Follow-up Legal Report on Specific Aspects of *The Martians'* Claims to Mars Land

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The present report was commissioned by Dr. Philip Davies and aims to address a number of questions that were brought up in series of exchanges with the report's author. The questions are grouped into two sets for the purpose of this report. A first set of questions relates to the issue of recognizing and substantiating a claim of de facto possession over Mars land and the legal implications of such claim for converting it into a legally recognized and enforceable claim of private ownership that could prevail over other claims, should the law evolve favorably in this respect. They have been put to the author as follows:

1. Do you broadly agree with Professor von der Dunk in his statement here?.. "In sum: while the activities so far undertaken with respect to Mars by The Martians are not illegal under either international space law or domestic UK space law, including activities which could be argued to qualify as (at least an embryonic form of) factual possession, currently it is impossible to translate such factual possession into legal ownership by The Martians of parts of Mars – even merely prospectively." It is the arguability of (embryonic) factual possession that I am most interested in.

2. I asked Professor von der Dunk to comment on this statement: "So, the cornerstone of our claim is that we can rightfully say we are in possession of land on planet Mars because of our persistent, continuous actions over the last 11+ years" ... his reply was: "I'd phrase this a bit more carefully: you might have the best and most substantiated claim for de facto possession, making you first in line if and when it would become possible to take the next step to de jure possession = ownership which is what you really need to be able to legally 'control' the part of Mars concerned. But whether that "if and when" turns to reality, and whether the regime than (sic) applicable would indeed honour your first-in-line claim, is still an open question" ... Would you broadly agree with his response?

3. I asked Professor von der Dunk the following question: "WRT Lex Ferenda: is it wrong (or unreasonable) for us to tell would-be co-claimants that our current claim to possession is valid and feasibly could, in maybe 150 years, lead to actual land title going to their family descendants?" ... his reply was: "Well, that is a matter of relative judgement, as said above: you would be first-in-line, and if any future regime to be developed along the lines indicated would honour the logic and fairness thereof, you should be given the chance to convert this possession into ownership, but unfortunately there is no certainty in that regard (...)" ... Would you broadly agree with his response?

4. Prof von der Dunk and I both think that right now, 2022, there is no other person or agency with proof of a stronger/longer claim of de-facto possession of Mars. To my knowledge, I am the only one. If the law were to evolve in favour of property rights and our claim was to strengthen, via STEM scholarships, towards claimants actually occupying (living and working on) Mars, do you think that my current actions to support de-facto possession (dating from 2010) could feasibly represent a starting point for this enduring claim - and thus be more legally difficult to defeat?

4bis. You will see that my strategy document acknowledges that my current claim (of >12 years) to de-facto possession is 'embryonic' and thus pretty weak. I do maintain that it can still serve as a legitimate starting point (should the law eventually evolve to tolerate such private property rights , then we can evidence the claim from 2010). In other words, although I agree that our claim would need to get stronger in order to truly deserve the award of celestial land title, what we are doing right now could be important in demonstrating the 'starting point' of the de-facto possession. Do you find logic in (and agree with) that opinion?

A first part of this section in the report will aim to answer those parts of the above questions that ask whether the current actions by The Martians can be argued to constitute an embryonic form of factual possession and if so, whether it is the 'best and most substantiated claim' for de facto possession.

The exact elements of the notion of possession are notoriously difficult to determine and may vary from legal system to legal system. Nevertheless, we agree with Smith ('The Elements of Possession', available here) that, "[w]ith possession, basic notions of control and nearness, as well as more artificial markings, all break the symmetry of claimants to a thing, making one person a good candidate for possessor. [N]otions of control and nearness have efficiency implications: […] with all else being equal we should expect actors maximizing the returns from assets to recognize greater residual claims in those who have the ability to affect the mean return from the asset. In the simple situations governed by basic possession, such persons are likely to be those near to and in 'control' of the things in question". The crucial factor of control includes both actions affecting the possessed thing and the intent to control it.

