THE PCA'S OPTIONAL RULES FOR THE ARBITRATION OF DISPUTES RELATING TO OUTER SPACE ACTIVITIES AND DISPUTE RESOLUTION IN THE ITU REGULATORY SYSTEM

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The Permanent Court of Arbitration (PCA) recently promulgated Optional Rules for the Arbitration of Disputes Relating to Outer Space Activities in order to address the specific conflicts of States, international organizations, and private entities arising from their activities in Outer Space.[i] The Rules are a voluntary mechanism for the settlement of disputes and are open to all parties, who also have the ability under the Rules to keep their confidential interests protected throughout the course of the arbitration. Additionally, the Rules allow the parties to select their own decision-makers to arbitrate the dispute, the decisions of which are final and binding on all of the parties involved.[ii] The PCA Rules also have a broader scope of application for resolving space-related disputes than other instruments in international space law[iii], and in this respect, are able to overcome the limitations of the more traditional sources of international Space Law that were designed to deal with disputes in Outer Space that are very different from those posed by present day circumstances. As the number of States with space capabilities and commercial activities in space increase, space disputes are becoming both more complex and frequent. By way of example, the competition over radio frequencies and orbital slots has become severe among participating States and other space-related stakeholders because they are a limited and finite natural resource. The International Telecommunication Union (ITU) is charged with the distribution of these resources as well as the protection of all registered radio frequencies and orbital slots from harmful interference. However, the ITU's current mechanism for the settlement of disputes is completely dependent on diplomatic channels, and there are no sanctions the ITU can impose for violations of its regulations. Although the ITU has an optional protocol for the compulsory settlement of disputes through arbitration, to date, it has never been used,[iv] and the ITU could, therefore, greatly benefit from the use of the PCA's specialized rules in resolving conflicts related to ITU resources and activities.[v] This paper presents a doctrinal assessment of the ITU's regulatory provisions in order to demonstrate the inherent limitations of the current ITU dispute mechanism processes to settle disputes posed by ITU-related activities that take place in Outer Space, and argues in favour of the adoption of the PCA's Rules for the resolution of such disputes.

I. INTRODUCTION

One of the primary objectives of both international and domestic law is to attempt to satisfactorily regulate the myriad of possible and complex relationships that develop between and amongst individuals and groups so as to avoid and/or resolve the conflicts that invariably arise. International law has numerous procedures and mechanisms which specifically deal with the resolution of conflicts including, *inter alia*, judicial settlement and arbitration. These processes may be formal, such as at the International Court of Justice (which deals with judicial settlement), and the Permanent Court of Arbitration (PCA) (which deals with arbitration), or of a less formal nature, such as through the creation of commissions or tribunals for limited periods and/or that deal only with specific types of conflicts.[vi] However, the focus of this paper is arbitration, specifically the PCA's Optional Rules for the Arbitration of Disputes Relating to Outer Space Activities (the "PCA Rules"), and will argue that the PCA Rules are a viable and satisfactory option for resolving ITU-related conflicts. Disputes involving the ITU generally center on harmful interference, although any conflict may originate regarding the interpretation of regulatory instruments as well as during the complex proceedings to record a frequency in the Master International Frequency Register (MIFR). Additionally, the fact that the radio frequency spectrum and orbit slots (especially the Geostationary Orbit) are limited natural resources, in turn resulting in more intense competition over these scarce resources amongst administrations, also represents a significant source of disputes. Finally, the increasing occurrence of new players in Outer Space, including those from the private sector, will also create new types of conflicts that challenge traditional ITU dispute settlement mechanisms.

II. ARBITRATION

The PCA is an independent international governmental organization that was established in 1899 by the Convention for the Pacific Settlement of International

Disputes (the Hague Convention) during the conclusion of the first Hague Peaceful Conference. The Convention was revised in 1907 during the Second Hague Peaceful Conference, and it currently has more than 100 signatory States.[vii] Article 20 establishes the foundation of the PCA itself, and provides that "the Signatory Powers undertake to organize a Permanent Court of Arbitration, accessible at all times and operating, unless otherwise stipulated by the parties, in accordance with the Rules of Procedure inserted in the present Convention."[viii] Finally, since its origin, the jurisdiction of the PCA has been open to non- signatory powers if agreed to by the parties.[ix]

Article 37 of the revised Hague Convention defined international arbitration as recourse to the pacific settlement of disputes between states by judges of their own choice based on the respect for law, with recourse to arbitration representing an engagement with good faith to the award.[x] This concept is, however, generally considered too narrow to comprehend the matters typically involved in arbitration today.[xi] Thus, modern arbitration is much more flexible, with the settlement of disputes occurring not only between any party or between states, but also between states and international organizations, between states and private persons, or even only between private persons. This flexibility facilitates the use of arbitration in many different types of international disputes, including those special commercial disputes which often do not have the option for resolution in other formal institutions such as the international courts, the jurisdiction of which extends only to states and not to private parties.

In addition, arbitration is a voluntary mechanism that often must be previously agreed upon by the parties in a manner that formalizes a compromise to resort to arbitration in the event of the occurrence of any dispute. This agreement may be determined in a treaty or in a special *comprimis*, the latter of which establishes the applicable rules and principles for governing the arbitration. Arbitration is, therefore, entirely consensual and accordingly, in cases involving space-related disputes, States are often much more willing to accept binding dispute resolution made in arbitration proceedings pursuant to discrete agreements rather than enter into new, significant multilateral treaties whereby all space-related disputes would be required to be dealt with in one universal way such as, for example, through the establishment of an international court for space law or the creation of an additional chamber to the International Court of Justice.[xii]

Moreover, unlike litigation, arbitration exhibits elements of both mediation and judicial settlement, and so on a continuum of conflict resolution methods, falls somewhere between diplomatic bargaining at one end and adjudication at the other.[xiii]

The parties still have the freedom to choose and to decide how they want their dispute to be handled under the rules, so arbitration provides a greater degree of flexibility than other forms of dispute resolution.

