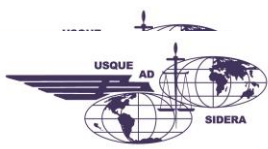




INSTITUTO IBEROAMERICANO DE DERECHO AERONAUTICO Y DEL ESPACIO
Y DE LA AVIACION COMERCIAL
Organismo Consultivo de las Naciones Unidas (O.N.U.)

THE MOON: FROM LABS TO TOWNS THE LEGAL FRAMEWORK FOR LUNAR BASES: GROWING ON THE EXPERIENCE OF THE INTERNATIONAL SPACE STATION.

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- WHY THE MOON?
- LEGAL FRAMEWORK FOR LUNAR BASES
- UTILIZATION OF EXTRATERRESTRIAL RESOURCES. MOON & ASTEROIDS
- THE ISS EXPERIENCE
- TOWARD THE FUTURE
- CONCLUSIONS

WHY THE MOON?

- ALWAYS IN THE SKY
- THE BIG GOAL OF SPACE RACE
- EASIER THAN OTHER DESTINATION
- NEAR FOR TO SOLVE PROBLEMS
- A TEST PLACE FOR DEEP SPACE EXPLORATION
- REASONABLE ENVIRONMENT FOR LEGAL REGULATION

RACE TO THE MOON





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ORION



SLS



THE MOON





LEGAL FRAMEWORK

- UN Treaty(4 of 5)
- UN Principles
- UN Resolutions
- ESA Convention
- ISS Agreements / NASA Agreements/ Others
- Lisbon Treaty Article 108
- Spanish Space Law

THE “BIG FIVE”

- 1967; OUTER SPACE TREATY
- 1968; RESCUE AGREEMENT
- 1972; LIABILITY CONVENTION
- 1972; REGISTRATION CONVENTION
- 1979; MOON AGREEMENT. NOT RATIFIED.

LET'S GO TO THE MOON

- EXPLORATION
- COLONIZATION vs SETTLEMENT
- NON ONLY TECHNICAL QUESTIONS
- THE HAGUE SPACE RESOURCES EXAMPLE
 - POLITICAL
 - PHILOSOPHICAL
 - ECONOMIC



RULES THAT WE HAVE (I)

- **U.N. DECLARATION OF LEGAL PRINCIPLES GOVERNING THE ACTIVITIES OF STATES IN THE EXPLORATION AND USE OF OUTER SPACE 1963**
 - The exploration and use of outer space shall be carried on for the benefit and in the interests of all mankind.
 - Outer space and celestial bodies are free for exploration and use by all States on a basis of equality and in accordance with international law.
 - Outer space and celestial bodies are not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.
 - The activities of States in the exploration and use of outer space shall be carried on in accordance with international law, including the Charter of the United Nations, in the interest of maintaining international peace and security and promoting international cooperation and understanding.
 - States bear international responsibility for national activities in outer space, whether carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried on in conformity with the principles set forth in the present Declaration. The activities of non-governmental entities in outer space shall require authorization and continuing supervision by the State concerned. When activities are carried on in outer space by an international organization, responsibility for compliance with the principles set forth in this Declaration shall be borne by the international organization and by the States participating in it.
 - In the exploration and use of outer space, States shall be guided by the principle of co-operation and mutual assistance and shall conduct all their activities in outer space with due regard for the corresponding interests of other States. If a State has reason to believe that an outer space activity or experiment planned by it or its nationals would cause potentially harmful interference with activities of other States in the peaceful exploration and use of outer space, it shall undertake appropriate international consultations before proceeding with any such activity or experiment. A State which has reason to believe that an outer space activity or experiment planned by another State would cause potentially harmful interference with activities in the peaceful exploration and use of outer space may request consultation concerning the activity or experiment.
 - The State on whose registry an object launched into outer space is carried shall retain jurisdiction and control over such object, and any personnel thereon, while in outer space. Ownership of objects launched into outer space, and of their component parts, is not affected by their passage through outer space or by their return to the earth. Such objects or component parts found beyond the limits of the State of registry shall be returned to that State, which shall furnish identifying data upon request prior to return.
 - Each State which launches or procures the launching of an object into outer space, and each State from whose territory or facility an object is launched, is internationally liable for damage to a foreign State or to its natural or juridical persons by such object or its component parts on the earth, in air space, or in outer space.
 - States shall regard astronauts as envoys of mankind in outer space, and shall render to them all possible assistance in the event of accident, distress, or emergency landing on the territory of a foreign State or on the high seas. Astronauts who make such a landing shall be safely and promptly returned to the State of registry of their space vehicle.



