



International Investment Protection of Space Assets *

Summary

*** Please note that this summary of the panel was AI-generated and therefore has not been fully vetted for accuracy.**

The session during Washington Arbitration Week focused on the evolving landscape of space law and the implications for investment treaties concerning space-related assets. The discussion was moderated by Ben Love, a partner in international arbitration, and featured notable speakers including Ernie Chong from FTI Consulting, Peter Plastic from White & Case, Laura from Collin Knight, and Flea from the French American National Security.

Key topics included the increasing commercialization of space, with commercial spacecraft now constituting approximately 75% of active assets, a significant shift from institutional ownership. This rapid growth has raised questions regarding the legal status of space assets under investment treaties. Panelists highlighted the importance of understanding the international legal framework governing outer space, primarily the Outer Space Treaty and related agreements, which outline principles such as non-appropriation of outer space and state liability for damages caused by space objects.

The panel also addressed the emergence of mining activities in space, discussing the potential for resource extraction from celestial bodies and the legal challenges this poses. Laura provided insights into the regulatory framework governing space activities, emphasizing the need for arbitration clauses in contracts to address disputes effectively, especially as private investment in space increases.

The discussion underscored the complexities of liability and dispute resolution in space law, particularly in light of potential collisions between spacecraft and the growing issue of space debris. Panelists expressed concerns about the adequacy of existing legal mechanisms to handle these challenges and the necessity for more robust frameworks to protect private investments in the space sector.

Overall, the session highlighted the need for ongoing dialogue and adaptation of legal frameworks to keep pace with the rapid developments in the space industry, the importance of arbitration in resolving disputes, and the potential for future regulatory developments as commercial activities in space continue to expand.



Authors

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Topics

Space assets, investment protection

Category

WAW

Full Transcript

00:00:04

Show. Hello everyone, who stays

00:00:06

Washington fishing week, Wednesday, 1st,

00:00:10

December Thursday, 1st, December. And

00:00:13

that we are having a

00:00:15

fabulous final space law. Dealing

00:00:18

with issues concerning, huge question

00:00:22

with maybe a tribunal deals

00:00:30

with, with a space law

00:00:32

issue is whether some of

00:00:42

the space related assets are



00:00:43

our investments under under investment

00:00:45

treaties and and the other

00:00:46

instrument. So we we are

00:00:50

very happy to be. A

00:00:54

no-host here at the dealer.

00:00:58

And my mission here is

00:01:00

empty and not to steal

00:01:02

anybody standard but only to

00:01:04

introduce it been love who

00:01:06

is a partner of the

00:01:07

Washington DC office, and also

00:01:09

the New York office and

00:01:11

he's heading the international arbitration



00:01:14

practice and then, many things

00:01:18

but has a has represented

00:01:20

and is very much interested

00:01:27

in business related issues. And

00:01:33

I also would like to

00:01:34

thank her and her colleagues

00:01:43

and organization in the Washington.

00:01:53

Thank you very much and

00:01:59

thank you, organizer for is

00:02:06

Washington arbitration. We've got a

00:02:07

killer or very happy to

00:02:10

be partnering up with this

00:02:12

program today. So, we have



00:02:15
with us for Exelon. Speakers

00:02:18
sitting here in the room,

00:02:20
to my left is Ernie.

00:02:22
Chong is a managing director

00:02:24
with FTI Consulting, and based

00:02:26
in Denver, Colorado is specializes

00:02:32
in all aspects of his

00:02:33
face value chain. Among other

00:02:35
things. He works on do

00:02:36
diligence and Mercer integration matters

00:02:38
and has over 20 years

00:02:40
experience in the space and

00:02:43
Telecommunications Industries. So Ernie is



00:02:45

a brew industry expert in

00:02:49

the subject, matter of today's

00:02:50

panel and we're very happy

00:02:51

to have some chill. And

00:02:54

then to the far left,

00:02:56

my far, left is Peter

00:02:58

plastic, who is a partner

00:03:01

in the international arbitration practice

00:03:03

at White & case here

00:03:04

in DC. Peter has extensive

00:03:07

experience in both commercial and

00:03:09

Industrial arbitration in a variety

00:03:12

of Industries, including must personally



00:03:16

for this panel of the

00:03:18

mining industry. So I think

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Peter will give us some

00:03:22

words later on mining, the

00:03:24

moon and other places in

00:03:28

space Peter, as law degrees

00:03:30

from Charles University in Prague,

00:03:32

and the George Washington University,

00:03:35

law school as well. And

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we also have with us

00:03:40

since key is with us.

00:03:44

Personally today Laura has law

00:03:47

degrees from Singapore and Paris



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and London University and she

00:03:52

currently practicing International arbitration with

00:03:54

Collin tonight and Mexico City.

00:03:57

She has experience in a

00:04:00

variety of international proceedings including

00:04:02

before the US grandiose claims,

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tribunal International Tribunal, for the

00:04:06

law of Siege and the

00:04:08

international court of justice, in

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addition to extensive experience in

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the best, commercial arbitration importantly,

00:04:15

for today, I should point

00:04:17

out that Laura is also



00:04:19

the founder of the space

00:04:20

Arbitration Association and its crew

00:04:23

leader in exploring space arbitration

00:04:27

Topics in in this field.

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We also have with us

00:04:33

who didn't know who is

00:04:37

diving in or you in

00:04:40

Paris, Flea. In another part

00:04:42

of Science of the United

00:04:45

States. French American National Security,

00:04:56

and compliance attorney. And he

00:04:59

has represented Global Aerospace, and

00:05:01

defense companies in the US,



00:05:03

Europe and around the world

00:05:05

on anti-corruption in global trade

00:05:07

matters, and foreign investments for

00:05:09

over 30 years. And he

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is currently, he is currently

00:05:13

serving as a designated officials

00:05:15

and an independent monitor for

00:05:17

Airbus under consent agreement, with

00:05:20

the state department, so very

00:05:22

happy to have to sleep

00:05:23

in his expertise with us

00:05:24

today. So I won't go

00:05:28

into the topic much myself



00:05:31
because we have these wonderful

00:05:33
experts with us today. But

00:05:34
I'll just start with a

00:05:35
question, which I'll toast to

00:05:37
you first and eat which

00:05:39
is why is it important

00:05:41
to discuss the protection of

00:05:43
space assets? So, thank you,

00:05:48
and very nice to be

00:05:50
residual. I'm just a drunk

00:05:52
or a receipt, the nice

00:05:56
views on my own and

00:05:57
I'm not speaking on the



00:05:58

behalf or on behalf of

00:06:00

the State Department, of course,

00:06:02

what is it in Portland?

00:06:04

Well, as you as you

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all know, probably any state

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Securities exponentially in the past

00:06:13

several years just to take

00:06:15

season contacts and just take

00:06:17

a few practical example, speaking

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about elbow. So you got

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a Rancho lift School in

00:06:24

space objects solid, which commercial

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and Telecom Solutions are just



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one example of when when

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which is the system composed

00:06:35

of generation multi centralized program,

00:06:41

such as the play, ano

00:06:43

Jill, positioning constellations. Such a

00:06:47

Schedule a l k a

00:07:00

few months ago and the

00:07:02

program is not, so we

00:07:06

can high altitude platform system,

00:07:09

so it's like your glider

00:07:11

undergo. The purpose is to

00:07:13

provide telecommunication services including internet

00:07:17

services. Chulo density areas such



00:07:21

as in Africa to the

00:07:24

other, you have to gross

00:07:27

significant roles in in space

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objects in space and then

00:07:33

you got to Blanchard's of

00:07:35

you sleep. So I think

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that's one of my distinguished

00:07:39

took or penalties will talk

00:07:40

about the managers case later

00:07:42

during the the discussion. You

00:07:46

may remember C Lounge which

00:07:48

was a joint venture back

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in the 90s between the



00:07:53

Russians and ukrainians of the

00:07:55

time which is interesting and

00:07:58

the US established to launch

00:08:03

satellites. So you're basically a

00:08:07

significant increase in in space

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object to all these systems.

