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About the New PCA Rules and Their Application to Satellite Communication Disputes

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Abstract

In 2011 the PCA Optional Rules for Arbitration of Disputes Relating to Outer Space Activities were adopted. The present contribution addresses the possible relevance of these new rules for disputes regarding international satellite communication, noting the existence of various dispute settlement regimes already available and analyzing their respective usefulness for such international satellite communications disputes.

1. Introduction

This contribution addresses the application of a new international dispute settlement system—the Permanent Court of Arbitration (PCA)¹ 2011 Optional Rules for Arbitration of Disputes Relating to Outer Space Activities,² or “PCA Rules on Outer Space Disputes”—to international satellite communications. Satellite communications, as the most commercialized, largest, and most down-to-earth among the various applications of outer space activities, provided a main rationale for establishing this new system in the first place.³ Satellite communications for the present purpose could be defined as the totality of hardware, software, and operations offering telecommunications facilities and services fundamentally making use of satellites in outer space to customers.

While dispute settlement in the international arena is much older than satellite communications, and satellite communications in turn much older than the new PCA Rules on

Outer Space Disputes, the major question to be asked here is: whence the necessity to establish such a new mechanism, noting that already *prima facie* a number of existing dispute settlement systems would be available—as discussed further below in greater detail. The answer to that question should start from the fundamental assessment that satellite communications is one of the most multifaceted sectors of the global economy.

2. Satellite Communications and Dispute Settlement

First, the above characterization applies to the physical infrastructure which allows satellite communications to take place, and to do so across the entire globe: it comprises both (tangible) terrestrial and (tangible) space hardware, communicating to each other by way of (intangible) radio waves as driven by extended (intangible) software and protocols. While much of the hardware is placed on Earth, other parts are to be found in less easily accessible areas—and of course the satellites themselves, key elements of that infrastructure, function in the essentially inaccessible area of outer space.

Legally speaking, this already means that many different national laws and jurisdictions are involved, applicable to the hardware present on the territory of the states concerned (ranging from ground stations to individual user communication devices), the software and protocols developed for those areas, and the radio waves to the extent “traversing” such jurisdictions.⁴

In addition, the use of outer space for both satellites and traversing radio waves to and from them means that a “global commons” is also involved, that is an area where individual state jurisdiction does not apply on a territorial basis, and the limitations to the basic freedom to act at a comprehensive level are and can only be set by international law.⁵ While obviously that raises the issue of where the air spaces subject to territorial sovereignty, vertically speaking, give way to the international area of outer space, that issue will not be discussed here.⁶

Second, due to the mix of military, political, social, economic, and commercial reasons for undertaking satellite communications, it is a sector where not only many governments but also a handful of intergovernmental operators—notably as of today INTERSPUTNIK⁷ and ARABSAT⁸—are active, as well as a host of private companies. Among the latter, moreover, three of the most important evolved from intergovernmental structures and still operate under the sway of an intergovernmental supervisor: Intelsat,⁹ Inmarsat,¹⁰ and Eutelsat.¹¹

This in turn means, in legal terms, that the legal aspects—and hence potential disputes—can involve any or all fields within public international law, national administrative law, civil and sometimes even criminal law, as well as private international law and contract law. Any ideal dispute settlement mechanism should be able to handle effectively and properly all such aspects within one coherent system. While, for instance, the aforementioned intergovernmental and formerly intergovernmental satellite operators under their constitutive documents have created their own dispute settlement systems, those can be used *only* for disputes between the organization and/or member states and moreover *only* for disputes concerning the activities conducted in the context of the organization and legal rights and obligations following therefrom.¹²

Third, as a consequence of the varied interests and legal characteristics of the stakeholders, also from a practical perspective many various aspects of the activities involved might be at issue in a dispute needing to be settled by legal means. These aspects range from the more technical and operational ones such as the technologies involved and the proper usage of radio frequencies, to trade and commercial issues of the right to provide or receive services, to political and security issues of satellite communications as critical infrastructure and, in many cases, involving high-level dual-use technology, to social aspects such as the provision of “public services.”

In the legal realm this also translates into a large variety of uncoordinated legal regimes being potentially of import on the operations in terms of subject matter. Whereas for example on the international level, the International Telecommunication Union (ITU)¹³ provides the legal framework for the coordination of usage of radio frequencies, the World Trade Organization (WTO)¹⁴ does so with respect to the provision of services, while there is no globally binding regime regulating the traffic of dual-use goods as far as relevant for satellite communications—that remains essentially a matter of national export control regimes.¹⁵

In sum, it will be clear that this large kaleidoscope of applicable legal regimes, potential players and stakeholders, interests and subject matter potentially subject to dispute, in itself will make disputes so much more likely, substantive, and in need of solution. This once again poses the fundamental question of whether any existing mechanism for dispute settlement (of which some of the main relevant ones will be discussed below) would adequately allow coverage of all disputes thinkable—noting of course that in the overwhelming majority of instances, common sense, negotiation, and diplomacy suffice to preclude disputes from requiring recourse to properly legal dispute settlement systems in the first place.

3. Existing Legal Dispute Settlement Mechanisms and their Potential Relevance for Satellite Communication Disputes

3.1. Introduction

In the following overview, attention will be paid only to those existing dispute settlement mechanisms which are of a decidedly legal character—that is, basically, those of judicial settlement and arbitration. While this is not to deny the validity and usefulness of many nonjudicial dispute settlement mechanisms, especially in the international community, such as diplomacy, mediation, and conciliation,¹⁶ the absence of the possibility to arrive at a binding settlement and a third party in the end imposing such settlement, a key common element in those mechanisms, causes them to be of a fundamentally different character. Most importantly, also, in those mechanisms predominantly legal analyses and considerations could and often do take a backseat to other concerns.

3.2. The International Court of Justice (ICJ)

The International Court of Justice (ICJ), often nicknamed the “World Court,” is the primary judicial organ of the United Nations and operates on the basis of a Statute which is an integral annex to the UN Charter; thus, all UN member states are *ipso facto* parties to that Statute.¹⁷ It consists of fifteen judges chosen from different nationalities, including one

from each of the five permanent members of the UN Security Council.¹⁸ The ICJ sits in The Hague, The Netherlands, and can issue both binding judgments in disputes and Advisory Opinions (which obviously are *not* of a legally binding nature).¹⁹

For satellite communications as sketched above, however, the ICJ mechanism presents a number of “shortcomings” from the perspective of an ideal mechanism able to handle *all* relevant disputes in a single coherent and effective fashion.

First, in terms of actors or stakeholders as potential disputants, the route to the ICJ is only formally open for states.²⁰ While international organizations may provide information relevant in a case before the Court²¹—as well as request for an Advisory Opinion, if properly authorized²²—they cannot themselves instigate a procedure or be a party to such a procedure in its own right. Private entities (such as currently most satellite operators are) even more fully depend on a particular state (usually the state of their nationality), more precisely first its willingness to undertake such an action of “diplomatic protection” and second its *jus standi*, meaning that the private company has complied with the prior requirement of “exhaustion of local remedies.”²³

Second, though all UN member states, and thereby almost all existing states, are parties to the ICJ Statute, the ICJ is only able to adjudicate disputes between states which have, one way or another, accepted ICJ jurisdiction. Effectively, there are four generally recognized ways in which such acceptance can be shaped.

By way of the first two scenarios, “[t]he jurisdiction of the Court comprises all cases which the parties refer to it *and* all matters specially provided for in the Charter of the United Nations or in treaties and conventions in force.”²⁴ In other words, parties to a dispute may at that stage refer that dispute in common agreement, by way of a document usually labeled “*Compromis*,” to the Court, respectively existing treaties may refer to the Court as the (or a) dispute settlement system to be used in case of disputes arising regarding the subject matter of such a treaty.