RULES THAT WE HAVE (II)

- OUTER SPACE TREATY 1967
 - FREEDOM OF EXPLORATION # I
 - NON NATIONAL APPROPRIATION # II
 - FOLLOW INTERNATIONAL LAW # III
 - PEACEFUL USE OF SPACE # IV
 - RESCUE OF ASTRONAUTS. MANKIND REPRESENTATIVES # V
 - INTERNATIONAL LIABILITY # VI
 - SPACE OBJECT REGISTER # VIII
 - NON CONTAMINATION # VIII
 - COOPERATION # IX
 - COMUNICATION & FREE INFORMATION # XI, XII



PRECEDENTS

- **SEA LAW**
- **1958 Geneva Conventions on the Law of the Sea** Geneva, 29 April 1958.
- **ANTACTIC LAW**
- **Articles of the Antarctic Treaty 1959**
- **Article 1** – The area is to be used for peaceful purposes only; military activity, such as weapons testing, is prohibited but military personnel and equipment may be used for scientific research or any other peaceful purpose;
- **Article 2** – Freedom of scientific investigations and cooperation shall continue;
- **Article 3** – Free exchange of information and personnel in cooperation with the United Nations and other international agencies;
- **Article 4** – The treaty does not recognize, dispute, nor establish territorial sovereignty claims; no new claims shall be asserted while the treaty is in force;
- **Article 5** – The treaty prohibits nuclear explosions or disposal of radioactive wastes;
- **Article 6** – Includes under the treaty all land and ice shelves but not the surrounding waters south of [60 degrees 00 minutes south](#);
- **Article 7** – Treaty-state observers have free access, including aerial observation, to any area and may inspect all stations, installations, and equipment; advance notice of all activities and of the introduction of military personnel must be given;
- **Article 8** – Allows for good jurisdiction over observers and scientists by their own states;
- **Article 9** – Frequent consultative meetings take place among member nations;
- **Article 10** – All treaty states will discourage activities by any country in Antarctica that are contrary to the treaty;
- **Article 11** – All disputes to be settled peacefully by the parties concerned or, ultimately, by the [International Court of Justice](#);
- **Articles 12, 13, 14** – Deal with upholding, interpreting, and amending the treaty among involved nations.



MOON AGREEMENT 1979

- NON APLICABLE
 - NON RATIFICATION FOR PRINCIPAL SPACE COUNTRIES
 - BIG PROBLEMS:
- Bans any military use of celestial bodies, including weapon testing or as military bases.
- Bans all exploration and uses of celestial bodies without the approval or benefit of other states under the common heritage of mankind principle (article 11).
- Requires that the Secretary-General must be notified of all celestial activities (and discoveries developed thanks to those activities).
- Declares all states have an equal right to conduct research on celestial bodies.
- Declares that for any samples obtained during research activities, the state that obtained them must consider making part of it available to all countries/scientific communities for research.
- Bans altering the environment of celestial bodies and requires that states must take measures to prevent accidental contamination.
- Bans any state from claiming sovereignty over any territory of celestial bodies.
- Bans any ownership of any extraterrestrial property by any organization or person, unless that organization is international and governmental.
- Requires an international regime be set up to ensure safe and orderly development and management of the resources and sharing of the benefits from them.



ARTICLE XI MOON AGREEMENT

- The Moon Agreement established several principles in the subsections of Article 11:
- ***1. The moon and its natural resources are the common heritage of mankind, which finds its expression in the provisions of this Agreement and in particular in paragraph 5 of this article.***
- ***2. The moon is not subject to national appropriation by any claim of sovereignty, by means of use or occupation, or by any other means.***
- ***3. Neither the surface nor the subsurface of the moon, nor any part thereof or natural resources in place, shall become property of any State, international intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person.***
- ***5. States Parties to this Agreement hereby undertake to establish an international regime, including appropriate procedures, to govern the exploitation of the natural resources of the moon as such exploitation is about to become feasible.***

LEGAL CONTROVERSY

- 1967 TREATY IS APPLICABLE
- 1972 TREATY IS NON APPLICABLE
- NEW RULES ABOUT SPACE RESOURCES
 - USA: UNILATERAL IMPULSE
 - AS AN ANSWER TO REAL ACTIVITIES & INITIATIVES



