

# Jurisdictional Challenges And Their Potential Impact Upon Commerce Related To A Private Settlement On The Moon

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A customs declaration for the Moon? Some may recall the quarantine endured by the crew of Apollo 11 upon their return from the Moon, but do they also remember the official declaration forms and quarantine that the crew had to sign upon their return from the Moon at the Honolulu airport? The cargo they declared, alongside their quarantine, was undoubtedly a first: "Moon rock and moon dust samples". Not only was this was a tangible example of space law jurisdictional issues; it was also a clear presage to the forthcoming effects of regulation and jurisdictional choice upon future commerce on the Moon. Regulation is a tool to either enable or to restrict commerce, and applicable regulation is determined by the choice of jurisdiction. Had the U.S attempted to establish the Moon as the 51st state, there would have been no need to process customs forms. Interstate commerce would have applied.

GENERAL DECLARATION (Outward/Inward) AGRICULTURE, CUSTOMS, IMMIGRATION, AND PUBLIC HEALTH			
Owner or Operator NATIONAL AERONAUTICS AND SPACE ADMINISTRATION			
Marks of Nationality and Registration U.S.A.		Flight No. APOLLO 11	Date JULY 24, 1969
Departure from MOON (Place and Country)		Arrival at HONOLULU, HAWAII, U.S.A. (Place and Country)	
FLIGHT ROUTING (*Place* Column always to list origin, every en-route stop and destination)			
PLACE	TOTAL NUMBER OF CREW	NUMBER OF PASSENGERS ON THIS STAGE	CARGO
CAPE KENNEDY	COMMANDER NEIL A. ARMSTRONG		
MOON	<i>[Signature]</i>	Departure Place:	MOON ROCK AND MOON DUST SAMPLES Cargo Manifests Attached
JULY 24, 1969 HONOLULU	COLONEL EDWIN E. ALDRIN, JR. <i>[Signature]</i>	Embarking NIL	
		Through on same flight NIL	
		Arrival Place:	
	<i>[Signature]</i>	Disembarking NIL	
	LT. COLONEL MICHAEL COLLINS	Through on same flight NIL	
<b>Declaration of Health</b> Persons on board known to be suffering from illness other than sickness or the effects of accidents, as well as those cases of illness disembarked during the flight: NONE			For official use only  HONOLULU AIRPORT Honolulu, Hawaii ENTERED <i>[Signature]</i> Customs Inspector
Any other condition on board which may lead to the spread of disease: TO BE DETERMINED			
Details of each disinfecting or sanitary treatment (place, date, time, method) during the flight. If no disinfecting has been carried out during the flight give details of most recent disinfecting:			
Signed, if required _____ Crew Member Concerned			
I declare that all statements and particulars contained in this General Declaration, and in any supplementary forms required to be presented with this General Declaration are complete, exact and true to the best of my knowledge and that all through passengers will continue/have continued on the flight.			

How will you watch Netflix on the Moon? On your iPhone? Will you iPhone be licensed to work there? In fact, how will you conduct any commerce on or from the Moon<sup>1</sup>, whether in a private or civil settlement? It's not that simple as the answer depends upon whose law you are working and residing under, as do those laws and regulations allow you to conduct commerce on the Moon? Does Netflix worldwide licensing deals with content providers apply distribution and viewing on the Moon? What if your private settlement on the Moon is under US law? Will you choose to place, aka domicile, your private settlement under US

<sup>1</sup> For the purposes of this paper the term 'on the Moon' is used for ease of discourse, however the authors fully understand and appreciate that any settlement 'on' the Moon would actually logically be 'in' the Moon and for the most part under its surface.

jurisdiction, Russian, European Union, Chinese, or the laws of a proven space commerce orientated jurisdiction such as the Isle of Man? The question of jurisdictional choice and its impact upon commerce is key to the success or failure of any venture on the Moon, or any other body or station in the Solar System, as this choice ultimately decides the economic success of the settlement or not. You must anticipate a thriving settlement of hundreds if not thousands of people living and working on the Moon. The choice maximizes or minimizes the chances of success, enabling a profitable growing thriving settlement with a franchisee model, or constraining a settlement stifling if potential and ultimately leading to its failure.

It must be understood from the outset that any private facility, satellite, or settlement at present according to the existing UN Outer Space Treaty and Liability and Registration Conventions will be under the regulation of a national government on Earth. In essence, similar to the flagging of vessels on the High Seas, a nation state will have the responsibility of licensing the operation of such a facility. This is the application of the law today to the global satellite industry. It is the application of the law to the International Space Station, and it will be so in the foreseeable future under the present international agreements for a private facility on the Moon. There is a reason Apollo 11 announced, ‘Tranquility *Base*, the Eagle has landed.’ Under these agreements the USA registered a base, a facility, on the Moon under its regulation and legal jurisdiction. A nation’s law, taxes, and more will apply to such a settlement, and in this, as in the global satellite industry, a company will have a choice of jurisdiction. The world’s present finance and insurance providers linked to the global space industries are familiar with the application and ramification of these jurisdictional factors, as are global regulators. The financing and insurance for the settlement will come from the existing financial markets. Will the rules of your jurisdiction allow for and enable them to invest and to see a return on their investment? The key will be to pick the domicile that will give the best chance of commercial success.