Under the third scenario, “[t]he states parties to the present Statute may at any time declare that they recognize as compulsory *ipso facto* and without special agreement, in relation to any other state accepting the same obligation, the jurisdiction of the Court in all legal disputes concerning: a. the interpretation of a treaty; b. any question of international law; c. the existence of any fact which, if established, would constitute a breach of an international obligation; d. the nature or extent of the reparation to be made for the breach of an international obligation.”²⁵

The fourth scenario arises where in a given case one party to the dispute addresses substantive matters, as opposed to just questioning the ICJ’s jurisdiction, which is then interpreted as amounting to *de jure* acceptance of that jurisdiction—the so-called *forum prorogatum*.²⁶

Third, in this context major limitations to possibly applicable law exist. The ICJ is charged with adjudicating disputes with a rather broad clause on applicable law—encompassing “a. international conventions, whether general or particular, establishing rules expressly recognized by the contesting states; b. international custom, as evidence of a general practice accepted as law; c. the general principles of law recognized by civilized nations; d. subject to the provisions of Article 59, judicial decisions and the teachings of the

most highly qualified publicists of the various nations, as subsidiary means for the determination of rules of law,"²⁷ and can also in principle decide a case *ex aequo et bono*.²⁸ Yet, for example, national or contract law normally cannot be applied. There is a clear and obvious focus of this Court on public international law, as the "law of nations," which also determines the main legal expertise of the individual members of the Court.²⁹

Fourth, also in another crucial context parties have little autonomy and control over the proceedings: the persons adjudicating the dispute. The fifteen judges of the ICJ are elected without any specific reference to a case or the parties thereto. The only exception is where a party to a dispute does not have a judge of its nationality on the court, in which case it may appoint an *ad hoc* judge.³⁰ While furthermore the possibility exists for the Court to compose—at its discretion, though presumably in close consultation with the parties to the dispute at issue—a chamber for a specific category of cases or even a single case, the members of such a chamber will be constituted from among the fifteen sitting judges.³¹

Fifth, and finally, in view of the more traditional character of state-to-state disputes and the law of nations, the political role of the United Nations of which the ICJ is the primary legal organ, and the focus on overarching public law aspects of any disputes brought before it, there would be a certain risk that expertise with the specific, high-level, and constantly evolving technology at issue in satellite communications would be largely absent with the judges themselves, which almost automatically would require experts to be called upon to explain such technological and operational issues behind any legal dispute.³²

3.3. *The ITU dispute settlement system*

With the ITU, ever since the World Administrative Radio Conference of 1959, being responsible for the international coordination of radio frequency usage by satellite systems and their ground infrastructure,³³ it would make sense to next investigate the extent to which settlement of satellite communications disputes could be achieved within the ITU framework. Indeed, the ITU Constitution and ITU Convention together provide for a few options to use in case a dispute arises.³⁴

First, however, the essence of this system is the potential absence of a binding resolution of a dispute. Thus, "Member States *may* settle their disputes on questions relating to the interpretation or application of this Constitution, of the Convention or of the Administrative Regulations by negotiation, through diplomatic channels, or according to procedures established by bilateral or multilateral treaties concluded between them for the settlement of international disputes, or by any other method mutually agreed upon."³⁵ Then, "[i]f none of these methods of settlement is adopted, any Member State party to a dispute *may* have recourse to arbitration in accordance with the procedure defined in the Convention."³⁶ In the alternative, an "*Optional Protocol on the Compulsory Settlement of Disputes Relating to This Constitution, to the Convention, and to the Administrative Regulations shall be applicable as between Member States parties to that Protocol.*"³⁷ The Protocol essentially amends the procedure of Article 41, but its invocation also establishes an arbitration tribunal.³⁸

Such an explicitly listed multitude of options, including two partly alternative arbitration mechanisms, it seems, would not be very conducive or compelling for parties to arrive

at a binding third-party settlement—or, to put it in other terms, there are too many explicit opportunities for states to dodge the binding settlement of disputes.

A second shortcoming from the perspective of the satellite communication sector as a whole concerns the limitation of access to these mechanisms to states only. This is certainly in line with the traditional character of the ITU as an intergovernmental organization composed of sovereign states³⁹ as further reflected in the ITU role in allotting frequencies to states requesting them, who in turn may assign them to nongovernmental operators.⁴⁰ While recently nonstate actors have become empowered to participate as “Sector Members,”⁴¹ this does not provide them with any voting or other key co-decision-making powers in the context of the ITU governance structure.⁴² Consequently, also, in any dispute to be settled under the mechanisms offered by the ITU treaties, it is one government or another which would have to take up the case of a private operator.

The third major shortcoming concerns almost the mirror-side of the general lack of the ICJ’s expertise in specific technological and operational matters. In view of the orientation of ITU’s role on precisely the latter category, one might question the extent to which any arbitration instigated under Article 41 of the ITU Convention or the Optional Protocol would be sufficiently aware of public international law, political and security, and trade and commercial aspects to comprehensively understand and address all potential angles to a satellite communications dispute.

3.4. The WTO dispute settlement system

Satellite communications increasingly having become a commercial sector with worldwide scope, the next area where relevant disputes might arise would concern that of international trade in goods and (especially) services, and the regime applicable thereto.

The General Agreement on Tariffs and Trade (GATT),⁴³ established in 1947 to progressively break down the international barriers to trade in commodities, already at least in principle could encompass goods and products in the context of satellite communications. More importantly, however, the extension in 1994 of the main principles and rules of the GATT to the service sector by way of the General Agreement on Trade in Services (GATS)⁴⁴ and the establishment of the World Trade Organization (WTO)⁴⁵ as a formal organization to underpin and further promote the aims of GATT and GATS, triggered its application to telecommunications, including satellite communications. This took place in particular as per the establishment of a 1997 agreement on basic telecommunication services,⁴⁶ following the general GATT- and GATS-approach of applying the general regime to specific sectors by way of specific and tailor-made further international agreements.

While the substance of application of GATS/WTO rules to the satellite communication sector effectively depended upon a complex web of individual states’ commitments, the above also meant the dispute settlement system for international trade disputes as per the WTO Agreement now became applicable to satellite communication disputes, to the extent that these concerned international trade aspects of satellite communication services.⁴⁷

In sum, this system consisted of a system of “escalating” dispute settlement mechanisms, starting with consultation and then moving up through panels, the Appellate Body and ultimately a Dispute Settlement Body, where parties however may also decide on arbitration.⁴⁸

This WTO dispute settlement regime essentially “suffers” from the same set of shortcomings as the ITU dispute settlement mechanisms discussed above.

First, it does not (necessarily) give rise to a binding solution imposed by a neutral third party, although it comes rather close by “creating a reverse consensus rule that maintains arbitral or appellate decisions unless a consensus vote rejects them.”⁴⁹ While Annex 2 to the WTO Agreement consistently speaks of “recommendations and rulings”⁵⁰ of the DSB, suggesting the latter would be binding as different from the former, this is nowhere explicitly stated.⁵¹

Second, it does not allow private companies having issues with a particular WTO-devolving regulation or the interpretation, implementation, or application thereof to assert a claim on its own behalf in the framework of the WTO dispute settlement regime.⁵² This is of course not surprising with a view to the character of the WTO as a classical international intergovernmental organization, yet automatically means many important actors and stakeholders in international trade will not have direct access to such dispute settlement procedures—and this analysis also applies squarely to satellite communications.

Third, the WTO in turn is obviously very focused on trade and commercial aspects, and hence expertise in those areas as necessary for dispute settlement will in principle be broadly available. By contrast, however, many potential other angles to a trade or commerce dispute involving satellite communications, such as the technical/operational, politico-security and social approaches, might easily be left out of the considerations or treated insufficiently or incorrectly.

3.5. *The Liability Convention dispute settlement clauses*

The next dispute settlement mechanism to be briefly scrutinized from the perspective of satellite communications concerns the Liability Convention,⁵³ the space treaty dealing with liability for damage caused by space activities. More precisely, it handles damage *caused by a space object*, liability for which is then attributed to the “launching State” —depending upon where the damage occurs, under a regime of absolute liability respectively of fault liability.⁵⁴ While a definition of “space object” is not really provided, there is no doubt that satellites such as used for telecommunications would be covered, and hence that the Liability Convention would be relevant.⁵⁵

The Liability Convention includes provisions for the solution of disputes on relevant cases of damage and liability. To begin with, the victim state should present its claims for damage to the launching state(s) through diplomatic channels.⁵⁶ If however no settlement is arrived at within a year after notification of the claim, the claimant state (or indeed also the defendant state) may have recourse to establishment of a “Claim Commission,” a mechanism which in appearance is very similar to arbitration.⁵⁷ Upon closer view, this mechanism has three fundamental “shortcomings” from the perspective of satellite communications.

First, the scope of the Convention, and thus of the Claims Commission’s competences, is rather limited *ratione materiae*. As already transpires from the above, the Convention’s clauses only deal with damage caused by satellites and liability therefore. This immediately raises a few issues. Issues of accountability broader than that of liability—in particular, that of general “international [state] responsibility for national activities in outer space”⁵⁸—can, if giving rise to international disputes, not be properly solved by this mechanism. This

could refer to, for example, claims that a particular satellite is violating international law prohibitions of inciting racism or war, where no (immediate) damage would be at stake.

The restriction of the Liability Convention's dispute settlement mechanism to cases of damage caused by satellites means that it does not even apply to all imaginable cases of damage occurring in the context of satellite operations. Damage caused independently from the satellites by other elements of the satellite communication system—ground stations and mobile devices, for example—are by definition *not* covered; only the space segment could be implicated.

