

## THE UN PRINCIPLES ON REMOTE SENSING AND THE GATS: CONFLICTS OR PEACEFUL CO-EXISTENCE?

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### *Abstract*

*Commercial remote sensing with satellite imagery has evolved to be a freely traded service, individually owned and universally sold via Internet as e.g. Google Earth. Since providing such imagery via Internet can be seen as a service in the sense of Art. I:3 (b) of the General Agreement on Trade in Services (GATS) the trade with such internet services is governed by the general obligations and the specific commitments of the GATS. In this context the question arises of how to reconcile the WTO ideas of liberalization of international trade with the UN Principles Relating to Remote Sensing of 1986. Concretely, the problem of the rights of the sensed state (Principle IV) and the GATS obligation to grant market access with possible exceptions jumps out at the legal observer. The paper suggests that as the law stands at the moment the corpus iuris spatialis shall not impede the free international services trade but space law interests can be taken into account via GATS provisions.*

## I. Introduction<sup>1</sup>

When they look at the Statute of Liberty from above or fly over the skyline of Sydney, only few users of Google Earth, the virtual globe program that offers satellite images of the earth, will be aware that this comfortable service raises questions of international space law. And even for the international lawyer it may not be apparent from the outset where the connecting element to space law might lie.

When we have a look back to the beginnings, the driving force of space law as a field of international law was space exploration<sup>2</sup> with nobody else but the states as actors and subjects of space law.<sup>3</sup> After the United Nations (UN) General Assembly had started to deal with outer space in several UN General Assembly resolutions highlighting the common interest of all mankind as the fundamental basis for space exploration,<sup>4</sup> further negotiations paved the way in the 1960ies and 1970ies for the adoption of the five space treaties, including apart from agreements on several special topics<sup>5</sup> the treaty on principles governing the activities of States in the exploration and use of outer

space, including the moon and other celestial bodies (Outer Space Treaty, OST).<sup>6</sup> Only in 1986, the UN Principles Relating to Remote Sensing of the Earth from Outer Space<sup>7</sup> (UN Principles) were adopted as a resolution by the UN General Assembly. In those times there was no general awareness of a potential future commercial character of space activities and the possible applicability of world trade rules to such activities. While at the time of adoption of the UN Principles the GATT 1947 regulated only the trade in goods, at the beginning of 1995 the WTO Agreement and – as Annex 1 b) to it – the General Agreement on Trade in Services (GATS)<sup>8</sup> came into force. The GATS covers a wide range of services some of which can also be provided by taking advantage of space activities. The principles which form the heart of the WTO legal order differ, however, in part considerably from the UN Principles. As its preamble clarifies, the GATS aims at an expansion of trade in services under the condition of progressive liberalization and as a means of promoting the economic growth<sup>9</sup>, while the UN Principles say that remote sensing activities shall be carried out for the benefit and in the interests of all countries, on the basis of equality and with respect for the legitimate rights and interests of the sensed State.<sup>10</sup> Thus, while trade law pursues a competitive approach, space law rather follows the idea of cooperation and benefit sharing.

Using the example of Google Earth, an internet service offering satellite images,

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<sup>2</sup> Nicolas Mateesco Matte, Space Law, in: Rudolf Bernhardt, Encyclopedia of Public International Law, Vol. VI/2, Amsterdam, North-Holland, 1992, p 552.

<sup>3</sup> Manfred Lachs, The international law of outer space, Recueil des Cours, Vol. 113 (1964-III), A. W. Sijthoff, Leyden, 1966, p. 68.

<sup>4</sup> Nicolas Mateesco Matte, p 552.

<sup>5</sup> These topics included the rescue of astronauts, liability for damages caused by space objects, registration of space objects and the activities on the moon.

<sup>6</sup> 610 U.N.T.S. 205; 6 I.L.M. 386.

<sup>7</sup> A/RES/41/65 of 3 December 1986.

<sup>8</sup> 1869 U.N.T.S. 183; 33 I.L.M. 1167.

<sup>9</sup> Para. 2 of the Preamble to the GATS.

