



THE GUIDE TO TELECOMS ARBITRATIONS

Editors
Wesley Pydiamah

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This article was first published in July 2022
For further information please contact insight@globalarbitrationreview.com

Published in the United Kingdom
by Law Business Research Ltd, London
Meridian House, 34-35 Farringdon Street, London, EC4A 4HL, UK
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www.globalarbitrationreview.com

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david.samuels@lbresearch.com

ISBN 978-1-83862-873-4

Printed in Great Britain by
Encompass Print Solutions, Derbyshire
Tel: 0844 2480 112

Acknowledgements

The publisher acknowledges and thanks the following for their assistance throughout the preparation of this book:

AlixPartners GmbH

Aluko & Oyeboade

Brattle

Boies Schiller Flexner (UK) LLP

Dechert LLP

Eversheds Sutherland LLP

Hanotiau & van den Berg

McDermott Will & Emery

Pallas Partners LLP

Paul Werné

Space Arbitration Association

Three Crowns LLP

Vieira de Almeida e Associados

Winston & Strawn LLP

Publisher's Note

Global Arbitration Review is delighted to publish *The Guide to Telecoms Arbitrations*.

For newcomers, GAR is the online home for the international arbitration specialists everywhere. We tell them all they need to know about everything that matters in their chosen niche.

GAR is perhaps best known for our daily news. But we also have a growing range of other output, including our technical library (our Guides series); our retrospective annual regional reviews; our GAR Live events; workflow tools such as our Arbitrator Research Tool (ART), which maps the connections of 30,000-plus names, and Primary Sources, which connects you to the original texts of decisions and judgments from GAR's unique archive; and (coming soon) our new GAR online Academy where newcomers can learn advocacy and other IA ringcraft at the foot of various masters. Please visit www.globalarbitrationreview.com if you are interested in finding out more.

As the unofficial 'official journal' of international arbitration, we occasionally become aware of gaps in the literature before others. This guide to telecoms arbitrations is a prime example. Few industries seek the counsel of arbitration specialists so regularly. And yet there has been no definitive book for either counsel or client on some of the practicalities of those disputes – until now.

On this occasion, however, the joy of accomplishment is tempered with pretty serious embarrassment. GAR has been writing about telecoms disputes since our inception in 2006. In fact, if I had to pick one industry that regularly produces large shareholder disputes, it would be telecoms. We should have thought of this one long ago.

Still, better late than never. And the timing may in fact be apposite. As editor Wesley Pydiamah notes in his introduction, demand for international arbitration from telecoms clients is only likely to increase as the industry goes through a series of technology releases and system upgrades.

As with most of our other sector-specific guides, this is not a complete toolbox (the exception here is our guide to IP arbitration); rather, it assumes a certain knowledge of the process on the part of the reader and jumps you straight to the practical points that are current and pertinent for telecoms.

We trust you will find it a useful addition to your library. If so, you may be interested the other books in the GAR Guides series. They cover energy, construction, IP disputes, mining, M&A, challenging and enforcing awards, investor-state arbitration and the use of evidence in the same practical way. We also have a book on advocacy in arbitration and one on how to become better at thinking about damages – as well as a handy citation manual (*Universal Citation in International Arbitration (UCLA)*).

We're delighted to have worked with so many leading names in creating *The Guide to Telecoms Arbitrations*. My thanks to all of them. And last, special thanks to Wesley Pydmiamah for spotting not only the gap in the literature but also in GAR's own foresight, and for his elan in developing the vision. And as always to my Law Business Research colleagues in production for creating such a polished work.

David Samuels

July 2022

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Introduction

Wesley Pydiamah¹

The idea of this guide, *The Guide to Telecoms Arbitrations*, came about during the covid-19 pandemic. With the world entering a new paradigm of lockdowns and working from home policies, the need for enhanced telecommunication services has never been so acute. This is undoubtedly true of mobile and data services, both of which are core services offered by any telecoms operator, and demand for these services is unlikely to slow down. Coupled with the advent of new technologies such as 5G, the telecoms sector is undergoing radical changes and is expected to revolutionise ways in which we live, work and interact in society. It has already impacted arbitration usages, with the ever-increasing reliance on technology for legal research, document management and virtual hearings.

Predictably, a rise in arbitrations could result from this new paradigm and the changing landscape. As telecoms operators embark on their development spree, states will also want to regulate the sector to preserve their essential interests. Frictions between telecoms operators and foreign governments are inevitable in light of the massive investments involved in existing and new roll-out projects. Both domestic and international legal frameworks will naturally evolve to keep track of developments in the sector.

This guide is not intended to be a comprehensive toolbox for any kind of arbitration that arises in the telecoms sector. But since we must start somewhere, this first edition will cover both general and specific themes that will hopefully bring more insight to the arbitration community.

