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Shin-Yi Peng

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Renegotiate the WTO "Schedules of Commitments"?: Technological Development and Treaty Interpretation

Shin-yi Peng†

The interpretation of schedules has been the subject of several Panel and Appellate Body reports in recent years, and it is anticipated that challenges to schedules related to information and communication technologies before the dispute settlement body will increase. The recent decisions of the Panel and the Appellate Body in EC-IT Products and China-Audiovisual Services may become significant leading cases on the issues of how to interpret "schedules of commitments" in this rapidly changing digital era. I conclude in this article that the Panel appropriately recognized in EC-IT Products that the Information Technology Agreement is not relevant in determining the object and purpose of the WTO Agreement and therefore the complainants' interpretative approach is overbroad and may compromise the legal certainty and predictability of tariff concessions. However, I argue that the Panel should have elaborated upon the question of how "technological development" and "product evolution" should be dealt with in interpreting concessions. I also stress that in China-Audiovisual Services the Appellate Body took a "brave" but necessary position on the issue of whether the definition of "sound recording distribution services" is alterable and evolutionary through time. In addition, the Appellate Body clarified that the fact that a service was technically feasible and commercially viable at the time of a member's World Trade Organization accession does not necessarily mean that that member's commitments under the General Agreement on Trade in Services include that service. As the Appellate Body's view alone is not a satisfactory basis for such an important holding, the final part of this article suggests that the reasoning ought to be supported in light of the principle of technological neutrality.

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† Professor and Director, Institute of Law for Science and Technology, National Tsing Hua University, Republic of China.

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E-mail: sypeng@mx.nthu.edu.tw
Website: http://www.sypeng.idv.tw
SSRN Author Page: http://ssrn.com/author=723329

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Introduction—Technology Evolution, the WTO, and Challenges in Interpreting the “Schedules” of Commitments

Digital convergence is an ongoing process. The advent of digital technology has led to the emergence of a ‘convergence’ phenomenon. Computers, telecommunications, and television, traditionally treated as separate media industries regulated under different regulatory regimes, are gradually emerging in the media industries, both at the global and national levels. This means that networks previously in distinct markets can

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1. It is evident that products and services in the information and communication technologies sector have gone through a dramatic technological convergence. We all experience the trend towards converting different kinds of information into data on computer files and then delivering those files over the same wires or airwaves. Most of us likely will get our telephone calls, television shows, recorded music, website access, and e-mail over a single line via a single device, and as such, the distinctions between each medium/device stop making sense.

2. The emergence of the convergence phenomenon is largely attributed to the invention of digital technology in the 1990s, which makes possible the delivery of media content in different technological forms. Richard Wu Wai Sang et al., Media Policy and Regulation in the Age of Convergence—The Hong Kong Experience, 30 H.K. L.J. 454, 458–60 (2000).
become direct competitors. In the ambit of international trade, unprecedented market changes have demonstrated that methods that worked in the past to determine tariff concessions for goods or market access commitments for services may no longer be the right approach today. The information-communication sector has undergone significant changes, and the economic activities related to information technology products are far broader, more varied, and much more global than was generally understood during the Uruguay Round and the Information Technology Agreement (ITA) negotiations. Thus, a crucial question is whether these commitments, which are more than a decade old, are sufficient to handle today’s commercial realities.

In the past decade the tension between technological development and treaty interpretation has increased, posing new challenges for the trade negotiators and domestic regulators of information and communication technology (ICT) industries worldwide. Empirical data has proven that ICT-related “schedule of commitments” has been a subject of numerous legal disputes. With respect to the trend of digital convergence, problematic interpretations of schedules in World Trade Organization (WTO) dispute settlement show how frequently the question of classification, in terms of both tariff commitments and General Agreement on Trade in Ser-

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4. As I will argue in parts I and II of this paper.


services (GATS) market access commitments, arises in practice.\textsuperscript{10} It is therefore necessary to examine the interpretation of schedules of commitments in this rapidly changing digital era.

In goods, the specific commitments consist of maximum tariff levels. For agricultural goods, schedules also include tariff quotas, limits on export subsidies, and domestic support. In services, schedules contain market-access commitments according to sector, and the interpretation of service schedules defines the scope of these explicit commitments.\textsuperscript{11} WTO Members' schedules form integral parts of the WTO-covered agreements. Therefore, they are treaty text which must be interpreted according to customary rules of interpretation of public international law, codified in Article 31 and, to the extent appropriate, Article 32 of the Vienna Convention.\textsuperscript{12} The Appellate Body has adopted this approach, and has generally not interpreted schedules differently from other WTO treaty language.\textsuperscript{13}

The \textit{EC-Computer Equipment} dispute first addressed whether panels should interpret tariff schedules like treaty language.\textsuperscript{14} The Appellate Body sided with the EC and explained that "[t]ariff negotiations are a process of reciprocal demands and concessions, of 'give and take'."\textsuperscript{15} In the Appellate Body's view, decision makers should interpret the schedule like any treaty: in accordance with the ordinary meaning of the treaty terms in context, and in the light of the document's object and purpose.\textsuperscript{16} Because WTO Members' schedules are "an integral part of the GATT 1994," they are subject to the same VCLT treaty interpretation principles that apply to GATT 1994.\textsuperscript{17} Since \textit{EC-Computer Equipment}, panels and the Appellate Body have consistently interpreted schedules on goods and services as treaty language in accordance with VCLT Articles 31 and 32.\textsuperscript{18} In \textit{US-Gambling}, the Appellate Body confirmed its approach to the interpretation of goods

\textsuperscript{10} See generally China-Audiovisual Services and \textit{EC-IT Products}, both of which are discussed at length in the body of this paper.
\textsuperscript{11} See \textit{General Agreement on Trade in Services} arts. XVI, XX, Apr. 15, 1994, 1869 U.N.T.S. 183.
\textsuperscript{13} See Isabelle Van Damme, \textit{The Interpretation of Schedules of Commitments}, 41 J. WORLD TRADE 1, 8-52 (2007) [hereinafter Van Damme, \textit{The Interpretation of Schedules of Commitments}]; see generally ISABELLE VAN DAMME, TREATY INTERPRETATION BY THE WTO APPELLATE BODY 93-102 (2009) [hereinafter VAN DAMME, TREATY INTERPRETATION].
\textsuperscript{16} See VAN DAMME, TREATY INTERPRETATION, supra note 13, at 106.
schedules in *EC-Computer Equipment* and reasoned that service schedules should be interpreted in accordance with the customary principles of interpretation in public international law.\(^{19}\)

Some commentators have stressed that the bilateral and contractual nature of schedule negotiations may influence the weight given to certain modes of interpretation in the VCLT.\(^{20}\) Nevertheless, the concept of “an integral part of the WTO covered Agreements” has been repeatedly emphasized by the Appellate Body.\(^{21}\) The Appellate Body dismissed the idea of differential interpretative treatment of schedules on the basis of the need to guarantee the security and predictability of the multilateral trading system set out in Dispute Settlement Understanding (DSU) Article 3.2.\(^{22}\) Thus far, the Appellate Body has not questioned the status of schedules of commitments as treaty language.\(^{23}\) Neither has the Appellate Body approached the interpretation of schedules differently from the interpretation of other WTO obligations.\(^{24}\)

The interpretation of schedules has been the subject of several panel and Appellate Body reports in recent years, and it is anticipated that the ICT-related schedules will increasingly be challenged before the Dispute Settlement Body (DSB).\(^{25}\) The assumption of the Appellate Body that schedules represent the common agreement among WTO Members, and should be interpreted accordingly, becomes even more complex in the face of ever-changing technology. The first part of this Article will discuss the implications of technological change for tariff and service schedules. Next, I will explore the issues of the approaches taken in *China-Audiovisual Services* and *EC-IT Products* and analyze the limits of the Vienna Convention in identifying the “common intention” of Members. In the final part of this Article, I will briefly summarize and further stress the importance of integrating the principle of technological neutrality into the WTO Law.