<sup>10</sup> Principle IV of the UN Principles.

the paper examines potential discrepancies of the GATS regime with space law and possible options for a reconciliation of the classical goals of space law with the regime on international trade.

The paper will start with a short characterization of the main ideas and core contents of the UN Principles and the GATS respectively (II. 1.) and will proceed with the examination of the applicability of these regimes to Google Earth (II. 2.) in order to facilitate an understanding of potential discrepancies that could arise between these two regimes (II. 3.) before solutions for such discrepancies are assessed (II. 4.) and conclusions are drawn (III.).

## II. The Main Ideas of the UN Principles and the GATS and The Application of their Rules to the Case Google Earth – India

### 1. General Characterization of the Main Ideas of the UN Principles and the GATS

#### a) The Main Characteristics of the UN Principles

One of the characteristics of interest for this paper laid down in Principle V of the UN Principles takes up the idea of **international cooperation** and elaborates on it by stating that states carrying out remote sensing activities shall promote international cooperation and make available to other States opportunities for participation based on equitable and mutually acceptable terms. This concept of commonality and

mutuality in remote sensing activities is laid down more generally in Principle II which says that remote sensing activities shall be carried out **for the benefit and in the interest of all countries**. It is confirmed as a general principle of space law by the reference taken in Principle IV to the Outer Space Treaty, which in Art. I says that outer space shall be the province of all mankind.

#### b) The Main Characteristics of the GATS

In contrast to the UN Principles, according to Recital 2 of its Preamble the GATS strives for the **expansion of trade** in services. This shall happen under conditions of **transparency** and progressive **liberalization**. This liberalization shall experience ever higher levels through further multilateral negotiations aimed at promoting the interests of all participants (Recital 3). Also, **competition** shall be ensured.<sup>11</sup> One of the crucial provisions of the GATS and the one of interest for this paper is Art. XVI GATS on market access as the most important rule for trade liberalization.

### 2. The Applicability of the Space Law and the GATS Rules to Google Earth

Discrepancies between the *corpus iuris spatialis* and the WTO rules of the GATS can only arise if Google Earth falls in the scope of both legal regimes.

#### a) Characterization of Google Earth

Google Earth is an internet program which creates an online 3-D globe by

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<sup>11</sup> See Art. XVII:3 GATS.

streaming in commercial satellite images of the earth stored on a server.<sup>12</sup> The end-user can view his/her house, fly over the skyline of Manhattan, search for schools, restaurants, hotels and plan driving routes.<sup>13</sup> Enhanced services include, for example, risk management information illustrated with relation to a specific point in the landscape for architects and real estate agents who want to build houses and sell real estate.<sup>14</sup> The advanced services, partly including a higher resolution of the images offered, are sold on subscription basis.

#### b) The Applicability of the GATS to Google Earth

For the application of the GATS to Google Earth, the offer of satellite images to a user for subscription via internet as well as possible national measures which try to block such an offer must fall in the scope of the GATS: According to its Art. I:1 the GATS applies to “measures by Members affecting trade in services.” Such measures are defined broadly<sup>15</sup> and shall include, *inter alia*, measures in respect of the purchase, payment or use of a service.<sup>16</sup> The notion “affecting’ trade in services” is also to be understood in a broad sense<sup>17</sup> and includes domestic measures, such as laws or regulations,

<sup>12</sup> E. Ratliff, *The Whole Earth, Cataloged*, *Wired* 15 (2007), p 154-157.

<sup>13</sup> For further descriptions of possible usages, see <http://earth.google.com>.

<sup>14</sup> *Ibid.*

<sup>15</sup> See Panel Report, *US – Gambling*, WT/DS285/R, para. 6.172.

<sup>16</sup> Art. XXVIII (c) (1) GATS.