"Damage" is defined by the Convention as "loss of life, personal injury or other impairment of health; or loss of or damage to property of States or of persons, natural or juridical, or property of international intergovernmental organizations."⁵⁹ This is generally perceived to refer, first, to *physical* damage only, where damage "caused by space objects" is generally interpreted to mean "damage caused by collision with a space object" (excluding for instance damage caused by mere electronic interference⁶⁰), and second, to *direct* physical damage only (excluding indirect damage such as loss of revenues⁶¹). Precisely since cases of electronic interference and commercial loss of revenues are high on the list of concerns of private commercial operators, this is a considerable limitation in the light of current realities.

The second shortcoming is also a familiar one: the Claims Commission mechanism as such is available only to states. Private entities could have any claims asserted only through their state of nationality, subsidiary to the state where the damage might have occurred (presuming cases where the damage was suffered on Earth).⁶²

Intergovernmental organizations may have a—relatively exceptional—possibility to qualify as an equivalent to "state parties" under the Convention if the majority of member states are parties to both the Outer Space Treaty and the Liability Convention,⁶³ but upon closer view this does not rise to the level of autonomous *jus standi* with respect to (establishment of) a Claims Commission.

If, on the one hand, the intergovernmental organization in question qualifies as "launching State" for the purpose of the Convention, a claim for damage may indeed be presented to the organization itself by any victim state. However, if such organization has not paid out within six months the compensation requested, the claimant state has the right to refer to individual member states of the organization (or other "launching States").⁶⁴ Noting the one year-term following diplomatic assertion of the claim before establishment of a Claims Commission could be undertaken,⁶⁵ this effectively means recourse to the mechanism of the Claims Commission is precluded for the organization itself.

If, on the other hand, the intergovernmental organization would qualify as a victim of damage at issue, in spite of its status as a "quasi-party" to the Convention, it would have to rely on one member state or another to assert claims on its behalf, whether by way of diplomatic negotiations or by way of the Claims Commission route.⁶⁶

It has to be said here finally that the Liability Convention itself recognizes that it may not be the most feasible or desirable tool for dispute settlement even within its realm of application—disclaiming any status as exclusive remedy, it explicitly allows for other, national dispute settlement mechanisms and even grants them priority: "Nothing in this Convention shall prevent a State, or natural or juridical persons it might represent, from

pursuing a claim in the courts or administrative tribunals or agencies of a launching State. A State shall not, however, be entitled to present a claim under this Convention in respect of the same damage for which a claim is being pursued in the courts or administrative tribunals or agencies of a launching State or under another international agreement which is binding on the States concerned.”⁶⁷

Also the waiver of the requirement of “exhaustion of local remedies,”⁶⁸ normally imposed as the standard in international law before state-to-state claims are allowed with respect to damage privately suffered, testifies to the desire to not unduly obstruct the possibilities for private entities to obtain compensation for damage suffered. It makes it easier for states to indeed take up the interests of a private operator in such a case—but of course this does not amount to any *jus standi* for the private operator himself with respect to a Claims Commission.

Third, in spite of its appearance as a mechanism of arbitration, judgments of the Claims Commission are not automatically binding. They enjoy that status only if both parties to the dispute at the outset have so agreed, which is not that likely to arise in the highly politicized environment of space activities, including satellite communications⁶⁹; otherwise the decision shall be a “final and recommendatory award, which the parties shall consider in good faith.”⁷⁰

3.6. National dispute settlement systems

Next, a word about national dispute settlement systems. A clear pointer to their potential relevance for satellite communications disputes is already provided for by the aforementioned Liability Convention, as it explicitly refers to such domestic legal dispute settlement mechanisms as an alternative to its own mechanism.⁷¹ Obviously, however, with almost all states in the world being somehow involved in satellite communications it is far beyond the scope of the present paper to address all those domestic dispute settlement systems.

At the same time, this characterization of the sector means that in principle any of the dispute settlement mechanisms which are part of the national legal systems could indeed be implicated; and from an abstract perspective they have some general traits in common which may make them less than ideal to solve most satellite communications disputes.

Essentially, this stems from their character as being a matter of national law. Following sovereignty over national territory, most of the laws enunciated by a state first apply to activities conducted on such territory, and the national court system consequently is entitled to adjudicate disputes on such laws—as much as they would be entitled, subject perhaps to the national private international law regime, to adjudicate disputes on contracts with a substantive connection to that state. Secondly, some national laws may also apply to nationals of the state, regardless of where they were active or concluded their contracts, although both concepts such as *lex re sitae* and the lack of executive competences within another state may stand in the way of actual enforcement—and sometimes give rise to labels of “extraterritorial” (exercise of) jurisdiction.

Still, any settlement of a dispute by such means will almost by definition concentrate on the *national* elements using *national* law and regulation, which may only provide a feasible solution in case the dispute itself is also (almost) exclusively of a *national* nature. Apart

from a range of more *de facto* problems this would entail for any dispute on satellite communications with substantial international aspects, there is one particular legal issue which in turn relates to the large measure of governmental and intergovernmental operations still prevailing in the sector at large—that of sovereign and functional immunities.

If foreign governments were implicated in a dispute before a national judge, they would be likely to raise the bar to jurisdiction of sovereign immunity; even if involved in satellite communications of a predominantly commercial nature, there might be many aspects of a sovereignty-sensitive nature involved.⁷²

Intergovernmental organizations such as INTERSPUTNIK⁷³ and ARABSAT⁷⁴ at least to the extent of their aims, purposes, and operations would similarly enjoy functional immunities, recognized at the very least by their own respective member states. With ITSO,⁷⁵ IMSO,⁷⁶ and EUTELSAT IGO,⁷⁷ the same would apply, though likely in a more intricate fashion since those IGOs mainly perform a supervisory function where the actual satellite operations are conducted by the private Intelsat, Inmarsat, and Eutelsat.

Though strictly speaking this does not concern satellite communications, discussions on liability in the context of satellite navigation have already pointed out that sovereign immunities in the US context may severely limit options for private claimants to be compensated for damage that is the consequence of erroneous or absent GPS signals. Absent specific provisions to the contrary, any claim for public liability against the US government would be inadmissible under sovereign immunity.⁷⁸

By way of exceptions to the rule, precise regulations then exist which provide for circumstances where the sovereign immunity of the US government *is or might be* waived. The relevant US regulations for the present purpose would be the Federal Tort Claims Act,⁷⁹ the Suits in Admiralty Act,⁸⁰ the Foreign Claims Act,⁸¹ and the Military Claims Act.⁸² Generally speaking, it is rather uncertain, however, that either of these acts could be used for the successful assertion of claims regarding GPS failures and consequent damages, and as a result claims for US public liability for GPS might easily fail.⁸³ For example, the Federal Tort Claims Act does not apply in case of “any claim arising in a foreign country.”⁸⁴ Or, the Suits in Admiralty Act applies only if “the accident (1) arose on the high seas or navigable waters of the United States; (2) posed a potential threat to maritime commerce; and (3) was substantially related to traditional maritime activity.”⁸⁵

Moreover, in view of the global application of GPS the problem of non-US citizens claiming for compensation at US courts would remain. From a practical (and political) point of view, such claims would require the claimant to travel to the United States, introduce his claim in English to US courts, possibly hire a US lawyer, and suchlike. There would be no fundamental legal impediment for non-US citizens to do so, but in practice it might turn out to be rather difficult to assert one’s claims. Furthermore, one may consider a claim before a US court against the US government for damage resulting from the usage of signals provided for free not a very promising venue in terms of possible success.

Lastly, it could certainly be doubted whether other governments—which would ultimately be held (at least) responsible for the safety of aviation in their own airspace⁸⁶—would agree to sue in a private capacity within the US legal and jurisdictional order. This obviously was the main reason for such states in the ICAO context to propose a relevant treaty on GNSS liability should be drafted.⁸⁷

It should be mentioned for completeness' sake that if the damage occurs in another jurisdiction than that of the United States, in principle it might be possible to claim for damages against the GPS providers in courts of such jurisdictions. In practice however, apart from political considerations and issues of evidence, already the "option" for the United States not to waive its sovereign immunity would make any such possibility a theoretical one.

While, as said, satellite navigation legal issues play out largely outside of the legal framework for satellite communications properly speaking, there would be sufficient overlap and commonality for the above to be potentially applicable in international satellite communication disputes before a domestic court or other—and thus testify to the complications of doing so.

3.7. *International arbitration*

Many of the shortcomings referred to above are closely related to the essence of a judicial dispute settlement system: a rather inflexible system allowing for very little party autonomy, for example, in key areas as regards involving judges with specific relevant know-how—since courts are never constituted by parties to a particular dispute once that dispute requires settlement by legal means—and the applicable law—which is equally prescribed upfront. When the benefits of this "inflexibility"—such as the stability and coherence in jurisprudence, methodology, and applicable law—are not perceived to outweigh the disadvantages, often international arbitration comes in.