It may sound trite, but is arbitration really the preferred option to resolve telecoms disputes? The first port of call is to see what the end users of arbitration think. The guide therefore starts with an in-house perspective from Paul Werné,

¹ Wesley Pydiamah is a partner at Eversheds Sutherland.

the former general counsel at one of the most prominent telecoms operators.² A chapter on the suitability of arbitration to new technologies by Nasser Ali Khasawneh, Maria Mazzawi and Ricardo Christie of Eversheds Sutherland LLP then follows.³

However, even when arbitration is preferred, the nature of the telecoms sector and its far-reaching and overlapping effects on a whole range of matters may give rise to issues of arbitrability, which may become important and relevant in the context of enforcement of arbitral awards.⁴ This is addressed in a chapter by Emily Hay of Hanotiau & van den Berg.

When it comes to commercial arbitration in the telecoms sector, it is fair to say that this has been primarily driven by M&A disputes that can arise in a variety of scenarios.⁵ While the governing law to these arbitrations will be subject to what the parties agreed to in their contract, a chapter by Will Hooker, Rosalind Axbey, Rachel Ong and James Newton of Pallas Partners LLP also looks at whether there is a different approach under common law as compared to civil law. Equally important are the valuation approaches most predominantly used in commercial arbitrations to assess damages, and this is explored by Kai F Schumacher and Christoph Wilmsmeier of AlixPartners.⁶

As for oil, gas and other natural resources, spectrum is the new scarce resource, one may say. Most of the telecoms infrastructure in use, such as towers, can be found on land. However, undersea cables have proliferated in recent times, which is not without posing difficulties when it comes to disputed maritime zones, as Michael J Stepek of Winston & Strawn LLP explains.⁷ Further, the terrestrial nature of that infrastructure is by no means the end of the story. The satellite industry has now emerged as a direct competitor to telecoms operators, and this is likely to entail a rise of satellite disputes that may be subject to arbitration.⁸ This is covered in detail by Laura Yvonne Zielinski, president of the Space Arbitration Association.

2 See Chapter 1, 'An In-House Perspective on Telecoms Arbitrations'.

3 See Chapter 2, 'Arbitration and the Advent of New Technologies'.

4 See Chapter 3, 'Issues of Arbitrability in Telecoms Arbitrations'.

5 See Chapter 4, 'M&A Arbitrations in the Telecoms Sector'.

6 See Chapter 5, 'Valuation Approaches in Telecoms Arbitrations: Commercial Arbitrations'.

7 See Chapter 6, 'Claims in Disputed Maritime Areas: Resolving International Disputes Arising from Activities Relating to Submarine Cables in Disputed Maritime Areas'.

8 See Chapter 7, 'The Rise of Satellite Arbitrations'.

Part II of the guide is devoted to investment treaty arbitration in the telecoms sector. There is self-evidently a tension between the state's sovereign right to regulate and the protection of the investor's rights. The chapters in this part of the guide, authored by Reza Mohtashami QC, Leilah Bruton and Farouk El-Hosseny at Three Crowns LLP, and Babatunde Fagbohunlu and Inyene Robert of Aluko & Oyeboode respectively, revisit the jurisprudence of the right to regulate and its limits⁹ and also look more closely at the obligations of the investor and how these obligations have been revamped in more recent investment treaties.¹⁰

There are then two chapters that focus on recent developments. The Huawei saga has brought a new light to the defence of necessity,¹¹ as explored by David Hunt and Ben Love at Boies Schiller Flexner (UK) LLP, whereas armed conflict and civil unrest in different parts of the world have posed further challenges to the sector, as Michael Darowski and Romilly Holland of McDermott Will & Emery set out.¹² The final chapter, by Lucrezio Figurelli and Richard Caldwell of Brattle, deals with issues of compensation and the approach taken by investment treaty tribunals in recent cases.¹³

The final part of the guide gives a geographical perspective to telecoms arbitrations, with an overview of telecoms arbitrations in Africa by Magda Cocco, Tiago Bessa, Carla Gonçalves Borges, Marília Frias and Catarina Carvalho Cunha, and Bernardo Kahn at Vieira de Almeida,¹⁴ and an overview of Latin America by Eduardo Silva Romero, José Manuel García Represa and Catalina Echeverri Gallego of Dechert LLP.¹⁵ Other regions will be covered in the online edition.

This guide brings together leading arbitration practitioners who have a wealth of experience in telecoms arbitrations. It is hoped that, by focusing on a sector that will be impacting the world of arbitration in the coming years, this guide will be helpful for the arbitration community.