I. Technological Development and Tariff Schedules

A. The EC-Computer Equipment Dispute—Legitimate Expectations

The *EC-Computer Equipment* dispute concerns the customs classifica-

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20. Id. Tariff concessions are often negotiated for a considerable period of time on a bilateral basis between WTO Members without the possibility of the involvement of all WTO Members. The process of negotiating, drafting, and concluding schedules of commitments can be unilateral in various degrees.
24. See id. at 8.
tion in the European Communities (EC or EU)\textsuperscript{26} of local area network (LAN) equipment\textsuperscript{27} and multimedia PCs.\textsuperscript{28} As part of the Uruguay Round, the EC had bound its tariff rates for automatic data processing (ADP) machines at 4.9%.\textsuperscript{29} The plaintiff, the United States, asserted that the EC classified LAN equipment and PCs as ADP machines during the Uruguay Round and for a short period after its conclusion. In May 1995, however, the EC adopted a new regulation classifying LAN adapter cards as telecommunications apparatus, a category subject to generally higher duties, in the range of 4.6% to 7.5%. With respect to multimedia PCs, in April 1996, a United Kingdom tribunal upheld a customs administration determination classifying PCs with multimedia capabilities as television receivers, thereby subjecting those machines to a 14% tariff.\textsuperscript{30}

In its \textit{EC-Computer Equipment} report, the Panel discussed at length whether the "legitimate expectations" of the United States were relevant for establishing a violation of GATT Article II. The panel referred to the United States' legitimate expectations of access to the EC as a contextual source for interpreting the EC's tariff schedule.\textsuperscript{31} On appeal, the Appellate Body rejected this reasoning, observing that "[t]he security and predictability of tariff concessions would be seriously undermined if the concessions in Members' Schedules were to be interpreted on the basis of the subjective views of certain exporting Members alone."\textsuperscript{32} The Appellate Body emphasized that the security and predictability of "the reciprocal and mutually advantageous arrangements directed to the substantial reduction of tariffs and other barriers to trade" is an object and purpose of the WTO Agreement.\textsuperscript{33} The Appellate Body was of the view that the "legitimate expectations" of an exporting Member are not relevant in determining whether the EC violated Article II:1 of the GATT1994.\textsuperscript{34}

Rather, the Appellate Body chose to rest its interpretation on the methodology set forth in Article 31 of the VCLT, and explained that "the purpose of treaty interpretation under Article 31 of the Vienna Convention is

\textsuperscript{26} For the purpose of this paper, the terms of "EC" and "EU" are interchangeable. The European Union (until November 30, 2009, known officially in the WTO as the European Communities for legal reasons) has been a WTO member since January 1, 1995. Since December 1, 2009, "European Union" has been the official name in the WTO as well as the outside world.

\textsuperscript{27} For example, network or adaptor cards, along with devices such as hubs, bridges, routers, repeaters, LAN switches, and various cables and modules constitute LAN equipment.

\textsuperscript{28} That is, personal computers.


\textsuperscript{31} Id. ¶¶ 8.23–8.28.


\textsuperscript{33} Id. ¶ 82.

\textsuperscript{34} Id. ¶¶ 80-99.
to ascertain the common intentions of the parties." These common intentions, as stressed by the Appellate Body, cannot be ascertained on the basis of the subjective and unilaterally determined "expectations" of one of the parties to a treaty. The Appellate Body consulted a wide range of sources in determining meaning of the EC's tariff concession. This meaning exceeded the expectations of all countries involved in the litigation and accurately approximated the common intent of all parties to the treaty.

To conclude, in EC-Computer Equipment—a leading case on how technological change may impact tariff schedules—when faced with the interpretation of "Automatic Data Processing Equipment" in a tariff schedule, the Appellate Body did not question whether it would be useful to examine how concessions in schedules of goods and services were negotiated, drafted, and concluded. It appears that the Appellate Body did contemplate the possibility that schedules may be of a different character than treaties and therefore may require more tailored interpretative methods. Nonetheless, it rejected the alternative to treaty interpretation, i.e., interpreting the schedules in the light of "legitimate expectations" of the exporting WTO Members, on the ground that this would undermine the security and predictability of schedules. The Appellate Body upheld a rigid application of the DSU Article 3.2, and stressed that "the common intentions [of the Members] cannot be ascertained on the basis of the subjective and unilaterally determined expectations of one of the parties to the treaty." However, as I will discuss in Section III, the disputing parties in China-Audiovisual Services as well as in EC-IT Products also articulated arguments in favor of a similar approach—to rely on the factual evidence that is of entirely subjective character.

B. The EC-IT Products Dispute—"Evolving" Coverage

The ongoing litigation brought by the United States, Japan, and Taiwan against the EC tariff regime regarding IT products is another example of how technological changes may impact tariff schedules. The EC has classified flat panel computer monitors with digital video interface (DVI) under tariff codes that are not covered by the ITA, and has subjected them to a 14% duty. The core question is whether the EC is entitled to

35. Id. ¶ 84.
38. On May 28, 2008, the United States and Japan requested WTO consultations with the EC with respect to its tariff treatment of certain information technology products. They were joined by Taiwan on June 12, 2008. The EC then blocked the panel case on August 29, 2008. EC Blocks Panel in IT Case and Appeals Compliance Findings in Banana Case, WORLD TRADE ORG. (Aug. 29, 2008), http://www.wto.org/english/news_e/news08_e/news08_e/dsb_29aug08_e.htm; see generally Dispute Settlement, WORLD TRADE ORG., http://www.wto.org/english/tratop_e/dispu_e/dispu_e.htm (last visited Mar. 20, 2012).
39. See generally Second Written Submission of the European Communities, Tariff Treatment of Certain Information Technology Products, 2-8, WT/DS375, WT/DS376, WT/DS377 (June 16, 2009) [hereinafter Second Submission of EC, EC-IT Products].
exclude the "flat panel display devices" from the scope of concessions merely because they are capable of receiving and reproducing signals from both "automatic data processing machines" and other sources. In addition, under the EC tariff regime, only a product with a telephony-based or cable-based modem qualifies for duty-free treatment. Thus, any product that communicates using a wireless, ISDN, or Ethernet modem is reclassified out of the duty-free tariff line and is subject to a 14% duty. Moreover, the EC issued a new regulation classifying multifunction printers having scanning, laser printing, and laser copying capabilities, under the HS subheading 9009.12—photocopying apparatus, carrying a 6% duty.