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If you will used to

00:08:19

be government state system, and

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these are shifted in the

00:08:25

past 10 years old Circle.

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And now, the states on

00:08:29

the owners of the systems,

00:08:32

they they'd rather die or



00:08:34

is there is there between

00:08:37

State ownership and open government

00:08:42

staying with the service? Instead

00:08:45

of on a Pets foreman

00:08:48

and this changes matters. 400

00:08:52

lemasters of course the poison

00:08:54

apple. The International Space Station,

00:08:55

which was used to used

00:08:59

to be afraid by nice

00:09:00

out today or Friday better.

00:09:03

No CrossFit class lever action.

00:09:11

Thank you for leave. That

00:09:16

was very, very interesting, overview,



00:09:19

Ernie. Do you have anything

00:09:20

to add a? Thank you

00:09:22

so much for having me

00:09:23

today. And thank you for

00:09:24

leap. So, just to sort

00:09:27

of elaborate of how we

00:09:28

got to where we are

00:09:29

today. So roughly about 5

00:09:32

years ago, they were roughly

00:09:34

about \$15. If space mission,

00:09:37

and that consisted roughly about

00:09:43

60% institutional customers which are

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civil agencies National Security, agency's



00:09:53

defense department thinks like that

00:09:54

across the globe and roughly

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40% of the market was

00:09:59

Marshall communication satellite Earth. Observation

00:10:02

satellite dishes, 2017. Today we

00:10:06

have roughly about 5,500 active.

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Add the ratio has completely

00:10:13

switched. So we are now

00:10:15

only about 25% institutional spacecraft

00:10:18

and 75% commercial. And why

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is that the case will

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historically space has been an

00:10:27

Institutional donate because the cost



00:10:30
of access, the space was

00:10:31
tens of thousands of dollars

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per kilogram object to be

00:10:36
launched into space and thanks

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to be usability. So, historically

00:10:48
distance cases that did not

00:10:50
close, previously are closing. And

00:10:52
so, there is a new

00:10:56
survey found Renaissance of Loris

00:11:00
orbit, commercial activity happening across

00:11:03
the globe. So to be

00:11:04
a little bit more specific

00:11:05
do Starlight, which is a



00:11:08

SpaceX pension By the internet

00:11:10

connectivity has 4400 spacecraft with

00:11:14

a first-generation already mentioned oneweb

00:11:18

either the first generation 6:48

00:11:20

but they're talking about the

00:11:21

2nd generation consisting of thousands

00:11:24

of spacecraft Amazon. Kuiper get

00:11:27

to be launched at least

00:11:28

3200 spacecraft the Chinese constellation

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13,000 spacecraft. It's it's in

00:11:37

the process of being developed.

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There is the Koreans unlock

00:11:41

3000, European commission. Just passed



00:11:45

the approval to launch, the

00:11:47

secure comms Network, that's 170

00:11:49

spacecraft. So if you talk

00:11:51

about sort of weird that

00:11:53

domain where the industry is

00:11:54

right now, This was almost

00:11:57

unfathomable roughly five years ago

00:12:00

but now is this is

00:12:01

sort of a matter of

00:12:02

reality. And there are commercial

00:12:04

Enterprises that are putting billions

00:12:07

of dollars with the help

00:12:09

of some state state funding



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to contribute and grow the

00:12:13

they low earth orbit space

00:12:17

Thanks. Thank you honey. And

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Laura I think you were

00:12:23

going to highlights and Trends

00:12:25

from the Space Foundation space

00:12:28

report. Yes. Thank you very

00:12:30

much been rather a nice

00:12:32

introduction and inviting me. And

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so yes I went to

00:12:35

underline. What what I need

00:12:37

and Philip have just said

00:12:38

maybe with a few recent



00:12:40

numbers that were contained in

00:12:42

the Space Foundation, 2022 and

00:12:45

Global space report. And so,

00:12:48

according to this report, the

00:12:50

global space economy reached 469

00:12:53

billion US dollars in 2021

00:12:55

with the commercial space sector

00:12:58

seeing a 6.4 and revenue

00:13:00

growth since 2020. And most

00:13:04

of the money generated by

00:13:05

the space industry in 2021

00:13:07

corresponds to the commercial sector

00:13:09

with more than a 2224



00:13:11

us billion US Dollars coming

00:13:15

from products and services delivered

00:13:17

by space forms and nearly

00:13:19

\$138 in US dollars to

00:13:22

spend on infrastructure and support

00:13:23

for those commercial Enterprises and

00:13:26

this is contradicting. The numbers

00:13:29

did Ernesto said, so they

00:13:31

might be more recent because

00:13:33

with all of the launch

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as we're currently seeing things

00:13:36

are changing very rapidly. But

00:13:38

according to this report over



00:13:39

90 per-cent of today's spacecraft

00:13:41

and now commercial And it

00:13:44

also mentions that in the

00:13:47

six months, the first six

00:13:49

months of 2022, alone, and

00:13:51

1022 spacecraft have already been

00:13:54

launched. This is a very

00:13:57

significant growth and I think,

00:14:01

now we have a total

00:14:02

of 5500 eggs of spacecraft

00:14:05

in space out of this.

00:14:07

Number again, changing very quickly.

00:14:08

And I just want to



00:14:10

say that I think this

00:14:12

growth is going to continue

00:14:13

because according to another study

00:14:16

done by your account side

00:14:17

that was published in November

00:14:18

and Global government space exploration

00:14:21

Investments where is 31 billion

00:14:24

US Dollars by 2031 so

00:14:27

we can expect to see

00:14:29

a lot of growth in

00:14:31

the area, which is why

00:14:32

this pain. I think it's

00:14:34

relevant. Thank you, man. Thank



00:14:37

you, Laura, so it's good.

00:14:38

I think we've heard so

00:14:43

far that the space industry

00:14:45

is experiencing rapid growth. Peter,

00:14:48

I promised that you would

00:14:49

address Mining and spaced. So

00:14:52

how is this growth impacting?

00:14:54

The mining sector in particular

00:14:55

just continuing on this team

00:15:02

of things that we're in

00:15:04

an in imaginable list. The

00:15:12

the emergence of private-sector activity,

00:15:16

exploring and exploiting space resources,



00:15:21
which today sounds like science

00:15:24
fiction but we might be

00:15:25
on the top of something

00:15:28
happening. You don't miss that

00:15:32
will eventually result in about

00:15:41
in the last couple of

00:15:45
years, there have been a

00:15:48
number of New York, Asteroids

00:15:53
identified, the thermostat metallic and

00:15:55
contain iron and nickel platinum,

00:15:59
gold. Maybe to the emergence

00:16:04
of private companies that seek

00:16:06
water on a conference. In



00:16:31

the last couple of years,

00:16:32

has the possibility of hydrogen

00:16:38

refueling station for further, development

00:16:46

of exploration of space. There

00:17:10

might be a resources on

00:17:11

the moon itself. That might

00:17:13

be exploring. Also, might have

00:17:19

seen the news that the

00:17:21

Chinese tank 85 mission on

00:17:25

the moon, discovered any mineral

00:17:27

on the moment right now

00:17:31

and helium-3 control fuel for

00:17:44

nuclear fusion or those who



00:17:47

are interested in that is

00:17:49

making the Future Energy. Men

00:17:52

tied, this is another today

00:18:00

or the launch of the

00:18:05

Japanese privately owned land. But

00:18:17

it's a privately owned under

00:18:20

the mission is to land

00:18:22

on the Moon part of

00:18:23

the mission of the company

00:18:25

called College Place. Has a

00:18:27

contract with no stop, my

00:18:29

surface mining on the micro-scale

00:18:46

and the United States. I've



00:18:52
made it a part of

00:18:54
their Space strategy and another

00:18:57
of their official state policy

00:18:58
to support the commercial development.

00:19:00
And so for the United

00:19:06
States, that's true. Under the

00:19:08
under the Trump Administration, also

00:19:12
threw under the administration of

00:19:15
December 2021 the White House

00:19:21
released, its us space Rarities.