9 See Chapter 8, 'Standards of Protection: The State's Sovereign Right to Regulate and its Limits'.

10 See Chapter 9, 'Standards of Protection and the Obligations of the Investor'.

11 See Chapter 10, 'Is the People's Good the Highest Law? The Concept of Necessity in Investor-State Protections'.

12 See Chapter 11, 'Civil Unrest and Investor-State Claims in the Telecommunications Sector'.

13 See Chapter 12, 'Valuation Approaches: Investment Treaty Arbitrations'.

14 See Chapter 13, 'A Look at the Future: the Growth of Telecoms Arbitrations in Africa'.

15 See Chapter 14, 'Telecommunications Arbitration in Latin America'.

I would like to warmly thank all the persons who have made this project a reality, starting, of course, with the contributors and the teams that have assisted them. I also express gratitude to the team at Global Arbitration Review including David Samuels, Mahnaz Arta, Hannah Higgins, Jack Levy and Georgia Goldberg.

Wesley Pydiamah

July 2022

Part I

General Considerations

CHAPTER 7

The Rise of Satellite Arbitrations

Laura Yvonne Zielinski¹

Introduction

Demand in telecommunication services is growing both in terms of network capacity and higher speed networks. This growing demand is being addressed not only through additional fibre and wireless deployments but also by satellite internet providers. Satellite internet is provided through communication satellites. While traditionally it had been reserved to geostationary satellites, recently, companies such as Starlink and OneWeb have started launching new satellite internet constellations in the low-Earth orbit that enable low-latency internet from space. With this development anticipated to expand, the satellite industry can be expected to become an increasingly important player in the global telecommunications industry.

Overview of the satellite industry and risks of disputes

Overview of current satellite activities

Broadly, artificial satellites are objects launched into space to orbit the Earth in order to collect information or enable communications. According to the 2021 State of the Satellite Industry Report published by the Satellite Industry Association, the satellite industry produced global revenues of US\$271 billion in 2020 (amounting to 74 per cent of the global revenues of the entire space economy). Of these revenues, 50 per cent were produced in the ground equipment sector, 44 per cent by satellite services, 5 per cent came from satellite manufacturing and 2 per cent from the launch industry. Within the satellite services, the most important use of satellites still corresponded to television, followed by radio, broadband, fixed and mobile communications, and finally remote sensing (used

1 Laura Yvonne Zielinski is the president of the Space Arbitration Association.

for agriculture, change detection, disaster mitigation, meteorology, Earth science, space science, and national security). In other terms, 84 per cent of satellites launched in 2020 were destined for commercial communications, 11 per cent for remote sensing missions, and the remaining 5 per cent for military surveillance, civil or military communications, scientific purposes, navigation and satellite servicing. The ground equipment in turn comprised consumer equipment (satellite TV dishes, etc.), GNSS equipment and network equipment.²

Potential for growth in the satellite industry

The satellite industry is growing at a very fast pace, driven mainly by a recent reduction in launch prices accompanied by increased launch activity and thus more launch choices for satellite operators. Another growth factor of the satellite industry is the improvement of satellites in the geostationary orbits and the increasing use of smaller satellites (smallsats). Finally, the expansion of satellite services can also be explained by the increase in telecommunication capacity, an increase in the resolution of commercially available imagery and the development of new satellite applications. As a result of these factors, according to the 2021 State of the Satellite Industry Report published by the Satellite Industry Association, the number of operational satellites in space has grown by 252 per cent from 958 in 2010 to 3,371 in 2020.³ This number is likely to further increase in the coming years with the launches of thousands of new satellites by companies such as Starlink, OneWeb and Kuiper, which plan to provide satellite internet through large satellite constellations in LEO (the lower Earth orbits).⁴

Likely rise of satellite disputes

Until recently, the space industry had been characterised by the presence of only a few large market participants that were conscious of their interdependence and corresponding need to collaborate. This is why the space industry has traditionally preferred mechanisms such as cross-waivers of liability and insurance over

2 2021 State of the Satellite Industry Report published by the Satellite Industry Association: accessible for a fee at: <https://sia.org/news-resources/state-of-the-satellite-industry-report>.

3 2021 State of the Satellite Industry Report published by the Satellite Industry Association: accessible for a fee at: <https://sia.org/news-resources/state-of-the-satellite-industry-report>.

4 See, for example, 'Nasa fears Space X plan for 30,000 satellites could hamper space missions', *The Guardian*, 10 February 2022, accessible at: <https://www.theguardian.com/science/2022/feb/10/nasa-fears-spacex-plan-for-30000-satellites-could-hamper-space-missions>.

formal dispute resolution mechanisms.⁵ However, the recent multiplication of activities and the entry of a large number of new actors into the satellite market is likely to change this dynamic, and brings about the risk of an increasing number of disputes.⁶ Those disputes will mainly arise out of the contractual relationships between the different public and private actors of the satellite industry. However, disputes are also likely to arise out of the growing congestion of the lower Earth orbits. Indeed, the launch of thousands of new satellites in a short amount of time is likely to significantly increase both the risk of physical collisions between operational satellites (or with entire or parts of defunct satellites called 'space debris'). Additionally, the increase in active satellites is causing a growing risk of harmful frequency interference between them. Finally, even in the absence of actual collisions, the costly avoidance measures and manoeuvres that the increasing space congestion will require, are likely to also result in disputes between satellite operators.