The EC is an original participant in the ITA, and modified its Schedule in accordance with the procedures indicated in the previous section. The EC incorporated the tariff commitments set out in Attachment A and Attachment B into its Schedule. Attachment A defines products by tariff heading, and Attachment B provides a narrative description of specific products covered by the ITA. Those commitments thus became a part of the EC Schedule, as stipulated in GATT 1994 Article II:1. As a result, those tariff commitments became WTO obligations of the EC pursuant to Articles II:1(a) and II:1(b) of the GATT 1994. A dispute arose regarding

40. See id. ¶ 204.
42. First Written Submission of Japan, European Communities and Its Member States—Tariff Treatment of Certain Information Technology Products, 4–5, WT/DS375, WT/DS376, WT/DS377 (Mar. 5, 2009) [hereinafter First Submission of Japan, EC-IT Products].
43. See ITA, supra note 5, at 1; see also Information Technology: Schedules of Concessions, World Trade Org., http://www.wto.org/english/tratop_e/inftec_e/itsched_e.htm (last visited Dec. 22, 2011).
44. ITA, supra note 5, at 2 states that:
   Pursuant to the modalities set forth in the Annex to this Declaration, each party shall bind and eliminate customs duties and other duties and charges of any kind, within the meaning of Article II:1(b) of the General Agreement on Tariffs and Trade 1994, with respect to the following:
   (a) all products classified (or classifiable) with Harmonized System (1996) ("HS") headings listed in Attachment A to the Annex to this Declaration; and
   (b) all products specified in Attachment B to the Annex to this Declaration, whether or not they are included in Attachment A; through equal rate reductions of customs duties beginning in 1997 and concluding in 2000, recognizing that extended staging of reductions and, before implementation, expansion of product coverage may be necessary in limited circumstances.
46. Id. at 55 U.N.T.S. 200 ("Each contracting party shall accord to the commerce of the other contracting parties treatment no less favorable than that provided for in the appropriate Part of the appropriate Schedule annexed to this Agreement.").
47. Id., which reads:
   The products described in Part 1 of the Schedule relating to any contracting party, which are the products of territories of other contracting parties, shall, on their importation into the territory to which the Schedule relates, and subject to the terms, conditions or qualifications set forth in that Schedule, be exempt
whether certain products are within the scope of the tariff concessions made by the EC pursuant to the ITA as the complainants alleged, or if they are within the scope of other EC Schedule concessions, which do not provide for duty-free treatment.49

With respect to “Flat Panel Display Devices,” the EC pointed out that the multifunctional LCD monitor “did not exist at the time the concessions were being negotiated.”50 Importantly, this casts light on the circumstances under which the concessions were made in view of the extremely detailed technical language used in the narrative of the product definitions in attachment B to the ITA. The EC stressed how radical changes in monitor technology from the time the ITA was negotiated rendered it exceptionally difficult to define a “monitor” in order to place it in the relevant legal framework.51 It argued that the multifunctional LCD monitor, which can usually display even television signals, fundamentally challenges the established legal categorizations.52 The EC asserted that the WTO Members should realize that the multifunctional LCD monitor is a “new product,” the result of the convergence of the IT and the multimedia consumer electronics industries.53

With respect to “Set Top Boxes which have a Communication Function,” it seemed to the EC that all the three complainants agree that the dispute depends on the interpretation of the narrative description of certain set top boxes contained in the EC Schedule and the ITA. In the EC’s view, however, the complainants misinterpret the content of the description.54 If interpreted correctly, the narrative description does not support their claim. The EC classifies set top boxes that connect to the Internet via ISDN, W-LAN, or Ethernet devices in heading 8528 71 19 (i.e., outside the duty-free heading 8528 71 13) because ISDN/W-LAN/Ethernet devices are not “modems.”55 The set top boxes that are at issue are not entitled to the ITA treatment because they simply do not fulfill the narrative descrip-

48. Id.
49. If “Flat Panel Display Devices,” “Set Top Boxes which have a Communication Function,” and “Multifunctional Machines” are within the scope of the tariff concessions made by the EC pursuant to the ITA, then the tariff commitments at issue are contained in the EC Schedule. As such, the EC’s actions to impose duties on the products in question are inconsistent with Article II: 1(a) and (b) of the GATT.
51. Id.
52. Id.
53. Id.
54. Id. ¶ 208
55. Id. ¶¶ 265–80 (emphasis added).
In the EC's view, the complainants avoided addressing any difference between the product existing at the time of the conclusion of the ITA (e.g., telephony-based or cable modem) and the product of today (i.e., ISDN, W-LAN or Ethernet devices) under dispute.

With respect to the "Multifunctional Machines," contrary to the complainants' assertions, the EC asserts that multifunctional machines are not technologically advanced versions of printers. According to the EC, multifunctional machines are best described as different devices, each with a specific function (photocopiers, printers and/or facsimile machines), that have been merged into a single machine capable of performing various functions simultaneously. Major manufacturers, such as Ricoh and Canon, describe their range of multifunctional machines as being "copier-based." The EC asserts the essential difference between analogue photocopying and digital photocopying is that the latter digitalizes the image, but this difference does not bring digital photocopiers outside the scope of HS96 9009 12. Thus, multifunctional machines cannot be classified directly under subheading 8471 60 unless they are used "solely or principally" with a computer.

It is interesting to review the creativity of the arguments and the interpretations as to whether a new product can be assumed to be covered by the concessions simply because it performs similar functions as a product that is covered by the concessions. Was the narrative description of the Attachment B to the ITA written in a way to accommodate technical developments of the products? Are we really convinced that the Members' commitments flowing from the ITA are "open-ended" and "accumulate any new product"?

C. Renegotiate the Tariff Commitments?

During the early stages of the development of information technology, the EC-Computer Equipment dispute raised the question of how to interpret tariff concessions considering the technological changes. The ongoing litigation on EC-IT Products provides an opportunity to revisit the issue of...

56. In response to the complainant's argument that "any kind of digital-to-analog converter constitutes a modem," the EC argued that such a proposition, if accepted, would lead to the absurd situation where any device that converts signals would be a modem, e.g., a television or an MP3/MP4 player would be considered a modem. Id.; see also Second Written Submission by the European Communities, European Communities—Tariff Treatment of Certain Information Technology Products, ¶¶ 20-32, WT/DS/375, WT/DS/376, WT/DS/377 (June 16, 2009) [hereinafter Second Submission by EC, EC-IT Products].

57. First Submission of EC, EC-IT Products, supra note 50, ¶¶ 205-35.

58. Id.

59. Id. ¶¶ 330-38.

60. Id.

61. Furthermore, many manufacturers of multifunctional machines market some of their machines in a copy-only version, with the printing and fax functions being offered as options. Id. ¶ 333.

62. Id. ¶¶ 371-72.

63. Second Submission by EC, EC-IT Products, supra note 56, ¶¶ 125-33.
tariff classification, and to offer a creative space for treaty interpretation under this digital convergence trend.