The role and practice of arbitration in the resolution of international disputes has also been strengthened by the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards. It currently includes 143 Contracting States.[xiv] Among other things, it provides for the recognition and enforcement of foreign arbitration awards made in the territory of a State other than the State where the recognition or enforcement of such award is sought, as well as to other arbitral awards that also are not considered as being domestic to the State where their recognition is sought.

Moreover, under the Convention, Contracting States are urged to recognize these arbitral awards as binding, and are also required to enforce them in accordance with their rules of procedure.[xv] Due to the number of signatories, this Convention also facilitates the acceptance of the binding nature of foreign arbitral awards all around the world, giving arbitration an important level of acceptance in different legal regimes.

Finally, another advantage of arbitration is its ability to protect any confidentiality issues at stake, since arbitration hearings do not need to be public nor do arbitration awards need to be published.[xvi]

In recognition of the importance of arbitration as a mechanism to settle international disputes that may arise in the context of international commercial relations, the United Nations Commission on International Trade Law (UNCITRAL) created Arbitration Rules in 1966, which were subsequently revised in 2010.[xvii]

Pursuant to Article 6 of the Arbitration Rules, the Secretary General of the PCA may serve as the appointing authority and may also designate one arbitrator or a substitute. The appointing authority shall also assure the appointment of an independent and impartial arbitrator, and is precluded from appointing any arbitrator with the same nationality of the parties.[xviii]

The PCA's modern arbitration rules are based upon the UNCITRAL Arbitration Rules, the latter of which are considered to be both widely accepted and sufficiently flexible to adjust to different needs and realities.[xix]

Finally, the International Court of Arbitration also encourages the use of commercial arbitration through its International Chamber of Commerce Arbitration Rules, which are devoted primarily to disputes involving the private sector.

In sum, the practice of arbitration has been widely accepted around the world. Despite all its heretofore-mentioned advantages, however, the actual use of arbitration in resolving disputes which arise under international law may still be considered rare when compared with the literally hundreds of conciliation and

arbitration treaties that have been signed since the beginning of this century (although the last decade has seen a substantial increase in the use of international arbitration).[xx] The objective of this paper is to argue in favor of the use of international arbitration as an effective mechanism for the resolution of conflicts arising within the particular and specialized sector of Outer Space, notably in the realm of conflicts involving disputes that arise under the regulatory system of the ITU.

III. THE ITU's ROLE AS AN INTERNATIONAL REGULATORY GOVERNMENTAL ORGANIZATION

International governmental organizations are public entities that, *inter alia*, strive to accomplish certain objectives that are better achieved jointly rather than individually. There are mainly two categories of such organizations: those that are regulatory in nature, such as the International Telecommunication Union (ITU), and those that are created to promote joint operational activities, such as the International Telecommunications Satellite Organization (INTELSAT). The latter category is common in the area of space activities due to both the large and risky financial investments as well as the specialized knowledge that are generally necessary to carry out activities in this field. Consequently, many States have pooled their resources to undertake Outer Space activities, and a great number of space-related disputes are likely to arise at the international level in the years to come.[xxi]

The regulatory intergovernmental organizations are one mechanism to prevent disputes, and also offer alternatives to resolve disagreements through dispute prevention and settlement mechanisms. Thus, intergovernmental regulatory organizations occupy an important position within the legal field regarding numerous international activities, including those related to Outer Space.[xxii] Indeed, their very character as mechanisms for balancing the various interests of states means that they should be provided with solid legal instruments to exercise their function, such as competencies to interfere in or make decisions in conflict situations.[xxiii] Such is the case with the ITU.

Both the ICJ and the PCA (the most recognized judicial conflict resolution mechanisms available under international law) are, in principle, able to resolve disputes related to Outer Space activities. In practice, however, the ICJ is available only for the resolution of disputes involving States that have accepted its jurisdiction, making this Court an institution which is limited to the resolution of disputes involving public law. Similarly, properly authorized intergovernmental organizations like the ITU can only participate in these cases in an advisory capacity.[xxiv]

According to its Constitution, the ITU is an intergovernmental organization comprised of both Member States and Sector Members,[xxv] the latter of which are defined as "any entity or organization authorized … to participate in the activities of a sector,"[xxvi] whereas Member States, unlike Sector Members, have the exclusive right to vote.[xxvii] The ITU possesses its own Constitution, Convention, and Administrative Regulations as its instruments. The Constitution is the foundational document of the Union and prevails over the Convention and the Administrative Regulations, while the Convention prevails over the Administrative Regulations. The Administrative Regulations are created by the International Telecommunication Regulations and the Radio Regulations.[xxviii] The instruments of the ITU have the legal status of an international treaty and are, therefore, binding upon Member States in all of the telecommunication offices and transmission stations established and operated by them which are engaged in international services or which are capable of causing harmful interference to the radio services of other countries (with the exception of installations for national defence as enumerated in Article 48 of the ITU Constitution). The supreme body of the ITU is the Plenipotentiary Conference, which convenes every four years. During the period in between these Conferences, the ITU Council acts on its behalf. The ITU also has World Radio Conferences which are responsible for revising the ITU Radio Regulations.[xxix] The decisions made either at the Plenipotentiary Conference or at the World Conference level are binding upon administrations and have treaty status.