The law applicable to satellite activities

International space law

International space treaties and UN General Assembly Resolutions

Satellite activities, like all space activities, are governed mainly by four international space treaties developed in the context of the United Nations Committee on the Peaceful Uses of Outer Space: the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the Outer Space Treaty),⁷ the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the Rescue Agreement),⁸ the 1972 Convention on International Liability for Damage Caused by Space Objects (the Liability Convention),⁹ and the 1976 Convention on Registration of Objects Launched

5 See Lotta Viikari, 'Towards More Effective Dispute Settlement of Disputes in the Space Sector', in *Dispute Resolution in the Space Sector: Present Status and Future Prospects*, Rovaniemi: Lapland University Press, p. 233; Alexis Mourre, 'Arbitration in Space Contracts', *Arbitration International*, Oxford University Press, Volume 21, Issue 1, 1 March 2005, p. 43; Frans von der Dunk, 'Space Law and the Resolution of Disputes on Space Activities', *Arbitration.ru*, March-April 2021, No. 2(26)p. 13; Stefanie Haeseker's presentation at the Space Arbitration Association event 'Does Outer Space Need Arbitration?', 13 January 2022.

6 Frans von der Dunk, 'Space Law and the Resolution of Disputes on Space Activities', *Arbitration.ru*, March-April 2021, No. 2(26) p. 13.

7 A pdf version is accessible at: https://www.unoosa.org/pdf/gares/ARES_21_2222E.pdf.

8 A pdf version is accessible at: https://www.unoosa.org/pdf/gares/ARES_22_2345E.pdf.

9 A pdf version is accessible at: https://www.unoosa.org/pdf/gares/ARES_26_2777E.pdf.

into Outer Space (the Registration Convention).¹⁰ A fifth treaty, the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the Moon Agreement), has failed to gain sufficient support and can be safely ignored for the purposes of this chapter.

The Outer Space Treaty, sometimes referred to as the ‘Magna Carta’ of international space law,¹¹ is the most comprehensive of the five treaties and sets out the main principles governing activities in Outer Space. According to Article I of the Outer Space Treaty, the exploration and use of outer space ‘shall be carried out for the benefit and in the interest of all countries . . . and shall be the province of all mankind’. Article II of the Outer Space Treaty clarifies that ‘outer space, including the moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use of occupation, or by any other means.’ Article III further states that the exploration of outer space shall be carried out ‘in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding’. In turn, Article IV bans the placement of weapons of mass destruction in orbit or on celestial bodies, and Article XI promotes international cooperation in space exploration.

Articles V to VII of the Outer Space Treaty contain principles that were further developed in the subsequent agreements mentioned above. Thus, Article V sets out the principle of providing assistance to any astronaut in need, a principle further expanded on in the Rescue Agreement. Similarly, as the basis for the Registration Convention, Article VI provides that State Parties to the Outer Space Treaty ‘shall bear international responsibility for national activities in outer space . . . whether such activities are carried on by governmental agencies or by non-governmental entities, for assuring that national activities are carried out in conformity with the provisions [of the Outer Space Treaty]’, and that the activities of non-governmental entities in outer space ‘shall require authorization and continuing supervision by the appropriate State Party to the Treaty’. To ensure compliance with this obligation of supervision, the Registration Convention

10 A pdf version is accessible at: https://www.unoosa.org/pdf/gares/ARES_29_3235E.pdf.

11 Frans von der Dunk, ‘International Satellite Law’, University of Nebraska Faculty Publications, 2019, p. 3; Alexander P Reinert, ‘Updating the Liability Regime in Outer Space: Why Spacefaring Companies Should be Internationally Liable for their Space Objects’, *William & Mary Law Review*, Volume 62, Issue 1 (2020) p. 333.

provides for the registration of space objects.¹² Finally, Article VII states that '[e]ach State Party to the Treaty that launches or procures the launching of an object into outer space . . . and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object or its component parts on the Earth [or in space]', a principle further developed in the Liability Convention.

In addition to these treaties, several Resolutions of the United Nations General Assembly, although in theory non-binding, have widely been followed and as such are said to amount to customary international law with regard to international space activities. Notably, a 1961 Resolution recommends that States register their space objects with the United Nations as part of an international registry.¹³ Other Resolutions are the 1986 UN Resolution on Principles Relating to Remote Sensing of the Earth from Outer Space,¹⁴ which constitutes the main legal document applicable to Earth observation activities; the 1982 Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting;¹⁵ the 1992 Principles Relevant to the Use of Nuclear Power Sources in Outer Space;¹⁶ and the 1996 Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries.¹⁷

Soft law and guidelines on space debris mitigation

International space law dates back to the Cold War era in which the exploration of outer space was very costly and limited to a few state actors. It therefore fails to specifically address several recent issues such as the accumulation of both active satellites and space debris in the lower Earth orbits that is already presenting

12 International Cooperation in The Peaceful Uses of Outer Space [1961] UNG 135; The United Nations Office for Outer Space Affairs maintains a registry of space objects supplied to the United Nations by its Member States.

