

CHINA'S WAPI POLICY: SECURITY MEASURE OR TRADE PROTECTIONISM?

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ABSTRACT

In December of 2003, the Chinese government announced that all WLAN equipment sold in China must conform to a propriety standard called WAPI, rather than the internationally accepted Wi-Fi standard. Moreover, for foreign firms to gain access to WAPI technology, they would need to partner with one of two-dozen Chinese firms designated by the Chinese government. The policy ostensibly grew out of security concerns regarding Wi-Fi, although it is unclear whether WAPI is more secure. Beijing has now indefinitely postponed the implementation of this policy, but WAPI is still relevant. This iBrief argues that WAPI is illustrative of many Chinese technical barriers to trade in the high-tech sector, and evaluates this policy's consistency with China's WTO obligations.

INTRODUCTION

¶1 Those with an interest in international trade have long wistfully thought of China as the last frontier. “For 700 years, ever since outsiders first started writing about the place, the western world has believed that there are untold riches to be garnered in China.”² Once China joined the World Trade Organization (“WTO”) in 2001,³ investors and exporters hoped the heretofore-elusive market of more than a billion potential consumers would finally be cracked open.⁴

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² JOE STUDWELL, *THE CHINA DREAM* ix (Atl. Monthly Press 2002).

³ China became the 143rd member of the WTO on November 10, 2001. *See WTO Ministerial Conference Approves China's Accession*, (Dec. 11, 2001) (noting that China's accession “is an historic moment for the WTO, for China and for international economic cooperation”), at http://www.wto.org/english/news_e/pres01_e/pr252_e.htm.

⁴ China's population is 1.3 billion. CIA World Factbook, *China*, at <http://www.cia.gov/cia/publications/factbook/geos/ch.html#People> (last visited Feb. 6, 2005).

¶2 Since China's accession to the WTO, U.S. exports to China have increased dramatically from less than \$15 billion in 2001 to approximately \$35 billion in 2004, elevating China to the fifth largest export market of the U.S.⁵ However, it is still difficult to penetrate some areas of the Chinese market, "particularly where innovation or technology play a key role."⁶ For example, China's 17 percent value-added tax ("VAT") on semiconductors raised the ire of U.S. industry and trade officials because tax rebates were awarded to domestic semiconductor producers that allowed these companies to pay no more than 6 percent VAT fees.⁷ Since this practice put the domestic industry at a competitive advantage vis-à-vis imports,⁸ the U.S. requested formal consultations with China at the WTO in March, 2004⁹—a precursor to a complaint being lodged—but the parties resolved the issue diplomatically.¹⁰ China's WAPI policy can be viewed through the same lens: another example of Chinese barriers to trade in the high-tech sector. WAPI refers to a proprietary standard for wireless technologies, the use of which China announced it would require for all wireless products sold in China, rather than the widely-used Wi-Fi standard. This iBrief argues that China's WAPI policy is inconsistent with its WTO obligations.

I. CHINA'S WAPI POLICY

¶3 In late 2003, the Chinese government announced that, as of June 1, 2004, all Wireless Local Area Network ("WLAN") equipment sold within China would have to comply with a new encryption standard: Wireless LAN Authentication and Privacy Infrastructure ("WAPI").¹¹

⁵ United States Trade Representative, 2004 REPORT TO CONGRESS ON CHINA'S WTO COMPLIANCE 4 (2004), available at http://www.ustr.gov/Document_Library/Reports_Publications/2004/Section_Index.html (last visited Feb. 7, 2005) [hereinafter 2004 REPORT].

⁶ *Id.* at 5.

⁷ See, e.g., Mike Clendenin, *U.S. Readies Complaint to WTO on China Tax*, ELEC. ENG'G TIMES, Mar. 17, 2004, available at <http://www.eetimes.com/semi/news/showArticle.jhtml;jsessionid=UDRXG22M3KJ1EQSNDBGCKHSCJUMKJVN?articleID=18400554> (last visited Feb. 7, 2005).