<sup>17</sup> See Appellate Body Report, *EC – Bananas III*, WT/DS27/AB/R, para. 220.

which directly or indirectly<sup>18</sup> regulate trade in services. “Trade in services” is defined in Art. I:2 GATS by a catalogue of four different modes of supply, *i.e.* cross-border supply (Art. I:2 (a)), consumption abroad (Art. I:2 (b)), commercial presence (Art. I:2 (c)) and presence of natural persons (Art. I:2 (d)). Cross-border supply is the supply of a service from the territory of one WTO Member into the territory of any other WTO Member. Whenever the American service supplier of Google Earth sells the right to use this service via internet to a customer in India, the respective data goes from the territory of the USA “cross-border” into the territory of India. The term “services” includes any service in any sector except services supplied in the exercise of governmental authority.<sup>19</sup> Thus, the offer of a private company of a virtual globe patched with satellite images which can be used via internet as a map with authentic views of the earth surface is a “service” in the sense of the GATS.

The “sector” of a service depends on the autonomous definition of the WTO Member for the purposes of its list of specific commitments in relation to which market access obligations arise.<sup>20</sup> As far as a WTO Member undertakes the commitment to grant market access to foreign services and service suppliers, the sectors and modes of supply laid down in this schedule indicate the services in relation to which the respective WTO Member is obliged to grant market access. For reasons of clarity and uniformity, most WTO Members opt for sectors laid down in the

<sup>18</sup> See Panel Report, *EC – Bananas III*, WT/DS27/R/MEX, para. 7.285.

<sup>19</sup> Art. I:3 (b) GATS.

<sup>20</sup> See Art. XX:1 GATS.

Services Sectoral Classification List.<sup>21</sup> Sub-sector 2. C. h) of this list is named “Electronic mail” and includes also network and related services (including software) necessary to access information in databases (so-called value-added network services).<sup>22</sup> Google keeps software necessary to use the Google Earth database of satellite images composed to form a 3-D globe usable for mapping and exploring the earth. This constitutes a service necessary to access information in databases in the sense of sub-sector 2. C. h).

#### c) The Applicability of the UN Principles to Google Earth

The UN Principles are “Principles relating to Remote Sensing of the Earth from Outer Space”. Therefore, their scope depends on the definition of “remote sensing”. The ordinary meaning of this notion is ‘the scanning of the earth by satellite in order to obtain information about it’<sup>23</sup> which does not indicate a specific purpose of such scanning. Principle I (a), however, defines **remote sensing** as the sensing of the Earth’s surface from space by making use of the properties of electromagnetic waves emitted, reflected

or diffracted by the sensed objects, for the purpose of improving natural resources management, land use and the protection of the environment. Thus, in contrast to the ordinary meaning of remote sensing, for the purpose of the UN Principles the scope is narrowed down to improving natural resources management, land use and environmental protection.

This assessment shows that the UN Principles are inapplicable to Google Earth since this service provides images of the earth as information database, to be used as ordinary maps or for locating shops, restaurants etc. These purposes do not correspond to the purposes of the UN Principles, i.e. natural resource management, land use and environmental protection.

This result makes clear that, as far as commercial remote sensing is concerned, the UN Principles do not provide an effective safeguard for the classical goals of space law, *i.e.* cooperation and the use of outer space in the interest of all countries.

#### d) The Applicability of Art. IX Outer Space Treaty to Google Earth

The inapplicability of the UN Principles as the special rules on remote sensing leads to the question whether the main instrument of international space law, the Outer Space Treaty, applies. In contrast to the UN Principles, OST is an international treaty with binding provisions.<sup>24</sup> It applies to all activities of states in the exploration and use of outer space and is not limited to the purpose of

<sup>21</sup> Group of Negotiations on Services, Uruguay Round, Services Sectoral Classification List, Note by the Secretariat, MTN.GNS/W/120, 10 July 1997.

<sup>22</sup> This more detailed content of “Electronic mail” is laid down in the United Nations Central Product Classification List, United Nations (2002): Central Product Classification (CPC): Version 1.1, Department of Economic and Social Affairs, Statistical Papers, Series M, No.77, Ver. 1.1, ESA/STAT/SER.M/77/Ver.1.1, New York: United Nations.

<sup>23</sup> D. Thompson (ed.), *The Concise Oxford Dictionary of Current English*, 9<sup>th</sup> ed. 1995.

<sup>24</sup> Art. 26 of the Vienna Convention on the Law of Treaties (United Nations Treaty Series, Vol. 1155, p 331; International Legal Materials, Vol. 8, p 679).

improving natural resources management, land use and the protection of the environment.<sup>25</sup> Therefore, it also applies to remote sensing undertaken for commercial uses as an activity in the use of outer space.