00:19:25
Framework that says that it

00:19:30
is one of the United

00:19:32
States priorities in space, to



00:19:36

Foster the development of the

00:19:37

commercial space sector including specifically

00:19:40

recovery and to use of

00:19:44

space resources. And so we

00:19:46

are seeing in this movement

00:19:48

on the commercial side, but

00:19:49

also the state side. Starting

00:19:53

as a matter of policy

00:19:55

that they want. Their national

00:19:57

government support going into those

00:20:09

areas and is it legal

00:20:23

if the interest of private

00:20:30

parties? Fascinating so we're not



00:20:45

we're not to mining on

00:20:47

the man, just get us

00:20:49

to take away. Maybe you

00:20:58

had mentioned you know how

00:21:00

this activity is regulated. And

00:21:03

the NFL be my turn

00:21:04

to Laura, you could give

00:21:05

us a background on the

00:21:07

international framework for regulating activities

00:21:10

in space. Yes. One second

00:21:15

please and yes so it

00:21:18

stays active it is I'm

00:21:19

in the governed by for



00:21:20

space treaties that have been

00:21:23

developed within the United Nations

00:21:26

committee on the peaceful use

00:21:27

of outer space short called

00:21:30

you and coptis and those

00:21:32

treaties and the 1967 treaty

00:21:35

on principles governing the activities

00:21:37

of states in the expiration

00:21:38

in the use of outer

00:21:39

space including the moon and

00:21:41

other celestial bodies which is

00:21:43

called and show at the

00:21:44

outer space treaty. Let me



00:21:46

have them. 1968 agreement on

00:21:49

the rescue of astronauts in

00:21:51

space objects, the rescue agreement.

00:21:53

We have the the 1972

00:21:58

convention on liability in outer

00:22:00

space and then we have

00:22:02

the 1976 convention on the

00:22:05

registration of space objects. So

00:22:07

those are for kids that

00:22:10

have been widely ratified and

00:22:12

constitute the main basis of

00:22:14

International Space law. There's a

00:22:16

fifth agreement for the moon



00:22:18

agreement that has been ratified

00:22:20

by very few countries and

00:22:22

buy none of the major

00:22:23

space-faring Nations. So it is

00:22:26

interesting to to look at

00:22:29

it to see what what

00:22:30

has been thought of. In

00:22:32

terms of Route 45 splitting

00:22:34

the moon and other celestial

00:22:35

bodies, but it is not

00:22:36

binding on many countries. Reservations

00:22:40

at 4 Main Street East.

00:22:41

And really the main one



00:22:43

is, the outer space treaty.

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It is sometimes even called

00:22:46

the Magna Carta of International

00:22:48

Space law, and it is

00:22:49

the most comprehensive of the

00:22:51

five cities in the sense

00:22:52

that it sets out the

00:22:54

main principles that is governing,

00:22:56

the use of outer space.

00:22:58

And some of that I

00:22:59

mentioned, just some of those

00:23:01

principles quickly because I think

00:23:03

there will be important for



00:23:05

us for our discussion of

00:23:09

this treaty and the expiration

00:23:12

and use of outer space

00:23:13

or be carried out for

00:23:14

the benefit, an interest of

00:23:16

our countries and it also

00:23:19

states that out of space

00:23:21

cannot be subject to National

00:23:22

appropriation. So I think either

00:23:25

way I will say a

00:23:26

few more worried about this

00:23:28

afterwards bed in the context

00:23:30

of what we just heard



00:23:31
that the private company when

00:23:32
mine the moon and this

00:23:35
is an interesting principle that

00:23:37
is contained in the International

00:23:38
Space law. The outer space

00:23:41
treaty on the also states

00:23:42
that stayed parties to the

00:23:44
treaty Schaub are international responsibility

00:23:47
for National activities, in outer

00:23:48
space. And that each state

00:23:50
party to the idiot that

00:23:52
launches a procuress, the launching

00:23:54
of an object into outer



00:23:55

space. And also each party

00:23:57

from whose territory of agility.

00:23:59

An object has launched is

00:24:01

internationally liable for damage to

00:24:03

another party to the treaty

00:24:05

or its natural or persons

00:24:09

and by such objects or

00:24:11

its component parts. So I

00:24:13

can this is a very

00:24:14

important principle because it states

00:24:16

that if you launch an

00:24:17

object into outer space and

00:24:19

that objects are its component,



00:24:22

which components, which include space,

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debris, damages and other object.

00:24:28

The state will be liable.

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Certain distance in addition to

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these treaties. And I have

00:24:33

been several resolutions of the

00:24:36

United Nations General Assembly and

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they are in theory non-binding.

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But some have been recognized

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to constitute customary international law

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and especially the 1961 resolution

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that recommends that states register,

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the space object or objects



00:24:54

with United Nations. As part

00:24:56

of an international registry for

00:24:58

registration of space objects is

00:25:00

mandatory for those countries that

00:25:02

form part of the registration

00:25:04

convention at Under the Sea.

00:25:07

A resolution is also recommended

00:25:10

for all other United Nations

00:25:12

member states. And then independently

00:25:16

of the pure space, treaty,

00:25:17

I think it is important

00:25:18

to be aware of the

00:25:20

international telecommunication Union, which is



00:25:23

a specialized agency of the

00:25:25

United Nations and is headquartered

00:25:27

in Geneva and it is

00:25:28

managing all radio frequencies and

00:25:31

the use of the earth

00:25:32

and geostationary orbit. So, I

00:25:35

can practice if you want

00:25:36

to launch a satellite and

00:25:38

under the itu, Ruth must

00:25:40

be coordinated with neighboring, satellite

00:25:43

networks to avoid interference between

00:25:46

the frequencies that I used.

00:25:47

And for our discussion, it's



00:25:50

important to know that this

00:25:52

car donation process is often

00:25:54

recorded in so-called coordination agreements

00:25:57

between the different operators that

00:26:00

said out, which operator where

00:26:02

are you? You switch frequencies

00:26:03

so that there's no ham

00:26:05

for interference between the two.

00:26:08

And before I was stopped,

00:26:09

and just one shot mention

00:26:11

of soft launch because I

00:26:13

just mentioned the states on

00:26:15

a liable for damages caused



00:26:18

by their space objects. And

00:26:21

this is becoming an increasing

00:26:22

problem because then one more

00:26:24

satellites and other more and

00:26:26

more distant headlights and parts

00:26:27

of satellites and space debris.

00:26:30

And unfortunately, we do not

00:26:32

yet have a binding treaty

00:26:34

regulating and the mitigation of

00:26:37

space debris. But there is

00:26:40

a non-binding international agreement and

00:26:43

in the form of the

00:26:44

2007, United Nations space debris,



00:26:47
mitigation guidelines that are generally

00:26:50
accepted as constituting. Best practices

00:26:53
in this area. Thank you,

00:26:58
Laura live, I have one

00:26:59
follow-up question. I was just

00:27:01
with respect to the obligations.

00:27:04
You described that are hard

00:27:06
law that are not soft.

00:27:07
Well, what enforcement mechanisms are

00:27:10
available to resolve disputes or

00:27:13
the word spread. Basically there

00:27:22
are no dispute resolution mechanisms

00:27:24
contained in the space treaties



00:27:26
except for the liability convention

00:27:28
that has a mechanism called

00:27:30
the Claims Commission, but it

00:27:32
is also its its decisions

00:27:34
are non-binding. So this is

00:27:36
a big problem of International

00:27:38
Space lock, the outer space

00:27:40
treaty refers to to the

00:27:42
dispute settlement mechanism under international

00:27:44
law. And one would assume

00:27:47
that this refers to an

00:27:49
international arbitration to the icj

00:27:52
to other mechanisms but also



00:27:54

all of the dispute settlement

00:27:56

mechanism. Contemplated under these trees

00:27:59

as they two-state mechanism. For

00:28:01

they do not apply to

00:28:02

private parties, which is why

00:28:04

am I betray? She is

00:28:07

in an important aspect to

00:28:10

consider Force Base operator, but

00:28:12

I think we would talk

00:28:12

about this a bit more

00:28:13

later on the month. Dressing

00:28:21

other regulations of space activity

00:28:24

at the regional and National



00:28:25

International Space is important and

00:28:37

key because all the major

00:28:40

spacefaring states are party split

00:28:43

so all those days prior

00:28:45

to the 1960s the United

00:28:47

States is apart. A s

00:28:48

is China Russia. And many

00:28:50

other Nations logo, it does

00:28:54

not. However, Your lace. I

00:28:58

won't be any questions that

00:29:00

come up when we consider

00:29:02

a private private commercial activities

00:29:06

in space such as is



00:29:08

it lawful under the seat,

00:29:10

tracks resources, and sell them

00:29:13

and a different countries taken.