⁸ Tim Beyers, *America's Chip Crusade*, THE MOTLEY FOOL, Mar. 19, 2004, at <http://www.fool.com/news/mft/2004/mft04031919.htm> (last visited Feb. 7, 2005).

⁹ China – Value-Added Tax on Integrated Circuits, WT/DS309/1, S/L/160, *Request for Consultation by the United States*, (Mar. 23, 2004).

¹⁰ 2004 REPORT, *supra* note 5, at 37.

¹¹ Sumner Lemon, *Controversy Over Chinese WLAN Standard Deepens*, IDG NEWS SERVICE, Dec. 10, 2003, at http://www.infoworld.com/article/03/12/10/HNchinesecontroversy_1.html (last visited Feb. 6, 2005).

WLAN is a generic term that refers to the linking of computers to communicate with each other by using high frequency radio signals that transmit and receive data.¹² The global WLAN standard developed by the independent Institute of Electrical and Electronics Engineers (“IEEE”) is Wireless Fidelity (“Wi-Fi”), also known as 802.11.¹³ The China Broadband Wireless Internet Protocol Standards (“BWIPS”) group developed WAPI to remedy what it perceived as security flaws in the encryption ability of Wi-Fi.¹⁴

¶4 Unlike Wi-Fi, the algorithm of which is available through the IEEE to anyone for free,¹⁵ WAPI is a proprietary standard. Thus, to gain access to WAPI, foreign firms must acquire a license through negotiations with any one of two dozen Chinese firms designated by the Chinese government.¹⁶ This feature quickly led to questions regarding Chinese sincerity. “‘Whatever national-security argument there may be for encryption, the real motivator is to promote the interests of certain Chinese companies over other companies,’ said Ann Stevenson-Yang, the managing director of the U.S. Information Technology Office in Beijing.”¹⁷

¶5 The wireless industry expressed almost immediate concern regarding the WAPI policy. For instance, Intel Corp. announced in March, 2004 that it would stop shipping Wi-Fi chips to China by May of that year because the perceived benefits of accessing the Chinese market did not outweigh the company’s concerns about the new policy.¹⁸ Even companies that decided to comply with WAPI were not without trepidation, as the potential remained for Chinese firms to extort

¹² See <http://www.wordreference.com/definition/local%5Farea%5Fnetwork>, see also

<http://www.wordreference.com/definition/wireless%5Flocal%5Farea%5Fnetwork> (last visited Feb. 6, 2005) (definitions of LAN and WLAN).

¹³ Lemon, *supra* note 11.

¹⁴ Patrick Mannion and Mike Clendenin, *China Throws Wi-Fi a Curve*, ELEC. ENG’G TIMES, Dec. 22-29, 2003, at 1, available at <http://www.eetimes.com/story/OEG20031222S0004> (last visited Feb. 7, 2005).

¹⁵ IEEE Standards Association, at <http://standards.ieee.org/getieee802/> (“This program grants public access to view and download current individual IEEE Local and Metropolitan Area Network standards at no charge”) (last visited Feb. 7, 2005).

¹⁶ *Intel Tells China: No More Chips*, INTERNETNEWS.COM, March 11, 2004, at <http://www.internetnews.com/wireless/article.php/3324601> (last visited Dec. 2, 2004) [hereinafter *No More Chips*].

¹⁷ Mannion and Clendenin, *supra* note 14, at 58.

¹⁸ *No More Chips*, *supra* note 16 (stating that other companies, like Broadcom, also decided to stop selling in China because of the WAPI policy, despite the large market).

technology transfers from foreign wireless companies in return for access to WAPI.¹⁹