The actions by The Martians of laser-targeting parts of Mars and the resulting changes to the planet's atmosphere may be argued to satisfy the requirements of some form of control and nearness, which are able to set apart the claimant from others in terms of de facto possession. However, it is axiomatic that possession must refer to a thing and in particular must be able to determine the rights or claims of the alleged possessor with respect to an easily identifiable and independent cluster of attributes against all other actors, especially other prospective users of the same thing. The importance of 'thinghood' becomes clear when we understand the element of possessory control as a function of salience and economic usefulness, which require a precise definition of its subject. In order to de facto possess something it must be clear that the possessor is in control of a defined thing; such thinghood facilitates and is in turn facilitated by specific actions with physical impact on the thing claimed, reinforced by the intent to possess said thing.

In this regard, we note that it is not entirely clear what would be the subject of de facto possession that is claimed by The Martians as a result of their laser-targeting activities. The activities described as constituting possession by The Martians are "persistent witnessed laser applications over 11+ years, laser Morse-Code declarations, national/international media declarations, administrative/governance planning, recorded applications to UK Gov, US Gov and UNOOSA, persistent website and social media presence since 2010" (The Martians' 2021 Background and Strategy document). The lasers target only segments of Mars and do so for limited time slots of 15-30 minutes on average twice per week, though for an extended period overall. While we agree that it could be argued from this set of actions that the claimant currently has the most specific and substantiated claim for de facto possession of (parts of) Mars when compared to other actors, we are not satisfied that these actions on their own would satisfy the requirement of control and nearness necessary to actually establish de facto possession. The only effect of the actions of The Martians on any part of Mars is to release CO2 in the planet's atmosphere, which on various counts the claimant admits is 'physically trivial' (Background and Strategy document). Further, the claimant admits that the main reason for targeting Mars instead of other celestial bodies is for practical purposes with the intention of igniting societal and legal discussion of the legal regime of space in general, noting that "[t]here is no other targetable celestial body that could be beneficially influenced (even in a tiny way) by laser light applications, so Mars was the only choice". This significantly weakens the link between the possessor and the allegedly possessed thing, affecting salience as an element of control, including the intent to control. Finally, as noted, these actions by the claimant's own admission only alter the planet's atmosphere, yet the claims of possession extend to 'de-facto possession of land on Mars' (Background and Strategy document), and in other cases appear to extend to the entirety of Mars. The thing with respect to which possession is claimed to exist is therefore both unclearly defined and - to the extent that it would, as we presume, refer to 'Mars land' - does not seem to be directly related to the parts of the planet that are actually physically affected by the actions of the claimant.

Even if the actions of The Martians would suffice to constitute de facto possession with respect to a specified 'thing', the legal implications of such possessory claims, their potential for future evolution into private ownership and their robustness in the face of competing claims are, each

individually, matters of significant legal uncertainty. This links to the second part of this report section, which, in turn, separates the discussion on these questions into two parts.

First, could The Martians' activities constitute an appropriate basis for legal recognition of private ownership at some future point in time, should such ownership be recognized by international law? Much like the very notion and elements of possession, the pronunciation of the specific link connecting de facto possession with legal property rights is equivocal across legal systems. Generally speaking, de facto possession is recognized in both common and civil law systems as a modest starting point for legally enforceable claims of ownership, though the line from possession to ownership is more pronounced and direct in common law than in civil law systems; the latter generally treat ownership and possession as distinct legal notions and do not necessarily attribute a lot of weight to de facto possession of a thing in the discussion concerning the validity and primacy of legal claims with respect to that thing. Even allowing for differences in determining the legal contents of the notion of property rights across different legal systems, however, most will agree with the characterization of property rights as a bundle of rights that is uniquely typified by the right to exclude others from using a certain thing, or, put differently, the exclusive right to set the agenda with respect to the use of a certain thing. If we take the (for the claimant more beneficial) common law system approach connecting de facto possession and ownership as our point of departure, the future recognition of The Martians' claims of ownership over land and the value of such claims over other competing claims will thus depend in large part on a determination of relative title based on concretized instances of control and nearness, expressed as a function of the ability of competing actors to affect the mean value of a thing and in this process exclude others from doing so. Should de facto possession be recognized as a legally sound basis for the establishment of property rights, this exercise can be expressed in terms of the various claimants' abilities to exclude others from using the claimed thing.