The objectives of the ITU are established in Article 1 of its Constitution.[xxx] To accomplish its objectives, the ITU effects the allocation and allotment of the radio frequency spectrum and registration of radio frequency assignments and orbital slots to space service agencies in order to avoid harmful interference between radio stations of different countries. The ITU also coordinates efforts to improve the use of radio-frequency spectrum for radiocommunication services of the geostationary-satellite and other satellite orbits.[xxxi] All transmitting stations must possess a licence to operate issued by the administration that has jurisdiction over it and in accordance with the provisions of the ITU Radio Regulations. The licence is the authorization to operate, and also establishes a jurisdictional link between the country and the station.[xxxii] Administrations thus have jurisdiction over the stations, and are responsible for dealing with cases of harmful interference which, in turn, may lead to the occurrence of international disputes.

IV. ITU-RELATED DISPUTES

Although ITU related disputes may originate from any matter of interpretation of its instruments, harmful interference and competition over radio frequency spectrum and orbital slots are the most common. Radio frequencies and associated orbits, in particular the geostationary-satellite orbit, are finite, limited natural resources. Consequently, Member States of the ITU are required to limit the use and spectrum of frequencies to the minimum necessary to provide satisfactory services, and are committed to use, whenever possible, advanced technologies in order to do so. The ITU promotes the rational, efficient, economic, and equitable use of radio frequencies and orbital positions in accordance with the provisions of its Radio Regulations, taking into consideration the special needs of the developing countries and also the geographical position of some countries.[xxxiii] The Radio Regulations therefore play an important role in achieving efficient and equitable use of these resources. Additionally, since satellites communicate via radio frequencies, it is essential to promote an environment free from harmful interference in order to ensure that services which rely on this technology can properly function. Moreover, radio waves do not respect state boundaries,[xxxiv] so when radio frequencies are not used in accordance with the Radio Regulations, harmful interference is much more likely to transpire.

According to the ITU Constitution, all transmission stations must operate so as to avoid harmful interference to the radio services or communications of other Member States that are operating in accordance with ITU Radio Regulations. Further, Member States shall ensure that the stations operating under their licence(s) follow ITU provisions and take all necessary steps to prevent any electrical apparatus from causing harmful interference to other services.[xxxv]

The increased use of Outer Space includes new stakeholders from around the world beyond Member States, and includes, for example, large national and transnational private corporations as well as global governmental organizations. These new parties have created even greater, more intense competition over radio frequencies and geostationary orbits which, in turn, has led to more cases of harmful interference and to the concomitant necessity of creating solutions to the harmful interference problem as well as an analysis of the adequacy of the present dispute resolution agreements and formal sources available in international law for resolving ITU-related disputes.

International protection from harmful interference is granted to specific frequency assignments recorded either in the Master International Frequency System (MIFR) or in conformity with a plan between the parties involved, where appropriate.[xxxvi] In addition, the universal right to be protected from harmful interference means that other administrations must take into account the frequencies that have already been registered and assigned.[xxxvii] This practice, known as the first come, first served principle, means that it is crucial for any administration to record their assignments as soon as possible, in order to guarantee priority during coordination procedures. Moreover, the procedures for registering assignments with the MIFR are not simple, and in most cases include the necessity of coordinating with other administrations in order to protect previously recorded assignments.

IV.I Particular Cases Allowed by the Radio Regulations

Some cases allowed by the Radio Regulations to operate under certain conditions may nevertheless increase the chances of causing harmful interference to registered assignments and the number of potential disputes. This session will discuss two cases: non-conforming assignments and assignments that do not complete their coordination procedure (including those that are brought into use before completing the coordination procedure).

The ITU has a Table of Frequency Allocation which determines the conformity of the operation of a particular assignment within the technical parameters and services established by the ITU without causing harmful interference to others. There is, however, one clear exception to operate in derogation of the Table of Frequency Allocation, which occurs in cases of non-conforming assignments that are permitted to operate without causing harmful interference or claiming protection from harmful interference to any station operating in accordance with the ITU regulatory system.[xxxviii] Non-conforming assignments are recorded for information purposes only, and must operate in accordance with number 4.4 of the Radio Regulations. Therefore, they cannot cause harmful interference to others and also cannot claim protection from harmful interference.[xxxix] However, even though non-conforming assignments cannot claim regulatory protection, they still impose a risk to other assignments that are properly registered.

Yet another area where harmful interference may occur is in those cases in which the ITU procedures for coordination have not been completed. For example, statistics of the BR show that 21% of the interference reported in 2012 was comprised of such cases, with the rate from January 2013 to the present increasing to 27%.[xl] In cases when an administration has truly committed to efforts to complete the coordination process without success, it is possible to request that the Bureau regard the assignment as having been notified of its probability for harmful interference in accordance with Rules 11.32A and 11.33 of the RR. If the Bureau's subsequent examination leads to an unfavourable