00:29:17

So, just stay where we

00:29:25

are. We have a block

00:29:28

of countries that line around

00:29:30

the United States adopted was

00:29:35

known as the Arkansas court.

00:29:38

Records are a set of

00:29:43

three principles for the Civil

00:29:45

exploration, teams of the bodies,

00:29:50

and the principal said the

00:29:53

countries. Kaiser. Private speech is



00:29:58

the principal of How are

00:30:06

the concept of the so-called

00:30:08

safety zones? These are areas

00:30:11

surrounding activities on celestial bodies.

00:30:16

Once the purpose of a

00:30:19

safety zone is to avoid,

00:30:21

harmful interference with his own

00:30:25

other actors who beat Tennessee,

00:30:30

records and Presley state that

00:30:37

other things for the safe

00:30:42

and efficient extraction and accusation

00:30:45

based resources. So, not only

00:30:49

do the air conditioner cord



00:30:51
expressly recognized in the few

00:30:54
of the parties to the

00:30:55
optimistic. Can you play some

00:31:06
of the mining for his

00:31:08
own designs to allow our

00:31:11
extraction? But also an addition

00:31:16
action might be like to

00:31:20
start the semi also are

00:31:29
completely different concept, which is

00:31:42
that space resources are to

00:31:44
be exposed for the benefit

00:31:47
of some kind of the

00:31:50
benefits sharing mechanism, completely different



00:31:54

idea from the commercial operation.

00:32:00

going back to the optimistic

00:32:02

or the other parties include

00:32:15

Russia has expressed strong opposition.

00:32:21

Then we look down to

00:32:26

the National. Low-level a number

00:32:30

of countries have adopted their

00:32:32

own legislation designed to set

00:32:36

up, a legal framework for

00:32:37

their own National also to

00:32:40

support as a matter of

00:32:42

national law, Ace commercial space

00:32:47

activity. So prominent example is



00:32:53

the United States, commercial space

00:32:56

launch competitiveness, Act of 2015

00:32:59

provides that US citizens engaged

00:33:07

or I shall be entitled

00:33:12

to recover treesource including to

00:33:15

sell it so I can

00:33:16

do the same idea implemented

00:33:18

in the National Mall. US

00:33:25

national anthem. Another example, Luxembourg

00:33:38

for companies and paste number

00:33:48

of laws designed to enable

00:33:51

account. Nikki Peter like to

00:34:07

move on to discussing, how



00:34:10

to check the private Investments.

00:34:12

But I thought, first of

00:34:13

my Journey Infinity / 2

00:34:19

to the topic Happy to

00:34:25

jump in. Our did the

00:34:28

challenge with the legal framework

00:34:32

is that people are coming

00:34:35

up with new use cases

00:34:36

for space. Things that we

00:34:39

never thought of before, somebody's

00:34:41

thinking of doing, and so

00:34:43

the framework is almost just

00:34:46

guiding principle but the actual



00:34:48
details of actually how you

00:34:50
addressed. This has to be

00:34:52
defined on an ongoing. and

00:34:56
so, it's It's one of

00:35:01
these situations where you can't

00:35:04
see that far ahead. You

00:35:05
just can't. It's the best

00:35:07
guess as to what may

00:35:08
arise, right? So, Specific example

00:35:13
of conducting in ASAP test

00:35:16
last December in 2021 and

00:35:21
some of the satellite companies

00:35:24
that are unaware of public



00:35:27
information. Had to maneuver their

00:35:31
spacecraft out of the Derby

00:35:32
School. And the International Space

00:35:35
Station at to essentially, do

00:35:39
an orbit raising. Well, what

00:35:43
is actually happening with the

00:35:45
East Lester objects, is that

00:35:47
they're burning fuel and you

00:35:51
cost money. And sometimes these

00:35:53
satellite operators and not plan

00:35:55
to conduct these type of

00:35:56
a basic U-verse still fundamentally

00:36:01
by having to perform a



00:36:03

number of these type of

00:36:04

maneuvers. You are essentially shortening

00:36:07

the lifespan of the spacecraft.

00:36:09

And so, from a liability

00:36:12

standpoint from International regulatory Frameworks,

00:36:14

ultimately, what do you collect

00:36:18

that from? Right, is the

00:36:20

estimated that some prospective investors

00:36:22

to say, hey, you know

00:36:23

what do we have planned

00:36:24

that in your business cases?

00:36:26

Thinking that, hey, we're going

00:36:28

to have to agree to



00:36:29
congestion. We're going to have

00:36:31
to get a plan for

00:36:32
these type of Maneuvers and

00:36:35
incidences. Baby. So it's it's

00:36:40
definitely one of these situations

00:36:42
where you do not expect

00:36:45
the five years ago, but

00:36:46
you're starting to see things.

00:36:49
It's simply impossible to keep

00:36:55
up with that. If you

00:37:01
have anything to add to

00:37:02
that. Yes, thank you. And

00:37:04
thank you been. I think



00:37:06

from beside the legal framework,

00:37:08

that was very clearly explained

00:37:12

earlier from an Investor's important

00:37:17

to keep in mind the

00:37:18

regulatory framework and although I

00:37:21

was going to mention 90%

00:37:24

of space rocket commercial, I

00:37:29

mean it's very close to

00:37:30

their activities are likely to

00:37:33

be their existence and activity

00:37:36

electric be treated as critical

00:37:39

infrastructure and National security-related. Let

00:37:42

me explain for example now



00:37:44

I'm sure they'll music sites

00:37:45

are very often due to

00:37:47

security concerns. A burst of

00:37:49

potential cybersecurity air tanks, located

00:37:52

on me, translations and satellites

00:37:56

system, that were system will

00:38:00

be likely printed as critical

00:38:04

infrastructures and a search in

00:38:07

the US, for example, subject

00:38:09

to National Security review. Buy

00:38:12

tissue to meet you in

00:38:13

French vessel in the US.

00:38:14

So there was a case



00:38:15
back in 2020. What was

00:38:20
the position of a foreign

00:38:23
company of a US base

00:38:24
company? Operating satellites and these

00:38:28
gave way to a station,

00:38:30
a grim. And I think

00:38:31
recently, I mean, I've seen

00:38:35
the night of the distractions

00:38:38
signal that the mere funding

00:38:41
by foreign money of anonymous

00:38:46
Twitter, National should be subject

00:38:50
to a National Security review.

00:38:52
I think I would pay



00:38:57

a lot of attention, very

00:38:59

close attention, and make sure

00:39:01

I have very sound. I

00:39:04

received very solid legal counsel

00:39:06

before, making any investment in

00:39:10

this area, because this is

00:39:12

tricky. And just one last

00:39:14

data. Point you ever since

00:39:17

she's down instances where the

00:39:19

transfer of ownership from a

00:39:22

satellite manufacturer or Launcher, Pro

00:39:25

provider, elbow, sore and any

00:39:28

other company may not be



00:39:31

my not occur before the

00:39:34

face, front is in spans

00:39:37

through. There is a lounge

00:39:38

music to space and then

00:39:41

the transfer of ownership occurs,

00:39:43

then which doesn't, well, which

00:39:45

isn't easy for the lighting.