13 Registration is mandatory for states that are parties to the Registration Convention and recommended for all other United Nations Member States.

14 UNGA RES 41/65.

15 UNGA RES 37/92.

16 UNGA RES 47/68.

17 UNGA RES 51/122.

serious risks, and will only continue to grow with the current multiplication of space activities and the planned large satellite constellations to be launched in the coming years.

In view of the political impossibility to agree on a new binding treaty able to address this new issue, in 2002, the Inter-Agency Debris Coordination Committee (IADC), comprising the major national space agencies, published the IADC Space Debris Mitigation Guidelines¹⁸ that served as a baseline for the 2007 United Nations Space Debris Mitigation Guidelines.¹⁹ While these instruments remain non-binding, they serve as an indication of best practices for satellite operators conscious of mitigating their creation of additional space debris.

The existing practice of private space actors reflects the acceptance of recommendations to limit the generation of space debris and minimise the negative impact on current and future space missions. Manufacturers try to reduce debris from launch vehicles and launched spacecraft by carefully designing them to prevent malfunctions and explosions and by ensuring that a reserved amount of fuel is available when a spacecraft's mission is over to enter or move them to disposal orbits.²⁰

In addition, there are currently efforts being undertaken to agree on rules of space traffic management to decrease the risk of physical collisions in outer space.²¹

Frequency allocation and coordination

Not only is the risk of physical collisions between active satellites or satellites and space debris becoming a growing issue, but the increase of active satellites in space is also presenting a challenge for frequency allocation and coordination.

It is the International Telecommunication Union (ITU), a specialised agency of the United Nations headquartered in Geneva, Switzerland, that offers the main international legal framework for addressing the technical and operational aspects of satellite communications.²² The ITU is managing all radio frequencies

18 IADC Space Debris Mitigation Guidelines, last revised in March 2022, accessible at: <https://orbitaldebris.jsc.nasa.gov/library/iadc-space-debris-guidelines-revision-2.pdf>.

19 Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space, accessible at: https://www.unoosa.org/pdf/publications/st_space_49E.pdf.

20 Elina Morozova, 'International Liability for Commercial Space Activities and Related Issues of Debris', Oxford Research Encyclopedia of Planetary Science, published online on 23 February 2021, p. 6.

21 See, for example, the European Commission's publication of 15 February 2022: https://ec.europa.eu/commission/presscorner/detail/en/QANDA_22_923.

22 Frans von der Dunk, 'International Satellite Law', Nebraska University Faculty Publications, 30 April 2019, p. 10.

and also the use of the Earth's geostationary orbit. It ensures that the available radio frequency spectrum and associated satellite orbits are used equitably, efficiently, and economically, and is tasked with preventing frequency interference between satellites.²³ The applicable sources of law are the ITU Constitution²⁴ and Convention,²⁵ and the ITU Radio Regulations,²⁶ all three inter-government treaties and binding as international law.

In practice, before a new satellite or system can be launched and used, it must be coordinated with neighbouring satellite networks. The result of this coordination process is set out in 'coordination agreements'. Compliance with these coordination agreements is crucial as harmful interference can prevent satellites from operating normally and thus cause significant financial damages to its operators.

Domestic space law

Under Article VI of the Outer Space Treaty, states are internationally responsible for any private activities in outer space that qualify as their 'national activities', and obliged to authorise and continuously supervise such activities. As a consequence, states have a strong incentive to regulate their domestic space activities in order to ensure compliance with international space law, while at the same time offering private parties incentives and the legal security they need to pursue space activities.

National space laws address issues such as approval processes for space launches, insurance requirements, liability limitations, space debris mitigation, national security requirements and environmental protection but the different domestic approaches can vary significantly from one state to another. In 2012, in order to increase harmonisation and reduce the fragmentation of domestic space law, the International Law Association proposed the Sofia Guidelines

23 Elina Morozova, Yaroslav Vasyanin, 'Mechanisms for Resolving Disputes Related to Violations of Coordination Agreements', presented at the 70th International Astronautical Congress in 2019, p. 15.

24 The Constitution of the International Telecommunication Union, signed in Geneva, Switzerland on 22 December 1992, entered into force on 1 July 1994.

25 The Convention of the International Telecommunication Union, signed in Geneva, Switzerland on 22 December 1992, entered into force on 1 July 1994.

26 The 2020 edition of the ITU Radio regulations can be accessed here: <https://www.itu.int/pub/R-REG-RR/en>.

for a Model Law on National Space Legislation.²⁷ The United Nations Office for Outer Space Affairs keeps an online database of states with national space legislation.²⁸

Finally, it should be mentioned that, as space technology and hardware are considered ‘dual-use technology’ (meaning that even commercial satellites can, for example, be used for military purposes if necessary), states want to protect their technological advances. As a consequence, satellite technology and hardware is often subject to export controls that need to be considered in any transaction regarding satellites.