Taking this further, it must also be remembered that one hundred percent of the monies ‘spent in space’ are not, they are actually spent here on the ground fueling our economies. Though with Moon, and other private settlements, could prove the first exceptions to this rule with nascent internal or intra settlement economies necessary for the daily functioning of the local facilities. People will live there, and earn their livings there. However, for the foreseeable future their bulk of their economic activity and their rains d’etre will be tied to the larger global economy and the billions of people living there. A possible local micro economy will almost certainly exist and thrive and will be vital for the day to day living of the settlement, but its macro existence will be tied to the larger global economy and CIS-Lunar economic system. Again raising the issue of jurisdictional choice. What factors are we discussing here? Why is jurisdictional choice so

important? Surely a facility will simply exist? Not so. Someone's laws must speak there and the question is whose.

As in global commerce, and the satellite industry today, Thomas Friedman's Flat Earth principle of globalization applies in the jurisdictional choice for any private settlement on the Moon. When considering the choice of jurisdiction (whose law speaks) for a private settlement on the Moon, or any other body or station in the Solar System, in theory a private concern could choose to establish itself in any one of the over 194 nations and economic jurisdictions of the world. This choice will be crucial in determining a host of factors all linked to economic success or failure.

When thinking jurisdiction think enabling legislation and regulation. Before you embark on the concept of a private settlement on the Moon does the nation you are choosing even have the necessary enabling legislation and regulation in place for space activities? Is this a pro space jurisdiction with an existing track record of success? Will their laws, regulation, and existing experience be a help to your venture or by choosing a jurisdiction with no space experience or laws in place are you placing barriers to your success before you even begin your project? How will your project seek financing if it cannot be licensed, nor insured? From the basic question of has the jurisdiction signed and ratified the requisite UN space treaties, further to asking if it has taken the next steps of having in place the necessary national regulation for space activities? Are companies already successfully using these laws and regulations for commercial activities in space, most likely satellite related? If not, why not? Does a national register of space objects necessary for the 'flagging' of space objects and crucial in terms of market access, as is the case with satellite communications, exist in the jurisdiction? How will you register your facility as required under the Treaties?

If an EU nation, which one? Laws and taxation for both individuals and companies are different in each. If US, which State, again noting that outside of Federal jurisdiction, laws and taxation for both individuals and companies are different in each.

Registration and licensing through an established jurisdiction is a key element in more than just ensuring access to finance and insurance, it also determines market access for the goods and services of your settlement. Will you have access to the markets of the world? Are you working via a World Trade Organization (WTO) member state? Which market will you need access to? Most likely all. Until the concept is proven, the establishment of the first or any private settlements is likely to be precarious and high risk in nature and financially precarious at first and will need every advantage and possible incentive. Market access is a critical issue. If you cannot sell your goods and services how will you succeed? The choice of jurisdiction plays directly to this.

Think of this in reverse and of the laws and regulations that will apply to you in a macro fashion. Which ITU Region will your jurisdiction be from? Region 1, 2, or 3? Noting that there has been discussion of a future ITU Region 4 for activities beyond Earth orbit. Different regions apply different broadcasting standards, crucial considering that the Earth spins beneath Moon and the Moon traverses every ITU region every twenty-four hours. How will you watch Netflix on the Moon? Which region will you be in for copyright?

Which time zone will you operate in? This depends upon the choice of jurisdiction. US time? East Coast, Central, Mountain or Pacific? Tokyo? Singapore? Or will you follow the established protocol via the International Space Station of utilizing Greenwich Mean Time (GMT)? For example, if GMT this will affect market access in a possibly unique manner granting similar trading advantages of the London Stock Exchange in its leveraging of its geographic position across time zones for effective trading in the Asian, European, and US markets simultaneously.

What legal regime would you choose for the commercial, scientific and day-to-day life of your settlement be under? How will you license telecoms? Which would be the most conducive for investment and economic viability? Common Law or Napoleonic? Islamic or Sharia law? What product liability or criminal laws? Rights of employment and personal liberty? Intellectual property protections and laws? Censorship? Employment laws? How would the European Social charter apply to living and working on the Moon? Vacation practices? Employment right? How would you fire someone on the Moon? Freedom of speech? Redress of grievance and voting in elections? In whose constituency or Congressional District would your citizens vote? How about immigration, work rights, rights of establishment and visas? Medical care? How will the Rule of Law be applied? How would civil authority regulate on the Moon in such a private settlement? How would the law be enforced? Will you serve alcohol on the Moon? No nightclubs or bars or theatres restaurants? How will people entertain themselves? Price controls of groceries? Unions? Labor relations? What uniform would you wish for your policeman or Sheriff to wear? Armed or not? Who will build the and maintain the prison? How will you affect civil rights and costs of such in terms of trial by jury, transport and imprisonment? How will you provide for the common defense? How will all or any of this ultimately affect your ability to do business and the profitability of your venture?