00:39:47

Stand, work as you can

00:39:48

imagine. Thank you for the

00:39:53

next two mechanisms by which

00:39:58

private actors who are invested

00:40:00

in the the space industry

00:40:01

affect the team that the



00:40:05

legal framework for space activity

00:40:07

mostly government relationships, between states

00:40:11

least at the international level,

00:40:12

and there's some jurisdictions that

00:40:14

have been identified such as

00:40:16

the US Luxembourg that have

00:40:18

their own National Frameworks that

00:40:20

might provide some guidance to

00:40:23

private investors. But what about

00:40:24

investment treaties, or just ordinary

00:40:28

commercial contracts? What, what is

00:40:30

their role in section of

00:40:33

these space assets? Peter, would



00:40:36

you like to start out?

00:40:38

Thank you. Excellent question. I

00:40:40

already, there is a principal

00:40:49

of the Mountain States state

00:40:54

for damage caused by their

00:40:57

space object bobs, for disliking

00:41:01

is finding mechanism to resolve

00:41:06

related and I'm still at

00:41:13

work. Demetrius or whatever harm

00:41:16

might arise from the outer

00:41:21

space. Treaty does not contain

00:41:22

a dispute resolution mechanism for

00:41:24

that. What we do have



00:41:27

again, we are at the

00:41:28

we are discussing the way

00:41:44

it works is that the

00:41:46

state is responsible for damage

00:41:49

caused by a subtract, the

00:41:55

launching state in this, our

00:41:57

space object launching state. In

00:41:59

this context means not only

00:42:00

also objects launched from its

00:42:05

territory. So you think SpaceX

00:42:08

That is a subject of

00:42:11

the United States based on

00:42:33

the weather in absolute or



00:42:39

whether it happens outside of

00:42:41

space and invention. Define Schwartzman

00:42:47

to buy damage, that's particle

00:42:49

1A and that is personal

00:42:54

injury permanent loss of damage

00:42:58

to property of state or

00:43:01

their person or three play.

00:43:03

So if a space object

00:43:05

causes damage to private property.

00:43:08

Albert and then article 12

00:43:15

articulate compensation that must be

00:43:20

paid to compensate for such

00:43:22

damage and that will be



00:43:24

familiar to those of you

00:43:26

who are interested in partial

00:43:33

x-ray, standard refers to Recreation,

00:43:40

that will restore the person

00:43:43

to the condition. It would

00:43:45

have existed when is the

00:43:48

damage has occurred and there

00:43:51

is a debate going on

00:43:52

lunch cooler weather than 12

00:43:58

and 18. The definition Invention

00:44:09

with working this contacts. We

00:44:10

don't really know is a

00:44:15

cichlid, state-to-state process, their first.



00:44:18

There needs to be a

00:44:19

consultation. If that does not

00:44:24

result in the resolution of

00:44:26

the issue, may go to

00:44:29

a Claims Commission that was

00:44:32

II arbitration process. Important play

00:44:35

the decision of the commission

00:44:39

is not binding unless the

00:44:41

parties had agreed before their

00:44:47

due date. There has been

00:44:48

only one instance, where the

00:44:52

reliability conventions speaker. The disintegration

00:45:00

of the Soviet nuclear power,



00:45:03

satellite workout, Fortunately, most of

00:45:12

Canada's Northern Territories, Canada undertook,

00:45:17

its first to locate the

00:45:19

debris and get rid of

00:45:20

Interest costs about \$15 Canadian

00:45:24

dollars. Back Then lyrics, General

00:45:36

international law to recover those

00:45:38

call, he's captured by the

00:45:46

definition of damage under the

00:45:48

liability Canadian dollars on nevertheless.

00:46:01

The convention, I think the

00:46:05

example that the early days

00:46:07

is Son, 21, and is



00:46:10
not at all. Hypothetical it

00:46:14
may be that that over

00:46:16
time, we will even see

00:46:17
the actual physical damage resulting

00:46:22
from sort of military test

00:46:25
conducted recently. You don't be

00:46:33
shuffling in the constellation of

00:46:35
of, of, of, of the

00:46:37
so, it is a possibility

00:46:44
if something like that happens.

00:46:46
I mean, it's kind of

00:46:47
like a diplomatic protection type

00:46:49
of the home, state of



00:46:52

the investor of the private

00:46:53

part of the convention. At

00:47:02

least you have a tree

00:47:05

on the other end, you

00:47:07

will not get Let me

00:47:14

just say it about the

00:47:15

investment 3D, so, you know,

00:47:19

the big problem. There. They

00:47:21

are. Territorial limits with respect

00:47:26

to you, don't leave me

00:47:32

look up where it where

00:47:34

does Terry 3 a.m. And

00:47:37

international law does not have



00:47:40

a definition of where over

00:47:43

into space and outer space

00:47:46

again, there are a couple

00:47:50

of possibilities. 150 miles per

00:48:01

hour, satellites are in outer

00:48:16

space. So those assets that

00:48:18

are out there was no,

00:48:20

to be not qualify as

00:48:22

a first aid by investment

00:48:26

CDs. However, it is conceivable.

00:48:31

I think that if the

00:48:34

state acts and the way

00:48:35

the damages, Space object. Reduces



00:48:50

the value of a space

00:48:51

mining companies, chairs or no.

00:48:58

Sable Furniture is addiction that

00:49:00

has a bilateral investment treaty

00:49:03

with the other country. Have

00:49:12

a note 4 not with

00:49:17

respect to the S&S out,

00:49:18

in space themselves company and

00:49:26

Rachel. When it comes to

00:49:44

Investments, space related Investments, on

00:49:48

Earth, and impact of State,

00:49:51

Contact on those Investments, are

00:49:53

there? Of course investment, treaties



00:49:57

are very relevant and their

00:50:03

impact study, and Laura will

00:50:09

discuss a couple of cross-border

00:50:20

investment. It is important considered

00:50:23

a structure in the investments

00:50:25

in a way. Before we

00:50:35

go to Laura to describe

00:50:37

some of the cases that

00:50:39

are going to ask you

00:50:43

what your specs of the

00:50:45

territoriality requirement, what would you

00:50:49

think about a theory of

00:50:52

territorial Nexus? So the space



00:50:55

I said it's so you

00:50:57

know obviously it's not in

00:50:58

the territory of the state

00:50:59

of its in outer space

00:51:01

but if the state owns

00:51:04

the rights to the orbital

00:51:06

slot as used those rights

00:51:09

to launch satellite program to

00:51:11

watch satellite into that slot,

00:51:13

everything that has to do

00:51:16

with this particular investment. Capital

00:51:19

intensive is is controlled by

00:51:22

that steak. Might there not



00:51:24

be serious territorial Nexus with

00:51:27

that state. That would satisfy

00:51:28

the airport. Requirements in that

00:51:32

cupboard. Yeah, you know, very

00:51:37

interesting question and maybe I

00:51:39

think it's it's it's something

00:51:41

that, you know, might be

00:51:43

argued this scenario, occurs where

00:51:47

you know, something by looking

00:51:50

for ways to remedy, you

00:52:01

know, the meaning of territory,

00:52:03

as defined under the applicable

00:52:05

investment 3 days after I



00:52:09

guess the state would argue

00:52:10

while looking for Universal Acceptance

00:52:13

in trying to deed of

00:52:15

the space space space by

00:52:19

definition of baseball and so

00:52:25

even though there is might

00:52:28

be a territorial Nexus you

00:52:29

just cannot play in that

00:52:31

that is the territory and

00:52:33

a state. We might be

00:52:38

stuck here on Earth when

00:52:40

it comes to definitely enough

00:52:49

to say that. Okay, thanks



00:52:55

Peter. What cases are the

00:53:06

investment real estate? If Benjamin

00:53:09

sorry, I completely agree with

00:53:11

with what Peter has said

00:53:12

that the way I see

00:53:14

it, we can distinguish between

00:53:15

investment cases that really refer

00:53:19

to. Is it going to

00:53:21

harm to asset in outer

00:53:23

space? Where I think the

00:53:24

Territorial and requirements is controversial.

00:53:28

And then, we have investment

00:53:32

case is related to the



00:53:33

space to the space industry.

