

## Appeal of the ruling

To my great surprise, most of the jurors of the first round voted in favor of spacechain despite the multiple violations. For this appeal, I will go to refute all “answers” given by spacechain and the juror siding with them.

Before starting, I would like to remind two things:

- Only one violation is enough to lead to a rejection. You may not agree with all the violations. You may side with spacechain for most of the violations. But as long as you agree that one violation applies, this should lead to a rejection.
- A violation does not need to be malicious to be a violation.

### 2.1. Requirements

2.1 “The token issuer’s directors are fit and proper persons (for example they have no previous record of fraud or similar dishonesty offences) “

## Github lines of code dishonesty

Response:

It is an executive decision that we do not update all the codes right away. Software used on our satellite payloads are complicated and we always need to work with multiple parties to make the mission successful.

Challenge:

Spacechain admits that there is no open source code made by them. They claim to have code but don't show it. Since it is not possible to show that something does not exist, the burden of proof should come from the side claiming that something exists (see [Russell's teapot](#) for the philosophical argument).

New Response:

To clarify, your assertion that “there is no open source code” made by SpaceChain is false. Indeed our team has published lots of code.

If you have published a lot of code, I guess you can point out to original code you published.

We are simply saying that there may be a time lag between the writing of the code and it being published on GitHub.

If you claim your team wrote code, you have to give proofs to this claim.

You may find the complete engineering code for the space node we launched in October 2018 is in the path [https://github.com/spacechain/SpaceNode\\_2018.10](https://github.com/spacechain/SpaceNode_2018.10). Our engineers are based in Chinese so the documentation are in Chinese and have not been translated into English. Hence

the lag. We need time to properly translate the documents to ensure everything is well translated to English to avoid any misinterpretations.

I looked at the repo and again most of this code is copied from other projects. I advise juror to browse this repo, take and a few random files, and search a part of it between "" in google. You will see the repository of the original project who made this code. I think I still managed to find out some original code there:

[https://github.com/spacechain/SpaceNode\\_2018.10/tree/master/Software/Deployment/%E6%98%9F%E4%B8%8A%E8%BD%AF%E4%BB%B6%E9%83%A8%E7%BD%B2%E5%8C%85/spc\\_protocol](https://github.com/spacechain/SpaceNode_2018.10/tree/master/Software/Deployment/%E6%98%9F%E4%B8%8A%E8%BD%AF%E4%BB%B6%E9%83%A8%E7%BD%B2%E5%8C%85/spc_protocol)

This totals to 2946 lines of code. This is only 0.052% of 5.6 millions of lines claimed.

Response:

It is required by some of our launch/satellite partners that we do not upload the code before the launch happens, as it may cause security issues if we release it too early.

Challenge:

This is a fake excuse. It is perfectly possible to have open source code which is not production ready. People just put this code on a specific branch or warn that it is not production ready.

Response:

This is a common practice in the space industry. We respect the open-source community and try to be as transparent as possible, but there are limitations as we are working with different space companies and their security comes first. We need to respect their protocols as any security breach will cause tremendous loss. If you're interested in learning more about what we do, follow us on our social media platforms. We constantly provide technical updates in our weekly report.

Challenge:

They are claiming that making open source code could provide security issues despite having previously stated that they will release open source code. If making it open source is fine in the future, there is no reasons it shouldn't be fine now.

New Response:

Often the timing of when open source code is made available to the community is dictated by the security protocols of our partner organizations.

It seems that development of the project is outsourced.

These organizations tend to err on the side of caution when releasing any information before a piece of hardware is launched into space. This is just the reality of operating in the space sector, but our baseline intention is to always make the code available after the hardware has been safely deployed in orbit.

Good intentions, but the burden of proof to show the code is on you. If you had no (or almost no) open source code, you shouldn't have bragged about 5.6M lines on github.