SPACE RESOURCES BUSINESS

- THE U.S COMMERCIAL SPACE LAUNCH COMPETITIVENESS ACT (H.R. 2262)
- THE AMERICAN SPACE TECHNOLOGY FOR EXPLORING RESOURCES OPPORTUNITIES IN DEEP SPACE ACT, MORE COMMONLY KNOWN AS THE **ASTEROIDS ACT**. (H.R. 5063; 113TH CONGRESS).
- Obviously one of the most important legal questions that arises is how to reconcile the provisions of the Asteroids Act with the principles established by Article II of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies of 27 January 1967, otherwise known as the Outer Space Treaty.
- Article II of the Treaty established that ***“Outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means”***.



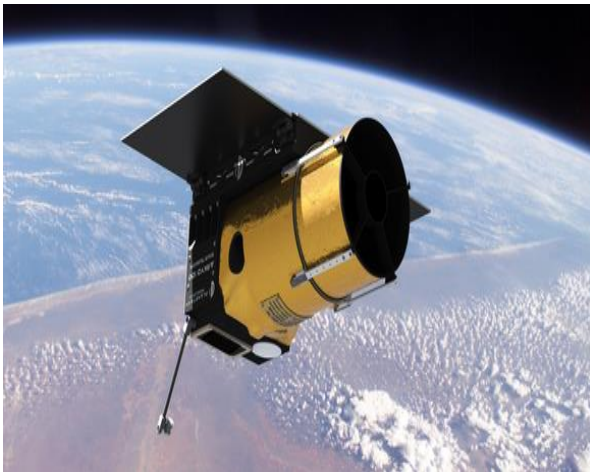
SPACE RESOURCES BUSINESS

- **TITLE IV-SPACE RESOURCE EXPLORATION AND UTILIZATION**
- *Space Resource Exploration and Utilization Act of 2015*
- (Sec. 402) The bill directs the President, acting through appropriate federal agencies, to:
- **FACILITATE THE COMMERCIAL EXPLORATION FOR AND COMMERCIAL RECOVERY OF SPACE RESOURCES BY U.S. CITIZENS;**
- **DISCOURAGE GOVERNMENT BARRIERS TO THE DEVELOPMENT OF ECONOMICALLY VIABLE, SAFE, AND STABLE INDUSTRIES FOR THE COMMERCIAL EXPLORATION FOR AND COMMERCIAL RECOVERY OF SPACE RESOURCES IN MANNERS CONSISTENT WITH U.S. INTERNATIONAL OBLIGATIONS;** and
- promote the right of U.S. citizens to engage in commercial exploration for and commercial recovery of space resources free from harmful interference, in accordance with such obligations and subject to authorization and continuing supervision by the federal government.
- A U.S. citizen engaged in commercial recovery of an asteroid resource or a space resource shall be entitled to any asteroid resource or space resource obtained, including to possess, own, transport, use, and sell it according to applicable law, **INCLUDING U.S. INTERNATIONAL OBLIGATIONS.**
- (Sec. 403) **It is the sense of Congress that the United States does not, by enactment of this Act, assert sovereignty or sovereign or exclusive rights or jurisdiction over, or ownership of, any celestial body.**

