competition issues in the mobile services market in Colombia, that the national regulator, Comisión de Regulación de Comunicaciones (CRC), is not taking appropriate action needed to address the dominant status of Claro.

With regards to roaming, based on the comments of Avantel and other non-dominant carriers, USTR has significant concerns over the apparent lack of any roaming arrangements between Claro and other carriers in Colombia. USTR acknowledges that there are multiple policy concerns to evaluate in addressing issues regarding roaming, including the promotion of facilities-based competition; however, the absence of a functioning roaming market suggests that Colombia has not yet adequately addressed this issue.

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[9] Avantel states that under Colombian law, concession contracts provide broader legal rights to its holders than licenses awarded via an administrative act. Avantel comment at page 4.

[10] In 2009, Colombia declared Claro dominant in the provision of mobile voice services.

Colombia explains that the CRC has had an initiative to regulate roaming since 2012, including the establishment of a wholesale rate for data roaming. Colombia states that the CRC has developed an "efficient cost model for mobile networks" with which Colombia seeks to balance its interests in encouraging infrastructure investment as well as national coverage by all market entrants.

USTR remains concerned that the obligation of carriers to offer roaming does not seem to be effectively enforced in Colombia, despite a regulation requiring such offering. USTR recognizes that a regulator must balance the goal of maximizing network build-out, particularly for operators controlling nation-wide spectrum, to ensure that this resource is not squandered and that facilities-based competition takes root. On the other hand, new entrants will inevitably need roaming options, at least on a transitional basis, as such build-out progresses, if they are to offer a viable service. USTR encourages Colombia to ensure that such arrangements are available.

Overall, Colombia has taken a number of steps to address competition issues in its mobile services market. Except for the concerns regarding roaming discussed above, Colombia appears to be engaged in credible efforts to address competition issues based on the comments received in connection with this year's review. USTR will continue its efforts to engage with Colombia to promote competition in the Colombian market and to uphold its obligations under the United States – Colombia TPA and the WTO.

Auctions

America Movil filed a comment expressing concerns regarding the rules set forth by the CRC for its auction of spectrum in the 1.7 and 2.5 GHz bands. The CRC rules prohibit Claro from participating in the bidding for one of the three licenses in the 1.7 GHz band because of Claro's dominant status in the mobile voice services market. Claro is permitted to bid on spectrum licenses in the 2.5 GHz band. The CRC rules do not appear to impose any limits on participation by any of the other existing carriers in bidding on licenses in the 1.7 GHz band.

The CRC states that its rules are aimed at preventing Claro from extending its dominance in the mobile voice market to the mobile data market. DirecTV supports the CRC rules because it will allow potential new entrants, such as itself, to acquire spectrum and compete in this market. The CRC rules, however, do not appear to provide any incentive or other mechanism aimed at promoting bidding by new entrants over other non-dominant existing providers.

We understand Colombia's concerns over competition issues in its mobile services sector and its rationale in promoting new entry into the market. However, limiting access to more desirable spectrum bands may not be the most appropriate or efficient means of promoting competition. There are alternative means that can address both competitive concerns and provide incentives for new market entry.

Currently, none of the four largest providers of mobile services in Colombia have an advantage in terms of the amount or type of spectrum licensed to them. Moreover, Colombia already has a spectrum screen that limits all carriers to 85 MHz of spectrum. As such, while USTR does not fault Colombia for adopting rules aimed at addressing its finding of dominance for Claro, we do

have serious concerns regarding the proposal to prohibit Claro from any participation in the 1.7 GHz band. This proposal raises questions as to whether it unfairly discriminates against Claro and its investors.

USTR suggests that Colombia consider other alternatives that more directly target any possible anti-competitive actions of the dominant supplier (*e.g.,* roaming or interconnection obligations that could be imposed on the dominant operator) as part of a new spectrum license, without excluding it from bidding on specific spectrum. Such an approach would more directly target any anti-competitive behavior by Claro without directly curtailing its ability to improve the services it provides to its current customers and to expand its network through legitimate practices.