On one hand, technology is organic: new features were being developed and advances were made "before the ink [was] dry" on the ITA.64 As argued by the United States Trade Representative, "if ITA participants only provided duty-free treatment to the products with technologies that existed at the time the ITA was concluded, very few ITA products would be eligible for duty-free treatment today."65 The IT sector is organic and technologically innovative; it is an area where evolution is the nature of the beast, and thus, we must read the existing commitments accordingly. ITA was intended to be much more inclusive and dynamic. Otherwise, eventually nothing would be covered by the ITA, simply because technology by its very nature evolves.66 Trade regimes, therefore, are urged to "evolve in a manner that enhances market access opportunities for information technology products."67

On the other hand, information technology has been evolving rapidly and is converging with entertainment, communication, and other technologies, thereby creating an ever increasing potential for specific information technology products to fall within the scope of the ITA. The EC argued that judicial interpretation may not be the appropriate way to clarify whether certain products are covered by the ITA. Members must revisit the product coverage by means of consensus, not only by litigation. What is covered and what is not covered is significant and will form a forever and rapidly changing landscape. In the view of the EC, it is necessary to renegotiate the

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65. Id.
66. Indeed, as the Preamble to the ITA suggests, the ITA was concluded in part for the purpose of encouraging innovation and the spread of technology throughout the world. The ITA Preamble states that the ITA's declarations were made:

*Considering* the key role of trade in information technology products in the development of information industries and in the dynamic expansion of the world economy;
*Recognizing* the goals of raising standards of living and expanding the production of and trade in goods;
*Desiring* to achieve maximum freedom of world trade in information technology products;
*Desiring* to encourage the continued technological development of the information technology industry on a world-wide basis;
*Mindful* of the positive contribution information technology makes to global economic growth and welfare;
*Having agreed* to put into effect the results of these negotiations which involve concessions additional to those included in the Schedules attached to the Marrakesh Protocol to the General Agreement on Tariffs and Trade 1994, and
*Recognizing* that the results of these negotiations also involve some concessions offered in negotiations leading to the establishment of Schedules annexed to the Marrakesh Protocol.

ITA, *supra* note 5, pmbl.
67. ITA, *supra* note 5, ¶ 1 (emphasis added).
ITA in the face of ever-changing technology. More importantly, there is a need to further develop a mechanism that will allow us to deal with technological change.

Indeed, a cursory analysis of relevant provisions of the ITA reveals that the treaty language is not entirely clear. The preamble and paragraph 1 of the ITA seem to support the complainants' interpretation of the EC Schedule. In particular, the complainants referred to provisions such as the aim of "achieving maximum freedom of world trade in information technology products," that the ITA "endeavors to encourage the continued technological development of the information technology industry," and that trade regimes "should evolve in a manner that enhances market access opportunities for information technology products." Do these provisions reflect that the ITA participants contemplated a "positive evolution in market access"? It is arguable that if every advance in technology necessitated renegotiating, economic operators would be discouraged from innovating. From this perspective, the objective embodied in the ITA provisions reflects an attempt to encourage technological development. If we take a closer look at paragraph 3 of the ITA Annex on a mechanism for "future negotiations" and for "updating the product coverage," however, it seems that the ITA participants were well aware of the rapidly advancing nature of the IT industry, and they did not expect the ITA's language was to cover every "new product" that may come along in the rapidly converging IT sector. Together, how should the above provisions be read? Further, how should the scope of the existing concessions in the ITA be decided?

II. Technological Development and GATS Schedules

A. The China-Audiovisual Services Dispute—Confusing Fact-Finding Process and the Misleading Evidence

Just as the interpretations of GATT provisions have dynamically evolved in response to the several hundred GATT dispute settlement procedures, so the interpretation of GATS provisions will evolve over time. In the

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69. Id.
70. ITA, supra note 5, pmbl.
71. Id.
72. Id. ¶ 1.
74. First Submission of U.S., EC-IT Products, supra note 9, ¶ 61.
75. Participants shall meet periodically under the auspices of the Council on Trade in Goods to review the product coverage specified in the Attachments, with a view to agreeing, by consensus, whether in the light of technological developments, experience in applying the tariff concessions, or changes to the HS nomenclature, the Attachments should be modified to incorporate additional products, and to consult on non-tariff barriers to trade in information technology products. Such consultations shall be without prejudice to rights and obligations under the WTO Agreement. ITA, supra note 5, ¶ 3.
76. First Submission of EC, EC-IT Products, supra note 50, ¶ 15.
context of services trade, the *China-Audiovisual Services* dispute,\(^77\) which directly involves the interaction with technological change, has practical significance for classification and scheduling issues.

China, in its GATS Schedule, made both market access and national treatment commitments regarding sound recording distribution services. In particular, under market access for mode 3 in Sector 2D, China committed to permit foreign service suppliers to establish contractual joint ventures with Chinese partners to engage in sound recording distribution.\(^78\) China scheduled no national treatment limitations under mode 3 for these Chinese-foreign contractual joint ventures.\(^79\) Given these commitments, Chinese foreign contractual joint ventures, including majority foreign-owned joint ventures, likewise should enjoy national treatment regarding sound recording distribution. The Chinese domestic legal framework,\(^80\) however, greatly limits the ability of foreign-invested enterprises to engage in the distribution of sound recordings by prohibiting these enterprises from engaging in their electronic distribution, for example, through the Internet and mobile telecommunications networks.\(^81\)

This prohibition does not extend to wholly Chinese-owned enterprises. In other words, China’s measures, by creating a regime for sound recording distribution that treats foreign-invested sound recordings distrib-

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\(^79\). See id. at ¶ 7.1314.

\(^80\). First Submission of U.S., *China-Audiovisual Services*, supra note 77, at ¶ 357.

\(^81\). "China maintains these restriction through three measures: (1) the *Interim Rules on the Management of Internet Culture* . . . ; (2) the Notice of the Ministry of Culture on Some Issues Relating to Implementation of the 'Interim Rules on the Management of Internet Culture' . . . ; (3) and the Several Opinions on the Development and Management of Network Music . . . "; id. ¶ 140.
utors much less favorably than wholly Chinese-owned sound recording distributors, impose more stringent requirements on foreign-invested enterprises than their wholly Chinese-owned counterparts. The United States therefore claimed that China’s measures are inconsistent with Article XVII of the GATS.82 China argued, however, that at the time of the negotiation of China’s GATS commitments, the legal framework governing the exploitation of music, and more precisely, the distribution of sound recordings, addressed exclusively the distribution of sound recordings in their traditional, hardcopy format.83 China further argued that, when properly applied, the rules of treaty interpretation confirm that network music services are not covered by its GATS commitments and that those commitments are strictly limited to the distribution of sound recordings in physical form.84

Both parties submitted a significant amount of evidence in support of their respective positions. To argue that network music services did not constitute an established business operating within a legal framework at the time of negotiations on China’s accession to the WTO, China submitted several pieces of evidence, arguing that network music services only emerged fully after China acceded to the WTO in 2001.85 Until the breakthrough of network music services around 2003, these services were largely illegal. No international consensus on the protection of Intellectual Property Rights had been reached allowing a worldwide legal exploitation of music over the Internet until the entry into force of the WIPO Copyright Treaty in 2002. In China, the first network music service platforms were launched around 2001.86 Therefore, the electronic distribution of sound recordings was a new phenomenon that did not exist at the time of China’s accession.87

The United States, on the other hand, argued that the circumstances surrounding the conclusion of China’s WTO accession demonstrated that the electronic means of delivery for music were part of the landscape as China’s commitments were being negotiated, and that China was aware that music was being distributed electronically at the time of China’s accession. The United States provided additional exhibits to strengthen its argument that electronic distribution of sound recordings was a reality long before China’s accession and China itself was aware of this development, including:88