Response:

We utilize existing code because that is the purpose of our Operating System – to integrate with different public chains. (so that we can interact with more open-source community and do what we actually good at, which is bringing blockchain in space instead of building another blockchain project.) That is also why we did not change the name of the file as that is a public chain we are using and we are transparent about it.

Challenge:

The [file I pointed out](#) is a file about Bitcoin, not even about Qtum and they don't use Bitcoin so their excuse does not stand. The problem with open source code in 2.1 is not that there is no open source code, it is that they claim that there is 5.6 million lines of code on their github but this code is just a copy of other projects. They admitted it is a copy of other projects.

New Response

As mentioned previously, we utilize existing code because that is the purpose of our Operating System – to integrate with different public chains.

Plus, we apologized if you thought the text “5.6M lines of code on GitHub” was interpreted as if we were stating that our team wrote all of that code.

Yeah, if you apologize for the wrongdoings about the “5.6M lines of code on GitHub”, takes your losses, correct the issues (the 5.6M lines of code claim is still on the [2018 year review](#) on your website) and resubmit. But trying to win the case (thus get the deposits of challengers) does not really look like an apology.

Since our space node launched in October 2018 has a space multi-signature wallet for users of Qtum network, the entire transfer system (including client, ground station, satellite) is based on Qtum network.

To avoid duplication, we built on the qtum client to modify the client version adapted to the space multi-sign so that may have caused the misinterpretation of copying only the Qtum project. In fact, in the satellite part, the entire project engineering software is completely written by us. You can find the project code at [https://github.com/spacechain/SpaceNode\\_2018.10](https://github.com/spacechain/SpaceNode_2018.10).

If I have been able to find 2946 lines of code that I believe you did not copy. Most of the code in this repository is copied from other projects.

The relevant code about Bitcoin is based on the space node that we are currently working on and going to launch at the end of 2019. Previously, we were working on integrating with ETH but have put pause on that for the moment to work on the Bitcoin chain for the next launch. We

can finish integrating ETH at any time when needed but for now, we are focusing on the Bitcoin for the next launch.

In order to ensure the quality of the code, we will only freeze all the code after the satellite blockchain node is launched. After the work is stable, we will then upload the final version of the code to GitHub. We will disclose the complete code of the space node as expected from December 2019 to January 2020.

Ok, then the honest thing to do would be to admit you did not satisfy the requirements at the time of listing, remove the reference to the 5.6M lines of code on Github. And resubmit once you disclose the code.

Then

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Response:

We apologize if the text “5.6M lines of code on GitHub” was interpreted as if we were stating that our team wrote all of that code. Our project is an open source collaboration and like the structure of all open-source projects, the work that we do, builds on top of countless lines of code written before us. For instance, the SpaceChain OS used Sylix OS as a kernel and integrated the Qtum blockchain. The whole point is innovating by leveraging and building on existing resources.

Challenge:

In a second document, they apologized for bragging about 5.6M lines of code stating that it was “interpreted as if we were stating that our team wrote all of that code”. When you build on the top of other projects, you never count the lines of code of projects you build on the top of (otherwise I guess you could even claim the amount of lines of code in the operating system like Windows or Linux which would be absurd). You import them as library or at best use Github forking options. Here their statment was clearly to misrepresent the amount of open source development which in my opinion is a serious fraud and have led people to buy their tokens thinking there was open source development.

New Reponse:

I think we are at a stalemate on this question. We say our intention of one thing, you say it was another. You say that this is not the way it's usually referenced when building on other code and that may be the case. At its core we see this as a miscommunication, not a sign of “serious fraud.”

If it was one isolated case which was promptly corrected, I could beleive the “misscommunication” version. Since it's the 3<sup>rd</sup> time you brag about fake acheivements and do not correct them (except the one on the marketplace that you had supposedly built), I think it qualifies as “serious fraud”.

## Previous claims of having built a marketplace

Response:

About having built a decentralized marketplace for space applications, that is in our previous draft of our whitepaper and not in our current version, which was updated in May 2018.