Mexico

Both the telecommunications and the video services markets in Mexico continue to be highly concentrated. By some metrics, 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.[11] 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 other cable networks.

Mexico has adopted a series of conditions for America Movil to meet before it will allow America Movil to provide video services and offer bundled voice, data, and video services to its customers. The United States Council for International Business (USCIB)[12] asserts that requiring America Movil to meet these conditions before entering the video services market limits competition and has led to a low penetration rate for pay television services in Mexico, currently only 40 percent as compared to an average of 50 percent across Latin America.[13] USCIB contends 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, DirecTV asserts that the Mexican government is rightly concerned about the ability of America Movil to leverage its dominant position in telecommunications services in the video services market. DirecTV states that America Movil, through bundling and cross-subsidizing, will be able to offer pay-television at artificially low prices, affecting competition, and eventually causing other players to withdraw from the market.

USTR is concerned about the high level of concentration in both markets and will continue to support efforts by Mexico to promote greater entry of domestic and foreign providers into both markets. Given the dominance of Televisa and its duopoly counterpart, TV Azteca in free-to-air television (still the dominant video platform in Mexico), and control over popular television

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[11] 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.

[12] USCIB represents companies in the telecommunications and information services industry, including international carriers, long distance carriers, incumbent local exchange carriers, competitive local exchange carriers, wireless carriers, broadband providers, Internet and value-added service providers, satellite service providers and manufacturers, equipment manufacturers, software companies, and business users.

[13] USCIB comment at page 24-25.

content, these companies would appear well-positioned to withstand new competitive entry into Mexico's video services market.

China

Early in 2013, MIIT proposed measures to open up the possibility of licensing resellers of mobile services. This proposal, titled *Pilot Program for Mobile Communications Resale Business*, appears to implement the State Council's 2010 national policy of encouraging broader private sector participation in the economy (issued as *Opinions of the State Council in Encouraging and Guiding the Healthy Development of Private Investment*).

This proposal is noteworthy in three respects: (1) it may inject welcomed market access opportunities into a basic telecommunications sector that MIIT consolidated several years ago into three State-owned, integrated operators; (2) it appears to be the first time the Chinese government will have tolerated wholly-private operators entering this sector, marking a significant departure from a 2001 State Council Decree (Decree 291) that USTR has contested and which required mobile operators to be majority state-owned; and (3) it implicitly recognizes the infeasibility of attracting new entrants in the sector under an extant rule that sets capitalization rates in the basic telecommunications sector at over USD $100 million. As a general matter, these three aspects of China's telecommunications regulatory regime, in addition to other, informal bans on new foreign licenses, have all but ensured that the sector categorized as basic has been bereft of foreign participation.

It is not entirely clear how MIIT intends to regulate the resale of mobile telecommunications services. MIIT indicates that resale will be classified as a basic service, but by referencing value-added services management rules, MIIT also suggests that regulatory treatment may be more flexible than that accorded to other basic service suppliers.

Unfortunately, MIIT's proposed rules appear to exclude foreign-invested enterprises from participation in the pilot program, by limiting participation to Chinese-invested enterprises. USTR has formally expressed strong concerns to China regarding this exclusion. Given the contribution foreign-invested companies could make, MIIT's proposed rules are both short-sighted and raise concerns relating to China's WTO commitments. China scheduled no limitations relating to foreign participation in the mobile market, except for equity limitations. In addition, China's schedule explicitly recognizes the rights of foreign firms to participate in the market as resellers.

USTR supports China's goal of promoting innovation and competition in its telecommunications services market, particularly through wholly-private operators. To ensure a truly competitive market, however, MIIT should provide meaningful opportunities to all enterprises, including foreign-invested enterprises, to enter this sector. To that end, USTR urges MIIT to modify the proposed rules to allow foreign participation, and to clarify that Chinese-foreign joint ventures may apply for and receive approval for any telecommunications services licenses that are required for participation in the pilot program.