Alongside some other differences, the main distinctive traits as compared to judicial settlement are precisely the possibility for parties to co-decide on the arbitrators that are to decide a case, and to co-determine the applicable law. Most closely related to the PCA Rules on Outer Space Disputes in this respect are the 2010 UNCITRAL Arbitration Rules⁸⁸ and the PCA Rules on Environmental Disputes,⁸⁹ which is also why the PCA Rules on Outer Space Disputes have used those two sets of rules as point of departure.⁹⁰

Even those two sets of rules, however—apart from more generic drawbacks such as the relative lack of stability and coherence referred to above—suffer from a few characteristics which may make them less than optimal for the solution of space law disputes.

The most important is that any arbitration rules (general ones as much as the environmental or other sector-specific ones) would also encounter difficulties in properly reflecting all aspects in the typical mix encountered in the context of space activities: highly public, political, and security-related aspects (much more so than even in the environmental dispute context, let alone the more familiar standard arbitration systems) alongside increasingly commercial and other more mundane aspects, as well as the need, more prominent than in almost any other sector of international relations, to understand technological and operational issues.

Consequently, for example, those other preexisting arbitration regimes would offer little opportunities to ensure confidentiality of information which could be desirable either from a security⁹¹ or from a commercial⁹² perspective. Also the highly desirable option to involve various categories of experts was not considered sufficiently facilitated.⁹³ Nevertheless, both the UNCITRAL Arbitration Rules and the PCA Rules on Environmental Disputes

were used as points of departure for the PCA's initiative to draft special rules for space disputes.

4. The PCA Rules on Outer Space Disputes

4.1 Background and rationale

The PCA Optional Rules for Arbitration of Disputes Relating to Outer Space Activities were adopted on 6 December 2011 during a special session of the PCA Administrative Council of member states—currently numbering 115.⁹⁴ This adoption followed a process of some three years, in which the Secretary-General of the PCA, Mr. Christiaan Kroner, undertook a preliminary assessment of the need and desirability of establishing such a specific set of rules and then established an Advisory Group under the chairmanship of Judge Fausto Pocar to draft such rules for the purpose of presentation to the Administrative Council.

The rationale for establishing this specific set of rules was provided as follows: “These Rules are based on the 2010 UNCITRAL Arbitration Rules with changes in order to: (i) reflect the particular characteristics of disputes having an outer space component involving the use of outer space by States, international organizations, and private entities; (ii) reflect the public international law element that pertains to disputes that may involve States and the use of outer space, and international practice appropriate to such disputes; (iii) indicate the role of the Secretary-General and the International Bureau of the Permanent Court of Arbitration (PCA) at The Hague; (iv) provide freedom for the parties to choose to have an arbitral tribunal of one, three, or five persons; (v) provide for establishment of a specialized list of arbitrators mentioned in article 10 and a list of scientific and technical experts mentioned in article 29 of these Rules; and (vi) provide suggestions for establishing procedures aimed at ensuring confidentiality. The Rules are optional and emphasize flexibility and party autonomy. For example: (i) The Rules, and the services of the Secretary-General and the International Bureau of the PCA, are available to States, international organizations, and private parties; and (ii) The Rules may be used, inter alia, in relation to disputes between two or more States parties to a multilateral agreement relating to the use of or access to outer space concerning the interpretation or application of that agreement. Where arbitrations deal with technical questions, provision is made in article 27 for the submission to the arbitral tribunal of a document agreed to by the parties, summarizing and providing background to any scientific or technical issues that the parties may wish to raise in their memorials or at oral hearings. A model clause that parties may consider inserting in treaties or other agreements to provide for arbitration of future disputes, and a model clause for arbitration of existing disputes are set forth in the annex to these Rules.”⁹⁵

The present contribution does not purport to deal in great detail with the Rules on Outer Space Disputes⁹⁶ but rather highlights the most salient aspects as following from the earlier survey of existing dispute settlement mechanisms as well as the above rationale.

4.2 Fundamental scope of the rules

The first such point concerns the flexibility desired to avoid discussions on whether a dispute on satellite communications would address only the “inspace” aspects (so that for example the Liability Convention’s dispute settlement mechanism could be triggered), only the technical/operational aspects (so that the ITU’s dispute settlement mechanism could be triggered) or only the trade-related aspects (so that the WTO’s dispute settlement mechanism could be triggered).

Here, the PCA Rules leave it completely to the parties to avail themselves of the Rules. The legal basis for the dispute is irrelevant; using the Rules for “disputes between [parties] in respect of a defined legal relationship, whether contractual or not” is dependent solely upon agreement between the two parties involved.⁹⁷ Even more fundamentally: “The characterization of the dispute as relating to outer space is not necessary for jurisdiction where parties have agreed to settle a specific dispute under these Rules.”⁹⁸

Thus, the Rules avoid the difficult issue of what constitutes “space activities”: activities conducted *in* space (whether by humans physically in space or basically guided from Earth), activities *directed at* or *aimed at* space (such as launching activities, which may even fall short of actually entering the area of outer space), and/or activities *dependent* on space activities (such as the sale of remote sensing data or the terrestrial use of satellite navigation). Thereby, it also avoids the difficult discussion on where “outer space,” as an area, begins.⁹⁹

As is quite usual under arbitration rules, agreement by a party to arbitrate automatically means that party waives any immunity from jurisdiction it might otherwise invoke, although a waiver of immunity from execution of any arbitral award must be expressed explicitly.¹⁰⁰ This is a fundamental clause in any arbitration regime which allows *jus standi* for both states and nonstate actors, as otherwise the principled legal equality of parties to a dispute would be fundamentally jeopardized.

Immunity from execution, while also a principled barrier to such legal equality, does require explicit agreement of a state party to a dispute both for practical and for principled reasons. Nevertheless, the assumption is that one way or another a state faced with an award imposing specific obligations, for example, to pay a fine would in good faith abide by such an award even if immunity from execution had not been waived in that particular case. If failure to satisfactorily allow execution of such an award by a state invoking immunity from execution would give rise to serious injustice, there would then be a residual possibility at least in principle for the state of the victimized nonstate party to raise the issue to an international, state-to-state level, and by way of diplomatic protection for example seize the International Court of Justice.¹⁰¹

4.3 Establishment and operation of the tribunal

The PCA Rules also provide for a set of clauses on how the arbitral tribunal is to be established. Noticeably, the PCA Secretary-General shall act as the appointing authority, using the PCA secretariat and its broad experience with international arbitration as the administrative supporting mechanism for organizing the arbitration.¹⁰²

The size of the arbitration panel is another area where maximum flexibility was striven for: while the default option would be three arbitrators, other panel-sizes may also be

opted for with a five-arbitrator panel being mentioned explicitly but no size *a priori* being excluded.¹⁰³ Thus, if the technical, operational or political complexity of a case so warrants, also seven- or nine-member panels could be established.

The PCA Secretary-General provides the fallback option for nominating arbitrators if the parties to the dispute fail to meet the deadlines for making their appointments.¹⁰⁴ The PCA also facilitates the use of the Rules by providing a list of legal experts which qualify and have indicated their willingness to serve as arbitrators—as options for parties to disputes who may not feel comfortable in looking for arbitrators on their own.¹⁰⁵

The PCA Rules contain the “usual” clauses on obligatory disclosures by arbitrators of circumstances potentially inhibiting their impartiality, on possible challenges of arbitrators on such grounds by any of the parties to the dispute, and the procedure for replacement, if necessary.¹⁰⁶

The Rules also provide for a full waiver of the liability of arbitrators and, more extensively, of “any person appointed by the arbitral tribunal” for “any act or omission” connected to arbitration.¹⁰⁷ The addition of other persons than the arbitrators themselves refers in particular to expert witnesses and the confidentiality adviser, the need for which may as argued be particularly prominent in many space activities-related disputes.¹⁰⁸

4.4 Major procedural provisions

With respect to the procedure, also the arbitrators are handed a large measure of discretion, as “the arbitral tribunal may conduct the arbitration in such manner as it considers appropriate, provided that the parties are treated with equality and that at an appropriate stage of the proceedings each party is given a reasonable opportunity of presenting its case.”¹⁰⁹

Similarly with regard to allowing third parties to join the proceedings the arbitrators enjoy the ultimate competence to decide: “The arbitral tribunal may, at the request of any party, allow one or more third persons to be joined in the arbitration as a party provided such person is a party to the arbitration agreement, unless the arbitral tribunal finds, after giving all parties, including the person or persons to be joined, the opportunity to be heard, that joinder should not be permitted because of prejudice to any of those parties. The arbitral tribunal may make a single award or several awards in respect of all parties so involved in the arbitration.”¹¹⁰

The only nondiscretionary precondition for such joinder, the need for the third party to be party to the arbitration agreement, serves as a guarantee—with a view to the potential complexity of cases in terms of potentially afflicted parties, subject matter, and applicable law—that such a third party would also be formally and fully aware of the way the arbitration is going to be handled, and its rights and obligations following from such joinder.