In line with our earlier comments assessing the elements of pre-legal/de facto possession, a legal claim of possession and hence its basis for ownership claims will be stronger in cases of clearly communicated claims over things with fixed, distinct boundaries that are or should be known by all other actors. In this respect, the fact that The Martians could arguably be deemed to be the first in time to demonstrate some physical basis for possession of Mars (see supra) is a relevant consideration. Further, the efforts to make public the claims and future plans of mediatisation are clearly relevant in determining whether the claims of de facto possession can be assumed to be known to others - although this is dependent in part on further clarification by the claimant of the exact boundaries of the thing that is claimed and its correlation with the actions establishing control undertaken so far (see also supra). However, as noted, it is unclear if the claims by The Martians are also sufficiently substantiated to withstand comparison with other competing current or future claims that may be based on more direct expressions of control and nearness establishing exclusivity with respect to the land of Mars than the laser-targeting efforts altering the planet's atmosphere and the governance plans of the claimant. This assessment requires taking a closer look at the international law that governs exclusive uses of outer space, in general, and (territory of) celestial bodies, in particular, as it finds its expression in the provisions of Articles I, II and IX of the Outer Space Treaty (OST).

Before addressing this point, we should clarify that, though the present situation involves actions by private actors and we are requested to assess the validity of private title over celestial bodies, it is fitting to assess the legal situation from the perspective of acquisition of title over land by States in international law, since the Outer Space Treaty classifies all space activities by private actors as 'national space activities' that are the responsibility of one or more State. In this respect, we should note that Article II OST bans national appropriation, which is understood as extending to ownership by private actors, by means of sovereignty, occupation, use or any other means. We also note that this ban of national appropriation in Article II OST is without comparable analogy in other legal regimes, including other international areas, which do not use the term national appropriation and in their phrasing focus more narrowly on prohibitions of territorial sovereignty. As we are asked to make abstraction of this prohibition in order to answer the questions that are the basis for this legal report, we shall nevertheless look at the legal relevance of (first) possession by States in establishing territorial sovereignty in traditional international law.

Here, we note that acts of de facto possession such as those described by the claimant and as cited earlier in this report - most notably the intermittent instances of 'trivial' terraforming and

rudimentary governance plans - have traditionally been deemed to have only marginal (if any) legal value for establishing exclusive title over land. International law does not generally recognize acquisitive prescription or historical consolidation of title. These modes or territorial acquisition and their relationship can be succinctly described as follows: "Whereas acquisitive prescription is primarily based on the prolonged lapse of time during which a State held possession of a territory, the notion of historical consolidation of title focuses rather on the special interest a State may have in a given territory, and the general tolerance or recognition by other States of this claim" ('Territory, Acquisition' entry in the Max Planck Encyclopedia of Public International Law). Acquisitive prescription is not commonly accepted in international law as a mode of acquisition of territory. Ever more explicitly, the International Court of Justice (ICJ) in its 2002 Judgment in the territorial dispute between Cameroon and Nigeria held that "the notion of historical consolidation has never been used as a basis of title in other territorial disputes, whether in its own or in other case law", and that "the theory of historical consolidation is highly controversial and cannot replace the established modes of acquisition of title under international law, which take into account many other important variables of fact and law" (ICJ, *Cameroon v. Nigeria*, Judgment of 10 October 2002, para. 65).

Admittedly, the Island of Palmas arbitration which is sometimes held up as an example of acquisitive prescription appears to lend some validity to land claims that are based primarily on a 'continuous and peaceful display of state authority during a long period of time', that are 'open and public' and have not been contested by others. Though they are open and public, we are not convinced that the actions performed so far by The Martians currently rise to the level of such display of authority, should acquisitive prescription indeed be accepted and should the law evolve so as to recognize title over Mars land. Without any specific activities demonstrating actual control over the land of Mars that strengthen and give further expression to the ambition of terraforming the planet than currently done through intermittent laser-targeting activities, the claimant's governance plans (which we were not able to review) are unlikely to carry sufficient legal weight. The time factor also differs quite substantially in the Island of Palmas and current cases (centuries vs. 11+ years). Though the timeframe envisaged by the claimant does extend to 150 years, it is rather unlikely that the claims would remain uncontested for this period of time, in particular after further mediatisation. We note in this respect that the overall toleration of claims of ownership based on historical consolidation or prolonged displays of authority are particularly important in the consideration of validity of these territorial claims.