finding, it will return the notice with guidance as to the appropriate action. Even then, however, it is still possible for the administration seeking registration to insist upon reconsideration by the BR in accordance with Rule 11.41. In such cases, the Bureau shall enter the frequency into the Master Register, but will also include the name of the administrations as well as the reasons for the unfavourable finding. In such cases, the administration recording the assignment is responsible to immediately stop any harmful interference against the administrations' assignments that were named as unfavourable for that register.[xli] This kind of scenario, although permitted by the ITU regulations, may nevertheless lead to cases of harmful interference. As indicated by the Board's Report to WRC-12, under Resolution 80 (Rev WRC-07), overcoming any difficulties in achieving coordination requires the goodwill of the administration involved and the identification of the technical solution(s) to mitigate any predicted interference. Additionally, notifications made pursuant to Rule 11.41, where few of the required coordination have been completed, likewise increase the possibility of interference. Accordingly, in such cases, the Board has instructed the BR to consider actions to raise awareness of administrations' rights and responsibilities when making notification pursuant to Rule 11.41 in order to encourage the administration to complete coordination.[xlii] Another example of situations that may facilitate harmful interference includes cases involving space station frequency assignments which are brought into use[xliii] before the completion of the coordination process. ITU Rule Number 7.5 A provides that if a frequency assignment is brought into use before the commencement of the coordination procedure pursuant to Article 9 whereby coordination is required, or before notification when coordination is not required, then the operation in advance of the application of the procedure shall in no way be afforded any priority. In addition, ITU Rule Number 8.1 determines that the international protection from harmful interference is derived either from the registering of the frequency assignment into the MIFR or in conformity, when appropriate, with a plan. Such rights also are conditioned by the provisions of the Radio Regulations regarding any relevant frequency allotment or assignment plan. However, in cases where the assignments are brought into use before completing their coordination but the parties have complied with the due diligence requirements of Resolutions 49 and 552, the assignments are still taken into account for a maximum period of seven years from the date that the relevant information for advanced publication was submitted. However, if the regulatory time frame ends and the assignment remains in Outer Space without the Bureau receiving the notice for recording, the BR may then cancel it provided it informs the administration six months beforehand.[xliv] These types of situations also may cause harmful interference, since the coordination process has not been completed and yet the satellite has already been launched. A question that arises in such cases is what would occur if the BR were to cancel this assignment. In such an event, the assignment would not have international protection from harmful interference but could still cause harmful interference to other assignments. Moreover, because the coordination process was not completed, these satellites would be operating in different legal capacities within the ITU regulatory system depending upon whether there was a favourable or unfavourable finding by the BR. If unfavourable, then the satellite would more likely cause harmful interference to other assignments.

Finally, it is important to mention that although the lack of completed coordination may lead to harmful interference, "during the coordination stage there is a need for greater flexibility in terms of the combination of characteristics studied, which will be defined only following completion of coordination with other networks and once the final requirements to be satisfied by the satellite projects are known. It is therefore expected that a coordination request could involve a more general approach rather than a specific and precise set of assignments submitted for notification."[xlv] Thus, there are instances where even though an assignment may have been registered for information purposes only, or may have had an unfavourable finding, if in fact the actual parameters were taken into consideration while analyzing the assignment, there could well be and should have been a favourable finding.[xlvi] These factors should be taken into consideration whenever it is considered that an incomplete coordination process may influence the possible occurrence of harmful interference.

V. ITU DISPUTE SETTLEMENT MECHANISMS

ITU Member States may settle their disputes concerning the application or interpretation of the ITU instruments by negotiation, through diplomatic channels, or in accordance with bilateral or multilateral conventions existing between them for the settlement of international disputes or by any other means mutually agreed upon.[xlvii] Because the ITU recognizes the sovereignty of its Member States,[xlviii] its Constitution also recognizes the possibility that other forms of settlement of international conflicts might exist between Member States.

Arbitration rules also exist within the ITU regulatory system, which are promulgated in Article 41 of its Convention. They provide, *inter alia*, that "[t]he party which appeals to arbitration shall initiate the arbitration procedure by transmitting to the other party to the

dispute a notice of submission of the dispute to arbitration."[xlix] The Convention also expresses the concern of Member States regarding the independence and impartiality of the arbitrators; the arbitrator(s) who is selected must neither be a national of a State which is a party to the dispute, nor have their domicile in one of the States that is a party to the dispute, nor be employed in that State's service. Similarly, if the arbitration is entrusted to governments, they cannot be a part of the dispute, although they obviously must be a party to the agreement which is the cause of dispute.[l] In addition, the arbitrator is free to decide issues regarding venue and the rules of procedure to be used at the arbitration proceeding. The decision of the single arbitrator (and of the majority of arbitrators in case involving more than one) shall be binding and final upon the parties. The ITU shall provide all the information concerning the dispute that the arbitrator(s) may need.[li]

There is an ITU Optional Protocol for the compulsory settlement of disputes which was established by the additional Plenipotentiary Conference in Geneva in 1992 and that has never been amended.[lii] The Member States to this Protocol, currently 64, have expressed their desire to resort to compulsory arbitration for the settlement of any conflict regarding the interpretation or application of any of the ITU instruments (Constitution, Convention, or Administrative Regulations).[liii] Therefore, according to the Optional Protocol, arbitration is compulsory unless other methods have been chosen by the Member States of the Union in accordance with Article 56 of the ITU Constitution, which allows for any means of settlement of disputes that is mutually agreed upon by the parties. The procedural rules are the same as those established by Article 41 of the ITU Convention except for the provision which states that if the parties do not respect the three months deadline to appoint an arbitrator, the Secretary-General then must appoint one, upon the request of a party.[liv]

Interestingly, to date, the ITU arbitration rules have never been used by parties involved in Outer Space-related conflicts, with such conflicts (the majority of which are disputes related to harmful interference) normally settled through negotiation and diplomacy. Additionally, the ITU's settlement of disputes mainly involves a repetition of the general international law rules regarding negotiations and arbitration, which may be the reason why its particularized arbitration procedure has never been used. However, with the increasingly competition over radio frequencies and satellite orbits, notably by new space stakeholders, the current ITU dispute mechanism structure is very likely to be challenged, thus necessitating the implementation of an international dispute mechanism that is open to all parties and which contains specific provisions that result in the effective and suitable resolution of ITU disputes.