Art. IX of the OST says that in the exploration and use of outer space the state parties shall conduct all their activities with due regard to the corresponding interests of all other state parties to the OST. Art. IX OST thus pursues similar goals as Principle IV of the non-binding UN Resolution on remote sensing. The OST is, however, only a framework agreement.<sup>26</sup> The enforcement of its principles is up to the state parties themselves. There are no international control mechanisms.<sup>27</sup> National interests militating against remote sensing activities therefore lack so far an effective enforcement mechanism under international space law.

It is thus worthwhile looking at the WTO context to see if national interests of the sensed state could perhaps be pursued there more effectively.

### 3. Discrepancies Between Space Law and the GATS and Possible Solutions

Before we speak about discrepancies, we should recall that space law does not *per se* prohibit the commercial use of outer space<sup>28</sup>: That the outer space shall be

<sup>25</sup> See, for example, Art. I of the Outer Space Treaty.

<sup>26</sup> R. Wolfrum in G. Dahm, J. Delbrück, R. Wolfrum, *Völkerrecht*, Vol. I/2, 2nd edition, De Gruyter, 2002, p 440.

<sup>27</sup> *Ibid.*, p 441.

<sup>28</sup> Rüdiger Wolfrum, *Die Internationalisierung staatsfreier Räume*, Springer, Berlin etc., 1984, p 269.

free for exploration and use by all States is laid down in the very first article of the Outer Space Treaty. Although the commercial use of outer space is thus not objected by the UN Principles and the OST, the ideas of this only explicit international document on remote sensing and also of Art. IX OST might be contradictory to the GATS interests in some cases.<sup>29</sup>

The paper confines itself to look at one of the most obvious examples, which in the past in fact has materialized already on several occasions, *inter alia*, with respect to Google Earth services in India.

#### a) Market Access (Art. XVI GATS) Versus the Interests of the Other State Parties to the OST (Art. IX OST)

Last year, India complained that high-resolution images of her President's residence, of the armed forces headquarters, of sensitive nuclear installations and strategic defence facilities shown on Google Earth posed a danger to national security.<sup>30</sup> Officials argued that these high-resolution images could be misused by terrorists.<sup>31</sup> Both India and the United States where Google, Inc. is based are WTO Members.<sup>32</sup>

Under the GATS, in order to be obliged to grant **market access** also to such

<sup>29</sup> Remote sensing services available to everybody also trigger various problems of human rights protection, especially with regard to the right to privacy.

<sup>30</sup> The Times of India, 3 April 2006.

<sup>31</sup> The Times of India, 10 March 2006.

<sup>32</sup> See the list of Members and Observers on the WTO Website at [http://www.wto.org/english/thewto\\_e/whatis\\_e/tif\\_e/org6\\_e.htm](http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm).

Google Earth services, the respective Member must have undertaken a specific commitment in its schedule. In the case of Google Earth services this is a commitment under 2. C. h) as seen above. **India has undertaken such a commitment** in its service schedule.<sup>33</sup> It is thus bound to grant Google Earth services coming from a US service supplier cross-border and showing these sensitive places market access to the Indian market for internet databases. In respect of cross-border supply, India has inscribed this obligation to grant market access in its list without reserving any limitations.

This obligation to grant market access to security sensitive images could conflict with Art. IX, which, *inter alia*, says that in the exploration and use of outer space the state parties shall conduct all their activities with due regard to the corresponding interests of all other state parties to the OST. National security and the fight against terrorism would seem to be the prime example of a legitimate interest of the sensed state. Both India and the United States are parties to the OST.<sup>34</sup>

How could this interest be reconciled with the market access obligation under the GATS? Art. IX OST is part of a binding international treaty just as Art. XVI of the GATS. But it is important to note that we do not talk here about a conflict of treaties (GATS and OST) in the classical sense of international law since a strict notion of conflicts between treaties implies that both treaties cannot

<sup>33</sup> India, Schedule of Specific Commitments, GATS/SC/42, 15 April 1994, p 9.