To be sure, the list of means of national appropriation in Art. II OST appears to allow for less substantiated forms of control, including perhaps discovery or symbolic acts, such as the 'physically trivial' acts of terraforming the atmosphere of a planet through laser-targeting and the development of governance plans. Once more disregarding the implications of this provision for the requested evaluation in abstracto and assessing the claimant's actions against general international law/future international space law, the performance of symbolic acts alone is not considered by States "as being sufficient to establish abiding exclusive appropriation of large land masses" (McDougal 1963, referencing works by Lindley, Hill and Waldock). The legal irrelevance of symbolic acts for the purpose of land acquisition has been affirmed in the context of space in particular, most notably in the aftermath of the landing of the first man on the Moon and the launch of Sputnik I, where it was stated that "[t]he placing of national insignia would not of course constitute a sufficient basis to found a claim of sovereignty over unoccupied land masses" (US State of Department statement of 14 September 1959, MS DoS file 761.56031A/9-1459). While the continuous laser-targeting actions of the claimant could be considered as being slightly more impactful than the act of placing national insignia, we still deem them to be largely symbolic in nature, and therefore agree with McDougal's assessment, based on the case law of the US Supreme Court, that actions such as those of the claimant could, at best, "[create] an 'inchoate title', which would lapse unless followed within a reasonable time by effective occupation" (McDougal 1963, available here, referenced by the claimant in the Background and Strategy document). The author continues to note, with reference to Oppenheim, that "the evidence is written large that states seldom regarded themselves as under legal obligation to refrain from entering and occupying lands which had previously been symbolically claimed by others, without accompanying actual occupation and use".

A distinct issue concerns the possibility that the stated ambitions of The Martians may fall short of the intentional element of territorial acquisition. Much in the same way that possession must be

ascertained in part with respect to the intent to control, determinations of acquisition of legal title over territory are based not only on the acts undertaken to assert ownership, but also the intent with which they have been performed. Specifically, in order for actions demonstrating control over a territory such as the terraforming activities of the claimant to be recognized as so-called legally relevant 'effectivités' revealing ownership, they should be accompanied by the intent to act as a sovereign. To be sure, in the present case, such intentions may be derived in part from the stated 'administrative/governance planning' by the claimant. However, an overview of the strategy documents outlining the ambitions of The Martians reveals a variety of objectives: in the short run, the actions of the claimant are aimed at terraforming the Martian atmosphere, which, in the medium to long run, should provide the basis for title of private ownership of Mars or parts thereof. While these aims, on their own, do contain elements of both possessory and proprietary intent, the claimant's strategy appears to place them in service of the overarching objective of inspiring socio-political and legal discussions and potentially steering the future evolution of the legal regime of outer space in general. Whether the confluence of these varied and diverse ambitions would be detrimental to the conclusion that the intentional element of territorial acquisition is met remains to be seen, though we consider it a real enough possibility that it should be taken into account by the claimant.

The above sections aimed to determine the legal relevance of the possessory acts of the claimant for establishing future ownership over Mars land, should the future regime of international space law evolve to tolerate such claims. The second issue we will now turn to is whether it is reasonable to assume that currently observed changes in interpretation and application of the non-appropriation principle as have inspired the actions by the claimant provide a reasonable basis for evolution of the legal regime such as to support recognition of these claims. In other words: is it reasonable to assume that the legal regime of outer space will evolve in such a way as to tolerate the claims of The Martians over other claims that may more readily be recognized by the anticipated evolution of space law? We understand that any answer to this question will necessarily be speculative, but we deem it important enough to address it nonetheless, considering the significance attached by the claimant to the future evolution of space law for the successful evaluation of their claim, in light of their stated acceptance that space law does not currently tolerate private ownership claims.