This notably also includes the novelty the Rules on Outer Space Disputes provide as compared to other arbitration mechanisms, giving rise to the concept of the “confidentiality adviser.” Here, a rather special procedure caters for the presumed occasional need to respect confidentiality, exceptionally even secrecy, in the context of commercial or security-sensitive information.

First, a party may call for information to be classified as “confidential.”¹¹¹ The Tribunal then decides on whether such classification would actually be granted, on the assumption that “the absence of special measures of protection [of information requested to be tagged

confidential] in the proceedings would be likely to cause serious harm to the party or parties invoking its confidentiality.”¹¹² It then also decides “under what conditions and to whom the confidential information may in part or in whole be disclosed and shall require any person to whom the confidential information is to be disclosed to sign an appropriate confidentiality undertaking.”¹¹³

In the alternative—and this is the real novelty—the Tribunal may, at the request of either party or also *proprio motu*, appoint a “confidentiality adviser,” an independent expert, “in order to report to it on the basis of the confidential information on specific issues designated by the arbitral tribunal without disclosing the confidential information either to the party from whom the confidential information does not originate or to the arbitral tribunal.”¹¹⁴ This clause walks a thin line between the need to accommodate the supreme interest of one party or the other to keep certain information confidential to such an extent that it determines its willingness to submit to arbitration and the due process requirement that opposing parties should be allowed to have access to information used for making judgmental decisions in particular disputes. Whether the line is so thin as to actually break, is currently a matter of conjecture, and will remain so unless tested in cases invoking the Rules as well as the confidentiality clauses.

4.5 Applicable law

With regard to the applicable law, the Rules provide that “the arbitral tribunal shall apply the law or rules of law designated by the parties as applicable to the substance of the dispute.”¹¹⁵ If no such designation has occurred, the arbitrators are to apply the national and/or international law rules they determine to be appropriate.¹¹⁶ Also deciding “as *amiable compositeur* or *ex aequo et bona*” is an option for the Tribunal only if parties have expressly authorized such a ground for decisions.¹¹⁷ If a contract is involved in the dispute, the Tribunal “shall decide in accordance with the terms of the contract, if any, and shall take into account any usage of trade applicable to the transaction.”¹¹⁸

“Usage of trade” refers to such non-legal, semi-legal, or meta-legal concepts as best practices, standards of behavior, and guidelines, which—certainly in the absence of specific substantive “hard law” on the issue—may come to serve as yardsticks for whether *legally* binding standards regarding “reasonableness” and “good faith” are complied with.¹¹⁹

4.6 Issues of evidence and expertise

In the general analysis above, attention was drawn to the large measure of technicality and the resulting needs to provide for proper evidentiary rules and involvement of experts. Here, it is obviously for the Tribunals to decide on “admissibility, relevance, materiality and weight of the evidence offered.”¹²⁰ If considered appropriate, nontechnical documents may be requested by the arbitrators from the parties to explain certain pieces of information.¹²¹

Finally, of course, experts on scientific or technical matters may be called upon by the Tribunal after consulting the parties, which may be challenged by any of the parties.¹²² Also here the PCA will play its facilitating role, in drawing up a list of such scientific, technical

and/or operational experts, although once again the freedom remains to call upon experts outside of such a list.¹²³

4.7 Measures and awards

The Tribunal can impose interim measures at the request of one of the parties.¹²⁴ “Interim measures” are defined as “any temporary measure by which, at any time prior to the issuance of the award by which the dispute is finally decided, the arbitral tribunal orders a party, for example and without limitation, to: (a) Maintain or restore the status quo pending determination of the dispute; (b) Take action that would prevent, or refrain from taking action that is likely to cause, (i) current or imminent harm or (ii) prejudice to the arbitral process itself; (c) Provide a means of preserving assets out of which a subsequent award may be satisfied; or (d) Preserve evidence that may be relevant and material to the resolution of the dispute.”¹²⁵

In other words, as is normal in regard of interim measures, the tribunal should weigh the interests of a claiming party in not seeing any possible favorable outcome—which consequently should *prima facie* be a realistic possibility—prejudiced by irreversible events and the interests conversely of a defending party in not seeing any possible favorable outcome to that party being prejudiced.

Like any true arbitrary award—and differently, for example, from the Liability Convention’s Claims Commission mechanism—also awards of the Tribunal under the PCA Rules on Outer Space Disputes are “final and binding on the parties,” unless a “simple” error is detected afterward which may then be corrected.¹²⁶ Awards will be decided by majority if there is more than one arbitrator.¹²⁷ Separate awards are possible if circumstances so warrant in the view of the Tribunal.¹²⁸ Unless parties have decided otherwise, the reasons for the award will be provided by the Tribunal.¹²⁹ Requests for (further) interpretation of an award can be honored.¹³⁰ Finally, additional awards may also be requested by the parties, such requests to be honored at the discretion of the Tribunal.¹³¹

4.8 Costs

Finally, the PCA Rules on Outer Space Disputes provide for important directions on the costs of the arbitration procedure. Default allocation of those costs is to the “unsuccessful” party or parties; as it is, however, often not that clear-cut whether both parties may be considered at least partly “unsuccessful,” the Tribunal may also provide for apportionment of those costs otherwise.¹³² Costs in this respect “include(. . .) only: (a) The fees of the arbitral tribunal to be stated separately as to each arbitrator and to be fixed by the tribunal itself in accordance with article 41; (b) The reasonable travel and other expenses incurred by the arbitrators; (c) The reasonable costs of expert advice and of other assistance required by the arbitral tribunal; (d) The reasonable travel and other expenses of witnesses to the extent such expenses are approved by the arbitral tribunal; (e) The legal and other costs incurred by the parties in relation to the arbitration to the extent that the arbitral tribunal determines that the amount of such costs is reasonable; (f) The fees and expenses of the International Bureau, including the fees and expenses of the appointing authority.”¹³³

5. Concluding Remarks

The PCA Rules on Outer Space Disputes offer, as compared to the existing and applicable dispute settlement mechanisms, the most comprehensive coverage of all aspects of satellite communications, and hence of all possible disputes regarding such activities. Through various mechanisms it takes into account terrestrial aspects *versus* space aspects, national law, and jurisdiction *versus* international law and the “global commons” character of outer space, the various categories of actors and stakeholders, public as well as private (and including any contractual law issues), and finally the technological and operational complexities of the sector—each at least as well as, and often more efficiently and coherently than those other mechanisms briefly recounted here.

Flexibility for the tribunal as well as the parties, and party autonomy, are truly maximized by way of such provisions as allowing the parties the ultimate decision on whether to use the Rules or not, on the size of the arbitral tribunal and on applicable law, within a coherent system. Ample room is also offered for taking the technological and operational complexities into due consideration.

The only serious caveat relates to the confidentiality adviser; it remains to be seen whether the best here would indeed have been the enemy of the good, or whether this procedural novelty causes more damage to the due process than it helps bring about solutions of intricate satellite communications disputes.

Notes

1. The Permanent Court of Arbitration (PCA) was established in 1899 to provide a variety of dispute resolution services to the international community; cf. further, e.g., http://www.pca-cpa.org/showpage.asp?pag_id=363.
2. Permanent Court of Arbitration, *Optional Rules for Arbitration of Disputes Relating to Outer Space Activities* (hereafter PCA Rules on Outer Space Disputes), effective 6 December 2011; available at http://www.pca-cpa.org/showpage.asp?pag_id=1188.
3. The author was member of the Advisory Group assisting the PCA in developing the PCA Rules for Outer Space Disputes; this evaluation as well as much of the following is based upon his recollections and impressions, as supported by a number of informal exchanges of opinion on file with the author.
4. The national sovereignty of states over national territory and everything taking place on it is, of course, one of the most fundamental tenets of international law; cf. already Art. 2(1), (4), (7), Charter of the United Nations (hereafter UN Charter), San Francisco, done 26 June 1945, entered into force 24 October 1945; USTS 993; 24 UST 2225; 59 Stat. 1031; 145 UKTS 805; UKTS 1946 No. 67; Cmd. 6666 & 6711; CTS 1945 No. 7; ATS 1945 No. 1. Falling within such territorial sovereignty are both the internal waters and territorial waters (cf. Art. 2, United Nations Convention on the Law of the Sea, Montego Bay, done 10 December 1982, entered into force 16 November 1994; 1833 UNTS 3 & 1835 UNTS 261; UKTS 1999 No. 81; Cmnd. 8941; ATS 1994 No. 31; 21 ILM 1261 (1982); S. Treaty Doc. No. 103-39) and the airspace above such territory as well as above internal and territorial waters (cf. Art. 1, Convention on International Civil Aviation [hereafter Chicago Convention], Chicago, done 7 December 1944, entered into force 4 April 1947; 15 UNTS 295; TIAS 1591; 61 Stat. 1180; Cmd. 6614; UKTS 1953 No. 8; ATS 1957 No. 5; ICAO Doc. 7300).