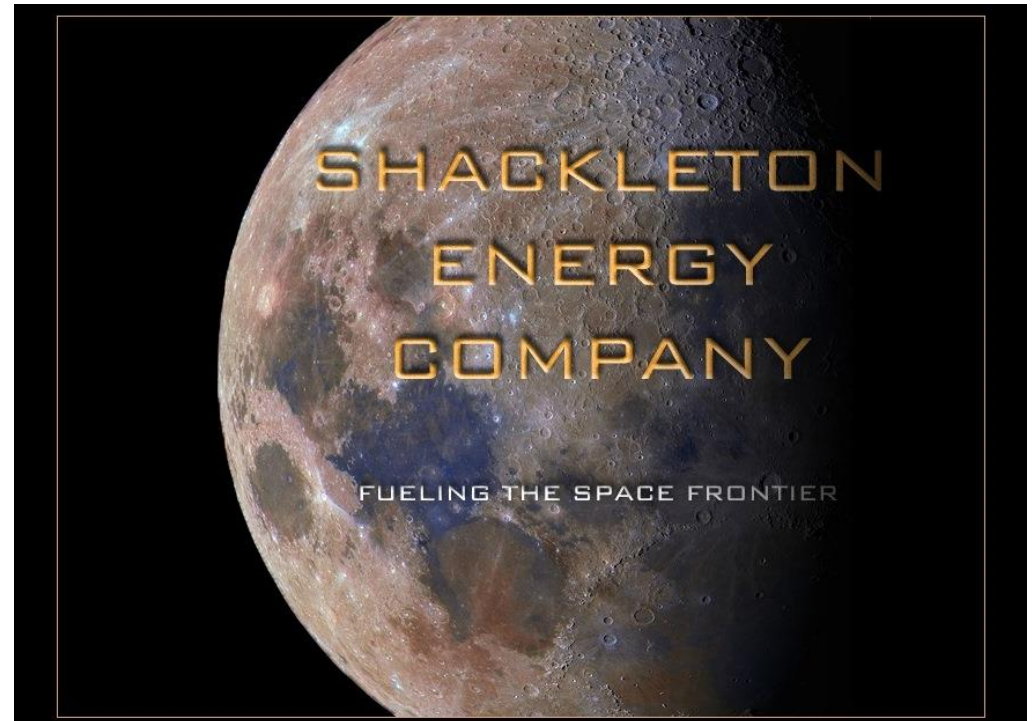
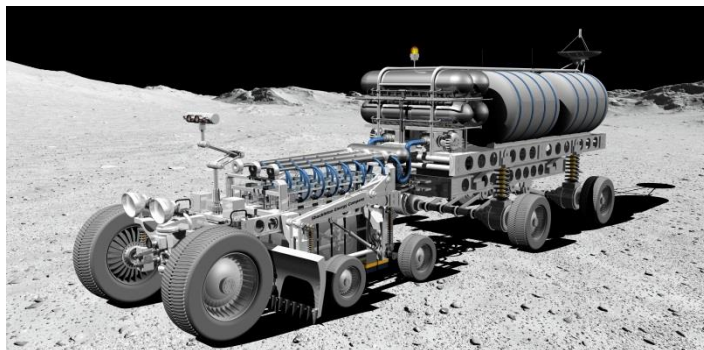
THE IISL POSITION

- The Boards of Directors of IISL on 20 December 2015, in reference to space resource exploitations declares that:
 - Outer Space Treaty 1967 is the basic legal regulation
 - Appropriation is prohibited
 - Free use is not regulated
 - Moon Agreement non binding
 - In absence of clear prohibition of the taking resources, the use is permitted as a interpretation of Outer Space Treaty.
 - International USA obligations must be accomplished