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. FTAs and the GATS 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.[14] This rule prevents a major supplier from gaining 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 competitive market costs of providing termination. 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, USTR has seen various governments taking actions that encourage an unreasonable increase in the termination rates of calls into their countries this year and in the last several years. 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 increases in termination rates also disadvantage enterprises in those foreign markets for which foreign communications are a key part of their business (*e.g.*, traders, hotels). In some cases, the major supplier benefits from the increased rates; in others, the governments in question use the revenues to fund universal service programs or programs unrelated to telecommunications, or do not account for the use of the funds adequately, if at all. 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 lower calling volumes.

Government-Mandated Termination Rate Increase

Pakistan

On August 13, 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 the "approved settlement rate" set by the Pakistani Telecommunications Authority (PTA). As part of the ICH agreement, every carrier, other than PTCL, suspended their interconnection arrangements for incoming international traffic and in turn received a fixed share of the revenues PTCL generates from the termination of incoming international traffic in Pakistan. The new international termination rate set by the PTA is $0.088 per minute, an increase of approximately four hundred percent over the competitive market rate of approximately $0.02 per minute that existed prior to the ICH agreement.

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[14] *See* General Agreement on Trade in Services (GATS) Reference Paper, Article 2 Interconnection, Negotiating Group on Basic Telecommunications, Job No. 2104 (April 24, 1996); *e.g.*, Free Trade Agreement Between the United States of America and the Republic of Korea, Article 14.8 Interconnection (March 15, 2012).

On August 28, 2012, the Competition Commission of Pakistan (CCP) sent a policy note to the PTA and the MOITT warning that the ICH agreement was an illegal price fixing and market allocation agreement and therefore contrary to Pakistan's Competition Act. Disregarding the opinion of the CCP, on October 1, 2012, the MOITT ordered the implementation of the ICH agreement and the carriers began implementing the agreement. In November 2012, the Lahore High Court suspended the ICH agreement and the MOITT and the PTA subsequently ordered carriers, including PTCL, to revise their international termination rates back to the levels that existed prior to the adoption of the ICH agreement. Multiple international carriers have informed USTR, however, that PTCL remains the only provider of international termination services in Pakistan and that the increased rate of $0.088 per minute remains in effect, even though it is no longer mandated by the PTA.[15] Most recently, the Pakistan Supreme Court overturned the Lahore High Court ruling and remanded the matter back to the CCP.

In addition, Vonage, a U.S. company, filed a petition with the U.S. Federal Communications Commission (FCC) requesting the FCC to order U.S. carriers to stop settlement payments to Pakistani carriers until the ICH agreement is abrogated and international termination rates on the U.S.-Pakistan route are set at cost-based levels. On October 31, 2012, the FCC issued a public notice on Vonage's petition.[16] The FCC has several safeguards in its rules intended to protect U.S. consumers from anticompetitive conduct by foreign carriers.[17] The FCC regards "certain actions as indicia of potential anticompetitive conduct by foreign carriers including, but not limited to: (1) increasing settlement rates above benchmarks; (2) establishing rate floors, even if below benchmarks, that are above previously negotiated rates; or (3) threatening or carrying out circuit disruptions in order to achieve rate increases or changes to the terms and conditions of termination agreements."[18] The unilateral rate increase maintained by PTCL constitutes a rate floor well above the previously negotiated rates, and the United States is not aware of any evidence that the $0.088 per minute rate is cost-based or otherwise reasonable.

On March 5, 2013 the FCC released an Order concluding that the recent actions by certain Pakistani long distance international carriers to set rate floors over previously negotiated rates with U.S. carriers for termination of international telephone calls to Pakistan are anticompetitive and require action to protect U.S. consumers.[19] The FCC concluded that the continuation of the rate floors set by the Pakistani carriers would result in a substantial increase in the cost of and repress demand for calls into Pakistan. The FCC ordered all U.S. carriers not to pay termination

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[15] *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).