Satellite disputes and arbitration

Commercial contractual disputes

As discussed above, the satellite industry comprises very different aspects, ranging from upstream activities, such as the manufacturing and launch of satellites, to midstream activities, such as the production, sale and distribution of satellite data, and downstream activities in the form of satellite applications for use on Earth or satellite broadcasting. Many of these activities involve contracts between various actors often based in different jurisdictions. The subject matter of these contracts is often highly technical and any satellite agreement can be subject to specific insurance requirements, heightened confidentiality and often export controls as a result of the dual-use nature of satellite technology. All of these aspects can and are likely to result in a growing number of contractual commercial disputes to the extent that the satellite industry is expanding in both scope and complexity.

As Professor Karl-Heinz Boeckstiegel said in 1993:

With the growing direct participation of private enterprises in space activities, disputes are bound to occur also in this context. In relative perspective, dispute settlement plays a greater role for private enterprises than for state institutions, because private enterprises do not have available diplomatic and political means and because private

27 Sofia Guidelines for a Model Law on National Space Legislation by the International Law Association, accessible at: https://www.unoosa.org/pdf/limited/c2/AC105_C2_2013_CRP06E.pdf.

28 United Nations Office for Outer Space Affairs' National Space Law Database, accessible at: <https://www.unoosa.org/oosa/en/ourwork/spacelaw/nationalspacelaw.html>.

*enterprises rely much more on calculating the exposure to costs and risk on the fulfillment of contractual obligations and, if necessary, on the enforcement for the other to fulfill the contract or pay damages.*²⁹

In the past, several of these contractual space disputes have been resolved through international commercial arbitration and it is likely that this trend will continue, as, for example, the European Space Agency provides for arbitration in Clause 35(2) of its General Clauses and Conditions for ESA Contracts³⁰ and arbitration clauses also seem to be routinely included into commercial space contracts by SpaceX, Avanti, Boeing, Airbus and Arianespace.³¹ In fact, a study undertaken by Vivasat Dadwal and Madeleine McDonald confirmed that international arbitration is used by both state and non-state actors in the resolution of publicly-known space-related disputes, especially in the satellite industry.³²

In the past, satellite disputes that gave rise to international arbitrations have for example arisen out of the late delivery of satellites, the insertion of a satellite into a wrong orbit, defective satellites already in orbit, the lease of satellite capacity, the right to orbital positions and frequency bands, export control and the cancellation of space contracts.³³

While international arbitration in general is well suited to adapt to the specific needs of the satellite industry, in 2011, the Permanent Court of Arbitration published its specifically-tailored Optional Rules for Arbitration of Disputes Relating to Outer Space Activities (the PCA Outer Space Rules).³⁴ These Rules are based on the well-known UNCITRAL Rules but contain various adaptations

29 Karl-Heinz Boeckstiegel, 'Settlement of Disputes Regarding Space Activities', *Journal of Space Law*, Volume 21, No. 1, p. 8.

30 Regulations of the European Space Agency: General Clauses and Conditions for ESA Contracts, ESA/REG/002, revised on 5 July 2019.

31 Rachael O'Grady, 'Dispute Resolution in the Commercial Space Age: Are All Space-Farers Adequately Catered For?', ICC Dispute Resolution Bulletin, Issue 3, 2021, p. 55, citing 'Avanti Wins Arbitration Award Against SpaceX', *SpaceNews*, 20 April 2011; C. Sanderson, 'Boeing faces claim over cancelled merger', *Global Arbitration Review*, 28 April 2020; European Commission Press Release: 'Mergers: Commission approves acquisition of Arianespace by ASL, subject to conditions', 20 July 2016.

32 Viva Dadwal, Madeleine McDonald, 'Arbitration of Space-Related Disputes: Case Trends and Analysis', presented at the 71st International Astronautical Congress in October 2020.

33 Jan Frohloff, 'Arbitration in Space Disputes', *Arbitration International*, Oxford University Press, 2019, Volume 35, Issue 3, pp., Paras. 309–329, 2.1.1–2.1.6.