Current trends of increasing privatization, militarization and commercialization of space have sparked concerns that the principles that have underpinned space law since the end of the 1950s are being subverted by a small number of powerful players. We understand that this is the main reason for the claimant to have initiated the plans that are under consideration here. The questions underlying this report appear to assume, in particular, that current evolutions in interpretation and application of the existing multilateral international space law treaties could give rise, in the near future, to formal recognition of private property rights over (parts of) space and/or the celestial bodies therein. While we sympathize with the concerns of the claimant and the objectives of the actions of The Martians they inspired, we should note that the interpretations that have been advanced in recent years, in national legislation and bilateral instruments, of fundamental provisions of multilateral space law instruments have largely traded on ambiguities in these provisions, which have deliberately been phrased in broad and general terms. Though we are personally not convinced that such ambiguities exist in the formulation of the strict prohibition of national appropriation in Article II OST, a clear line in the interpretation and application of this provision in the regulations adopted by some States has emerged in recent years that does indeed allow for appropriation of parts of celestial bodies. Crucially, however, this interpretation is based on the (unsupported) claim that the provision's scope of "outer space, including the Moon and other celestial bodies" does not include the natural resources of celestial bodies. We have discussed the inconsistencies and baseless nature of these claims elsewhere and they need not be repeated here. What is important is that, in making this assertion, States that have adopted national legislation apparently allowing for private appropriation of *natural resources* of celestial bodies, have also confirmed the continued applicability of the non-appropriation principle to the *land areas* of celestial bodies (we understand that Martian resources are the subject of two other claims by the claimant which we have not been asked to address here). The United States legislation is the most explicit on this point and asserts that, in the view of the US, Article II OST not only excludes sovereignty but also ownership or other forms of exclusive rights over celestial bodies: "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". (We reiterate that this interpretation must extend to private actors by virtue of international responsibility of States over all space activities by non-State actors, which is not challenged by any State.) The crux of the matter is thus not that factual possession might form the basis for legal ownership but rather that, due to the absolute and complete prohibition of appropriation and its accepted extension to ownership by private actors, the scope of application of this prohibition must not be comprehensive and in particular cannot apply to natural resources. We understand that this is not the approach taken by the claimant.

In light of the consistent affirmation of the principle of non-appropriation vis-à-vis land areas on celestial bodies, we consider the most likely road towards establishment of permanent exclusivity over parts of celestial bodies one that is based on an evolution towards factual exclusion of others based on actual and protracted use and claims of necessary exclusivity to ensure non-interference. This is indeed what appears to be the intention of the unilateral establishment of so-called 'safety zones' by the signatories of the US-led Artemis Accords as a way of 'deconflicting' space activities on celestial bodies. In this scenario, 'de facto' appropriation of/sovereignty over (parts of) territories of celestial bodies would not be based on a reinterpretation of Art. II OST but rather on an expansive interpretation of Arts. I and IX OST in a way that allows those actors that engage in peaceful activities of actual and continued use of (parts of) celestial bodies in such as way that their activities would suffer harmful interference from activities of use or exploration of others, to object to such activities by others in a manner that guarantees exclusivity. The actions of The Martians developed so far may be first in time, but in our view currently do not in a meaningful way exclude others from performing their activities, nor do they require exclusivity for their performance.

A second set of questions relates to the next steps to be taken by The Martians in order to consolidate their efforts of influencing the evolution/development of space law in a way that would tolerate their claims and address their concerns. The claimant first admits that the actions undertaken by The Martian so far may not be sufficient to reach their objectives and that further action is therefore required:

5bis. I am not telling prospective members that they are assured a plot of land on Mars ... I am selling claims, or rather membership of a pan-multinational communal claim of de-facto possession of land on Mars ... something that should put us in a competitive position should the law change towards tolerance of such property rights. I advise that such 'first-in-line' positioning will still not be enough ... we need to strengthen the claim through a large but finite membership and many annual scholarships (for applicants within our members families) to study STEM subjects and be advocates for our project/claim. Understanding all that, do you still see anything wrong or unsettling about what I am doing? Are my ultimate goals too simplistic/naive and rather silly... or are they even dangerous or obstructive of real progress?