00:53:35

Is that a very conventional

00:53:36

cases, in the sense that

00:53:38

they deal with concession, contracts

00:53:41

are public contracts with the

00:53:42

state. We're actually the Nexus

00:53:45

to outer space is remote

00:53:47

to some extent because what

00:53:48

we be at stake, if

00:53:49

not the physical harm, physically

00:53:51

in outer space. But if

00:53:52

if I, if an investor

00:53:54

signed a concession contract with



00:53:56

a specific State, I think

00:53:58

an argument surrounding the territorial

00:54:01

Nexus, just because the subject

00:54:03

matter of that concession contract

00:54:06

isn't out of space is

00:54:07

not very It relevant, and

00:54:09

this is actually what we

00:54:11

need. What we can see,

00:54:12

in the cases that have

00:54:14

happened so far, which I

00:54:16

basically three and a none

00:54:18

of these cases that territorial

00:54:22

link was arguing so that



00:54:29

we cases arising out of

00:54:30

two situations and neither of

00:54:33

the two, the link with

00:54:35

our state and the territory

00:54:37

of the house state was

00:54:38

controversial. So one of those

00:54:42

cases as you decide versus

00:54:43

Mexico, which is the case

00:54:45

I pass, immunity worked on

00:54:47

by, can't say that much

00:54:48

about it. But it related

00:54:50

to a provision contained in

00:54:52

a concession contract and that



00:54:54

you just said had with

00:54:56

Mexico over the use of

00:54:58

geostationary orbit positions, and in

00:55:01

the concession contract that was

00:55:02

a provision and saying that

00:55:04

he decided to head to

00:55:05

reserve a percentage of their

00:55:07

overall. satellite capacity for free

00:55:10

to the Mexican state, which

00:55:12

is a provision that dated,

00:55:14

from a long time ago

00:55:16

and you just had was

00:55:17

arguing that it was Violating



00:55:21

the fair and Equitable treatment

00:55:22

standard of the treaty and

00:55:25

fortunately use that lost the

00:55:27

case in the other two

00:55:29

cases and rising out of

00:55:31

the same scenario. A Davis

00:55:33

vs, India and Deutsche telekom

00:55:35

versus India. And those cases

00:55:38

a rose out of a

00:55:39

contract with an Indian company

00:55:42

over the lease at least

00:55:44

of Aspen frequency at bent.

00:55:47

And India, canceled that contract



00:55:51

saying that it needed the

00:55:52

S Pen for its own

00:55:54

security reasons, national security reasons

00:55:57

and that those cases were

00:56:00

lost in pass and one

00:56:03

and had by the investor.

00:56:04

Because the tribunal decided that

00:56:06

only part of the frequency

00:56:08

band was needed for National

00:56:09

national security reasons, and the

00:56:13

remaining part was decided to

00:56:17

be a breach of the

00:56:18

excavation and fat. Treatment for



00:56:21

Visions in the, the epic

00:56:22

epic battery dies. So we

00:56:24

can see that the half

00:56:25

beam investment cases relating to

00:56:28

the space sector that were

00:56:30

not particularly controversial, in the

00:56:31

sense that they were quite

00:56:32

conventional cases. Not so much

00:56:34

focus on the outer space

00:56:36

aspects that on the regulatory

00:56:38

aspects surrounding those Investments. I

00:56:41

think to the extent that

00:56:42

we will see collisions happening



00:56:44

more frequently and maybe even

00:56:47

see satellite operators, having to

00:56:51

contact very costly. And avoidance

00:56:54

Maneuvers are the time we

00:56:56

might see cases that are

00:56:58

more purely space cases at

00:57:02

where I think all of

00:57:03

the elements that Peter has

00:57:05

mentioned will probably be argued.

00:57:08

And this before the first

00:57:11

stop, I went to say

00:57:12

a few words about commercial

00:57:13

arbitration, because if we talked



00:57:15

about the, the protections of

00:57:18

investments in outer space, I

00:57:21

think it is important for

00:57:22

operate us to keep in

00:57:24

mind that the dispute settlement

00:57:27

mechanism that are available, ask

00:57:29

you and space activities. A

00:57:32

highly Technical High School Confidential

00:57:34

and subject to export control,

00:57:38

regulations are at a specific

00:57:39

legal aspect. And National Court

00:57:42

might not be that well

00:57:44

equipped to deal with those



00:57:45

cases. And because of the

00:57:48

language barrier has the public

00:57:49

character of national proceedings and

00:57:51

maybe also the lack of

00:57:52

specific space experience of National

00:57:55

Dress. International arbitration is an

00:57:59

important option from Force Base

00:58:01

in Vespas and to the

00:58:03

extent possible. I think it

00:58:05

is recommended to include arbitration

00:58:08

Clauses in every possible space

00:58:11

contract and we can see

00:58:13

that this is already widely



00:58:15

the case. I think SpaceX

00:58:17

Boeing Airbus correct me if

00:58:19

I'm wrong, di include arbitration

00:58:22

clauses in the contract, so

00:58:24

it has the European space

00:58:25

agency and to to anyone

00:58:29

who is working at space

00:58:30

contracts. What does not include

00:58:32

arbitration clauses. I think it's

00:58:34

a good recommendation to maybe

00:58:36

change that. Thanks Laura, Sol

00:58:40

Food in arbitration clauses and

00:58:43

in commercial contracts obviously is



00:58:46

one way to ensure that

00:58:47

there's there's an adequate dispute

00:58:50

resolution mechanism. But what about

00:58:51

your scenario that Ernie described

00:58:54

where there where the central

00:58:58

Ford collisions, right? And the

00:59:01

spacecraft had to diverge from

00:59:05

its normal path, and that

00:59:06

meant that use more fuel

00:59:08

and that it snowed there

00:59:09

for had a real life

00:59:11

span and therefore, couldn't open

00:59:16

that life span. What is



00:59:18

the remedy for an investor

00:59:21

in that scenario and a

00:59:28

very specific scenarios, you could

00:59:31

maybe have her for protection

00:59:32

and security claim against the

00:59:34

whole state. Assuming you can

00:59:37

prove a causal link between

00:59:38

the damaged stuff rides and

00:59:40

any actions of a letter

00:59:42

X by the whole state.

00:59:44

And obviously arbitration will not

00:59:47

be available. But unless the

00:59:50

parties can agree to it



00:59:51

after the fact on in

00:59:53

the in the DM and

00:59:55

probably the case that is

00:59:57

a contract between the parties

00:59:59

involved, in the Collision, as

01:00:01

we have seen that climbs

01:00:02

commission is available through diplomatic

01:00:05

protection for private operators, but

01:00:07

it's reside would be non-binding.