[16] *See Petition for Protection from Anticompetitive Behavior and Stop Settlement Payment Order on the U.S.-Pakistan Route,* Public Notice, DA No. 12-1738, IB Docket No. 12-324, 27 FCC Rcd 13429 (Int'l Bur. 2012). KDDI Global, LLC (KDDI) filed comments and AT&T filed reply comments in support of Vonage's petition.

[17] *See International Settlements Policy Reform*, IB Docket Numbers 11-80, 05-254, 09-10, RM-11322, Report and Order, FCC 12-145, 27 FCC Rcd 15521 (2012) (2012 ISP Reform Order); *International Settlements Policy Reform: International Settlement Rates*, IB Docket Nos. 02-234 and 96-21, First Report and Order, 19 FCC Rcd 5709 (2004) (2004 ISP Reform Order).

[18] *See 2004 ISP Reform Order*, 19 FCC Rcd at 5731, ¶ 45.

[19] *See Petition for Protection from Anticompetitive Behavior and Stop Settlement Payment Order on the U.S.-Pakistan Route*, Memorandum Opinion and Order, DA No. 13-341, IB Docket No. 12-324(Int'l Bur. 2013), available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2013/db0305/DA-13-341A1.pdf.

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.

Pakistan's actions to increase its international termination rates have led to a massive increase in rates for telecommunications into Pakistan, hurting both U.S. telecommunications companies seeking to terminate calls in Pakistan and Pakistanis living abroad trying to call home as well as other U.S consumers. The immediate cost to U.S. telecommunication companies (and their subscribers, if cost increases are passed on) will be in the tens of millions of dollars. As Pakistani companies and U.S. companies investing in Pakistan depend on competitively-priced telecommunications to engage in trade, Pakistan's actions also stand to affect these companies' competitiveness as well, to the extent that they depend on incoming international calls for their business (*e.g*. from customers, suppliers and affiliates).

Pakistan is a member of the WTO with commitments under the GATS Annex on Telecommunications. Section 5 of the Annex on Telecommunication requires the provision of access to telecommunications networks and services in Pakistan on reasonable terms and conditions. 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."[20] There is substantial evidence that carriers participating in the market for terminating international traffic into Pakistan appear to be colluding to avoid competition and to fix the rate for such termination at a level significantly above the prior range of rates that was offered when all such participants were actually competing to provide such services. These actions raise concerns about Pakistan's obligation to provide reasonable terms for access and use as required by the GATS Annex on Telecommunications.

The disparity in rates offered foreign suppliers is evident when compared to rates offered within Pakistan for a similar service, namely nationwide termination services offered by typical Pakistani suppliers. Such rates are regulated in Pakistan (typically, set at around $0.02 for nationwide termination) and track the previously-available competitive international termination rates.

USTR looks to Pakistan to ensure the functioning of a competitive market for the termination of international voice calls by rejecting the ICH agreement and taking necessary steps to prevent collusive behavior among international operators.

Ghana

In 2009, Ghana mandated an increase in the termination rate for incoming international calls to US$0.19 per minute.[21] U.S. carriers had previously negotiated rates below US$0.07 for termination on fixed networks and below US$0.14 for termination on mobile networks. According to FCC data, in 2009, the United States sent over 300 million minutes of traffic to Ghana. In 2011, however, the number of minutes was less than 170 million, a decline of over 48 percent. This mandated minimum rate raises concern about Ghana's obligations under the

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[20] *Mexico – Measures Affecting Telecommunications Services,* Panel Report, WT/DS204/R (Apr. 4, 2004)

[21] Electronic Communications (Amendment) Act, 2009, Act 786, December 31, 2009. The statute requires that 32 percent of this required interconnection rate is kept by the government.

GATS Annex on Telecommunications and GATS Reference Paper. USTR will continue to engage with Ghana to seek removal of the mandated rate increase.