V.I Assistance of the BR and the RRB

In addition to utilising ITU settlement dispute provisions, the administrations also may seek the assistance of the ITU Radiocommunication Bureau (BR) and the Radio Regulation Board (RRB). [ITU Radio Regulation] Number 13.2 provides that when an administration has difficulty resolving a case of harmful interference and seeks the assistance of the BR, the latter shall, as appropriate, help identify the source of the interference and seek the cooperation of the responsible administration in order to resolve the matter, and also prepare a report for consideration by the RRB including a draft recommendation to the administrations concerned.[lv] However, because there are no formal sanctions under the ITU regulatory system, administrations are compelled to rely on goodwill and mutual assistance to settle problems of harmful interference,[lvi] and generally leave the resolution of disputes to the necessary diplomatic channels.

Another point relevant to ITU-related disputes is that the Radio Regulation Board (RRB) has decided not to analyze any case that is presented to it which contains confidential information. "Any submission to the Board containing restricted material (confidential, proprietary, sensitive) shall be returned by the Bureau, who will invite the administration concerned to resubmit an unrestricted document if it wishes the Board to consider the material."[lvii] This decision of the RRB was made in the name of transparency, which is an important principle to any intergovernmental organization.

Similarly, Resolution 119 has instructed the RRB to periodically review its working methods, decision making, and other internal processes in order to attain a higher degree of transparency.[lviii] The RRB has received the custodian of a public trust, and its members do not represent any member administration nor may they receive any instruction from them. They shall approve the Rules of Procedure (RoP) and consider any other matter that cannot be resolved through the application of the afore-mentioned RoP. The RRB may also perform any additional duties regarding the assignment and utilization of frequencies in accordance with the procedures established by the RR, a competent conference, or the ITU Council.[lix]

Although the RRB may assist administrations and decide the cases of harmful interference that are brought to its attention, it does not have the power to impose any decision or sanctions. Its assistance is reserved solely for administrations, and it does not assist private companies which have economic interests in harmful interference cases. The RRB's decision to only evaluate non-confidential material significantly strengthens the need for a mechanism that can protect confidentiality

while assisting parties in resolving their disputes. The availability of this type of mechanism is also important to guarantee the possibility that the RRB will operate with the necessary and desired transparency due to the existence of an appropriate mechanism outside of the ITU that can deal with disputes without compromising sensitive information. As will be seen momentarily, such a mechanism is provided by the PCA's Space Rules.

Although the ITU regulatory system exists to prevent the occurrence of harmful interference, incidents of such interference still occur, and with time, this trend will likely grow worse due to the increasing use of the radio frequency spectrum and orbital slots, especially at the geostationary level, for new space stakeholders, namely commercial actors. Moreover, due to the current complex system of registration and coordination of frequency assignments as well as the necessary goodwill of administrations to ensure compliance during the process, many disputes may arise in the future that will not be easy to resolve at the ITU level even with the assistance of its bodies such as the BR and the RRB. Even more problematic is the fact that many of these cases have political ramifications, thus making it further difficult to negotiate the resolution of such disputes, particularly through diplomatic channels, such as in some current harmful interference cases which involve satellite broadcasting services.

If a satellite intends to broadcast electronic transmissions over the territory of another administration, then the administration responsible for the satellite must first obtain the agreement of the administration whose territory will be affected by the satellite. Further, according to the ITU Radio Regulations, "In devising the characteristics of a space station in the broadcasting satellite service, all technical means available shall be used to reduce, to the maximum, the radiation over the territory of other countries unless an agreement has been previously reached with such countries."[lx] In this regard, Article 34 of the ITU Constitution provides that Member States reserve the right to cut off, in accordance with their national laws, any private telecommunications which may appear dangerous to the security of their respective States or contrary to their laws, public order, and decency.

It is important to emphasize that harmful interference is prohibited, in accordance with the ITU Constitution, in particular harmful interference that is intentional. . This is an extremely sensitive issue which may have significant political effects and eludes easy settlement. Therefore, although the ITU has established its own rules for settling disputes between administrations, these rules may not be sufficient to resolve all cases of harmful interference. Through the use of arbitration, however, the private parties involved in a dispute may settle their differences while leaving their political considerations aside. Therefore, even if States are not willing to submit their disputes to arbitration, private companies may well prefer this option, which procedure can be facilitated through the implementation of the PCA's Space Rules in ITU-related disputes.

VI. THE PCA's OPTIONAL RULES FOR OUTER SPACE ACTIVITIES (OUTER SPACE RULES)

Although other formal mechanisms exist for the settlement of international disputes, the focus of this paper is an analysis of the PCA's Optional Rules for Outer Space Activities and their potential applicability and suitability to ITU-related disputes involving activities in Outer Space. This is especially true in light of the fact that new players in the realm of Outer Space require an appropriate dispute resolution mechanism in cases involving ITU-related matters.