¶6 There are many potential negative consequences of China's WAPI policy. First, because the industry loses economies of scale associated with a single global standard, WAPI might raise costs for all wireless chip producers.²⁰ Second, wireless manufacturers are worried that the way in which the Chinese government chose to implement the WAPI policy—through mandatory licensing from Chinese firms—would constitute an anti-competitive practice.²¹ Because foreign companies must negotiate licenses with Chinese firms, who are potential competitors, it might be difficult to secure access to the Chinese market. Chinese companies could also engage in price gouging by charging high prices for the WAPI standard to inhibit foreign firms' ability to enter the Chinese market. Even worse, the Chinese firms might condition access to WAPI on foreign firms agreeing to share valuable intellectual property with their Chinese counterparts.²² Some industry insiders even predict that the WAPI policy would require all manufacture of WAPI-based wireless products to move inside China's borders because WAPI technology cannot leave the country.²³

¶7 Responding to industry concerns, the U.S. government stepped in, writing a letter to Chinese Vice Premier Zeng Peiyan that noted its concerns regarding the WAPI policy.²⁴ The U.S. government was especially concerned that the licensing feature might require transfer of technology from foreign firms to Chinese competitors.²⁵ The U.S. urged China to reconsider its WAPI policy, noting that the new rule “would

¹⁹ *See id.*

²⁰ Lemon, *supra* note 11 (noting the IEEE's concerns regarding WAPI's potential to undermine standardization).

²¹ *China Regulations: A New Flap Over WAPI Standards*, EIU VIEWSWIRE, Mar. 17, 2004 [hereinafter *New Flap Over WAPI*].

²² *Id.*

²³ Michael Kanellos, *Divide Between U.S. Tech Firms, China—A Great Wall?*, CNET NEWS.COM, March 19, 2004, at http://news.com.com/Divide+between+U.S.+tech+firms%2C+China--+a+great+wall/2100-1006_3-5175837.html (last visited Feb. 7, 2005) (predicting that the hours of work to test each wireless product must be done inside China).

²⁴ *See Letter From Bush Administration Officials to Beijing Protesting Wi-Fi Encryption Standards*, BUSINESSWEEK ONLINE, Mar. 15, 2004, at http://www.businessweek.com/magazine/content/04_11/b3874018.htm (last visited Feb. 7, 2005) (for a reprinting of the letter, signed by U.S. Trade Representative Robert Zoellick, Secretary of Commerce Donald Evans, and Secretary of State Colin Powell) [hereinafter *Bush Administration Letter*].

²⁵ *See id.*

appear to be inconsistent with China's WTO commitments."²⁶ Officials from both countries met in April 2004, and China agreed to suspend indefinitely implementation of the WAPI policy.²⁷

II. IS WAPI CONSISTENT WITH CHINA'S WTO OBLIGATIONS?

¶8 Although it appears that, at least for now, Beijing will not enforce a WAPI standard on wireless products sold in China, analyzing whether WAPI is consistent with China's WTO obligations is still valuable. First, China might succumb to domestic industry pressure and reintroduce the WAPI policy. Second, this analysis will likely have bearing on other Chinese high-tech sector policies in the years to come. This section will evaluate the WAPI policy in terms of China's WTO obligations, particularly those found in the Agreement on Technical Barriers to Trade²⁸ ("TBT") and the National Treatment requirement found in Article III of the General Agreement on Tariffs and Trade ("GATT"). This section also analyzes whether, in the event of a violation, China's WAPI policy is excused by the general exceptions found in GATT Article XX or the security exceptions of Article XXI.

A. *The Agreement on Technical Barriers to Trade precludes government actions like China's WAPI policy.*

¶9 The TBT "establishes rules and procedures regarding the development, adoption and application of ... standards ... to prevent the use of technical requirements as unnecessary barriers to trade."²⁹ One of the stated goals of the TBT is harmonization of national regulatory frameworks as a means of "improving efficiency of production and facilitating the conduct of international trade."³⁰ While the GATT is best described as a system of negative integration, which states what countries are *not* allowed to do, the TBT is closer to positive integration—mandating what governments *must* do. The TBT accomplishes this by requiring countries to follow international technical

²⁶ *Id.*

²⁷ Mike Clendenin, *Beijing Backs Off Proprietary Spec for Wireless LANs*, ELEC. ENG'G TIMES, Apr. 26, 2004, at 1, available at <http://www.eet.com/issue/fp/showArticle.jhtml;jsessionid=TUROV2SMQPRV KQSNDBCCKHSCJUMKJVN?articleId=19200140&kc=6256> (last visited Feb. 7, 2005).