5bis. You will also see that my strategy assumes the most likely driver of a change in law towards tolerance of property rights would be the commercial settlement and use of resources of celestial land. If, via a large membership and a linked STEM-studies scholarship plan, we have some representation within those first settlers, then I assert that we have perhaps the strongest claim towards land title registration. But Professor Von der Dunk, in the last third of his report, suggests that we should attempt to drive the change in law in our favour (rather than waiting, anticipating opportunity). He provides guidance (options 3 and 4 in his report are preferred by me) on how this might be done. I am keen to pursue this ... but with this in mind I would like your comment on the matter... do you think that we could, with a large membership of several million people, persuade national delegations (e.g. at COPUOS... perhaps slowly, one-by-one) of the benefits that could be realised through our project?

Finally, we are asked to comment on the following legal strategy:

5ter. In common law, ownership is a split bundle of rights. In a couple of steps, I can see how, without damaging OST, national delegations at COPUOS could facilitate the tolerance of my plan... that being to have legal title to be held by UN on behalf of all mankind - and only the beneficial title to be shared amongst all of our co-claimants. The distribution of co-claimants is, in our best efforts, equitable (half of claims are open to all, the other half distributed to nationals according to national human rights and corruption stats). It means that if space faring nations agree a new top-up treaty (to sit upon OST to provide strength against aggressive weaponization and debris generation... and to facilitate smooth, responsible commerce), they can have representation on a savvy, pro-business space-user group which will provide governance/ regulation to space exploitation activity. Mining companies can operate with investor confidence... they must still pay a 'ground-rent' to affected landowners (our co-claimants), who in turn must share a large proportion with all other land-owners. Thus, we can honour the requirements of Article I OST. So, the cornerstone to the realisation of those benefits (enhanced security, equitable land ownership and vibrant/responsible business with light touch/pro-business regulation) is the international legal acceptance (lex ferenda) that all humanity (ala the 'province of all mankind') could legally appropriate celestial land (legal title held by UN body - in trust) and thus allow for beneficial interest/title to be shared by pan-multinational claimants (equitable distribution).

The above questions relate to the avenues that are open to the claimant for having their claims of ownership of Mars land, which are based on existing displays of authority or special interest, realistically materialize as valid and opposable in a legal environment that is tolerant of them. Considering the thoughts and arguments offered in the first section of this report and taking into account the options that are, as we understand them, being weighed by the claimant, we wish to address two possible avenues of action. Before discussing them, we should stress that both avenues are likely to require a significant elevation of the level of activities and investment of the claimant, as we believe that neither approach can be realized solely on the basis of the actions undertaken so far by The Martians. We will first scrutinize, in detail, the option that we believe to be in line with the preferences of the claimant, before suggesting, only briefly, a second avenue for their consideration.

From the above questions it is clear that the preferred route of the claimant for building on the existing activities of The Martians would be to try and affect the existing legal regime on outer space through intensive diplomatic, marketing and political efforts so as to steer the regime's evolution it in a way that wold validate private ownership over land with communal management. It is unclear whether the claimant would pursue this avenue by lobbying national delegations to advocate for a specific interpretation of the existing international legal framework on outer space, or by insisting on the negotiation of a new treaty that would 'sit upon the OST' to realize the latter instrument's communal vision - both tactics appear to be mentioned. In either scenario, we understand that the future evolution of space law as envisioned by the claimant would be based on a re-interpretation of the existing treaties that focuses on the communal interests already intrinsic in the OST spirit and provisions, by States that are sympathetic to the claimant's concerns.

First, we agree with the claimant that such efforts of interpretation of existing treaty provisions will in practice require the involvement of State delegations at UN COPUOS or other intergovernmental forums on space law. Conduct by non-State actors such as The Martians on its own does not generally constitute subsequent practice relevant for the interpretation of treaties under articles 31 and 32 of the Vienna Convention on the Law of Treaties. Nevertheless, the International Law Commission (ILC) notes that such conduct may, in theory, "be relevant when assessing the subsequent practice of parties to a treaty", though the Commission also notes that "non-State actors can also pursue their own goals, which may be different from those of States parties. Their documentation and their assessments must thus be critically reviewed" (ILC Draft Conclusions on Subsequent Agreements and Subsequent Practice in Relation to the Interpretation of Treaties 2018). It is possible that the specific intentions of the claimant as outlined in their strategy documents will affect a future assessment of the relevance of their practice in this regard (see also supra). In light of the subsidiary relevance - at best - of non-State actor practice, we therefore agree that delegations of States will need to be involved in their efforts.