PROJECTS UNDER DEVELOPMENT



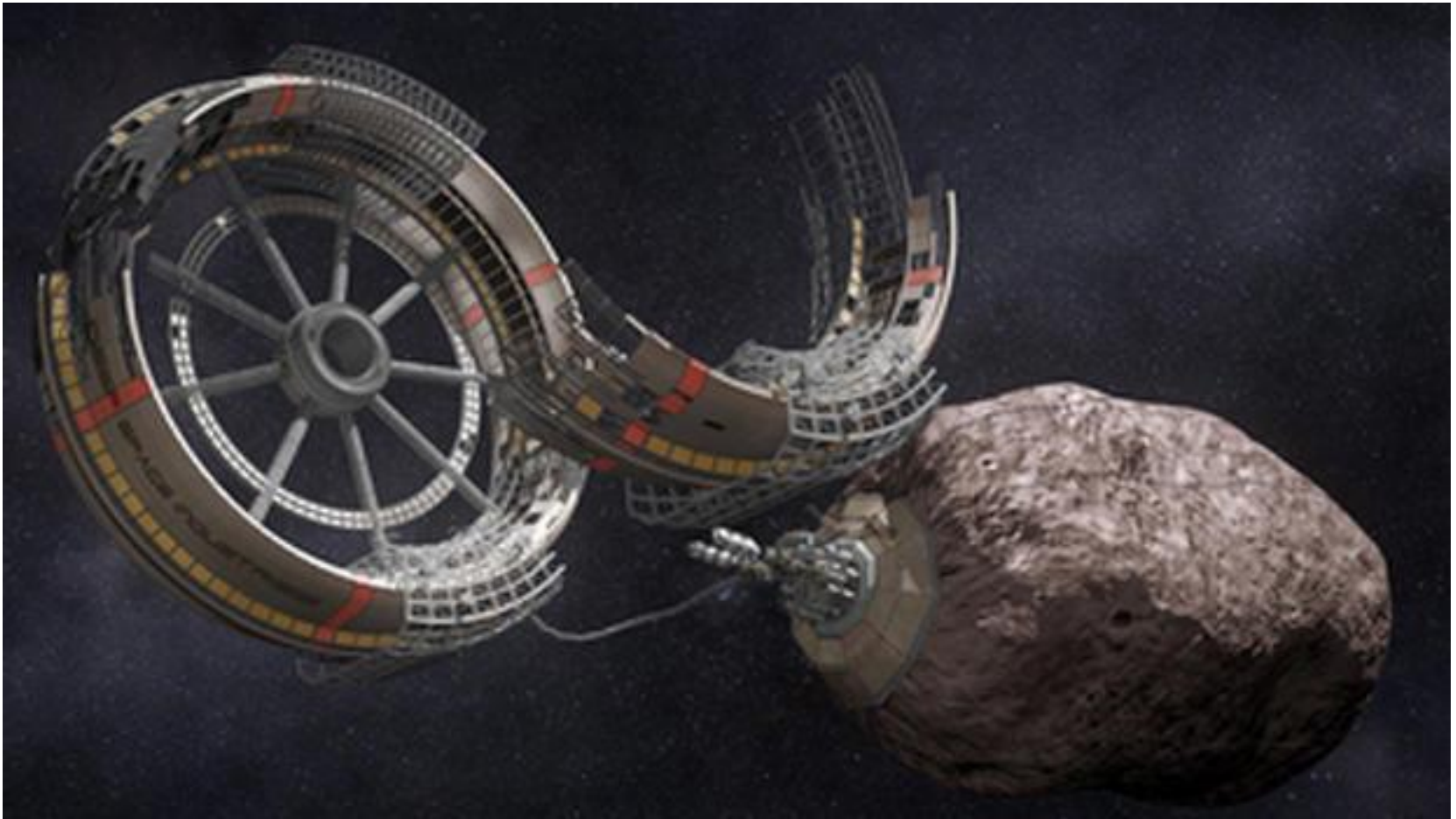
FUTURE PROJECTS



FUTURE PROJECTS



FUTURE PROJECTS