01:00:09

So it's probably not very

01:00:11

efficient, but Timothy medicine. And

01:00:15

another author that I can't

01:00:16

just can't remember at the



01:00:17

moment and have written a

01:00:19

paper. A few years ago

01:00:20

on with the proposition that

01:00:23

the awarding of launch licenses

01:00:27

could be condition at a

01:00:29

domestic level and on the

01:00:32

agreement to arbitrate any Collision

01:00:35

disputes. Because the the possibility

01:00:38

of having an international treaty

01:00:39

regulating this at the moment

01:00:41

is very low because of

01:00:42

the geopolitical context, but they

01:00:45

suggested that if, if the



01:00:47
meaning of the space-faring nations

01:00:50
would agree domestically to include

01:00:53
the obligation to arbitrate Collision

01:00:57
disputes in the launch licenses,

01:00:59
then the screen it's kind

01:01:00
of like in a similar

01:01:02
way as the bilateral investment

01:01:04
treaties M. Overtime have promoted

01:01:08
investment arbitration on a bilateral

01:01:10
basis. This could maybe also

01:01:11
have been with and we

01:01:14
got to space objects, but

01:01:16
this is just an idea



01:01:17
has not been implemented yet

01:01:19
but I think a lot

01:01:20
of people are thinking about

01:01:21
how we could make the

01:01:23
food resolution mechanisms available for

01:01:26
those kids. Okay. No. Thank

01:01:29
you, Laura. Yeah. I wonder

01:01:31
also with International actors in

01:01:34
the space. Just simply resort

01:01:37
to National courts on some

01:01:39
sort of theory of extraterritoriality

01:01:42
of the us obviously. Has

01:01:44
that concept? That's a stretch



01:01:46

to extend it to exit

01:01:49

the amount of space. I

01:01:51

don't know if any what

01:01:52

I haven't looked into that

01:01:53

but if anyone wanted to

01:01:54

come in or not you're

01:01:56

welcome to otherwise I can

01:02:00

have some Sport, extra space

01:02:06

assets from industry perspectives, the

01:02:16

weather in the region of

01:02:17

the US for GM's that

01:02:18

he's extractor, turn on the

01:02:20

US export control regimes International



01:02:23

traffic in arms regulations. That's

01:02:28

a little bit different but

01:02:29

that, that would apply outside

01:02:32

of the US and could

01:02:33

be used by by by

01:02:35

the US and reinforce the

01:02:38

number of a number of

01:02:40

a number of Sadie. I

01:02:42

mean, I guess the question

01:02:43

is a nun based on

01:02:45

my old days of doing

01:02:47

a little bit of international

01:02:49

transmission when I was in



01:02:51

private practice, in the case

01:02:53

that in the event that

01:02:55

were able to secure a

01:02:57

decision in favor of your

01:02:59

science. Then there's the issue

01:03:03

of how you secure the

01:03:05

asset when they were the

01:03:06

exit is old and let's

01:03:07

say about your state or

01:03:08

government, right? I'm not sure

01:03:12

if there has been any

01:03:13

practical examples of that people

01:03:17

are. Are, you know, when



01:03:17

you know, when I'll check

01:03:20

out of the way of

01:03:22

energy back and strike me

01:03:23

as one of the one

01:03:25

of the issues that You

01:03:28

probably divestitures will likely face

01:03:31

in the near future. No,

01:03:36

definitely. I think they would

01:03:38

face issues of sovereign immunity

01:03:39

of other issues. So, I'm

01:03:43

looking at the clock. Now

01:03:44

we only have about 5

01:03:45

more minutes or so. What



01:03:49

I wanted to ask all

01:03:50

of our panelists about is,

01:03:51

you know, what's the outlook

01:03:52

for the future in terms

01:03:53

of risk and opportunities for

01:03:56

private business activities? Start with

01:03:59

you, Laura and then Yeah,

01:04:04

I don't, I don't want

01:04:04

to take my time but

01:04:05

I think another aspect that

01:04:06

ready, come very relevant, Fallout

01:04:08

4. Satellite, operator specifically and

01:04:10

will be frequency interference disputes



01:04:13

and in general dispute over,

01:04:15

who would use which frequency,

01:04:17

is because sbsr. But in

01:04:20

general, the radio spectrum is

01:04:22

also becoming very saturated. And

01:04:25

again, I'm, I'm coming back

01:04:26

to that I made earlier

01:04:29

and coordination agreements between different

01:04:34

satellite operators can contain arbitration

01:04:36

clauses, and I think this

01:04:37

would be a useful practice

01:04:39

for satellite operators. Going for

01:04:42

what they has been the



01:04:42

case between you to set,

01:04:44

an SES in 2012 on

01:04:46

the basis of coordination agreement.

01:04:48

So I think you should

01:04:48

let us include arbitration clauses

01:04:50

in the agreement. I recently

01:04:53

learned that when wet pipes

01:04:54

a that's not, but I

01:04:56

think it would be a

01:04:57

fairly good practice going for

01:04:59

what Computer. I think you've

01:05:03

already identified at least one

01:05:04

future Trend, mining the moon.



01:05:06

But anything else? Enter private

01:05:14

space activities will drive. The

01:05:16

need for further legal rules

01:05:19

that govern the opportunity for

01:05:25

national-level, the Artemis, the courts,

01:05:29

for example, expressly anticipate. That

01:05:31

there would be a further

01:05:32

development of those rules are

01:05:36

what people see over time

01:05:39

and such a development of

01:05:40

something that is closer to

01:05:51

giving investors a remedy or

01:05:54

guidance. At least that's two



01:05:57

out results situations like this

01:05:59

one. Don't have any contractual

01:06:03

relationship. You have impacts caused

01:06:06

by the space object, upon

01:06:08

country, on The Wonder of

01:06:14

the prospects of a global

01:06:17

new regime for space Investments.

01:06:20

I think are pretty much

01:06:21

zero at the next year.

01:06:25

So, so I wonder if

01:06:27

companies eventually, but it will

01:06:29

resort to Ikea lateral domestic

01:06:33

League, regulation aimed at protecting



01:06:37
their own Nationals. Such as

01:06:39
this might be a stretch.

01:06:40
But, you know, the United

01:06:42
States, adopt something that would

01:06:47
allow the position of sanctions

01:06:48
on the state officials involved

01:06:52
in Acts that damaged, the

01:06:55
space station, What do you

01:07:01
see on the horizon? Not

01:07:05
an expert in this particular

01:07:06
domain but given that my

01:07:08
emphasis is really on business

01:07:10
and economic opportunities insurance. I



01:07:16

mean, you can't register a

01:07:18

car without having liability insurance

01:07:20

That may be one way

01:07:24

to mitigate the potential for

01:07:25

collision damage that a crowded

01:07:28

space. I believe you have

01:07:30

anything to add before we

01:07:31

turn into the audience for

01:07:33

a questions and especially your

01:07:43

flights will require require and

01:07:46

will continue to require you

01:07:47

to announce of financing and

01:07:50

huge Improvement of private investors.



01:07:54

So I think he's quite

01:07:58

relevant about insurance, maybe your

01:08:04

separate discussion Iran, boost in

01:08:11

terms of Technology economy and

01:08:13

legal, and Regulatory regime. Thanks

01:08:16

for To run our audience.

01:08:22

Thank you. I think you

01:08:24

flipped and thank you to

01:08:26

all of our panelists. So

01:08:28

Jose you may have to

01:08:29

guide me on how the

01:08:31

next 15 minutes work but

01:08:32

I assume we're just going



01:08:34

to take questions from the

01:08:35

live audience and from our

01:08:37

bracelet. Identify yourself. if you

01:08:50

have any questions yet, Yes,

01:08:53

I am. Call Emma. Moto

01:09:43

Metal remix. Yeah, I think

01:10:00

something like that comes Burton

01:10:02

act, but your space right

01:10:05

here. I think the proposal

01:10:28

was that from the audience,

01:10:30

that Congress might enact a

01:10:32

statute that would remove soccer

01:10:35

immunity for the states that



01:10:39

have engaged in activity in

01:10:42

space. That is negatively affected

01:10:44

us investment. That's the definitely

01:10:49

seems like it could be

01:10:50

a possibility or one solution.

01:10:51

Any other questions from the

01:10:54

audience? It's not Going forward

01:11:20

when you have, please. And

01:11:29

how are you seeing at

01:11:51

the same time? Laura, would

01:11:58

you want to repeat that

01:12:00

question? Because it's, it's very

01:12:01

difficult for the online audience.



01:12:03

I think. Also to to

01:12:04

hear it, it's it comes

01:12:11

from the fact that because

01:12:11

there are more private actors

01:12:13

in space sector and foreign

01:12:16

investors may be dealing with

01:12:18

an operation that is managed

01:12:20

by private actors opposed to

01:12:22

stay. I would that have

01:12:25

any impact on the interpretation

01:12:27

of the essential security, provisions

01:12:29

in investment treaties. So I

01:12:32

think reference was made a



01:12:33

particular to the two cases

01:12:35

against India that you described.

01:12:39

Maybe maybe I need and

01:12:40

flippin or anyone here knows

01:12:42

more about this than I

01:12:44

do. Right? From what from

01:12:45

what I know is that

01:12:46

most of the space contract

01:12:48

have Provisions that in case

01:12:50

of a National Emergency is

01:12:52

a commercial operators, have to

01:12:54

end hand over the satellite

01:12:55

capacity to two governments. I



01:12:57

believe the US has such

01:12:59

a provision in salt, many

01:13:00

other countries, and most commercial

01:13:03

satellites are all of them

01:13:05

that you will use technology.