5. Cf. Artt. II, also I, Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (hereafter Outer Space Treaty), London/Moscow/Washington, done 27 January 1967, entered into force 10 October 1967; 610 UNTS 205; TIAS 6347; 18 UST 2410; UKTS 1968 No. 10; Cmnd. 3198; ATS 1967 No. 24; 6 ILM 386 (1967).
6. For those interested in the opinion of the author, reference may be had, e.g., to *Beyond What? Beyond Earth Orbit? . . . ! The Applicability of the Registration Convention to Private Commercial Manned Sub-Orbital Spaceflight*, 43 *California Western International Law Journal* (2013), esp. 325–34.
7. INTERSPUTNIK was established in its original fashion by the Agreement on the Establishment of the “INTERSPUTNIK” International System and Organization of Space Communications (hereafter INTERSPUTNIK Agreement), Moscow, done 15 November 1971, entered into force 12 July 1972; 862 UNTS 3; TIAS 859 (1973) No. 12343; *Space Law—Basic Legal Documents*, C.VIII.1. Currently, it has 26 member states; see <http://www.intersputnik.com>.
8. ARABSAT was established by the Agreement of the Arab Corporation for Space Communications (ARABSAT) (hereafter ARABSAT Agreement), Cairo, done 14 April 1976, entered into force 15 July 1976; *Space Law—Basic Legal Documents*, C.VII.1; 44 *Telecommunications Journal* (IX/1977), at 422. Currently, it has 21 member states; see <http://www.arabsat.com/pages/AboutUs.aspx>.
9. Intelsat took over the satellite fleet originally operated by the intergovernmental organization INTELSAT, with a remaining nucleus of that latter entity surviving as the International Telecommunications Satellite Organization ITSO; cf. Agreement Relating to the International Telecommunications Satellite Organization (ITSO) (hereafter ITSO Agreement), Washington, done 20 August 1971, entered into force 12 February 1973, as amended 13 November 2000, amended version entered into force 30 November 2004; Cm. 5092; *Space Law—Basic Legal Documents*, C.V.I. See for an analysis of its privatization and the relationship between ITSO and Intelsat, e.g., P. K. McCormick, *Intelsat: Pre and Post-Private Equity Ownership*, in *The Transformation of Intergovernmental Satellite Organisations* (Eds. P. K. McCormick & M. J. Mechanick) (2013), 81–117; M. J. Mechanick, *The Role and Function of Residual International Intergovernmental Satellite Organisations Following Privatisation*, in *The Transformation of Intergovernmental Satellite Organisations* (Eds. P. K. McCormick & M. J. Mechanick) (2013), 175–221.
10. Inmarsat took over the satellite fleet originally operated by the intergovernmental organization INMARSAT, with a remaining nucleus of that latter entity surviving as the International Mobile Satellite Organization IMSO; cf. Convention on the International Mobile Satellite Organization (hereafter IMSO Convention), London, done 3 September 1976, entered into force 16 July 1979, as amended 1998, amended version entered into force 31 July 2001; ATS 2001 No. 11; *Space Law—Basic Legal Documents*, C.VI.1. See for an analysis of its privatization and the relationship between IMSO and Inmarsat, e.g., D. Sagar & P. K. McCormick, *Inmarsat: In the Forefront of Mobile Satellite Communications*, in *The Transformation of Intergovernmental Satellite Organisations* (Eds. P. K. McCormick & M. J. Mechanick) (2013), 35–79; Mechanick, 175–221.
11. Eutelsat took over the satellite fleet originally operated by the intergovernmental organization EUTELSAT, with a remaining nucleus of that latter entity surviving as EUTELSAT IGO; cf. Convention Establishing the European Telecommunications Satellite Organization (EUTELSAT) (hereafter Revised EUTELSAT Convention), Paris, done 15 July 1982, entered into force 1 September 1985, as amended 20 May 1999, amended version entered into force 28 November 2002; Cm. 4572; *Space Law—Basic Legal Documents*, C.II.1. See for an analysis of its privatization and

- the relationship between EUTELSAT IGO and Eutelsat, e.g., C. Roisse, The Evolution of EUTELSAT: A Challenge Successfully Met, in *The Transformation of Intergovernmental Satellite Organizations* (Eds. P. K. McCormick & M. J. Mechanick) (2013), 119–73; Mechanick, 175–221.
12. See, e.g., Art. 19, ARABSAT Agreement; Art. XVI, ITSO Agreement; Art. 31, IMSO Convention; Art. XV, Revised EUTELSAT Convention.
 13. The ITU was reconstituted most recently by the ITU Constitution (Constitution of the International Telecommunication Union, Geneva, done 22 December 1992, entered into force 1 July 1994; 1825 UNTS I; UKTS 1996 No. 24; Cm. 2539; ATS 1994 No. 28; Final Acts of the Additional Plenipotentiary Conference, Geneva, 1992 (1993), at 1; and the ITU Convention (Convention of the International Telecommunication Union, Geneva, done 22 December 1992, entered into force 1 July 1994; 1825 UNTS I; UKTS 1996 No. 24; Cm. 2539; ATS 1994 No. 28; Final Acts of the Additional Plenipotentiary Conference, Geneva, 1992 (1993), at 71); both amended a few times since.
 14. The WTO was established by the WTO Agreement (Agreement Establishing the World Trade Organization, Marrakesh, done 15 April 1994, entered into force 1 January 1995; 1867 UNTS; UKTS 1996 No. 57; ATS 1995 No. 8; 33 ILM 1125, 1144 (1994)).
 15. It should be noted that the Wassenaar Arrangement (Wassenaar Arrangement on Export Controls for Conventional Arms and Dual-Use Goods and Technologies, Wassenaar, done 19 December 1995, effective 12 July 1996; <http://www.wassenaar.org/>), relevant in this context, essentially is a voluntary coordination mechanism, not a legally binding international treaty. This leaves such regimes as that based upon Regulation of the European Parliament and of the Council amending Council Regulation (EC) No 428/2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items, No. 388/2012/EU, of 19 April 2012, OJ L 129/12 (2012), or that of the US International Traffic in Arms Regulations (ITARs) to deal with such issues—but obviously from a regional respectively national perspective.
 16. Cf., e.g., Art. 33(1), UN Charter, which provides: “The parties to any dispute, the continuance of which is likely to endanger the maintenance of international peace and security, shall, first of all, seek a solution by negotiation, enquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements, or other peaceful means of their own choice.” See further, e.g., G. Goh, *Dispute Settlement in International Space Law* (2007), 91–110; J. Merrills, The Means of Dispute Settlement, in M. D. Evans (Ed.), *International Law* (2003), 531–39.
 17. See esp. Art. 92, UN Charter, and Statute of the International Court of Justice (hereafter ICJ Statute), San Francisco, done 26 June 1945, entered into force 24 October 1945; 156 UNTS 77; USTS 993; 59 Stat. 1031; UKTS 1946 No. 67; ATS 1945 No. 1.
 18. Cf. Art. 3(1), ICJ Statute.
 19. See Artt. 22(1), 34–38, 65–68, ICJ Statute.
 20. See Art. 34(1), ICJ Statute.
 21. Cf. Art. 34(2), ICJ Statute.
 22. See Art. 65(1), ICJ Statute; Art. 96(1), UN Charter, provides that the UN General Assembly and UN Security Council have this right to request an Advisory Opinion *ipso facto*.
 23. See, e.g., I. Brownlie, *Principles of Public International Law* (4th ed.; 1990), 494–504; M. N. Shaw, *International Law* (4th ed.; 1997), 567–69; P. Okowa, Issues of Admissibility and the Law on International Responsibility, in M. D. Evans (Ed.), *International Law* (2003), 493–99.
 24. Art. 36(1), ICJ Statute; emphasis added.
 25. Art. 36(2), ICJ Statute. Such declarations “may be made unconditionally or on condition of reciprocity on the part of several or certain states, or for a certain time”; Art. 36(3). It should be