34 A PDF version of the PCA Outer Space Rules can be accessed here: <https://docs.pca-cpa.org/2016/01/Permanent-Court-of-Arbitration-Optional-Rules-for-Arbitration-of-Disputes-Relating-to-Outer-Space-Activities.pdf>.

to better suit the requirements of the space industry. For example, under Articles 10(4) and 29(7), the Secretary-General of the Permanent Court of Arbitration maintains a list respectively of arbitrators and experts with specialised knowledge of the subject matter at issue. Article 17(6) allows the parties to a dispute to apply to have certain information classified as confidential and Article 17(8) provides for the possibility of appointing a ‘confidentiality adviser’ to report to the tribunal on specific issues without disclosing the confidential information on which his or her report is based. Finally, according to Article 27(4), the tribunal may request the parties to provide a non-technical document summarising and explaining the background to any scientific, technical or other specialised information that the arbitral tribunal considers to be necessary.³⁵ At the time of writing, the PCA Outer Space Rules have not yet been used in practice. However, ‘[a]s the size and sophistication of the market develops, it seems likely that users will gravitate toward the [PCA Outer Space Rules], which were prepared with their specific needs in mind.’³⁶

Disputes over space collisions or collision avoidance manoeuvres

As mentioned above, disputes in the satellite industry are likely to arise not only out of contracts but might also result from space collisions or costly collision avoidance manoeuvres. A first example of such a scenario was the 2009 collision between the active commercial satellite Iridium 33 and the defunct military satellite Kosmos 2251.³⁷ While no formal dispute resolution proceedings are known to have taken place following this particular collision, an increase of collisions can be expected to lead satellite operators to explore available forums to recover the damages they are likely to suffer.

35 For a detailed review of the PCA Outer Space Rules, consult: Evgeniya Goriatscheba, Mikhail Batsura, ‘Specialized Arbitration Rules for Disputes Relating to Outer Space Activities’, Arbitration.ru, March-April 2021, No. 2(26); Frans von der Dunk, ‘About the New PCA Rules and Their Application to Satellite Communication Disputes’, University of Nebraska Faculty Publications, 2015.

36 Evgeniya Goriatscheba, Mikhail Batsura, ‘Specialized Arbitration Rules for Disputes Relating to Outer Space Activities’, Arbitration.ru, March-April 2021, No. 2(26), p. 23.

37 Nicholas Johnson, ‘The Collision of Iridium 33 and Cosmos 2252: The Shape of Things to Come’, presented to the 60th International Astronautical Congress in October 2009.

The Liability Convention, the treaty setting out the rules of liability for damage caused by space objects, contains a dispute settlement mechanism that can be qualified as quasi-arbitration: the Claims Commission.³⁸ While indeed similar to arbitration, the Claims Commission presents two main drawbacks: its decisions are only recommendatory unless all parties to a dispute agree to render them binding, and equally importantly for private satellite operators, the Liability Convention, being an international treaty, only applies to states, and is therefore not available to them other than through diplomatic protection.

It follows that in the absence of a contractual link between the parties involved in a collision and the corresponding lack of prior consent to arbitration – unless they can agree to refer their dispute to arbitration once it has arisen – the parties then have to turn to domestic courts. However, in domestic court litigation, satellite operators are likely to face well-known obstacles such as language-barriers, bias, sovereign immunity and, in addition, uncertainty over the competent court and the applicable law, and a lack of expert knowledge of the satellite industry among domestic judges.

To address this lack of efficient dispute resolution provisions available to private space actors, in 1998, the International Law Association published its Final Draft of the Revised Convention on the Settlement of Disputes related to Space Activities,³⁹ establishing arbitration as the default dispute resolution mechanism. This proposal failed, however, to gain sufficient political support and has never entered into force. More recently and to circumvent the necessity of agreeing on a new international treaty, it has been suggested that states amend their domestic laws to condition launching licences for space objects on the mandatory consent to arbitration for any dispute involving the object in question.⁴⁰

Until such efforts progress further, it is unlikely that there will be many international arbitration cases over satellite collision cases. Litigation over these issues should, however, be expected.

38 Hanneke van Traa-Engelman, 'Settlement of Space Law Disputes', *Leiden Journal of International Law*, December 1990, pp. 144-145.

39 Lotta Viikari, 'International Law Association's Draft Convention on the Settlement of Disputes Related to Space Activities', *Arbitration.ru*, March-April 2021, No. 2(26), pp. 14-17.

40 Henry R Hertzfeld, Timothy G Nelson, 'Binding Arbitration as an Effective Means of Dispute Settlement for Accidents in Outer Space', *International Institute of Space Law*, 2013.

Investment disputes

Satellites are expensive assets and the manufacturing, launching and operating of a satellite require significant economic resources. As a consequence, companies involved in the satellite industry have a strong incentive to make sure their satellites benefit from international investment protection.

Because of the high financial costs related to the launch of a satellite, the corresponding risk, and the arguable economic and reputational contribution to the host state of the satellite, satellite launches are likely to comply with the required characteristics for an ‘investment’ under both the majority of bilateral investment treaties and Article 25 of the Convention of the International Centre for Settlement of Investment Disputes (ICSID).⁴¹ It follows that, as long as they are accepted to be investments ‘made in the territory of the host State’ as routinely required under bilateral investment treaties, satellite-related investments could be protected by international investment protection treaties.⁴²

Interestingly, in past investor–state proceedings involving satellites, no jurisdictional objections over the territorial requirement seem to have been raised, as the link between the host state and the investment had been clearly established through the rights of the respective host states over the frequency spectrum and orbital positions at issue. On the merits, past investment treaty cases have dealt with alleged conventional treaty breaches of expropriation and the violation of the fair and equitable treatment standard.