²⁸ Agreement on Technical Barriers to Trade, April 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND, available at http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm [hereinafter TBT Agreement].

²⁹ 2004 REPORT, *supra* note 5, at 40.

³⁰ TBT Agreement pmb., para. 3.

standards where they exist, and by justifying deviations from those standards in certain circumstances.³¹ Thus, where the TBT applies, it is perhaps more restrictive than the GATT.

¶10 For a measure to fall within the purview of the TBT, it must be a “technical regulation.”³² The three criteria of technical regulations were set out by the Appellate Body in *EC – Sardines*:³³

1. The measure “must apply to an identifiable product or group of products”;
2. The measure “must lay down one or more characteristics of the product”; and
3. “[C]ompliance with the product characteristics must be mandatory.”³⁴

¶11 The WAPI policy would thus fall under the TBT. WAPI applies to an identifiable group of products (wireless products) and sets out characteristics of those products; namely, that they must comply with the WAPI proprietary standard. The third criterion of a technical regulation is also met: compliance with WAPI is mandatory if companies wish to sell inside of China.³⁵

¶12 Because WAPI does not comply with the requirements of the TBT, requiring the standard runs afoul of the TBT. The TBT “recognizes the important role that international standards play in promoting harmonization and facilitating trade.”³⁶ To that end, where “relevant international standards exist . . . Members shall use them as a basis for their technical regulations except when such international standards . . . would be ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued.”³⁷ This means that where an international standard exists, and that standard would be effective in accomplishing a government’s legitimate regulatory objectives, the international standard must be used. Because requirements attach where an international standard exists, a question arises as to whether Wi-Fi falls into that category.

³¹ *Id.* at art. 2.4.

³² GATT Dispute Appellate Body Report on European Communities Trade Description of Sardines, WT/DS231/AB/R, para. 175 (Sept. 26, 2002) [hereinafter *EC – Sardines*].

³³ *Id.*, para. 176.

³⁴ *Id.*

³⁵ *See id.*

³⁶ *Id.*, para. 214.

³⁷ TBT Agreement art. 2.4.

¶13 The TBT defines a standard as a “[d]ocument approved by a recognized body, that provides . . . rules, guidelines or characteristics for products or related processes and production methods.”³⁸ The Appellate Body in *EC – Sardines* rejected the EC’s argument that an international standard requires consensus.³⁹ Thus, the test for whether a standard exists turns on whether a “‘recognized body’ of the international standardization community” adopted it, not whether all parties agreed to such a standard.⁴⁰ In the area of wireless technologies, Wi-Fi is an international standard. Wi-Fi was “recently elevated to International Organization for Standardization status.”⁴¹ As the *EC – Sardines* case makes clear, China’s lack of acceptance of Wi-Fi does not change this conclusion. Because an international standard exists, China is obligated to base its regulations on the standard unless Wi-Fi “would be an ineffective or inappropriate means for the fulfillment of legitimate objectives.”⁴²

¶14 The professed purpose behind China’s WAPI policy is a concern about the security of Wi-Fi.⁴³ To successfully challenge China’s use of the WAPI standard, a complainant must show that Wi-Fi is “[e]ffective or [i]appropriate”⁴⁴ for addressing those concerns.⁴⁵ To do so, a complainant should highlight that (a) the rest of the world believes Wi-Fi to be sufficiently secure, and (b) it is unclear whether WAPI is more secure than Wi-Fi. If a complainant can show that Wi-Fi satisfies China’s objectives, the very imposition of a WAPI standard would violate Article 2.4 of the TBT.⁴⁶

¶15 Failing to find a violation of Article 2.4 of the TBT, there is a supplementary ground on which to challenge the Chinese WAPI policy. The TBT imposes an additional obligation on Members to ensure that “technical regulations shall not be more trade-restrictive than necessary to fulfill a legitimate objective.”⁴⁷ There is perhaps an independent claim to make that the manner in which China chose to implement its WAPI

³⁸ *Id.* at Annex 1, Terms and Their Definitions for the Purpose of this Agreement, para. 2.