- pointed out, that as of 3 September 2014 a total of 70 states, roughly one-third of the international community of states, have deposited such an *a priori* recognition of ICJ jurisdiction which is currently in force; see <http://www.icj-cij.org/jurisdiction/?p1=5&p2=1&p3=3>.
26. See, e.g., Brownlie, 729–30; S. Rosenne, International Court of Justice (ICJ), in R. Wolfrum (Ed.), *The Max Planck Encyclopedia of Public International Law*, Vol. V (2012), 475.
 27. Art. 38(1), ICJ Statute. The referenced Art. 59 provides: “The decision of the Court has no binding force except between the parties and in respect of that particular case.”
 28. See Art. 38(2), ICJ Statute.
 29. Cf. also Art. 2, ICJ Statute: “The Court shall be composed of a body of independent judges (. . .) who possess the qualifications required in their respective countries for appointment to the highest judicial offices, or are jurisconsults of recognized competence in international law.”
 30. Cf. Art. 31 (2), (3), ICJ Statute.
 31. Cf. Art. 26, ICJ Statute.
 32. While Art. 50, ICJ Statute, does allow for the Court to “entrust any individual, body, bureau, commission, or other organization that it may select, with the task of carrying out an enquiry or giving an expert opinion,” there is for example no *a priori* list of such experts available, and it may furthermore be argued that a minimum level of technological expertise would anyhow be necessary for judges to fully understand such expert testimony and place it in the proper juridical context.
 33. See, e.g., F. Lyall, *International Communications* (2011), 110; F. Lyall, *Law and Space Communications* (1989), 358 ff.
 34. See for more details S. Venkatasubramanian, ITU and Its Dispute Settlement Mechanism, in this publication see p.23.
 35. Art. 56(1), ITU Constitution; emphasis added.
 36. Art. 56(2), ITU Constitution; emphasis added. Art. 41, ITU Convention, provides the details of this arbitration option.
 37. Art. 56(3), ITU Constitution; emphasis added.
 38. See further S. Venkatasubramanian, ITU and Its Dispute Settlement Mechanism, in this publication see p. 23.
 39. See also Art. 2, ITU Constitution.
 40. Cf. Artt. 1(16), (17), (18), 5(1), Radio Regulations, Edition of 2012 (hereafter Radio Regulations); <http://www.itu.int/pub/R-REG-RR-2012>.
 41. See Artt. 3(3), 12(3.a), 17(3.b), 21(4.b), ITU Constitution, as amended by the Instrument amending the Constitution of the International Telecommunication Union of 22 December 1992, as amended 14 October 1994, Minneapolis, done 9 November 1998, entered into force 1 January 2000; ATS 2000 No. 8; also, e.g., Art. 4(9ter), ITU Convention, as amended by the Instrument amending the Convention of the International Telecommunication Union of 22 December 1992, as amended 14 October 1994, Minneapolis, done 9 November 1998, entered into force 1 January 2000; ATS 2000 No. 8. The three sectors referred to concern the Radiocommunication Sector, the Telecommunication Standardization Sector, and the Telecommunication Development Sector.
 42. Cf., e.g., Artt. 7, 8, 10, ITU Constitution, on the Plenipotentiary Conference (the highest organ of the organization) and the ITU Council (the executive organ acting on behalf of the Plenipotentiary Conference), making no reference whatsoever to Sector Members.
 43. As per the General Agreement on Tariffs and Trade (hereafter GATT), Geneva, done 30 October 1947, entered into force 1 January 1948; 55 UNTS 194; TIAS 1700; ATS 1948 No. 23.

44. As per the General Agreement on Trade in Services (hereafter GATS), Marrakesh, done 15 April 1994, entered into force 1 January 1995; UKTS 1996 No. 58; Cm. 3276; ATS 1995 No. 8.
45. As per the aforementioned WTO Agreement; see *supra*, at n. 14.
46. As per the Fourth Protocol to the General Agreement on Trade and Services of 15 April 1994, Geneva, done 15 April 1997, entered into force 5 February 1998; ATS 1998 No. 9; 33 ILM 1167 (1994); 36 ILM 354 (1997).
47. See for more details P. Malanczuk, *From Negotiations to Dispute Settlement: The Role of the World Trade Organization in Relation to Satellite Communications*, in this publication see p. 71.
48. Further to Art. III(3), Annex 2, “Understanding on Rules and Procedures Governing the Settlement of Disputes,” provides for this dispute settlement system. See Art. 4, Annex 2, on consultations; Art. 5 on good offices, conciliation, and mediation; Artt. 6–16 & 18–19 on panels; Artt. 17–19 on the Appellate Body; Artt. 20–24 on the Dispute Settlement Body; and Art. 25 on arbitration.
49. Goh, 212.
50. See Art. 21, Annex 2, WTO Agreement.
51. Cf., e.g., Art. 3, Annex 2, WTO Agreement, which seems to skirt the issue, referring to member states “affirm[ing] their adherence to the principles for the management of disputes” as per Annex 2 (in § (1)) and also otherwise merely impressing the value of confirming to decisions arising out of the dispute settlement system.
52. Cf., e.g., Art. 3, esp. (2), (3), (7), Annex 2, WTO Agreement.
53. Convention on International Liability for Damage Caused by Space Objects (hereafter Liability Convention), London/Moscow/Washington, done 29 March 1972, entered into force 1 September 1972; 961 UNTS 187; TIAS 7762; 24 UST 2389; UKTS 1974 No. 16; Cmnd. 5068; ATS 1975 No. 5; 10 ILM 965 (1971).
54. See Artt. I(c), II, III, Liability Convention, with Art. I(c) defining the “launching State” along four alternative criteria: the state which launches, which procures the launch, whose territory was used for the launch respectively whose facility was used for the launch of the space object at issue.
55. Art. I(a), Liability Convention, contains only a partly and circular “definition” of “space objects”; among experts it is more or less agreed that all human-made objects launched or attempted to be launched into outer space would be covered by this concept.
56. See Art. IX, Liability Convention.
57. See Art. XIV, Liability Convention. The details of establishing a Claims Commission and its competences and *modus operandi* are provided by Art. XV–XXL.
58. Art. VI, Outer Space Treaty. The proper relationship between this state responsibility, and the state liability expounded by Art. VII, Outer Space Treaty, as well as the Liability Convention has never been satisfactorily clarified. See, e.g., already the author’s *Liability versus Responsibility in Space Law: Misconception or Misconstruction?*, in *Proceedings of the Thirty-Fourth Colloquium on the Law of Outer Space* (1992), 363–71.
59. Art. I(a), Liability Convention.
60. The author is aware of only one expert who made the argument that damage resulting from incorrect navigation information broadcast by a GNSS-satellite should be compensable under the Liability Convention, as “damage caused by a space object”; see B. D. K. Henaku, *The Law on Global Air Navigation by Satellite: An Analysis of Legal Aspects of the ICAO CNS/ATM System* (1998), 221.

61. It should be added that some authors argue that the clause of Art. XII, Liability Convention, which requires “such reparation in respect of the damage as will restore the person, natural or juridical, State or international organization on whose behalf the claim is presented to the condition which would have existed if the damage had not occurred,” effectively means also indirect and consequential damages such as loss of revenues form part of compensable damage; cf., e.g., B. A. Hurwitz, *State Liability for Outer Space Activities in Accordance with the 1972 Convention on International Liability for Damage Caused by Space Objects* (1992), 12–20; the authors quoted in C. Q. Christol, *The Modern International Law of Outer Space* (1984), e.g., 96–97.
62. See Art. VIII(1), resp. (2), Liability Convention. For natural persons suffering damage, a third subsidiary option exists in that a state of permanent residence may also assert a claim (per Art. VIII(3)), but this clause seems not to be applicable to legal persons such as companies, as “permanent resident” is a term of art for *natural* persons.
63. Following Art. XXII(1), Liability Convention, in such cases they can deposit declarations of their “acceptance of the rights and obligations provided for in this Convention,” and thereby act as *de jure* parties to the Convention with the exception of the procedural clauses contained in Artt. XXIV–XXVII. So far, only the European Space Agency (ESA), EUTELSAT IGO and EUMETSAT have complied with the necessary conditions.
64. As per Art. XXII(3), resp. (a) & (b), Liability Convention. Note also that Art. XXII(3) in any event holds member states of the organization liable jointly and severally with the organization itself.
65. See Art. XIV, Liability Convention.
66. Cf. Art. XXII(4), Liability Convention.
67. Art. XI(2), Liability Convention.
68. Cf. Art. XI(1), Liability Convention.
69. The one occasion where the Liability Convention was at least formally referred to in the context of an international dispute (the Canadian statement of claims in the Cosmos-954 case; see Statement of Claim by Canada; *Space Law—Basic Legal Documents*, A.IX.2.2) already testifies to such a reticent attitude; although there could be little doubt that the Soviet Union was liable under the Liability Convention for any damage compensable under it caused by the Cosmos-954 satellite in 1978, the final settlement specified that the Soviet Union paid compensation “*ex gratia*,” in other words; not formally accepting such liability. See Protocol between the Government of Canada and the Government of the Union of Soviet Socialist Republics, done 2 April 1981, entered into force 2 April 1981; 20 ILM 689 (1981); *Space Law—Basic Legal Documents*, A.IX.2.2.2; in more detail Hurwitz, 113–40; also, e.g., L. Viikari, *The Environmental Element in Space Law* (2008), 40, 46–48.
70. Art. XIX(2), Liability Convention.
71. See Art. XI(2), Liability Convention.
72. In most national jurisdictions the traditional theories of absolute immunity of a sovereign state’s organs in the courts of another state have given way to that of relative immunity, only to be allowed for *acta jure imperii*, acts reflecting typical and rather exclusive state competencies, but not for *acta jure gestionis*—more or less acts in a private capacity, even though undertaken by governments. Still, in a considerable number of circumstances an argument could be made *acta jure imperii* would be at issue. See, e.g., H. Fox, International Law and Restraints on the Exercise of Jurisdiction by National Courts of States, in M. D. Evans (Ed.), *International Law* (2003), 359–71; Shaw, 491 ff.
73. Following its communist origins, where international law theory was very much focused on state sovereignty and rather suspicious of functional immunities, in the case of INTERSPUTNIK