01:13:06

So they can be used

01:13:08

for military purposes or for

01:13:11

national security purposes in general

01:13:13

if necessary. So I would

01:13:17

think that this may be

01:13:18

answers to questions, the satellites

01:13:20

are never just commercial, which

01:13:22

is why one of the



01:13:23

reasons why and that's a

01:13:25

lot of confidence confidentiality in

01:13:27

space contracts and space disputes

01:13:30

and because of the military

01:13:31

implications they can have, some

01:13:34

of this will be important.

01:13:35

I think both and investment

01:13:36

and commercial space disputes going

01:13:42

Thank you, Laura, you know,

01:13:46

I think I understood the

01:13:48

scenario correctly. It, it would

01:13:50

raise questions of Retribution because

01:13:53

it's basically a situation where



01:13:57

functions that are or that

01:13:59

we're administered by the state,

01:14:00

or the city park authorities

01:14:02

are being privatized. They are

01:14:04

being held on by private

01:14:07

entities, in which case you

01:14:18

want to still would be

01:14:23

attributable to the treaties for

01:14:30

whatever whatever happens. In the

01:14:33

question, whether Issues of National

01:14:40

Security. Thank you, Peter. So

01:15:02

we have a question from

01:15:03

the audience, this is for



01:15:06

you Arnie. And it says

01:15:07

regarding the kinetic, destruction of

01:15:10

the Russian satellite Kosmos, 1408,

01:15:14

there been any attempts on

01:15:16

the part of the owners?

01:15:17

Infected abscess to recover damages,

01:15:22

I am not aware of

01:15:23

any sort of active pursuit

01:15:26

of Remedies against the need

01:15:35

for insurance, or any statute

01:15:37

for Congress. I think they

01:15:51

haven't been any proceedings because

01:15:52

they haven't been any damages



01:15:55

but it's just that with

01:15:57

with Ever more debris being

01:16:00

created. It's a question of

01:16:01

time. I think until they

01:16:03

will be damages or that's

01:16:05

where I insurance for her

01:16:07

to be very relevant Journeys,

01:16:10

description that there's already economic

01:16:12

damage because the music that

01:16:18

was unplanned, the asset traps

01:16:25

economic damage does not. Are

01:16:29

difficult to proof. I mean,

01:16:33

it's it's, you know, you



01:16:35

it would be the amount,

01:16:39

the Quantum of damage would

01:16:42

be a very technical, so

01:16:45

it can be, I think

01:16:45

it can be true, but

01:16:47

they hate. This is how

01:16:47

much do you have to

01:16:56

admit. It's not just about

01:16:57

the value, the fuel. It's

01:16:59

about the value of the

01:17:00

asset that's using with you

01:17:01

and how do you establish

01:17:02

that? That might be a



01:17:04

little more difficult. Rhino. Exactly.

01:17:08

Be. There is to know

01:17:09

every time you should have

01:17:10

performed at the economic life

01:17:19

by what they want you

01:17:21

to replenish. The constellation would

01:17:32

have to lunch. And I

01:17:42

think that you do the

01:17:43

streets lately evolving in a

01:17:45

sense that historically, because space

01:17:48

has always been recognized as

01:17:50

a very hard to made.

01:17:51

There is a ton of



01:17:53

Art 15 year contract that

01:17:57

spacecraft a few Lawns and

01:17:58

more competitive with the architect

01:18:07

of operators and manufacturers are

01:18:13

looking for ways to reduce

01:18:14

costs and it's just that

01:18:22

he's got. So instead of

01:18:23

giving you a h, a

01:18:25

t or spacecraft, that's the

01:18:33

kind of things that you

01:18:34

do. Western always thinking up.

01:18:38

So you know when you

01:18:39

have these sort of unplanned



01:18:40
events it really soon. Meant

01:18:48
for me at one of

01:18:49
the difficulties may be any

01:18:51
correct me if I'm wrong

01:18:52
but it's that it's not

01:18:54
always easy to identify who

01:18:56
was debris is causing the

01:18:59
ammonia. So that's one of

01:19:01
the reasons and the other

01:19:02
thing is liability for damaged

01:19:05
in outer space at least

01:19:07
another liability convention asphalt based

01:19:10
so that you would not



01:19:11

only need to prove that

01:19:12

the specific kind of debris

01:19:15

that has caused your maneuver.

01:19:16

I came from that country

01:19:18

or that company, but also

01:19:19

that it was there because

01:19:21

of a sword and I

01:19:23

abide by the state I

01:19:25

guess in an acid test,

01:19:27

it would be relatively easy

01:19:29

to prove that but if

01:19:30

it was a satellite that

01:19:31

was the times and then



01:19:33

broke up for some bud,

01:19:34

might be more difficult. Say

01:19:36

that was a fraud. Play

01:19:38

the points for Base Library.

01:19:42

And just to be clear.

01:20:06

is it the Zipper ride

01:20:08

or Or disputes that may

01:20:14

arise out of the private

01:20:19

party, except I'm not in

01:20:21

a contractual relationship. Private school,

01:20:28

private event basically launching statement

01:20:39

cell or text one from

01:20:42

its 33 and it is



01:20:49

only damage to another state

01:20:52

itself of also damage to

01:20:56

Albert Hill, that's States national

01:21:01

so you know it's not

01:21:16

enforceable. So, in order for

01:21:18

there to be a private

01:21:19

pilot's claim would be akin

01:21:22

to a spousal international law

01:21:41

Let me in. many of

01:21:44

us who have discovered this

01:21:46

area in the Months or

01:21:49

years or so, that space

01:21:52

law has been developed yet.



01:22:03

There's just so much space

01:22:05

for aura. Creativity. Want one

01:22:14

question that that I had.

01:22:21

Whether you know, of attempts

01:22:23

to buy basic model, vitreo

01:22:34

Provisions, such as the definition

01:22:36

of investment, that would make.

01:22:39

The pH is work. What

01:22:42

is the main conclusion? Is

01:22:46

that a typical model, B?

01:22:49

I C unlimited you as

01:22:58

we all know, I'm mortified

01:23:04

all the time and I'm



01:23:06

not sure whether I bet

01:23:09

you would be the correct.

01:23:12

but it seems that a

01:23:15

state to state Treating State.

01:23:22

My also have some limitations.

01:23:24

I don't know the answer

01:23:32

to that but my instinct

01:23:33

is no, because the current

01:23:35

redrafting of investment treaties is

01:23:38

trending toward reducing the scope

01:23:40

of State liability, not fighting.

01:23:42

No more investors more opportunities

01:23:45

as two states. So I



01:23:47
doubt that happening but maybe

01:23:48
I'm wrong. Certainly would be

01:23:55
open to something that has

01:24:13
been there for a very

01:24:13
long time. And, you know,

01:24:15
their number number of people

01:24:17
who have been Studying it

01:24:19
for a very long time

01:24:20
and I think what we

01:24:22
are seeing now is that

01:24:23
there is increased interaction between

01:24:26
you know one of us

01:24:33
myself. And but you know



01:24:35

I'm finding this to be

01:24:36

a very open and friendly

01:24:37

community so I'm grateful for

01:24:39

that. It's a good thing

01:24:41

that they will be very

01:24:54

grateful to lowda and I'm

01:24:56

always open to joining the

01:24:59

flowers to join them and

01:25:01

learn That's that's an excellent

01:25:06

notes. And Don Jose I

01:25:07

think we're now on a

01:25:08

time. I just want to

01:25:10

thank analyst once again and



01:25:14

thank you, still eat the.

01:25:15

Thank you. Laura is dialed

01:25:17

in, really excellent discussion and

01:25:20

I learned a lot. I

01:25:20

hope the speakers who are

01:25:35

now in person, you are

01:25:38

relieved from their speaking. You

01:25:40

need anybody wants to stay

01:25:43

on for a few minutes

01:25:44

and break out really feel

01:25:47

free to do so just

01:25:49

a few minutes but we

01:25:53

would play by ear. I



01:26:05
d now people have been

01:26:07
so we'll play it by

01:26:10
ear. So thank you very

01:26:12
much at the next one

01:26:17
which I believe will be

01:26:18
at at 12.