SpaceChain does not build its own chain. Instead, it integrates with other public chains into our system. The first integration done was with Qtum and [we successfully performed a Qtum multi-signature transaction with our satellite payload launched in October 2018](#).

Challenge:

They just admitted to have lied in the past. That is clearly dishonesty even if they admit it now. What they called a “draft” was a paper number 1.0 and put in public, this is clearly not a draft.

New Response:

When we say draft, we meant “version” of our white paper. As our technology progresses and as the industry changes (blockchain is still relatively new), we will continue to update our white paper and made edits to it to align it with our vision and industry trends. The very first version of our white paper was also very raw with many grammatical errors (It was not very well translated from Chinese to English) and so that is why we cleaned it up and split it into two white papers for better clarity. With each version, we aim to improve our white paper for better clarity and language.

Ok, so you can see Spachain admits it was a public release of the paper misleading about a supposedly platform they had built.

## Claim of having built a decentralized platform for space

Response:

Yes, in our current version of the white paper, we mentioned that we have built a decentralized platform for space and satellite-based application development because our GitHub has been open sourced since March 2018 and we launched the first node in Feb 2018. Our OS has been flight tested and is working well in space. Like any other open- source projects, this is a continuous building process and we are constantly developing it.

Challenge:

They did not build any platform, they just put a Qtum node on a low orbit (i.e. cheap) satellite. They previously stated that the code was not open source (so it can't be decentralized if it's not open source). Again, they claim to have build stuff, the burden of proof is on them to show it and they failed to show it.

New Response:

As previously stated, we have built a decentralized platform. It is an ongoing process. Two nodes in space are proof of technology. We are continuing to build this platform. It is impossible to have a fully-ready decentralized platform as we will continue to expand on this platform over the years.

Yeah, that is a proof of concept, not a “a decentralized platform for space and satellite-based application development”.

## 2.2 Requirement

I remove the claim about 2.2. Since it is the weakest of the 5 claims.

## 3.1 Requirement

Response:

As mentioned previously, it is not easy to build an operating system that is specially made for space and blockchain. The nodes that we have launched into space are embedded with our operating system. We have launched two nodes into space on [Feb 2018](#) and [Oct 2018](#). You can even track the node we sent into orbit on Oct 25 [here](#).

Challenge:

From their response, it seems that SpaceChain claims to satisfy 3.1 by satisfying 3.1.1 because they did not try to refute my statements that they did not satisfy 3.1.2 “Open-source code in development ” nor 3.1.3 “Architecture diagrams or novel applications of cryptography and mathematics.”. So we will focus on 3.1.1 “A working beta product” (remember that only one of 3.1.1, 3.1.2 and 3.1.3 are sufficient to satisfy 3.1).

We do agree that they did launch 2 low orbit satellites. However space chain is (according to [their own paper](#)) “the world’s first open-source satellite network”. Two satellites obviously cannot be considered “a network”.

Now the question which remains is whether or not two satellites can be considered “a working beta of a network”. If you consider it is, 3.1 should be satisfied. If not, it shouldn’t (but keep in mind that only one violation is enough to reject).

New Response:

**A network is actually defined as two or more connections. That said, we are just getting started. The network will expand over time.**

**(You have 2 satellites, so it is only one connection.) I will let the jurors determine whether or not it is misleading to call a system with 1 connection a network.**

## 3.2 Requirement

Challenge:

3.2 “There is a demand for the token driven by an existing or future utility. This utility is obtained from obtaining, holding, participating, or spending the token. The team has identified a reason for the token to exist which is not just fundraising.”

SPC tokens can be spent in exchange for using our IDE of the SpaceChain OS to build applications.

Why would anyone pay to use an open source IDE?

The tokens can also be used to facilitate applications built on our platform,

It's hard to make a statement least informative “facilitate applications” does not tell anything about the envisioned usage.

for example, to perform multi-signature transactions with our satellite payloads.

Why would you need a token to use multisignatures?