The Outer Space Rules[lxi] were adopted on 6 December 2011 by the PCA with the objective of filling a lacuna that had previously existed in the settlement of space-related disputes at the international space law level. These Rules were intended to be a voluntary and binding mechanism open to all space stakeholders, with a focus on the particularities of Outer Space activities.[lxii] Previous mechanisms available for the settlement of international space related disputes were either too limited in their personal or material scope and/or were not available to all possible space actors, including private entities, nor were they open to all the material possibilities that could arise from the particularities of space activities.[lxiii]

By way of example, the Liability Convention has limited material scope, covering only claims for (physical) damages caused by space objects.[lxiv] In addition, none of the other fundamental space law treaties provide any specific guidance as to dispute resolution,[lxv] and although the instruments of the ITU do provide for arbitration, they do so in regard to only certain subject matters related to the interpretation and application of specific ITU instruments, such as harmful interference to registered radio frequencies.[lxvi]

This lack of a specialized dispute resolution mechanism has left States with no option but to rely on general international law mechanisms for resolution of most of their disputes. However, the problem in this regard is that these generic instruments are mostly available only for the resolution of disputes involving States, such as the International Court of Justice.[lxvii]

As a result, the advisory group that created the PCA's Space Rules concluded that arbitration would be a more desirable and suitable mechanism for the resolution of disputes arising from Outer Space activities. For example, most current international space law

agreements between private parties already generally provide opportunities for arbitration of disputes either under UNCITRAL rules or procedural rules related to private arbitration. The PCA Advisory Group also noted that international arbitration has several advantages which makes it particularly well suited to the resolution of contemporary space-related disputes: it is open to all parties, it is voluntary, the awards are final and binding, it is internationally recognized by the New York Convention, it is flexible and can be modified on the interest of the parties through an agreement, the parties are able to choose their own decision-makers, and the parties can also preserve confidentiality.[lxviii]

In sum, the new Space Rules, although largely based on the UNCITRAL rules, have been adapted to fulfill the particular needs and characteristics of conflicts related to space activities whereby States, international organizations, and private entities often act both as important stakeholders and potential parties.[lxix] By way of example, the words 'intentional wrongdoing' in Article 16 of the Space Rules (this term also exists under the general UNCITRAL rules) was deleted from the revised rules, which was considered to be a more realistic approach since the inclusion of these words would doubtless lead to endless discussions and accusations regarding whether the wrongdoing at issue was intentional. The Advisory Group further understood that retention of these words was unnecessary and could lead to unwanted complications, in turn threatening the establishment of an agile and efficacious dispute settlement procedure.[lxx]

The Advisory Group also included in its analyses some rules specific to the PCA, such as the optional rules of procedure for arbitrating disputes between two States (1992), the optional rules for arbitration rules to disputes between two parties of which only one is a State (1993), the optional rules for arbitration between International Organizations (1996), and the optional rules for arbitration of disputes between international organizations and private parties (1996). The PCA's first specific optional rules related to disputes in the field of natural resources and the environment was also an important source, since space activities similarly possess high levels of technical complexity and sensitivity to confidentiality of information.[lxxi] The participation of States in developing the PCA arbitration rules through detailed comments was also welcomed so that any proposed rules would be tailored to their present needs and concerns as well as to those of their intergovernmental organizations.[lxxii]

The scope of the Space Rules is also conveniently very broad. For example, the characterization of a particular dispute as relating to Outer Space is not necessary for the establishment of jurisdiction where the parties have agreed to settle a specific dispute under these Rules.[lxxiii] This is of particular importance regarding ITU disputes, since the ITU does not deal solely with space- related activities. In addition, the scope of the settlement of disputes under these rules may relate to any rule, decision, agreement, contract, convention, treaty, or constituent instrument of an organization, agency, or relationship.[lxxiv]

Additionally, parties may not claim sovereign immunity from the Rules, since an agreement to use the Rules is considered a waiver of any immunity.[lxxv] Parties are also free to decide if they need one, three, or five arbitrators depending upon the complexity of the matter.[lxxvi] Although the parties are free to choose their arbitrator(s), due to the specificities and high level of technical complexity that these disputes may have, the Secretary-General will make available a list of persons considered to have expertise in the subject matters of the dispute in order to assist the parties.[lxxvii] In this regard, the arbitral tribunal can also request that the parties jointly or separately provide a non-technical document summarizing and explaining the background of any scientific, technical, or other specialized information which the arbitral tribunal may consider to be necessary to fully understand the matters in dispute.[lxxviii]

One of the most important provisions of the Space Rules is the extended protection of confidentiality. Due to the highly sensitive nature regarding the potential disclosure of classified information identified by the advisory group,[lxxix] it was given the option of appointing a confidentiality adviser who would report to the tribunal and to the other party or parties without disclosing confidential information[lxxx] that would otherwise compromise the willingness of a party to settle the dispute pursuant to these rules.

In addition, the presence of a large number of Member States within its organization gives the PCA unique status and extensive experience to assist States or their entities with their arbitration proceedings and it is, therefore, a better option than private arbitral institutions for managing potential arbitrations involving the particular characteristics and wide range of possible parties involved in Outer Space activities.

Thus, the PCA plays a vital role with the adoption of its Space Rules[lxxxi] which, in turn, are considered to be an important source for strengthening the provisions of the major UN Space Law Treaties. The flexibility provided by the Rules and the realistic equilibrium they promote among the many different interests involved are a further reflection of the fact that they fulfill a clear need for the settlement of disputes related to Outer Space activities, and that the resolution of such disputes can and should not be nullified by claims of sovereign immunity.[lxxxii]

VII. CONCLUSION

The PCA's Space Rules provide both an adequate and desirable mechanism for the resolution of ITU-related disputes. Their broad scope of application, the fact that they are not limited to Outer Space disputes, that they can be used by any party, and the extended confidentiality protections they provide all make the Rules particularly suitable as a tool for settling disputes within the ITU regulatory sphere. Although many other instruments besides arbitration exist for resolving disputes, the particularities and characteristics of the Space Rules make them more appropriate for resolving current conflicts in Outer Space. Even if the actual use of arbitration is rare when compared with the number of arbitration treaties that have been signed, any mechanism for the settlement of international disputes should not be measured by the number of times it is used but rather by the quality and adequacy of its rules and of the decisions it may provide.

