

INTERNATIONAL INSTITUTE OF  
AIR AND SPACE LAW

# Concluding remarks: Space Tourism – Legal and Policy Aspects

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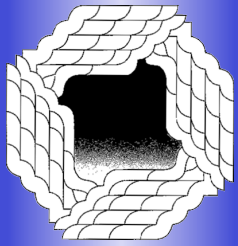


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# *Orbital vs. sub-orbital*

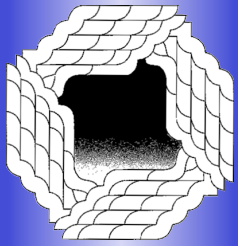
- Totally different market paradigms
  - Basically piggy-backing with enormous infrastructure costs vs. adventure entertainment
- Real markets for the time being in sub-orbital
  - Figures of Virgin Galactic
  - Simple technology – simple benefits: weightlessness & viewing the earth

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# Virgin Galactic

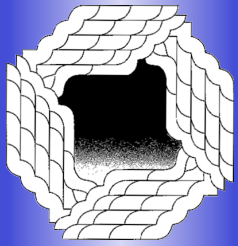
- Key to impending success two-fold:
  - No terrestrial launch but air launch
  - Revolutionary design of the wings
- Combined manufacturing & service provision → special IPR company
  - Monopolisation vs. broad usage
- Aim SS-2: to prove technology!

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# *Licensing*

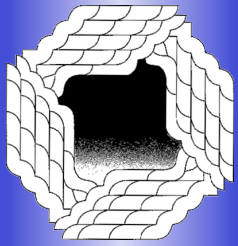
- Distinction licensing-authorisation
- Of course still matter of nat'l law
  - Airline(-like) licensing...?  
N.B.: Virgin Galactic UK company
- Dealing with liability-reimbursement  
ref. Liability Convention
- Licenses also have value in terms  
of securities! (UNIDROIT)

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# Registration

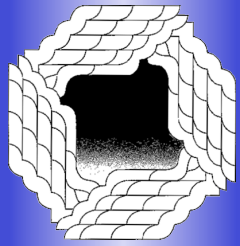
- Main issue: a/c or s/o?
  - SS-2 t/b registered in US as space object plus launch facility – but complying with aviation standards as for certification!
  - International registration should be under Registration Convention...?
- Registration of Russian a/c...

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# *Liability*

- Air law liability would be more appropriate for passengers
  - Medical issues!
  - Third-party liability: if space objects (SS-2!), Liability Convention applies → national law!?
- Liability: will waivers be upheld?
- Product liability for manufacturers
- Insurance: just starting to move in...

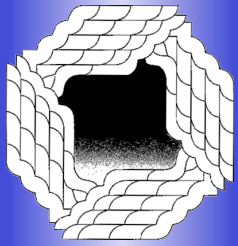
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# *Certification*

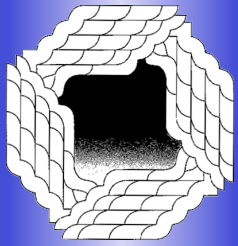
- Constraints may severely negatively impact
  - Cf. US currently; Europe needs to address
- Crew certification has not been addressed today
- ‘Certification’ passengers
  - Virgin Galactic: 16+ years; pregnancy; heart & circulatory issues (↔ astronauts!)

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# *Financing*

- UNIDROIT efforts to stimulate developing financial markets – might well include developing markets such as space tourism!
  - Cf. Virgin Galactic's SS-3

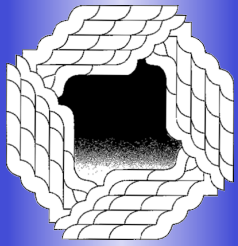
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# *Int'l legal issues*

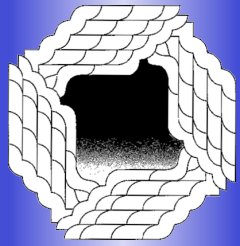
- Boundary air-outer space!
  - Are flights in air or in outer space?
  - NASA: 50 m/80 km; X-prize: 100 km
  - Achilleas: 110 km
- Liability UAE / Singapore ...?
- FAA ISFO idea: institutional issues
- Status of crew & passengers...
  - Astronauts not legal status! → int'l statute?

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# *Thanks...*

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- ESA & Director General for usage of the main Room
- ECSL for organising it, esp.
  - Dr. Lafferranderie, President & Chairman
  - Mr. Marchini, Executive Secretary
- All the speakers
- ... and the audience!

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