How will you pay for your Netflix subscription? This assumes that Netflix is available in the jurisdiction of your choice. What currency will you be using? US Dollars? Euros? Pound Sterling? Yen? The currency depends upon your choice of jurisdiction. It is hard to imagine someone taking a printing press and paper to the Moon for the exercise of printing money for the local economy, let alone

coinage. Does your jurisdiction allow for digital currency to be used? Bitcoin or other? A private settlement of the Moon could logically become the testing ground for the digital lifestyle and economy of the future, will the laws of your jurisdiction allow for such? How about taxation? Personal, corporate and other? How will you incentivize companies to invest in the settlement and encourage individuals to leave the Earth to work there, even bringing their families? What school curriculum and educational provisions? How would 'public' services be paid for in a private settlement? Will there be a grocery store? A bar? How will commerce operate in the Settlement itself?

Would a Foreign Trade Zone for customs and excise be possible? Technically the private settlement would most likely have a launch site for transit to and from the Lunar surface. Every major commercial launch site or spaceport on Earth operates under a Foreign Trade Zone or equivalent to allow for the transshipment of goods in and out of the nation in question via launch without triggering traditional customs barriers. Why not the equivalent on the Moon? Does your jurisdiction grant such today? Would it tomorrow? The equivalent of a Lunar Freeport? Could commerce be conducted without such? No major spaceport is able to thrive without similar.

Take the question of customs and excise one stage further, actually back to the customs declaration and quarantine of the Apollo 11 crew, what about medical quarantine, both physical and cyber for access to and from the private settlement? As has been marked in space upon the ISS, and at facilities in Antarctica, remote sterile environments are susceptible issues of disease and contamination. A real quarantine might be needed in any settlement of the Earth's surface to protect against infection and well being and also to ensure productivity and commerce. How would this affect transfer or personnel or the time of goods and services to market? How would this impact your business plan? Your profitability? How would your laws be applied to aid or hinder your business?

Health and safety regulations will be crucial, but will the hierarchy of all of your domicile laws apply logically on the Moon to allow or to inadvertently restrict commerce? What more or less might logically be needed? In such an unforgiving environment with the use of different materials and protocols where mistakes would likely carry the ultimate price, how would compliance be judged? The jurisdiction of choice must accept and understand these differences and further be willing to proactively address them acting upon them in a safe yet expedient manner.

Further, will utilities be considered under health and safety regulations? Water, power, pressure? Access to air on the Earth is a given and not charged for, but on the Moon? The US Environmental Protection Agency allows for minimum pollution targets from industrial facilities in the USA, but considering the

importance of air quality any pollution into the environmental system in a settlement be acceptable to its inhabitants while legal under the laws of that jurisdiction? It is highly likely that every space of the settlement, pressurized or other, will logically be monitored for health and safety reasons, but how does this interact with the privacy and discovery laws of your jurisdiction? How can intellectual property be protected if everything and everyone is under surveillance 24/7?

Would you the laws of your chosen domicile allow you form a company on the Moon? How would you meet Know Your Customer regulations in such a circumstance? Open a bank account? Manage pensions and investments of those living there? School fees? Conduct everyday commerce?

Hence as with a possible new ITU Region 4 where new frequency rules apply tailored to uses beyond Earth Orbit, perhaps if the settlement is US based, a new US territorial status could be granted, maybe a 51<sup>st</sup> State with specific laws and differences adapted to the new environment, similar to the Alaska prior to statehood? Could the International Space Station be a model with its international code of conduct applied in a commercial fashion?

Or, why have to choose just one jurisdiction? The Moon could be utilized as a jurisdictional testing ground for commerce. Could a private settlement choose multiple jurisdictions to take effect in specific trading zones allowing market forces to compete? Similar in effect, though not in historical origin, to the Canton system once in effect in China? Different jurisdictional and economic zones applied to different industries or services? You could make a conscious choice to invent a new material in under the laws of the most competitive jurisdiction in that regard, while producing a new broadcast under another, and yet still trading in a third or more. You live under one law and then work under another in another part of the settlement? Similar to the market-enabling role of the Levant Company in trading in the Middle East?

This paper merely scratches the surface of the impact of jurisdictional choice upon the macro and micro economic functioning of a private settlement on the Moon in an attempt to trigger initial thoughts and the beginning of a conversation. Jurisdictional choice is of crucial importance to the success or failure of such a venture, but such a venture also potentially opens the door to the possibility that new models of jurisdictional use could also provide workable solutions. Just as in space commerce today on the Earth, commercially driven jurisdictions such as the Isle of Man and others may also logically have a special attraction for select entrepreneurs seeking to establish private settlements on the Moon and elsewhere in the Solar System, yet success will ultimately be decided by those jurisdictions either choosing to embrace the vision and the possibility heralded by such private settlements or not.

### **About the authors:**

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