³⁹ *EC – Sardines*, *supra* note 32, at para. 218. *See id.*, para. 222 (“consensus is not required for standards adopted by the international standardizing community”).

⁴⁰ *Id.*, para. 227.

⁴¹ *See id.*

⁴² *See* TBT Agreement art. 2.4.

⁴³ Mannion and Clendenin, *supra* note 14, at 58.

⁴⁴ *See* TBT Agreement art. 2.4.

⁴⁵ *See EC – Sardines*, *supra* note 32, at para. 275 (“it is for . . . the complaining Member . . . to bear the burden of proving its claim”).

⁴⁶ *See* TBT Agreement art. 2.4.

⁴⁷ *Id.* at art. 2.4.

policy, requiring foreign manufacturers to negotiate licenses with a limited number of Chinese firms, is more trade-restrictive than necessary to accomplish its information security objective. For instance, the government itself could have granted licenses on a non-discriminatory basis to any company that wished to manufacture wireless equipment for the Chinese market. Thus, even if the Chinese government is warranted in mandating WAPI, the licensing requirements might nonetheless violate Beijing's obligations under the TBT.

B. China's WAPI policy could also be challenged successfully under GATT's National Treatment obligation.

¶16 In addition to the TBT, China's WAPI policy possibly runs afoul of the National Treatment obligation found in GATT Article III:4⁴⁸ because WAPI treats domestic wireless manufacturers differently from foreign companies. GATT Article III:4 requires that the products made by foreign companies "be accorded treatment no less favorable than that accorded to like products of national origin in respect of all laws, regulations and requirements"⁴⁹ A complainant who brings such a challenge must show:

1. That the domestic and foreign products in question are "like products";
2. That the measure "affects" the product's internal sale; and
3. That the imported product is treated "less favorably" than the like domestic product.⁵⁰

¶17 Four criteria are used to determine if products are "like": physical properties of the product, end-uses in a given market, consumer perceptions, and tariff classification.⁵¹ If products are "like," the measure affects the sale, and imported products are treated less favorably than domestic products, a National Treatment violation exists.

¶18 Here, the WAPI policy arguably violates China's National Treatment obligations by giving domestic wireless manufacturers an advantage vis-à-vis their foreign competitors. First, Wi-Fi products are

⁴⁸ General Agreement on Tariffs and Trade, Oct. 30, 1947 [hereinafter "GATT"], art. III:4 (1994).

⁴⁹ *Id.*

⁵⁰ GATT Dispute Appellate Body Report on Korea Measures Affecting Imports of Fresh, Chilled and Frozen Beef, WT/DS161/AB/R, WT/DS169/AB/R, para. 133 (Dec. 11, 2000) [hereinafter Korea – Beef].

⁵¹ GATT Dispute Appellate Body Report on European Communities Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/AB/R, para. 85 (Mar. 12, 2001) [hereinafter EC – Asbestos].

like WAPI products. Their physical characteristics are similar, they have common end-uses, and consumers almost certainly perceive the two standards as comparable.⁵² Second, the WAPI policy obviously affects the sale of Wi-Fi within China: it precludes it. This, in turn, meets the third requirement for a National Treatment violation by creating less favorable treatment for foreign Wi-Fi products.⁵³ Therefore, it is plausible that China's implementation of WAPI violates its National Treatment obligation.⁵⁴

¶19 China might argue that even if a National Treatment violation has occurred, it is excused by the Article XX General Exceptions, or the Article XXI Security Exceptions. Article XX allows countries to violate their WTO commitments in limited circumstances, such as when the measure is "necessary to secure compliance with laws or regulations which are not inconsistent" with GATT.⁵⁵ The regulating country must still show that the measure is not applied in a discriminatory fashion.⁵⁶ GATT also contains a circumscribed exception for national security, which states that, "[n]othing in this Agreement shall be construed to require any contracting party to furnish any information . . . it considers contrary to its essential security interests."⁵⁷