82. See id., ¶¶ 140-55.
83. See First Submission of China, China-Audiovisual Services, supra note 77, ¶ 479.
84. Id., at ¶¶ 389-403.
86. First Submission of China, China-Audiovisual Services, supra note 77, ¶¶ 389-403.
87. Id. at ¶¶ 443-48.
88. Second Oral Statement of the U.S., China-Audiovisual Services, supra note 77, ¶¶ 43-46; see, e.g., Second Submission of the U.S., China-Audiovisual Services, supra note 77, ¶ 154; First Oral Statement of the U.S., China-Audiovisual Services, supra note 77, ¶ 63.58-66, 68; First Submission of U.S., China-Audiovisual Services, supra note 77, ¶ 51.
• According to the testimony of David Hughes of Sony Music, Mr. Hughes stated that he “first became involved in the digital distribution of music in September 1996,” a time period well before China’s WTO accession.\(^8\)

• According to the Federation of the Phonographic Industry (IFPI), developments in online distribution of music “build on a process that goes back to 1998 when eMusic.com began selling MP3 singles and albums on the web in the U.S.”\(^9\)

• Steamwaves, another American service, was launched in 1999 and was one of the first to offer a streaming subscription service.\(^9\)

• China’s own involvement in the international forum dating back to the early 1990s, demonstrates that China, like the WTO Members with which it was negotiating, was aware of the electronic distribution of music prior to its WTO accession. For example, in October 1995 at the WIPO World Forum on the Protection of Intellectual Creations in the Information Society, Mr. Shen Rengan, Deputy Director General of the National Copyright Administration of China in Beijing, participated in a working session.\(^9\)

• Within the WTO context, discussions regarding electronic delivery of services also took place prior to China’s accession. For example, the Work Programme On Electronic Commerce - Progress Report to the General Council states that “[i]t was the general view that the electronic delivery of services falls within the scope of the GATS, since the Agreement applies to all services regardless of the means by which they are delivered, and that electronic delivery can take place under any of the four modes of supply.”\(^9\)

• In early 2000, a Houston-based company and the Government of China formed a joint venture to launch an MP3 website. This was a website permitting the electronic delivery of sound recordings from the Internet to a user’s MP3 music listening device.\(^9\)

• Numerous websites, such as chinamp3.com and suflash.com, were distributing music electronically in China prior to 2000.\(^9\)

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92. First Oral Statement of the U.S., China-Audiovisual Services, supra note 77.


95. Id.
Certainly, with respect to supplementary means of interpretation under Article 32 of the Vienna Convention, the circumstances of conclusion, the fact-finding process, and the numerous evidence and exhibits are rather confusing, if not misleading. Both parties seemed to focus principally on the questions of "whether the electronic distribution of sound recordings was unknown at the time of China's December 2001 accession to the WTO," "whether the electronic distribution of sound recordings was a phenomenon known to China and other WTO Members before China joined the WTO," or "whether China was unaware of the existence of the joint venture between the Chinese government and a Houston-based company to supply music online and therefore was unaware of the electronic distribution at the time of its WTO accession." The core questions then become: How well should a trade negotiator understand the development of technology, and to what extent can it be relevant in the context of Article 32 of the Vienna Convention? Why is it so critically important for the parties in dispute to demonstrate the negotiators' awareness of the current status of technology? How can the fact, if proven, that the electronic distribution of sound recordings was a phenomenon known to China at the time of China's accession, affect the panel's decision? And the further puzzle arises as to whether very similar or identically worded commitments (e.g., cellular mobile phone services) could be given different meanings (e.g., 2G v. 3G mobile services) depending on the date of a Member's accession to the WTO (e.g., 1994 for Korea v. 2002 for Taiwan) because the meaning to be attributed to those terms can only be the meaning that they had at the time the Schedule was concluded.

B. Renegotiate the GATS Specific Commitments?

At the core of the issue is the "temporal variation" in language. Language is under a constant movement, and varies incrementally over time. It changes depending on the social context and technological environment. In the context of technology, "old language" acquires partly or even completely new meanings. Such changes must also affect the language used in treaties.

We cannot deny that the meaning of "sound recording distribution services" at the time of China's accession to the WTO was substantially different from that of "sound recording distribution services" at the time of interpretation by the Panel. To illustrate, the increasing adoption of broadband and mobile technologies and the widespread adoption of smartphones and portable music playing devices continue to drive the digital music market. Sales of recorded music in CD format have declined steadily since 2000, as consumers increasingly have moved toward digital

96. Id.
97. Section III of this paper will further discuss those issues.
98. ULF LINDERFALK, ON THE INTERPRETATION OF TREATIES, 73-95 (2007).
99. Id., at 73.
100. Id.
101. Id.
The majority of music is now sold in digital format, downloaded by consumers to laptops, MP3 players, or other devices. According to the IFPI report, in 2009, for the first time ever, more than a quarter of the recorded music industry's global revenues (27%) came from digital channels. In the United States, the world's largest music market, online and mobile revenues now account for around 40% of music sales. Particularly noteworthy, mobile digital contents continued to perform favorably, achieving major growth of 39% in sales of full single-track downloads service, which accounted for 60% of all mobile digital contents, and 53% of overall digital music delivery in terms of sales. The music industry landscape, indeed, has been undergoing major structural changes as companies from other industries become integrated into music distribution, and business models transform to adapt to changing market demands. Thus, in its written submissions, China repeatedly stated that the only viable way to address this unresolved issue should be via requests-offers negotiation, rather than the "fast track" of the WTO dispute settlement mechanism.

China-Audiovisual Services may have a wider impact on the interpretation of GATS schedules of commitments, especially the sectors in which technology-enabled businesses are developing most rapidly. Shall we interpret a GATS market access commitment using the "ordinary meaning" at the time of its conclusion (i.e., historical language) or the "ordinary meaning" at the time of interpretation (i.e., contemporary language)?

The following part explains how to tackle the problem caused by these social variations for the interpretation of treaties, and how a schedule of commitment is interpreted to include a new product or service not existing at the time of negotiation.

III. A Critical Review of the Interpretative Approaches Taken in the Disputes of EC-IT Products and China-Audiovisual Services

A. The "Object and Purpose" of the Treaty


The recent decisions of the Panel and the Appellate Body in EC-IT Products and China-Audiovisual Services touched upon a number of issues...
of ongoing significance to the treaty interpretation in this digital world. In *EC-IT Products*, the complainants argued that the ITA may be relevant in analyzing the “object and purpose” of the GATT 1994 because the ITA is an instrument related to the GATT 1994.\(^\text{109}\) As indicated in Section II-C of this article, the ITA arguably contains a number of mechanisms to encourage technological development, including broad product coverage and Attachment B. In the complainants’ view, those provisions in the ITA that express the desire such as “to achieve maximum freedom of world trade in information technology products” contradict the EC’s view that a digital product should no longer be entitled to duty-free treatment simply because technology advances.\(^\text{110}\) To some degree, it is fair to say that the complainants seek to justify an extensive reading of the scope of ITA by arguing that it is necessary in order to further the “object and purpose” of the ITA.\(^\text{111}\) It is their position that the EC concession must cover “all” devices that fit squarely within its terms regardless of how their other functionality may change or improve over time.\(^\text{112}\)

The Panel faced several questions, including: Is there an interpretative principle whereby tariff concessions must be broadly construed in order to promote the expansion of trade between Members? Was the complainants’ interpretative approach overbroad, therefore compromising the legal certainty and predictability of tariff concessions, and creating the risk that Members would become reluctant to pursue the ITA liberalization process?