Tonga

Tonga Communications Corporation (TCC), Tonga's government-owned major supplier of basic telecommunications services, allegedly refuses to negotiate what U.S. operators consider a cost-oriented and reasonable rate for the termination of international traffic in Tonga, and the Tonga government appears not to have taken steps that would ensure TCC offers such rates. Based on this stance, TCC has declined to offer U.S. operators direct circuits for connecting calls into Tonga, forcing U.S. operators to connect to Tonga through third countries. 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 and their customers.

Universal Service Surcharges and Taxes

Panama

As part of the implementation of the United States – Panama Trade Promotion Agreement (TPA) which entered into force on October 31, 2012, Panama agreed to change its universal service law to eliminate a separate and additional universal service charge on international traffic terminated in Panama. Fees collected by Panama for its universal service fund are now collected on a nondiscriminatory basis among all carriers participating in the telecommunications sector in that country.

Jamaica

Since 2005, Jamaica has imposed a surcharge on the rate Jamaican carriers charge international operators to terminate calls in Jamaica. Jamaica justified the surcharge by asserting its need to fund its universal service program administered by the Universal Access Fund Company. According to FCC data, in 2009, the United States sent over 630 million minutes of traffic to Jamaica. In 2011, however, the number of minutes was less than 300 million, a decline of 53 percent. Notwithstanding the decline, Jamaica increased the burden on international carriers by raising the surcharge for traffic to mobile networks from US$0.02 to US$0.075 in 2012 (the surcharge on traffic to wireline networks remains US$0.03). Jamaica's actions raise concern about its obligations under the GATS Telecommunications Services Reference Paper, which requires it to ensure that universal service obligations are administered in a transparent, non-discriminatory manner, and that they be no more burdensome than necessary to achieve its universal service goals. USTR supports efforts to ensure universal telecommunications service; however, levying a surcharge solely on international calls not only places an unwarranted burden on foreign operators and consumers, but also adds to the cost of doing business in Jamaica, arguably detrimental to Jamaica's own broader economic interests.

Noting the actions of Panama with regard to universal service surcharges and taxes, which are analogous with the Jamaican situation, USTR urges Jamaica to similarly change its universal service charge to ensure that it does not have the effect of discriminating between domestic and international suppliers.

In addition, USTR is concerned that the revenues collected by Jamaica are no longer reserved for the country's universal service fund, but instead are used by the government in its general expenditures. Without a specific earmark of funds for a universal service fund, the surcharge collected by Jamaica should more appropriately be considered a tax on international traffic. This practice appears to deviate from the International Telecommunication Union principle that incoming international traffic not be taxed.[22]

El Salvador

Since 2008, El Salvador has imposed a US$0.04 per minute tax solely on inbound international traffic. This tax is likely one factor in the decrease in traffic to El Salvador. According to FCC data, in 2009, the United States sent over 700 million minutes of traffic to El Salvador. In 2011, however, the number of minutes was only 450 million, a decline of over 35 percent.

This practice appears to deviate from the International Telecommunication Union principle noted above that incoming calls not be taxed. An alternative approach would be to tax the overall revenue of the Salvadoran operators.

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, the 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. In addition to China Satcom, there are only two 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),

[22] International Telecommunication Regulations, Article 6.1.3, available at http://www.itu.int/osg/csd/wtpf/wtpf2009/documents/ITU_ITRs_88.pdf

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 to end-users through the licensed China Satcom, adding to their cost of doing business and forcing them to rely on China Satcom, which will often be their competitor, to offer services. 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-discriminatory licensing requirements).

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 VSAT services[23] on a foreign satellite, India requires that VSAT operators route their connectivity through ISRO. 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 Antrix, a State-owned and controlled corporation that functions as the commercial and marketing arm of 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 operators that have the ability to serve India, in a manner that enables non-discriminatory market participation and complies with other relevant non-discriminatory requirements (*e.g.,* relating to radio interference).