In practice, the cases *Devas v. India* and *Deutsche Telekom v. India* arose out of India’s revocation of leased S-band frequency spectrum,⁴³ and *Eutelsat v. Mexico* related to a provision contained in the concession contracts for the use of Mexican geostationary orbital positions allowing for the free reservation of satellite capacity for the Mexican government.⁴⁴

41 Stephan Hobe, Rada Popova, Hussaien El Bajjati, Julian Scheu, ‘The Protection of Satellite Telecommunications Activities Under Bilateral Investment Treaties’, *Journal of World Investment & Trade*, Volume 19, 2018, pp. 1024–1058; Laura Yvonne Zielinski, ‘Space Arbitration: Could Investor-State Dispute Settlement Mitigate the Creation of Space Debris?’, EJIL:Talk!, 19 March 2021.

42 Hasin warns that extending the investment protection system to outer space could fuel a regulatory race to the bottom. Gershon Hasin, ‘Confronting Space Debris Through the Regime Evolution Approach’, *International Law Studies*, Volume 97, 2021, p. 1097.

43 *Devas v. India*, PCA Case No. 2013-09 and *Deutsche Telekom v. India*, PCA Case No. 2014-10.

44 *Eutelsat v. Mexico*, ICSID Case No. ARB(AF)/17/2).

Disputes over frequency interferences

As mentioned above, any newly launched satellites need to be coordinated with neighbouring satellites – a process the results of which are set out in ‘coordination agreements’. It has also been mentioned above that the violation of a coordination agreement can cause harmful interference resulting in significant financial damage to satellite operators.

When a case of harmful interference occurs, the parties can bring it to the attention of the ITU, and following an investigation, the ITU Radio Regulations Board can formulate recommendations. Its powers are limited, however, by its inability to review the confidential provisions of the coordination agreement at issue, its inability to award damages and, among other drawbacks such as the length and the public nature of its proceedings, the non-binding nature of its decisions. As a consequence, to recover damages caused by the breach of a coordination agreement, parties need to resort to alternative dispute settlement mechanisms.

As with collision cases, recourse to domestic courts is likely to face obstacles such as language barriers, bias, arguments over the competent court and the applicable law, and the absence of industry knowledge of the decision-makers.⁴⁵ Unlike in the case of a physical collision between satellites, the parties to a dispute arising out of the violation of a coordination agreement are, however, connected exactly through this agreement. Unfortunately, coordination agreements are commonly drafted by technical experts and therefore rarely contain arbitration clauses.⁴⁶ This can, however, change in the future and, like with collision cases, in the meantime, the parties have the possibility to refer a dispute to arbitration once it has already arisen.

The dispute that arose in 2012 between Eutelsat S.A. and SES S.A. related to the non-compliance with a coordination agreement, and was resolved through international arbitration administered by the Court of Arbitration of the International Chamber of Commerce.⁴⁷ It is not public whether the coordination agreement contained an arbitration clause or whether the parties agreed to refer

45 Elina Morozova, Yaroslav Vasyanin, ‘Mechanisms for Resolving Disputes Related to Violations of Coordination Agreements’, presented at the 70th International Astronautical Congress in 2019, pp. 20–22.

46 Elina Morozova, Yaroslav Vasyanin, ‘Mechanisms for Resolving Disputes Related to Violations of Coordination Agreements’, presented at the 70th International Astronautical Congress in 2019, p. 23.

47 Kyriaki Karadelis, ‘Eutelsat Settles ICC Satellite Dispute’, *Global Arbitration Review*, 30 January 2014.

their dispute to arbitration after the event.⁴⁸ Either way, this arbitration serves as an example that future disputes arising out of coordination agreements are likely to end up before arbitral tribunals.

Conclusion

In conclusion, the satellite industry is growing quickly, and with this growth comes an increasing risk of satellite disputes – ranging from commercial contractual disputes to investment disputes, and disputes over satellite collisions or harmful frequency interference. The resolution of these disputes will benefit both from decision-makers and counsel who are familiar not only with the commercial and technical characteristics of the satellite industry but who are also well acquainted with international and domestic space law and the specific legal rules applicable to satellite activities. It is international arbitration that can best guarantee access to both while being able to cater to the international and confidential nature of the satellite industry. It is therefore unsurprising that many satellite disputes – both contractual and investment disputes – have already been resolved through arbitration. We should expect the number of satellite arbitrations to grow in the years to come.

48 Elina Morozova, Yaroslav Vasyanin, 'Mechanisms for Resolving Disputes Related to Violations of Coordination Agreements', presented at the 70th International Astronautical Congress in 2019, p. 20.

APPENDIX 1

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ISBN 978-1-83862-873-4