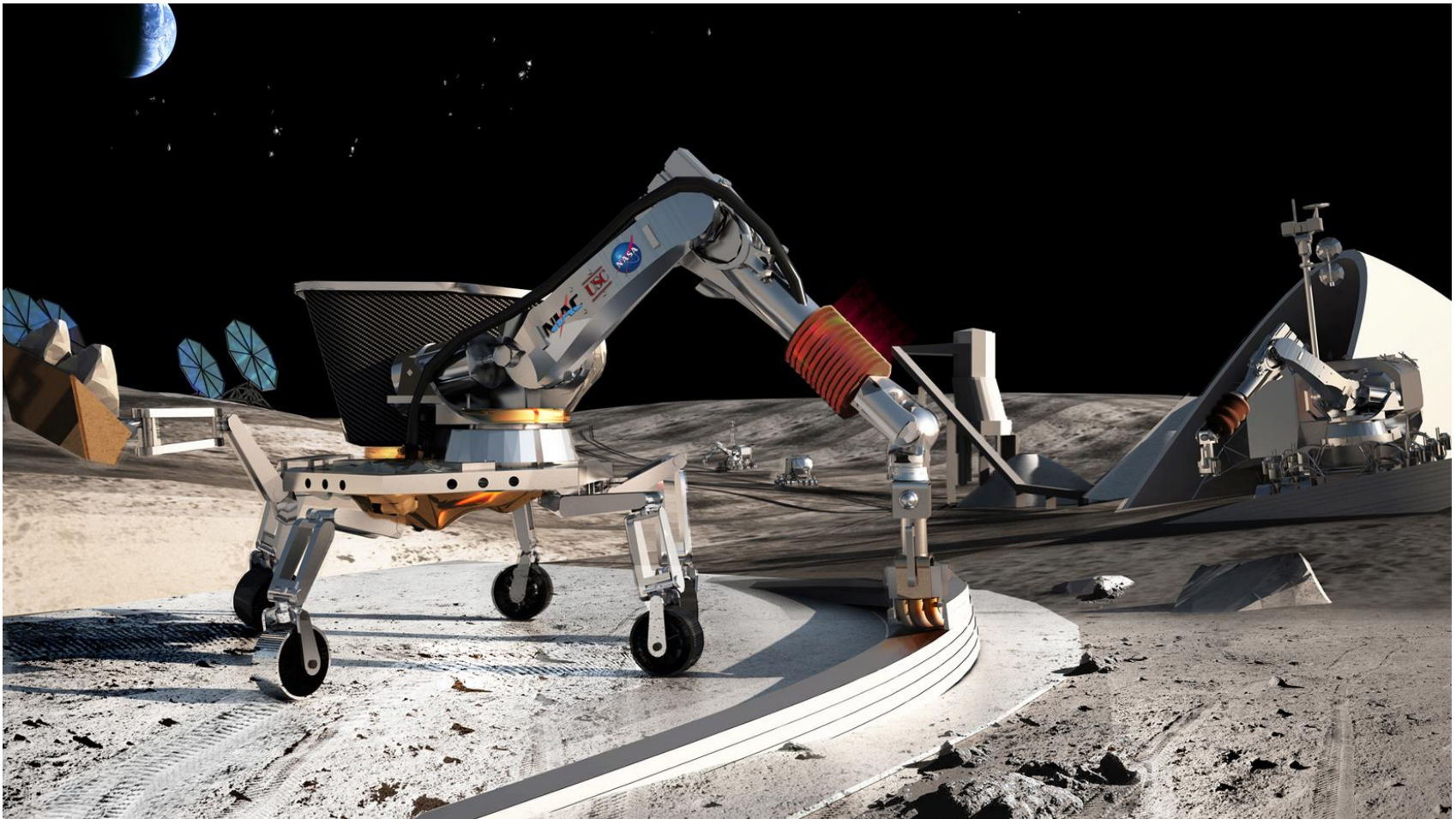
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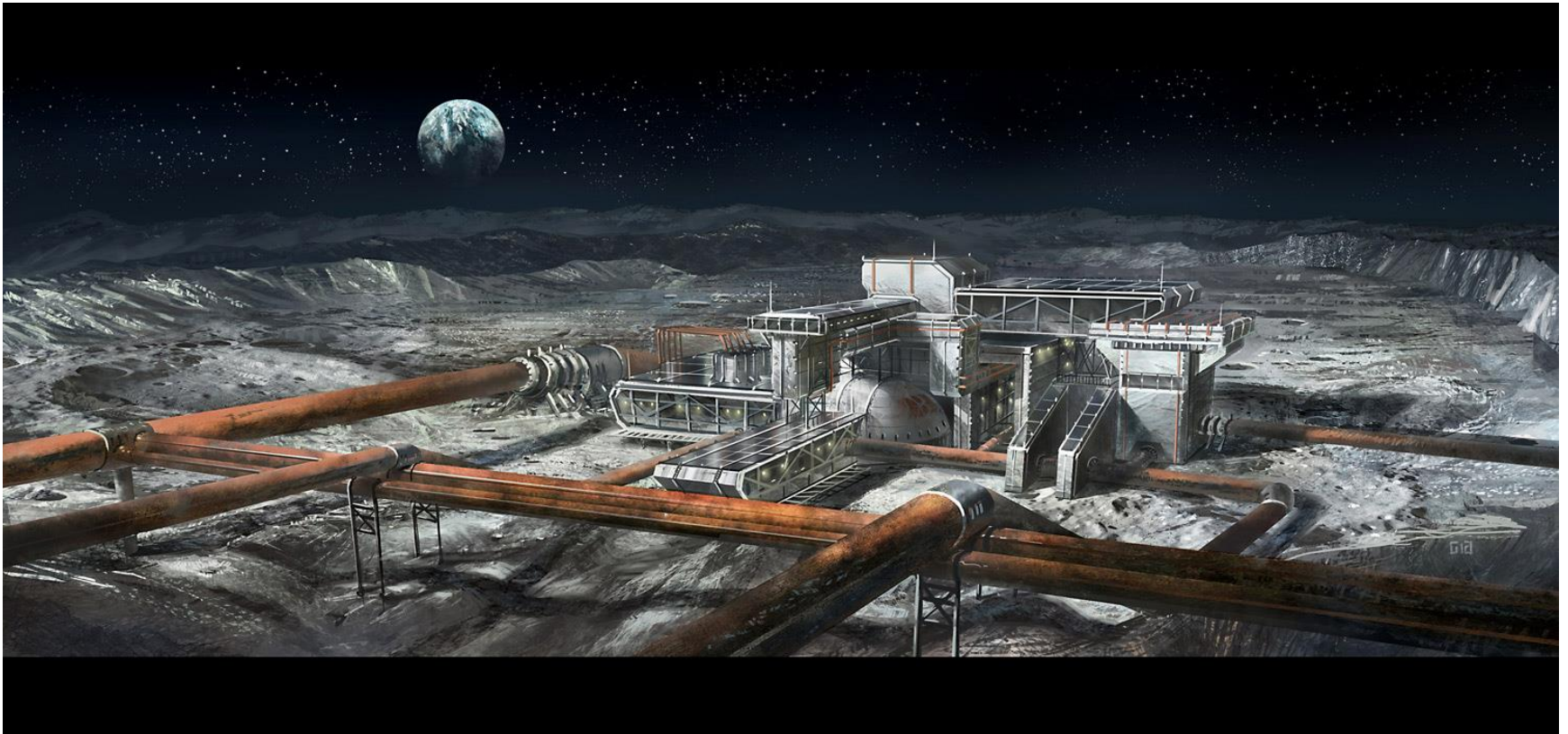
FUTURE PROJECTS