<sup>34</sup> See for the status of the space law agreements: [http://www.unoosa.org/pdf/publications/ST\\_SPA\\_CE\\_11\\_Rev1\\_Add1\\_Rev1E.pdf](http://www.unoosa.org/pdf/publications/ST_SPA_CE_11_Rev1_Add1_Rev1E.pdf)

be applied simultaneously.<sup>35</sup> In our case, however, the aim of the one treaty, i.e. to respect the interests of the sensed state, could be pursued through the application of the other: The GATS provides for exceptions from its obligations in case of several specific situations. Art. XIV GATS regulating the General Exceptions and Art. XIV<sup>bis</sup> GATS providing for Security Exceptions are the most prominent exceptions provisions.<sup>36</sup> By means of these exceptions clauses, the space law interests could be taken into account.

#### b) Effective Enforcement of Space Law Interests via the Exception Clause of the GATS

Enforcing space law via the GATS requires that the security concerns of India can be seen as making up an exception in the sense of the exception clauses of the GATS. National measures by India impeding market access of Google's services could take, for example, the form of criminalizing the provision of Google Earth services which would constitute a "zero quota" for such services in the sense of Art. XVI:2 (a) and (c) GATS.<sup>37</sup> Speaking about a ban of Google Earth pictures of public Indian buildings and sensitive defence installations, one seems to be directed to the exception clause of Art. XIV<sup>bis</sup> GATS dealing with "security exceptions". Art. XIV<sup>bis</sup>:1 (a)

<sup>35</sup> N. Matz-Lück, *Treaties, Conflicts between*, in: R. Wolfrum, *Encyclopedia of Public International Law*, 2007 (*forthcoming*).

<sup>36</sup> Apart from these, there are exceptions justified under Art. XII to safeguard the balance of payments and Art. XIII in the context of government procurement.

<sup>37</sup> See Appellate Body Report, *US – Gambling*, WT/DS285/AB/R, para. 227.

GATS, which is the only paragraph of the provision that seems to fit, reads: „Nothing in this Agreement shall be construed to require any Member to furnish any information, the disclosure of which it considers contrary to its essential security interest.” The problem with Google Earth is that India is not required to furnish these pictures (although it considers their disclosure to the general public contrary to its essential security interests) since the pictures are already in the possession of Google Earth. Therefore, this exception does not apply by its wording. A systematic look at Art. XIV<sup>bis</sup>:1 (b) GATS shows that there are also exceptions that allow for taking *positive* action in order to protect essential security interests. But they are limited to specific purposes which do not apply here.<sup>38</sup> Therefore, Art. XIV<sup>bis</sup> GATS does not free India from her obligation to grant market access to Google Earth services.

Art. XIV GATS dealing with general exceptions could be applicable. Art. XIV (a) GATS says that Members are not prevented from taking measures “necessary to protect public morals or to maintain public order.” “Public morals” is to be understood as including standards of right and wrong conduct maintained by or on behalf of a community or nation.<sup>39</sup> This alternative does not apply to the case of Google Earth pictures/India since there security instead of morals is at stake. “Public order” refers to the preservation of the

<sup>38</sup> Such as the protection of security interests relating to fissionable and fusionable materials (Art. XIV<sup>bis</sup>:1 (b)(ii)) or actions in pursuance of obligations under the United Nations Charter (Art. XIV:2).

<sup>39</sup> Report of the Panel, *US – Gambling*, WT/DS285/R, para. 6.465.

fundamental interests of a society, as reflected in public policy and law.<sup>40</sup> These fundamental interests can relate, *inter alia*, to standards of law, security and morality.<sup>41</sup> Although ‘security’ would seem to be the appropriate fundamental interest in case of Google Earth pictures of official buildings and defence facilities, it was rightfully pointed out that the WTO Panel’s reference to standards of security must not lead to the misapprehension that the public order exception would also cover national security interests which are – as seen above - the subject of Art. XIV<sup>bis</sup> GATS.<sup>42</sup> Only societal interests are covered by Art. XIV:1 (a) GATS.<sup>43</sup> Indian authorities mentioned, however, not only the general concern about national security interests but also the possible misuse of the pictures by terrorists. Such a danger of terrorist use must be seen as relating to the society as such.<sup>44</sup>

In case of Art. XIV GATS, after the identification of an appropriate exception a necessity test (“necessary to protect”) must be conducted.<sup>45</sup> In a

<sup>40</sup> *Ibid.*, para. 6.467.