India's Ministry of Information and Broadcasting (MIB) has also established guidelines that set a preference for Indian satellites to provide capacity for delivery of Direct-to-Home (DTH) subscription television services, a major (and growing) source demand for satellite services in India. In practice, authorized DTH licensees have not been permitted to contract directly with foreign operators. Instead, any foreign satellite capacity must be procured through Antrix, which, in turn, only permits such procurements if ISRO does not have available capacity on its satellite system. If the government of India does permit the use of foreign satellite capacity, the foreign satellite operator must sell the capacity to ISRO, which then resells the capacity to the end user. Thwarting foreign suppliers from developing direct relationships with DTH licensees does not appear justified and is of concern to USTR, as it puts U.S. suppliers at a competitive disadvantage and deprives the DTH licensees a fuller range of service offerings.

SUBMARINE CABLE SYSTEMS

India

USTR commends the national regulator, the Telecom Regulator Authority of India (TRAI), for taking positive steps in 2012 to reduce access and collocation charges at India's submarine cable landing stations. As TRAI considers a methodology to reduce these changes to a more

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

reasonable, cost-oriented level, USTR urges TRAI to amend the proposed methodology to ensure that these charges do not include costs for equipment that is not required for most access arrangements, and to officially publish the new revised fees as soon as the consultation process with industry is complete.

TELECOMMUNICATIONS EQUIPMENT

China

Multi-Level Protection Scheme

In 2012, both bilaterally and during meetings of the WTO's Committee on Technical Barriers to Trade, USTR 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 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 technology suppliers in China. USTR has 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 United States – China Joint Commission on Commerce and Trade (JCCT) meeting, China indicated that it would begin the process of revising the MLPS regulations. It also agreed that, during that process, it would enter into discussions with the United States regarding its concerns.

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 one of three voluntary LTE encryption standards 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 (mobile base stations) and mobile devices comprising 4G TD-LTE networks in China. Industry analysis of

two draft ZUC-related standards published by MIIT suggests 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 appear to contravene a commitment that China made to its trading partners in 2000, which clarified that China would permit foreign encryption standards for information technology and telecommunications hardware and software in the broad commercial marketplace and that it would only impose strict "Chinese-only" encryption requirements on specialized IT products whose "core function" is encryption. Additionally, a ZUC mandate would appear to contravene China's 2010 JCCT commitment on technology neutrality, in which China had agreed to take an open and transparent approach that allowed commercial telecommunications operators to choose which telecommunications equipment and encryption technologies and standards to use for their networks; and not provide preferential treatment to domestically-developed standards or technology used in 3G or successor networks.

USTR 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, USTR will continue to closely monitor developments in this area.

India

License Amendments Affecting Importation of Telecommunications Equipment

India issued a series of requirements for telecommunications service providers (TSP) and equipment vendors in December 2009, February 2010, March 2010, and July 2010, which were designed to maintain the security of India's commercial networks. The requirements would have applied to the purchase of imported products, but not products manufactured in India by Indian-owned or Indian-controlled manufacturers. Issued as amendments to telecommunications service licenses, these regulations sought to impose an inflexible and unworkable security approval process. They mandated the forced transfer of technology to Indian companies, the escrowing of source code and other high-level and detailed designs, and assurances against malware and spyware during the entire use of the equipment. In response to concerns raised by industry and trading partners, including the United States, India suspended implementation of the license amendments while it consulted interested parties to better evaluate the extent to which those requirements in fact addressed India's security challenges.

Following those consultations, India issued a new set of license amendments in May 2011, which eliminated many of the most concerning aspects of the previous proposed license amendments. Concerns remain, however, regarding certain provisions in the May 2011 license amendments, including: (1) the requirement for telecommunications equipment vendors to test all imported information and communication technology (ICT) equipment in labs in India; (2) the

requirement to allow telecommunications service providers and government agencies to inspect a vendor's manufacturing facilities and supply chain, and to perform security checks for the duration of the contract to supply the equipment; and (3) the imposition of strict liability and possible blacklisting of a vendor for taking inadequate precautionary security measures without the right to appeal and other due process guarantees. USTR will continue to engage India to seek ways to ensure that U.S. telecommunications equipment manufacturers can continue to participate meaningfully in the Indian market, while also respecting security concerns of the Indian government.