Because being available is the first step on the road to being used, the ITU provides an excellent forum for discussion of the implementation of the PCA Rules, which would provide to administrations and other interested parties both an awareness of these Rules and their potential utility in the resolution of space-related conflicts. Finally, the Rules could easily be implemented within the ITU regulatory system at two different levels: (1) either directly by changing the ITU instruments to include these Rules for use either on an optional or mandatory basis, or (2) indirectly, whereby States and satellite service operators could include in their service agreements, leases, or contracts specific provisions mandating the use of the PCA's Space Rules to resolve conflicts that occur as a result of their activities in Outer Space.[lxxxiii]

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[i] Permanent Court of Arbitration, *Optional Rules for Arbitration of Disputes Relating to Outer Space Activities* [hereinafter *PCA Rules*], Introduction.

[ii] Judge Fausto Pocar. "An Introduction to the PCA's Optional Rules for Arbitration of Disputes Relating to Outer Space Activities" (2012) 38 *Journal of Space Law* 177 at 179 [hereinafter *Pocar*].

[iii] *Pocar*, *supra* note ii at 181.

[iv] International Telecommunications Union, *Constitution of the International Telecommunications Union*, , Article 56 compiled in Collection of the Basic Texts of the International Telecommunications Union Adopted by the Plenipotentiary Conference, 2011 Edition (Geneva: International Telecommunications Union, 2011) [hereinafter *Constitution*] at 51; International Telecommunications Union, *Convention of the International Telecommunications Union*, Article 4, compiled in Collection of the Basic Texts of the International Telecommunications Union Adopted by the Plenipotentiary Conference, 2011 Edition (Geneva: International Telecommunications Union, 2011) [hereinafter *Convention*] at 66; International Communications Union, *Radio Regulations of the Radio Regulations Board*, Articles 9.64 and 1, compiled in The Radio Regulations, Edition of 2012 (Geneva: International Communications Union, 2012) [hereinafter *Radio Regulations*]..

[v] Ram Jakhu, "*Dispute Resolution Under the ITU Agreements*" (Paper delivered at the Annual Meeting of the Permanent Court of Arbitration Advisory Group, 2010), [unpublished].

[vi] Jacob Bercovitch and Richard Jackson, *Conflict Resolution in the Twenty-First Century: Principles, Methods, and Approaches* (Ann Arbor: University of Michigan Press, 2009) at 5 [hereinafter *Conflict Resolution*].

[vii] *Hague Convention, supra note* vii at Article 16.

[viii] *Ibid* at Article 20.

[ix] *Ibid* at Article 26.

[x] *1907 The Hague Convention for the Pacific Settlement of International Disputes*, 1971 U.K.T.S. 6, 1 Bevans 577, 2 A.J.I.L. Supp. 43 (1908) [hereinafter *1907 Hague Convention*], Article 37.

[xi] *Conflict Resolution, supra* note vi...

[xii] *Pocar*, *supra* note iii at 7-8.

[xiii] *Conflict Resolution, supra* note vi.

[xiv] *Convention on the Recognition and Enforcement of Arbitral Awards*, June 10, 1958, 21 U.S.T. 2517, T.I.A.S. No. 6997, 330 U.N.T.S. 38 [hereinafter *New York Convention*].

[xv] *New York Convention, supra* note xvii at Articles 1 and 3.

[xvi] *Pocar*, *supra* note iii at 9.

[xvii] *UNCITRAL Arbitration Rules as revised in 2010*, GA Res 65/22, UNGAOR, 65th Sess, Supp No 17, UN Doc A/65/17, (2010) [hereinafter *UNCITRAL Rules*], at iv.

[xviii] *UNCITRAL Rules, supra* note XX at Article 6.

[xix] *New PCA Rules of Arbitration Adopted*, online: Permanent Court of Arbitration < http://www.pca-cpa.org/showpage.asp?pag_id=1030>