¶20 Here, however, the WAPI policy is not excused by the General Exceptions found in Article XX. Even if requiring WAPI and banning Wi-Fi secures compliance with the Chinese information-security objectives, Beijing would fail the "necessary" prong of the analysis.⁵⁸ The Chinese government could not show that the WAPI policy is necessary to accomplish that objective. When determining if a measure is necessary, the WTO evaluates the importance of the interest at stake, how well the challenged measure contributes to the ends pursued, and what effect the measure has on trade.⁵⁹ Also pertinent is whether there

⁵² See EC – Asbestos, *supra* note 51, para. 101.

⁵³ See Korea – Beef, *supra* note 50, para. 133.

⁵⁴ An additional argument could be made that even if Wi-Fi is *not* like WAPI, foreign WAPI products are disadvantaged, as compared to domestic products, because foreign companies are required to negotiate licenses for the WAPI standard while the Chinese government gives domestic firms access to WAPI. In the extreme, a foreign firm might be excluded from China altogether if no firm with access to WAPI is willing to grant a license. See GATT art. III:4. In fact, one might expect the difficulty in obtaining a license to correlate with a firm's prior competitiveness within China. More competitive firms would have greater difficulty securing WAPI technology from competitors.

⁵⁵ *Id.* at art. XX:(d).

⁵⁶ *Id.* at art. XX (known as the "chapeau").

⁵⁷ *Id.* at art. XXI:(a).

⁵⁸ See *id.* at art. XX:(d).

⁵⁹ Korea – Beef, *supra* note 50, para. 166.

exists an alternative that is consistent with GATT obligations.⁶⁰ In addition, the measure must not be applied in an arbitrary or discriminatory manner.

¶21 Because WAPI probably does not satisfy the rigorous requirements of the exceptions to the GATT, any violations to the TBT or GATT Article III:3 would most likely not be excused. For example, protecting information security is an important government interest; however, it is unclear if WAPI is more secure than the default standard, Wi-Fi. What is clear is that the WAPI measure would disrupt trade in wireless products, at least until foreign manufacturers could negotiate licenses to comply with WAPI. Also damaging to China's case is their unilateral action⁶¹ in the face of international pressure to work with the IEEE to improve Wi-Fi security.⁶² It is likely that these factors combined would prevent China from successfully defending its WAPI policy using the exceptions found in Article XX.

¶22 Even if China could convince the WTO that WAPI is necessary to protect one of the enumerated governmental objectives, the policy would probably still fail, as it is applied in a discriminatory manner.⁶³ Only domestic companies are freely given the WAPI standard, whereas foreign firms must negotiate to gain access to it.⁶⁴ This characteristic of the WAPI policy is at the heart of what National Treatment proscribes, and the exceptions do not excuse such discrimination.

¶23 Perhaps the security exceptions found in Article XXI could excuse China's potential violations from the WAPI policy. There is no case law interpreting the circumstances under which the security exceptions may be applied.⁶⁵ National security is an elastic concept that

⁶⁰ *Id.*

⁶¹ That the United States unilaterally imposed a standard, rather than negotiated with its trading partners to find an acceptable solution to the problem of sea turtle conservation was significant to finding a WTO violation in the Shrimp Turtle case. See GATT Dispute Panel Report On U.S. Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, para. 166 (May. 15, 1998).

⁶² See Mannion and Clendenin, *supra* note 14, at 58 (calling out to China to “come and help us [the 802.11 working group] enhance it”).

⁶³ See *id.* at art. XX (requiring that such measures undertaken for legitimate purposes “not [be] applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination”).

⁶⁴ *No More Chips*, *supra* note 16.