- any such immunity was subject to member state agreement: “It [INTERSPUTNIK] shall enjoy in the territory of the states whose governments are Members of the Organization the legal capacity necessary for the attainment of its goals and the performance of its functions. The scope of this legal capacity shall be determined by appropriate agreements with the competent authorities of the states in whose territory it carries out its activities”; Art. 9(1), INTERSPUTNIK Agreement.
74. Cf. Art. 16, ARABSAT Agreement: “All the provisions of the Prerogative and Immunities agreement of the League of the Arab States passed as per the League’s Council resolution No. 575 dated 10 May 1953, shall be applicable in the case of the Arab Corporation for space communication.”
 75. Cf. Art. XIII, ITS0 Agreement.
 76. Cf. Art. 9(5) & (6), IMSO Convention.
 77. Cf. Art. XII, Revised EUTELSAT Convention.
 78. “Sovereign immunity” is defined as “preclud[ing] litigant from asserting an otherwise meritorious cause of action against a sovereign or a party with sovereign attributes unless sovereign consents to suit”; Black’s Law Dictionary, 1252; West’s Law & Commercial Dictionary in Five Languages, Vol. II, 552; referring to *Principe Compania Naviera, S.A. v. Board of Com’rs of Port of New Orleans, D.C.La.*, 333 F. Supp. 353, 355.
 79. Federal Tort Claims Act, 28 U.S.C., §§ 1346(b), 2671–2680 (1988).
 80. Suits in Admiralty Act, 46 U.S.C. App., §§ 741–752 (1988).
 81. Foreign Claims Act, 10 U.S.C., § 2734 (1994).
 82. Military Claims Act, 10 U.S.C., § 2733 (1994).
 83. See, e.g., J. M. Epstein, *Global Positioning System (GPS): Defining the Legal Issues of Its Expanding Civil Use*, 61 *Journal of Air Law & Commerce* (1995), 262–68.
 84. Federal Tort Claims Act, § 2680(k); see also Epstein, 265.
 85. Under the so-called “*Sisson test*,” *Sisson v. Ruby* 497 U.S. 358 (1990) as dealt with by Epstein, 266.
 86. See Art. 28, Chicago Convention; also F. P. Schubert, *An International Convention on GNSS Liability: When Does Desirable Become Necessary?*, 24 *Annals of Air and Space Law* (1999), 252–54.
 87. See, e.g., Schubert, 258–61.
 88. UNCITRAL Arbitration Rules (as revised in 2010); accessible through http://www.uncitral.org/uncitral/en/uncitral_texts/arbitration/2010Arbitration_rules.html.
 89. PCA Optional Rules for Conciliation of Disputes Relating to Natural Resources and the Environment (hereafter PCA Rules on Environmental Disputes); accessible through http://www.pca-cpa.org/showpage.asp?pag_id=1188.
 90. See Introduction, PCA Rules on Outer Space Disputes.
 91. The international character of space activities would in many instances give rise to international traffic in dual-use technology which could trigger export controls and, if violated, severe sanctions. While at the international level the Wassenaar Arrangement itself does not provide for a binding regime including sanctioning, the US ITARs and in the European Union the national export control regimes operating within the parameters of Regulation No. 388/2012/EU do provide for binding rules and severe sanctions in case of violations. Since the export of technology is normally very broadly defined, as including for example the mere exchange of technological information and know-how, divulging such information in an international arbitration setting may easily trigger the application of such regimes.
 92. This refers in particular to trade secrets and patent issues, where in a given dispute the necessity to share such commercially critical information with the tribunal and the opposing party (for

- purposes of fair trial) clashes with the desire to exclude any access by (potential) competitors and the general public (through published awards) to such information.
93. Cf. Introduction, PCA Rules on Outer Space Disputes.
 94. Technically speaking, this concerns the total number of states having ratified either the 1899 or the 1907 founding conventions; the Convention for the Pacific Settlement of International Disputes, The Hague, done 29 July 1899, entered into force 4 September 1900; ATS 1901 No. 130; resp. the Convention for the Pacific Settlement of International Disputes, The Hague, done 18 October 1907, entered into force 26 January 1910; ATS 1997 No. 6. See http://www.pca-cpa.org/showpage.asp?pag_id=1038.
 95. Introduction, PCA Rules on Outer Space Disputes, p. 4.
 96. See also, e.g., F. Pocar, An Introduction to the PCA's Optional Rules for Arbitration of Disputes Relating to Outer Space Activities, 38 *Journal of Space Law* (2012), 171–85.
 97. Art. 1(1), PCA Rules on Outer Space Disputes.
 98. Art. 1(1), PCA Rules on Outer Space Disputes.
 99. Cf. on this issue, e.g., *supra*, text at n. 6.
 100. See Art. 1(2), PCA Rules on Outer Space Disputes.
 101. See *supra*, § 3.2.
 102. See Art. 6(1), also (2) & (3), PCA Rules on Outer Space Disputes.
 103. See Artt. 7–10, PCA Rules on Outer Space Disputes, esp. Artt. 7(1), 10(2).
 104. Cf. Artt. 7(2), 8(1),(2), 9(2),(3), PCA Rules on Outer Space Disputes.
 105. See Art. 10(4), PCA Rules on Outer Space Disputes.
 106. See resp. Artt. 11, 12, 14, PCA Rules on Outer Space Disputes.
 107. Art. 16, PCA Rules on Outer Space Disputes.
 108. See further *infra*, § 4.6.
 109. Art. 17(1), PCA Rules on Outer Space Disputes.
 110. Art. 17(5), PCA Rules on Outer Space Disputes.
 111. See Art. 17(6), PCA Rules on Outer Space Disputes.
 112. Art. 17(7), PCA Rules on Outer Space Disputes.
 113. Art. 17(7), PCA Rules on Outer Space Disputes.
 114. Art. 17(8), PCA Rules on Outer Space Disputes.
 115. Art. 35(1), PCA Rules on Outer Space Disputes.
 116. See Art. 35(1), PCA Rules on Outer Space Disputes.
 117. Art. 35(2), PCA Rules on Outer Space Disputes.
 118. Art. 35(3), PCA Rules on Outer Space Disputes.
 119. Cf. for an enlightening discussion of this issue, e.g., I. Marboe, The Importance of Guidelines and Codes of Conduct for Liability of States and Private Actors, in *Soft Law in Outer Space* (Ed. I. Marboe) (2013), 119–44.
 120. Art. 27(5), PCA Rules on Outer Space Disputes.
 121. See Art. 27(4), PCA Rules on Outer Space Disputes.
 122. See Art. 29(1) resp. (3), PCA Rules on Outer Space Disputes.
 123. See Art. 29(7), PCA Rules on Outer Space Disputes.
 124. See Art. 26(1), PCA Rules on Outer Space Disputes.
 125. Art. 26(2), PCA Rules on Outer Space Disputes.

- 126. Art. 34(2), resp. Art. 38, PCA Rules on Outer Space Disputes.
- 127. See Art. 33(1), PCA Rules on Outer Space Disputes.
- 128. See Art. 34(1), PCA Rules on Outer Space Disputes.
- 129. See Art. 34(3), PCA Rules on Outer Space Disputes.
- 130. See Art. 37, PCA Rules on Outer Space Disputes.
- 131. See Art. 39, PCA Rules on Outer Space Disputes.
- 132. See Art. 42(1), PCA Rules on Outer Space Disputes.
- 133. Art. 40(2), PCA Rules on Outer Space Disputes.

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