[xx] *Conflict Resolution*, *supra* note vi at 6.
[xxi] *Pocar*, *supra* note iii.
[xxii] Frans G. von der Dunk, "Space for Dispute Settlement Mechanisms – Dispute Resolution Mechanisms for Space? A Few Legal Considerations" (2001) *Proceedings of the 44th Colloquium of the Law of Outer Space*, 442.at 445 [hereinafter *von der Dunk*]
[xxiii] *Ibid*.
[xxiv] *Von der Dunk*, *supra* note xxv at 450.
[xxv] *Constitution*, *supra* note iv at Article 2.
[xxvi] *Constitution*, *supra* note iv at Annex, 1001B, 54..
[xxvii] *Constitution*, *supra* note iv at Article 3.
[xxviii] , *Ibid* at Article 4.
[xxix] , *Ibid* at Articles 7, 8, 13.
[xxx] *Ibid* at Article 1.
[xxxi] *Ibid*.
[xxxii] *Radio Regulations*, *supra* note iv at Rule 18.1
[xxxiii] *Constitution*, *supra* note iv at Article 44.
[xxxiv] Yvon Henri, "Interference on Satellite System" (Paper delivered at the International Telecommunications Union Asia-Pacific Regional Workshop on Satellite Launching and Coordination) [unpublished].
[xxxv] *Constitution*, *supra* note iv at Article 45.
[xxxvi] *Radio Regulations*, *supra* note iv at Rule 8.1
[xxxvii] *Ibid* at Rule 8.3
[xxxviii] *Ibid* at Rules 4.4 and8.4
[xxxix] *Ibid* at Rule 4.4.
[xl] Henri, *supra* note xxxvii.
[xli] *Radiot Rules*, *supra* note iv at Article 11, numbers 11.32A, 11.33, 11.38, 11.41, 11.41.2, 11.42
[xlii] International Telecommunications Union, *Document RRB 13-1/7-E*, at, item n. 6, item 4, March 22, 2013.
[xliii] According to Radio Regulation 11.44 B, a frequency assignment to a space station in the geostationary-satellite orbit shall be considered as having been brought into use when a space station in the geostationary-satellite orbit with the capability of transmitting or receiving that frequency assignment has been deployed and maintained at the notified orbital position for a continuous period of ninety days. The notifying administration shall so inform the Bureau within thirty days from the end of the ninety-day period. (WRC 12)., *Radio Regulations*, *supra* note iv at Rule 11.44B.
[xliv] *Ibid* at Articles 11, 11.44.1
[xlv]Jorge Ciccorossi, "Coordination and Analyses of GSO Satellite Networks" (Paper presented at Regional Radiocommunication Seminar. San José, Costa Rica, 30 October - 02 November 20120 at 12.
[xlvi] See Ciccorossi, *Ibid*. According to him, it is possible to optimize the filing, though there are some aspects to consider while submitting a filing that can facilitate the recording in the MIFR.
[xlvii] *Constitution*, *supra* note iv at Article 56.
[xlviii] ITU *Ibid* at Preamble.
[xlix] *Convention*, *supra* note iv at Article 41.
[l] *Ibid.*
[li] *Ibid*.
[lii] International Telecommunications Union, *Basic Documents, Explanatory Notes*, Number 12.
[liii] International Telecommunications Union, *Optional Protocol on the Compulsory Settlement of Disputes Relating to the Constitution of the International Telecommunication Union, to the Convention of the International Telecommunication Union and to the Administrative Regulations*, compiled in Collection of the Basic Texts of the International Telecommunications Union Adopted by the Plenipotentiary Conference, 2011 Edition (Geneva: International Telecommunications Union, 2011) [hereinafter *Protocol*] at Article 1, 175.
[liv] *Protocol*, *supra* note lvx at Article 2, 176.
[lv] *Ibid* at Rule 13.2.
[lvi] *Ibid* at Rule 15.22.
[lvii] International Telecommunications Union, Radiocommunication Bureau, *Circular Letter CCRR/48 to Administrations of the ITU Member States, Annex, Part C, Internal Arrangements and Working Methods of the Radio Regulation Board*, 12 April 2013.

[lviii] International Telecommunications Union, *Resolution 119*, compiled in Collection of the Basic Texts of the International Telecommunications Union Adopted by the Plenipotentiary Conference, 2011 Edition (Geneva: International Telecommunications Union, 2011) [hereinafter *Resolutions*] at 419.
[lix] *Constitution*, *supra* note iv at Article 14.
[lx] , *Radio Regulations*, *supra* note iv at Rule 23.13, paragraph 4.
[lxi] These Rules were established after over two years of work of a study group of international experts chaired by Judge Fausto Polcar and in collaboration with the International Bureau of the PCA. The group was formed by Ram S. Jakhu Frans G. von der Dunk, Maureen Williams, Tare Brisibe, Joanne Irene Gabrynowicz, and Judge Fausto Pocar. *See Pocar*, *supra* note ii.
[lxii] *Pocar*, *supra* note ii at 1.
[lxiii] *Ibid* at 5
[lxiv] *Convention on the International Liability for Damage Caused by Space Objects*, 29 March 1972, 961 U.N.T.S. 187, 24 U.S.T. 2389, T.I.A.S. No 7762 [hereinafter *Liability Convention*)/
[lxv] *Pocar*, *supra* note ii at 6
[lxvi] *Ibid* at 6.
[lxvii] *Ibid.*
[lxviii] *Ibid* at 8-9.
[lxix] *PCA Rules*, *supra* note i at Introductory Notes, i.
[lxx] International Law Association (ILA), "Part I Introduction – Remote Sensing, Satellite Data In Court, Space Debris, Dispute Settlement**,"** *SOFIA Conference (Space Law)* (2012) [hereinafter *ILA SOFIA Conference*] at 2-3.
[lxxi] *Pocar*, *supra* note ii at 10-11. See also the Permanent Court of Arbitration, *Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment*,
[lxxii] *Pocar*, *supra* note ii at 10.
[lxxiii] *PCA Rules*, *supra* note i at Article 1.
[lxxiv] *Ibid* at Article 3 (3) d).
[lxxv] *Ibid* at Article 1 (2).
[lxxvi] *Ibid* at Article 9 (1).
[lxxvii] *Ibid* at Article 10 (4).
[lxxviii] *Ibid* at Article 27 (4).
[lxxix] *Pocar*, *supra* note ii at 13.
[lxxx] *PCA Rules*, *supra* note i at Article 27 (8).
[lxxxi] *Pocar*, *supra*, note ii at 14
[lxxxii] *ILA SOFIA Conference*, *supra* note lxxvi at 2-3.
[lxxxiii] Ram Jakhu, "Satellites: Unintentional and Intentional Interference" (Paper delivered at Panel Discussion on Radio Frequency Interference and Space Sustainability organized by the World Secure Foundation, Washington, 17 June 2013).