In the Panel Report, the Panel took the position that provisions of the ITA were not relevant to determining the object and purpose of the WTO


\[^{110}\] Id.

\[^{111}\] Such an approach, however, has been strongly criticized by the EC as “a shortsighted,” “simplistic way” of reading the treaty that may have negative systemic implication. Executive Summary of the Oral Statement by the European Communities at the First Substantive Meeting, *European Communities—Tariff Treatment of Certain Information Technology Products*, Annex D-2, ¶ 8, WT/DS375/R, WT/DS376/R, WT/DS377/R (Aug. 16, 2010).

\[^{112}\] Id.
Agreement. The Panel pointed out that the ITA constitutes a separate plurilateral arrangement made among a subset of WTO Members. Due to the application of the most-favored nation principle and Article II of the GATT 1994, the duty bindings agreed to by the ITA participants were also extended to all WTO Members. The objectives of the ITA participants of having tariff regimes "evolve" in a manner that "enhances market access for information technology products" and "encourag[ing] the continued technological development of the information technology industry" could not be considered a basis for determining the object and purpose of the WTO Agreement and the GATT 1994. Having said that, the Panel indicated that the relevant object and purpose in the dispute was the "general object and purpose" of the WTO Agreement as a whole, including the GATT 1994, which was to provide security and predictability in the reciprocal and mutually advantageous concessions negotiated by parties for the reduction of tariffs and other barriers to trade. The Panel then concluded that by interpreting the terms of the relevant EC concessions in light of "the 'general object and purpose' of the WTO Agreement as a whole," it saw nothing that would override or contradict its preliminary conclusion that the EC concessions require duty-free treatment for the products in dispute. In other words, based on the general object and purpose of the WTO Agreement as a whole, not the ITA, the Panel reached the conclusion that the objectives of security and predictability required that concessions cover products that did not exist in that form when the concessions were granted as long as they complied with the wording of the concessions concerned.

2. Services Schedules: "Sufficiently Generic" Terms?

In China-Audiovisual Services, the "object and purpose" of the GATS played a significant role in determining China's commitments. In its first submission, the Chinese government argued that unduly extending the scope of Members' GATS commitments would contradict the principle of progressive liberalization reflected in the Preamble, which stipulates that the Agreement is aimed at establishing "a multilateral framework of principles and rules for trade in services with a view to the expansion of such trade under conditions of transparency and progressive liberalization." The principle of progressive liberalization is reflected in the structure of the GATS, which contemplates that WTO Members undertake specific commitments through successive rounds of multilateral negotiations with a view to liberalizing their service markets incrementally, rather than immediately and completely at the time of the acceptance of the GATS. In light of this general object and purpose, China also asserted that the princi-
ple of progressive liberalization required the Panel to base its analysis of the relevant terms in China's GATS Schedule on their meaning at the time of China's accession to the WTO.119

The United States responded that compliance with current commitments was essential to the credibility and future success of progressive liberalization.120 On appeal, China again claimed that the Panel interpreted the entry “sound recording distribution services” according to its contemporary meaning, but that the principle of progressive liberalization did not allow for the expansion of the scope of the commitments of a WTO Member by interpreting the terms used in the Schedule based on the meaning of those terms at the time of interpretation.121

The Appellate Body found that the task of ascertaining the meaning of a concession in a Schedule, like the task of interpreting any other treaty text, involves identifying the common intention of the Members.122 Regarding the “object and purpose” of the GATS, the decisive paragraph of the Appellate Body decision reads as follows:

We consider that the terms used in China's GATS Schedule ('sound recording' and 'distribution') are sufficiently generic that what they apply to may change over time. In this respect, we note that GATS Schedules, like the GATS itself and all WTO agreements, constitute multilateral treaties with continuing obligations that WTO Members entered into for an indefinite period of time, regardless of whether they were original Members or acceded after 1995.123

In other words, the Appellate Body threw in a wild card by stating that the commitments in dispute were generic terms. The Appellate Body appeared to be implying that the content of “generic terms,” such as “sound recording” and “distribution,” are assumed by the Members to change over time.124 On that basis, the Appellate Body concluded that the analysis supported the interpretation of China's commitment on “sound recording distribution services” as including the electronic distribution of sound recordings.125 Interestingly, the Appellate Body did not refer to any GATS provisions supporting this proposition. Nor did it address how to determine if a term is “generic” enough or elaborate on the distinction between “time-bound” and “timeless” WTO obligations.126 This raised a critical question as to the definitions of Members' GATS Specific Commitments.127 Are we really convinced that WTO Members' commitments flowing from the GATS, when expressed in a “sufficiently generic way,” are “open-ended” and “accumulate any new services”? The key questions

120. Appellee Submission of the U.S., China-Audiovisual Services, supra note 77, ¶ 106.
121. Id.
123. Id. ¶ 396 (emphasis added).
125. Panel Report, China-Audiovisual Services, supra note 77.
126. Id.
127. Gardiner, supra note 124, at 172–73.
remain unanswered. It could be argued that the Appellate Body did not go far enough in its “activism.”

B. The “State of Technology” that Existed at the Time of the Negotiations


The supplementary interpretation principle “the circumstances of conclusion” of the treaty, under the Article 32 of the VCLT, was heavily relied upon by the parties in EC-IT Products and China-Audiovisual Services. Were the terms of the EC concession “frozen” in time at the conclusion of the ITA? As indicated in Section II:B of this paper, the Complainants and Third Parties to this dispute strongly criticized that the EC’s argument (that the ITA merely covers IT products existing in 1996) ignores the “enhancement,” “development,” and “evolvement” aspects of the ITA.129

As discussed earlier, the core issue in EC-IT Products is whether the possibility that a particular product would fall within the scope of an ITA concession, especially those based on Attachment B of the ITA, should be excluded in the technological development of that product. On this issue the Panel should, at least, have considered two questions. First, to what extent is the “state of technology” that existed at the time of the negotiations relevant to determining the scope of the commitments?130 Second, how should “technological development” and “product evolution” be dealt with in interpreting concessions?131

Not surprisingly, however, the Panel avoided directly responding to the arguments regarding “the circumstances of conclusion” made by the parties proposed as “supplementary means” of interpretation. In the Panel’s view, “it is neither desirable nor possible to answer such questions in the abstract and without reference to the terms of the concessions that are being interpreted.”132 In this context, the Panel explained that it had applied the customary rules of interpretation of public international law, as set out in Articles 31 of the Vienna Convention, and had examined the ordinary meaning of the terms of the EC’s commitment, in the context provided by the ITA, other relevant parts of the EC Schedule, and the schedules of other WTO Members.133 Having said that, the Panel decided that

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128. VCLT, supra note 12, art. 32 states:
Supplementary means of interpretation
Recourse may be had to supplementary means of interpretation, including the preparatory work of the treaty and the circumstances of its conclusion, in order to confirm the meaning resulting from the application of article 31, or to determine the meaning when the interpretation according to article 31:
(a) leaves the meaning ambiguous or obscure; or
(b) leads to a result which is manifestly absurd or unreasonable.