FUTURE PROJECTS



FUTURE PROJECTS



PROPOSAL I

- PARAMETERS FOR A FUTURE REGIMEN OF SETTLEMENT AND RESOURCES EXPLOTATION IN CELESTIAL BODIES:
 - EXPLOTATION MADE IN PROFIT AND INTERESTS OF MANKIND
 - FOLLOWING INTERNATIONAL LAW RULES
 - NON APPROPRIATION
 - PRINCIPLE OF OWNERSHIP ABOUT RESOURCES
 - MANNED SPACE BASES
 - CREATION OF INTERNATIONAL SCIENTIFIC RESERVES
 - PLANETARY PROTECCION IN BOTH WAYS
 - NON MILITARY USE. NO WEAPONS
 - INTERNATIONAL LIABILITY OF STATES
 - REGISTER
 - MUTUAL ASISTANCE
 - INTERNATIONAL SISTEM OF CONTROVERSIAL RESOLUTIONS



THE ISS PRECEDENT AS EXAMPLE

- INTERNATIONAL SPACE STATION IS A MODEL OF INTERNATIONAL COOPERATION
- THE SUCCESSFUL OF THIS MODEL CAN GIVE US ORIENTATION ABOUT THE *MODUS OPERANDI* IN THE MOON
- COOPERATION IS THE BEST WAY FOR A INTERNATIONAL MOON BASE
- BUT ALSO, A “PRIVATE” MOON BASE CAN BE OPERATED TOO.

CATEGORY OF MOON BASES

- INTERNATIONAL: COOPERATION AS ISS
 - PLACEMENT
 - GOVERNMENT: TREATIES 67, 68 & 72; SPECIAL TREATY AS ISS
 - RESOURCES EXPLOTATION
 - CODE OF CONDUCT IN BASE
- PRIVATE:
 - UNDER INTERNATIONAL LAW.
 - NATIONAL LIABILITY
 - LICENSES? CONCESSIONS. WHO GIVE THEM?



TOWARD THE FUTURE

- A NEW SOCIETY IN THE MOON
- WHAT KIND OF LAW? INTERNATIONAL LAW/MOON LAW
- FOLLOW JURISDICTION BY MODULS?
- A LOT OF INTERESTING CHALLENGERS IN THE FUTURE

CONCLUSIONS

- IN A NEAR FUTURE, EXPLORATION AND COMMERCIAL ACTIVITIES TAKE THE MAN AGAIN TO THE MOON
- RULES WILL BE NECESSARY IN THIS NEW AGE
- SOME FRAMEWORK EXIST AND IT WILL BE APPLICABLE
- BUT, NEW RULES WILL NEED TO BE DEVELOPED
- THIS TASK WILL BE NOT ONLY BE ARRANGED FOR SCIENTIFIC, ENGINEERS, AND ASTRONAUTS: LAWYERS AND POLITICIANS HAVE A IMPORTANT ROLE TO PLAY
- ...AND THE OPPORTUNITY TO TAKE CARE ABOUT LEASSONS OF OUR PAST AND MADE A BETTER BRAND NEW MODEL



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THANK YOU
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