<sup>41</sup> *Ibid.*

<sup>42</sup> T. Cottier, P. Delimatsis, N. Diebold, Art. XIV GATS, in: R. Wolfrum/P.-T. Stoll/C. Feinäugle (eds), *Max Planck Commentaries on World Trade Law, WTO – Trade in Services*, Vol. 6, Martinus Nijhoff Publishers, Leiden, Boston, 2008 (forthcoming), para. 22.

<sup>43</sup> Krajewski, *National Regulation and Trade Liberalization in Services*, Kluwer, The Hague, 2003, p 158.

<sup>44</sup> A justification based on Art. XIV:1 (b) GATS – „measures necessary to protect human, animal or plant life or health“ – may be more difficult to argue since Google’s provision of the pictures as such does not in itself directly endanger life or health of people.

<sup>45</sup> See for details T. Cottier, P. Delimatsis, N. Diebold, *supra* note 41, paras 55 *et seq.*



process of balancing interests, the challenged measure must be found to be crucial for the achievement of the policy goal pursued.<sup>46</sup> In the case of India the possible prevention of a terrorist attack and the prospect to save many lives will militate for a justification of respective measures due to the considerable weight of these interests.<sup>47</sup> In addition to that, the preconditions of the chapeau of Art. XIV, i.e. that there is not arbitrary or unjustifiable discrimination between countries with like conditions and no disguised restriction on trade in services, must be fulfilled.

Summing up, India may invoke in the case of Google Earth showing pictures of Indian official buildings and defence facilities Art. XIV:1 (a) GATS as a justification for blocking market access by criminalizing the provision of such services.

### III. Conclusions

After the examination of the services of Google Earth offering satellite pictures of the earth in light of Indian concerns about picture misuse by terrorists under space and WTO law, the following conclusions can be drawn:

Since the UN Principles were drafted at a time when commercial remote sensing had not yet surfaced as a major economic interest, these principles are not applicable to commercial remote sensing and therefore offer no safeguard

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<sup>46</sup> See T. Cottier, P. Delimatsis, N. Diebold, *supra* note 41, para. 56.

<sup>47</sup> It must be admitted, however, that national measures by India are limited to the Indian territory whereas international terrorism may operate from abroad. Blocking market access may, however, lead to a general blurring of the contentious pictures by Google as happened in the past.

for the interests laid down in space law on remote sensing (especially in Principle IV concerning the legitimate rights and interests of the sensed state.) Art. IX OST stipulating due regard of the nations conducting space activities to the interests of all other states parties is applicable. Nevertheless, there is no classical “conflict of treaties” between the GATS (with its market access obligation) and the OST (with its obligation to respect the interests of the sensed state). Rather, the GATS itself offers by means of its exception clause a mechanism that allows to take into account the sensed states’ interests which are protected by the OST. Given the fact that the OST is only a framework convention with weak enforcement mechanisms, applying the GATS can be a more effective means to enforce interests protected by space law. A procedural advantage of this solution is that the state that wants to pursue its interest does not have to invoke this interest but the state seeking market access whose services are blocked will have to initiate dispute settlement proceedings challenging the measures taken by the former state that allegedly hinder market access.

De lege ferenda, the space law community should think about solutions of how to cope with the growing market of commercialized remote sensing data services. In this regard, the private companies’ goals but also the interests of the sensed states must be taken into account. As one approach, one could try and tie up to existing structures by amending the UN Principles on remote sensing and broadening their scope. Even if the international community could agree on that, however, it would still be necessary to lay down the rules in a binding instrument with a functioning

enforcement mechanism. As long as there is no consensus on such a tailor-made solution, in cases such as Google Earth there is at least one effective

means of opposing the interests of the sensed state known from space law to the trading interests of the sensing state via the GATS.

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