131. Id.

132. Id., ¶ 7.596.

133. Id., ¶ 7.597.
"there is no need to consider further the particular status of technology at the time of negotiating the concession in assessing the scope of the concession before the panel." Thus, for instance, the Panel did not consider the question of whether the fact that DVI was developed after the conclusion of the ITA should operate to exclude flat panel display devices with DVIs from the scope of the concession.

While the Panel was prudent enough and did not allow itself to fall into the trap of the "investigation" of the technological history of IT products, it departed from its interpretative approach and, to some degree, responded to the parties' arguments regarding the state of technology at the time of ITA negotiations. For example, in response to the EC's argument that multifunctional monitors are "new products" that did not exist at the time of the negotiations, the Panel indicated that "multifunctionality was not unknown at the time of the negotiations." The Panel also cited factual evidence supporting its viewpoint that negotiators were at least aware of a wide array of technology at the time of considering the "panel display devices" concession.

It is obvious that the Panel was reluctant to draw a firm conclusion on how "technological development" should be addressed in interpreting concessions. The reasoning was unsatisfying, and failed to say when negotiators' awareness of new technology would be relevant to the determination of the scope of the commitments.

2. Services Schedules: Technical Possibility and Commercial Reality

As described in Section III.A of this Article, both parties submitted a significant amount of "evidence" in support of their positions regarding the "circumstances of conclusion." The Chinese allegation was based on the "Technical, legal and commercial impossibility," emphasizing that any interpretation of China's relevant commitments under Sector 2D must necessarily incorporate the circumstances surrounding the negotiations. China was of the view that the service in question was not part of its commitments because at the time of the negotiations the sound recording distribution service only covered sound recordings in physical form.

The Panel found that evidence on the technical feasibility or commercial reality of a service at the time of the commitment was relevant to determining the "common intention of Members" under Article 32 of the Vienna Convention. In this context, the Panel found that the evidence presented by the parties suggested that the electronic distribution of music had become a technical possibility and commercial reality before the entry into force of China's GATS Schedule following its accession to the WTO on 11

134. Id., ¶ 7.600.
136. Id., ¶ 7.601 (emphasis added).
137. Id., n. 807.
138. First Submission of China, China-Audiovisual Services, supra note 77, ¶ 482.
139. Id., ¶¶ 476-82.
140. Panel Report, China-Audiovisual Services, supra note 77, ¶ 7.1237.
December 2001.\textsuperscript{141} In the Panel's view, the record also indicated that China was \textit{aware} of this fact.\textsuperscript{142} The Panel was, therefore, not persuaded that the meaning of the phrase "sound recording distribution services" could not extend to the distribution of sound recordings in non-physical form because negotiators of China's GATS Schedule had at the time no conception of the technical or commercial viability of this form of distribution.\textsuperscript{143}

Regarding the circumstances of the conclusion of the treaty, the Appellate Body could have easily decided this issue based on the Panel's reasoning, but the Appellate Body instead took a different position and utilized a different approach. The Appellate Body spent several paragraphs in the \textit{China-Audiovisual Services} report to clarify important aspects of the Panel's reasoning and characterize the Panel as having "simply found that this element did not establish that China could not have undertaken a commitment on the electronic distribution of sound recordings in 2001."\textsuperscript{144} The Appellate Body emphasized that the Panel "did not itself draw interpretative conclusions on the basis of the evidence of the conclusion of the treaty."\textsuperscript{145}

As the reasoning of the Appellate Body shows, the Appellate Body distanced itself from the Panel Report on this issue, and gently chided the Panel by modifying the Panel's reasoning.\textsuperscript{146} To some degree, the Appellate Body's ambiguous stance on the insignificance of "technical possibility" and "commercial reality" makes it seem that the issue has been slightly addressed. The Appellate Body rejected China's argument about the factual situation and the significance of the circumstances of the conclusion of the treaty, implying that at least in this dispute the commercial or legal status of the business at the time of China's accession was not relevant.

C. Identifying the Common Intention of Members?

The Appellate Body's assumption that schedules represent the common agreement among WTO Members, and should be interpreted accordingly, becomes even more complex in the face of ever-changing technology. In \textit{EC-Computer Equipment}, a leading case on how technological change may impact tariff schedules, when faced with the interpretation of "Automatic Data Processing Equipment" in a tariff schedule, the Appellate Body did not question whether it would be useful to examine how concessions in schedules of goods and services were negotiated, drafted, and concluded. However, it rejected the alternative to \textit{treaty interpretation}—to interpret schedules in the light of "legitimate expectations" of the exporting WTO Members—on the ground that this would undermine the security

\begin{itemize}
\item \textsuperscript{141} Id., ¶ 7.1235-7.1247.
\item \textsuperscript{142} Id., ¶ 7.1246.
\item \textsuperscript{143} Id., ¶ 7.1247.
\item \textsuperscript{144} Appellate Body Report, \textit{China-Audiovisual Services}, supra note 9, ¶ 408.
\item \textsuperscript{145} Id., ¶ 407-10.
\end{itemize}
and predictability of schedules. The Appellate Body upheld a rigid application of DSU Article 3.2, and stressed that "the common intentions of the Members" cannot be ascertained on the basis of the subjective and unilaterally determined expectations of one of the parties to the treaty.147

Along these lines, as the reasoning of the Appellate Body in China-Audiovisual Services shows, the Appellate Body rejected China's argument about the factual situation—the technical or commercial viability of electronic distribution of sound recording—and about the significance of the "circumstances of the conclusion of the treaty,"—that the electronic distribution of sound recordings was unknown at the time of China's accession to the WTO, and China was unaware of the existence of such services.148

In a more recent Panel report in EC-IT Products, the Panel again determined the scope of the EC tariff commitments on certain IT products. Once again, it examined the ordinary meaning of the terms of the EC concession, in the context provided by the ITA, other relevant parts of the EC Schedule, and the schedules of other WTO Members. The Panel established that the products in dispute were covered by the EC concession based on the above approaches, implying that the fact that the EC was unaware of the state of technology that existed at the time of the negotiations is of limited relevance to the question at issue.149

Both cases tackled the issue of whether the existence of certain technologies at the time of the conclusion of the treaty negotiations is relevant to the interpretation of the tariff or service schedules, and both cases reached confusing and self-contradictory conclusions: First, both panels were convinced by the evidence submitted by the complaining parties that the "new" technologies were known at the time of the treaty negotiation, and that the responding parties to the disputes were aware of such technological development. Second, both panels took the position that even if it were accepted that the responding parties' claims are factually accurate that the products or services were unknown at the time of the negotiations, such facts were of limited relevance to the questions at issue. In other words, both panels did not themselves draw interpretative conclusions based on evidence of the conclusion of the treaty. Finally, the "state of technology" and the negotiators' subjective awareness might be relevant or even significant in future cases, leaving open the possibility that another WTO Member might make those arguments in a subsequent dispute.

The meaning of the circumstances of conclusion is not indicated in the Vienna Convention. The circumstances that cause a treaty to be enacted, affect its content, and attach to its conclusion are all factors that are considered in practice.150 In theory, evidence on the technical feasibility or commercial reality of a product/service at the time of the commitment indeed may constitute circumstances relevant to the interpretation of

150. GARDINER, supra note 124, at 343.
its scope under Article 32 of the Vienna Convention. We cannot ignore the fact that all the parties involved in EC-IT Products and China-Audiovisual Services submitted a significant number of exhibits in support of their positions regarding the "circumstances of conclusion." It is understandable that the panels and/or the Appellate Body would not dare to take a radical position on this issue. However, given the potentially far-reaching consequences of the Panel's conclusion on how to interpret "schedules of commitments" in this rapidly changing digital era, one would expect that it presented a well-reasoned legal analysis on Article 32 of the Vienna Convention.