We further agree that the suggested approach of affecting the interpretation of existing space law is feasible in theory since we believe that the common interests underlying the fundamental principles of the Outer Space Treaty can resist unilateral interpretative efforts by a small number of States, even those that are particularly active in space, provided that other States speak out against such efforts. A non-governmental organization consisting of a sufficiently broad membership could conceivably exercise enough pressure on States to address looming issues of common concern for all humankind. We have seen similar (relative) success stories highlighting the role of non-State actors in the areas of the governance of artificial intelligence, climate change and cyberspace. However, we have noted that this may not be likely considering the way in which space law is currently evolving, as an increasing number of States appears to be yielding to pressures of commercialization and privatization, while a robust response from other States with opposing views is currently not forthcoming. At the same time, this may also be taken as a strong indication that initiatives such as those launched by The Martians are much-needed and indeed timely.

Should the ambitions of the claimant reach farther than attempts to steer the interpretation of existing space law treaties and rather encapsulate the negotiation and entry into force of a novel treaty that sets up a system akin to UN trusteeship with equitable distribution of rights to access/use/own land and resources in outer space and on celestial bodies, we should note, first, that any

difficulties described in the above paragraphs will naturally be amplified considerably in the pursuit of such ambitious objective. We can suffice, in this regard, by pointing out that no new multilateral treaties on outer space have materialized over the course of the last 40+ years. Equally telling is the significant, continued political opposition by many States to the last multilateral space law agreement that was adopted - the Moon Agreement - for, among other things, its (quite sensible) requirement that a future regime on the exploitation of natural resources from celestial bodies should be based on an equitable distribution of benefits. We should also note that the provisions in the Outer Space Treaty, including the non-appropriation principle, apply to all actors, including international organizations such as the UN, so that they could not be subverted by States acting in the context of an organization of like-minded States. However, we believe that this does not stand in the way of a future legal instrument that would, in line with the community interests of the OST, give appropriate authority to an international organization to regulate access to and use of land and resources on celestial bodies in order to manage international competition and avoid conflicts, similar to the ITU regime or the International Seabed Authority - though whether such a system would recognize the prior claims of The Martians or its members depends on a variety of factors as described in the first section of this report.

The above examples of management of other international areas arguably show that the plans of the claimant are not necessarily 'naive' or 'simplistic'. Whether they are 'dangerous or destructive of real progress' or, rather, precisely necessary to counter the observed evolution in space law depends on one's perspective. We believe that arguments of de facto possession over an entire planet based on intermittent laser targeting would, on their own, in all likelihood be insufficient to realize the objectives as set out by the claimant, and will require further actions to substantiate their proprietary claims. We understand that this is also the view of the claimant. The suggested approach of lobbying national delegations to adopt formal positions in furtherance of the goals of the claimant is a sensible and generally accepted approach with a non-negligible chance of success, if managed adequately. Nevertheless, it is fraught with significant obstacles, as described in the above paragraphs. The evolution of international law, in general, and international space law, in particular, appears to move towards the adoption of non-binding recommendations and guidelines over binding treaties, in an effort to give maximal legal weight to established and developing practice by those actors that have access to space. In this context, it is possible that interpretative statements by State actors may not suffice to meaningfully influence the practice-based developments of space law we are witnessing today. A second option may therefore also need to be considered by the claimant, either as an alternative or supplementary avenue, which would focus on further developing the space activities by The Martians in a way that would more directly establish a possessory connection between Mars land and the claimant that could realistically be viewed as actual and continued use of the claimed territory with exclusionary effects. Whether this is a more feasible avenue in light of its likely resource-intensive nature is not evident, though it may be more effective as it would appear to better fit the currently observed evolution of space law. It is outside the purview of this report to give specific examples of how the activities of The Martians could be intensified in this manner, though we note that costs could be offset through collaboration with industry in the implementation of existing activities.