⁶⁵ However, the United States threatened to invoke Article XXI over trade restrictions it imposed on Cuba (the parties eventually settled). See generally August Reinisch, *Widening the US Embargo Against Cuba Extraterritorially*, 5

changes over time, especially in light of the recent growth in global terrorism. Information security takes on a renewed significance under these circumstances. Perhaps China, arguing that it can be the sole judge of what measures are necessary to protect Chinese national security, would prevail in a challenge to the WAPI measures.⁶⁶ Yet, too expansive a reading of the national security exceptions might facilitate cheating by Members, undermining the obligations imposed by the WTO system.

III. PLACING WAPI IN CONTEXT: OTHER CHINESE POLICIES IN THE HIGH-TECH SECTOR

¶24 When thinking about how to categorize China's WAPI policy, whether as a legitimate response to security concerns or a veiled attempt at protecting domestic industry, one should place this individual policy within a broader context. WAPI is only one of many examples of Chinese protectionism in its high-tech sector.⁶⁷

¶25 As previously discussed, China's discriminatory VAT policy in the semiconductor industry could have been the template followed for the WAPI policy. In both instances, facially neutral measures were used to further the underlying industrial policy of promoting domestic industry at the expense of foreign counterparts. In addition, both policies were withdrawn only after increased U.S. pressure that included threats of recourse to the WTO.

¶26 A recurring theme in Chinese industrial policy is the push to develop new standards and parallel technologies. For instance, the Chinese government, tired of paying large royalties to the DVD consortium, partially funded the development of the Enhanced Versatile Disk ("EVD") to compete with the international standard.⁶⁸ China also launched a homegrown standard for 3G cellular phones, TD-SCDMA.⁶⁹

EUR. J. INT'L L. 545 (1994), available at <http://www.ejil.org/journal/Vol7/No4/art6-07.html>.

⁶⁶ See *id.* at 545 (laying out the argument that national security is "auto-determined").

⁶⁷ See *New Flap Over WAPI*, *supra* note 21 (noting that "this is not an isolated event. . . . China has adopted a number of policies aimed at boosting home-grown technologies at the expense of those offered by foreign companies").

⁶⁸ Larry Magid, *Chinese Government to Develop Alternative to DVD – EVD*, PC ANSWER.COM, Nov. 27, 2003, at http://www.pcanswer.com/articles/synd_china.htm (last visited May 31, 2005).

⁶⁹ See Andrew Orłowski, *Trade Wars II: China Shuns Qualcomm—No CDMA Tax!*, THE REGISTER, Nov. 23, 2002, available at http://www.theregister.co.uk/2002/11/23/trade_wars_ii_china_shuns/print.html (last visited Feb. 8, 2005).

¶27 Promoting the development of new standards is not problematic per se; the competition among standards is at the core of technological progress and innovation. However, China's decision to unilaterally mandate which standard must be used within its borders slips into trade obstruction.⁷⁰ In addition, China hopes to parlay success on the domestic front to influence which standards are adopted on a global scale.⁷¹ Hence, "China is trying to use the size of its market and a proprietary standard to leverage control of the wireless sector."⁷² This is of particular concern if, due to the underlying cost structure of the market, there is only room for one global standard. An aggressive industrial policy might crowd-out other standards, despite the relative advantages of each contender. China has thus shown itself to be active in molding industrial policy in its high-tech sector in non-neutral ways.

CONCLUSION

¶28 Although each of China's policies in the high-tech sector may be individually be excused, China's WAPI policy seems to be a clear case of excessive protectionism. China's stance on WAPI furthers its national policy of promoting the interests of domestic manufacturers at the expense of their foreign competitors. Now that China has become a member of the WTO, its international treaty obligations, such as those provided by GATT and TBT, might preclude such industrial policies. Although WAPI has now faded from international attention after last year's diplomatic settlement, this author would wager that the future will bring further attempts by Beijing to unilaterally impose protectionist policies on others in the high tech sector.

⁷⁰ See *supra*, § II.

⁷¹ Bradford Brown, *Joining WTO Means Playing By Global Rules*, INFORMATIONWEEK, April 5, 2004, at 70, available at <http://www.informationweek.com/showArticle.jhtml?articleID=18700337> (last visited May 31, 2005).

⁷² *Id.*