D. Integrating the Principle of "Technological Neutrality" into the WTO Law

In addition, in China-Audiovisual Services the Appellate Body's reasoning on "object and purpose" is of great practical significance and will have significant implications for future disputes regarding interpretation of schedules of commitments in the rapidly changing digital era. Although different types of schedules vary in their structure, it will be interesting to see how the reports of the Appellate Body in China-Audiovisual Services will affect the possible appellate proceeding on EC-IT Products, particularly the interpretation of Attachment B of the ITA. Is the term "monitor" "sufficiently generic" that the definition of the terms may change over time? Is the term "modem" a generic term that should not be interpreted in an overly-narrow or technical sense? Do the tariff commitments set out in Attachment B of the ITA constitute multilateral treaties with continuing obligations so as to ensure that the tariff regimes will evolve over time?

In China-Audiovisual Services the Appellate Body seems to imply that the content of "generic terms" in the schedules of commitments is assumed by the Members to change through time. It did not, however, say anything about how to determine whether a term is generic enough. Nor did it elaborate on the distinction between "time-bound" and "timeless" WTO obligations, leaving open the possibility for later WTO litigation to materialize the meaning.

Having said that, I am of the view that the notion of "generic terms" and the principle of "technological neutrality" conceptually reinforce each other, and the latter itself might well serve as the rationale for the former. In U.S.-Gambling, the Panel stated that "a market access commit-

152. The EC pointed out that the multifunctional LCD monitor did not exist at the time the concessions were being negotiated. This casts an important light on the circumstances under which the concessions were made in view of the extremely detailed technical language used in the narrative of the product definitions in attachment B to the ITA. The EC stressed how the radical changes in monitor technology from the time the ITA was negotiated have made it exceptionally difficult to define a "monitor" in order to place it in the relevant legal framework.
153. See Appellate Body Report, China-Audiovisual Services, supra note 9, ¶ 396.
ment . . . implies the right of other Members’ service suppliers to supply a service through all means of delivery, whether by mail, telephone, Internet etc., unless otherwise specified in a Member’s Schedule.”155 As the United States argued before the China-Audiovisual Services Panel, the GATS is technologically neutral in the sense that it does not contain any provisions that distinguish between the different technological means through which a service may be supplied.156 The United States invoked the principle of “technological neutrality” to argue that any practical differences between the supply of sound recordings in physical and digital form are simply differences with respect to the “means of delivery.”157 According to the principle of technological neutrality, the differences between the physical and digital distributions are not relevant to the interpretation of the scope of a GATS commitment, unless specified in a Member’s Schedule.158 The United States further stressed that China’s position, if accepted, would suggest that the GATS and Members’ commitments must be renegotiated each time a new technology results in a new means of supplying a service. This would be an unworkable outcome, and would be inconsistent with the principle of technological neutrality.159 The GATS is sufficiently dynamic to cover new technological innovations affecting the delivery of services.160

“Technological neutrality” has been well-established as a general regulatory principle under the International Telecommunication Union framework.161 A far as possible, a technologically neutral position—the idea that there should be equivalent treatment of equivalent services, regardless of the delivery means—should be adopted by the regulator.162 In fact, in past years many negotiating proposals have stressed the need to consider the coverage of ICT-related commitments.163 Issues mentioned, among others, mainly concerned digital convergence, the blurring distinction between telecom, computer and audiovisual services, and the integration of the ICT

156. First Oral Statement of the U.S., China-Audiovisual Services, supra note 77, ¶ 54.
157. Id.
160. Id.
163. Council for Trade in Servs., Information Note by the Secretariat, ¶ 46, Doc. JOB(03)/208 (Sept. 26, 2005).
industry. The EU approach, for example, is designed to impact neutrally on different business models and technologies and to provide a way forward that will be able to deal with future technologies, particularly those involving convergence, especially to deal with ambiguities arising from convergence and rapid development of ICT market.

The Panel and the Appellate Body offered no response to those arguments regarding the principle of technological neutrality. It is apparent, however, that the Appellate Body's reasoning in China-Audiovisual Services on the basis of the notion of the "generic terms" is conceptually linked and theoretically relevant to the principle of technological neutrality. The United States and the Appellate Body have produced two closely linked legal arguments, but the Appellate Body just missed an opportunity to elaborate on the principle of technological neutrality. I am of the view that the Appellate Body's reasoning on the so-called "sufficiently generic terms" and the US position on the principle of "technological neutrality" can be mutually supportive and reinforcing. WTO Members and the Appellate Body must seriously consider ways to integrate the principle of "technological neutrality" into the WTO jurisprudence.

Conclusion

Information technology is eliminating historical differences between devices and network platforms, as well as blurring the lines between physical networks and the service providers that use those networks. EC-Computer Equipment, EC-IT Products, and China-Audiovisual Services offer a creative space for treaty interpretation considering the digital convergence trend.

The interpretation of schedules has been the subject of several panel and Appellate Body reports in recent years, and one may anticipate that ICT-related schedules will increasingly be challenged before the DSB. The recent decisions of the panels and Appellate Body in EC-IT Products and

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165. Special Session of the Council for Trade in Services, Communication from the European Communities: Classification in the Telecom Sector Under the WTO-GATS Framework, Docs. TN/S/W/27, S/CSC/W/44 (Feb. 10, 2005); see also Council for Trade in Services, Information Note by the Secretariat, supra note 163.
166. Peng, Trade in Telecommunications Services: Doha and Beyond, supra note 6, at 302-03.
167. Id.
China-Audiovisual Services may become significant leading cases—and it is highly likely that the WTO case law will be built incrementally upon them. Given the potentially far-reaching consequences of the panels/Appellate Body interpretation, one would expect that they presented a well-reasoned legal basis.

I conclude that the Panel appropriately recognized in EC-IT Products that the ITA is not relevant in determining the object and purpose of the WTO Agreement and therefore the complainants’ overbroad interpretative approach may compromise the legal certainty and predictability of tariff concessions. The Panel’s finding is remarkable in that it resolved an ongoing discussion on whether the objectives of the ITA participants of having participants’ tariff regimes evolve in a manner that “enhances market access for information technology products” can be considered a basis for determining the object and purpose of the GATT 1994. Nevertheless, the Panel should have fully elaborated upon the question of in what situation and to what extent can the “state of technology” that existed at the time of the negotiations be relevant to determining the scope of the commitments.

I also conclude that two aspects of the Appellate Body’s decision in China-Audiovisual Services have significant implications for the question of how to interpret schedules of commitments in this rapidly changing digital era. First, despite the lack of legal reasoning, the Appellate Body took a brave but necessary position on the issue of whether the definition of “sound recording distribution services” evolves over time. Secondly, the Appellate Body clarified that the fact that a service was technically feasible and commercially viable at the time of a Member’s WTO accession does not necessarily mean that that Member’s GATS commitments include that service. As the Appellate Body’s view alone is not a satisfactory basis for such an important holding, this article suggests that the conclusion ought to be supported in light of the principle of “technological neutrality.”