These concerns take on greater urgency given that it appears that India intends to implement the domestic testing requirement in April 2013, but has yet to consult stakeholders on a number of issues critical to industry's compliance with this requirement. These issues include how implementation can take place without adequate testing facilities in India.

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 with respect to the testing and certification procedures China maintains 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 EMC 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 in 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 Network Access License and Radio Type Approval 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 being appointed to process applications for both testing and certification processes. Based on industry's experience to date, it does not appear that MIIT's new approach is meaningful in terms of streamlining MIIT's processes. USTR remains concerned that it 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 and burdensome functionality testing continues to be required under these 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. In 2013, USTR will monitor developments in this area closely and will continue to pursue progress in enhancing transparency and streamlining China's telecommunications testing and certification requirements.

Mutual Recognition Agreements

Mutual Recognition Agreements (MRAs) are agreements under which each party to the agreement agrees to accept the results of testing or certification conducted by test labs or certification bodies recognized by the other party. In May 2011 the United States and Mexico signed a bilateral telecommunications equipment MRA. The MRA fulfills a long outstanding NAFTA commitment to ensure that each Party adopt provisions necessary to accept test results from testing facilities in the territory of another Party. This agreement has not yet entered into force. Although the agreement allowed for an 18 month phase-in period prior to entry into force Mexico has yet to finalize procedures that authorize the acceptance of 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 October 2012, the United States and Israel signed a bilateral telecommunications equipment MRA that, once implemented, will permit recognized U.S. laboratories to test telecommunications products for conformity with Israeli technical requirements, and vice versa. The MRA also provides 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 – both 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 leverage the efficiencies of global supply chains and global sourcing to obtain the most competitive and innovative inputs. Policies that discriminate against imported products, in contrast, interfere with the operation of these global

supply chains can actually discourage firms from establishing new manufacturing facilities in countries adopting such policies.

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). USTR will continue to engage with these economies to explore ways to achieve manufacturing goals without recourse to local content requirements that hamper competition and limit the growth potential and ultimately the competitiveness of their telecommunications sector. USTR 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 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 and locally-developed equipment, software and systems in the networks licensees would build to use this spectrum. ANATEL imposed specific milestones to implement such preferences, requiring operators to demonstrate a 70 percent local content ratio in their infrastructure deployment in 10 years (i.e. by 2022). Apart from the discriminatory effects of this policy, it is likely that these requirements depressed the auction price Brazil obtained. 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 late 2013 or early 2014. The 700 MHz spectrum is considered much more attractive to U.S. industry because the market for both the services and the equipment for that band is much larger than the bands licensed in 2012. For comparison purposes, the 450 MHz and 2.5 GHz bands were auctioned for $2.9 billion, while the 700 MHz is expected to bring in an estimated $40 billion. 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 Preferential Market Access (PMA)

India's November 2011 National Manufacturing Policy (NMP) calls for greater 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 requires government entities to meet their needs for ICT equipment by purchasing a certain amount of domestically-manufactured products. India adopted implementing measures under the PMA in late 2012 that identified specific telecommunications and computer equipment as products currently subject to this requirement. Of even greater concern is the provision in the PMA that anticipates similar domestic purchase mandates applicable to private firms for "electronic products which have security implications." Neither

the PMA nor subsequent government statements regarding the PMA articulate precisely how domestic manufacturing would address India's security concerns. Furthermore, initial draft lists of these products appear to cover an unduly broad range of electronic products so as to call into question whether security concerns, rather than industrial policy, are the primary motivation for imposing such requirements on private firms.

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 for wireless broadband services, rising to 50 percent in five years. Regulation 19/PER/M.KOMINFO/09/2011 issued in September 2011 reinforced the same requirements 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 procured and have that information "authenticated" by the government or a survey institute appointed by the government.

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