**New Response:**

Unlike many other industries, space industry has remained very closed circle and international collaboration has been difficult because it is challenging to build shared interests among companies from different countries. We believe it makes a lot of sense for space industry to have a token. This industry is all about international collaboration and token serves greatly as a value transmitting vehicle within the ecosystem.

“value transmitting vehicle within the ecosystem” there are already ton of working “value transmitting vehicles”, and I don't see which SpacePlayer would want to use SPC instead of well established, general purpose coins/tokens.

A unified token that can be used to facilitate transactions related to all space services, products and facilities in a global setting.

As more companies and businesses tap onto the SpaceChain project, the entire network is powered by and built on this token economic model. Thereby, the SPC token served as means for payment and transactions at all of SpaceChain's partners.

In addition, people who wish to use the applications that are built on our network will require to transact in SPC. The applications can include anything from cryptocurrency exchanges, global real-time sensors array and peer-to-peer encrypted messaging.

Currently, our token can be used to buy the hardware boards we have developed so that people can start to develop apps on our platform. We have mentioned it on our website here under SPC Services: <https://spacechain.com/get-involved/>. We also wrote an article about it in this article <https://spacechain.com/what-is-the-spacechain-operating-system/>

However, we have not heavily promoted the purchase option for these boards because the dapp community is currently not very mature. We may do it more promotion when the community is more mature in future. This will be the retail side of our business, which we are not focussing on at the moment. We are mostly directly connecting with corporate partners and working directly with them. Blockchain + Space is still a relatively new concept in the industry and we need time to grow the community.

Again, the only usecase SpaceChain lists is “payment”. This contrasts with their “various usecases” claim.

## 5.3 Requirement

Challenge:

5.3 “The team which issued the token should have made efforts to be transparent about details of the token supply, circulating supply, and any inflation, as well as their own ownership of issued tokens.”

Response”

On our website, you can find information about our circulating supply, total supply, volume and market cap. <https://spacechain.com/get-involved/>

Additionally, in our Bitcointalk thread, we have made it clear where the rest of tokens are held.

Challenge:

I managed to find the post [there](#). Without knowing exactly where and what to search it is impossible to find it. Answering a question on a non-SpaceChain forum which is not referenced on the SpaceChain website cannot be considered as “efforts to be transparent”.

Moreover by just stating “various needs”, they do not provide information on the breakdown of how those tokens will be used. Just saying that tokens will be used for “various needs” cannot be considered as a “details of the token supply”. In their various need, they did not specify which part were to go to the team itself (“as well as their own ownership of issued tokens”).

To break it down to specifics:

15% for team and future talent acquisition

15% for building Space & Blockchain Ecosystem 9% for key partners and resources

10% for future reserves

(51% was distributed to community) The majority of the tokens were distributed via the presale.

Also, some of the tokens were airdropped on exx.com early on and some were airdropped via community events.

Spacechain just informed the jurors of the repartition of the supply. This is not enough to satisfy 5.3 because:

– Giving them after a dispute is raised cannot be considered as “efforts to be transparent”, because they just gave them when this would have led to bad consequences to them and they did not give them to the public. Only jurors and people following the case have this information.



Only answering on a dispute cannot be considered as transparency. So I advise SpaceChain to put this information in one of their media if they really want to “be transparent”.

– There is a timing issue, at the time of the dispute, they did not “have made” this disclosure. The policy clearly speaks of the past. Even if the policy did not, we cannot rule according to the current state but must rule according to the state when the dispute was created, otherwise, challengers (which also give deposits) could be unjustly punished because claims they made were legit when they made them could not become valid anymore. This could lead to some attacks were people purposely submit badges for conditions which are not satisfied, change them after a challenge and harvest the deposits of the challengers. If you are a juror and think that SpaceChain now satisfies the requirements but did not satisfied them at the time of the challenge, I think you should vote to reject on the current dispute, even if it is then to switch to accept in the future if SpaceChain makes this information public and reapply.

**New Response:**

As we stated in a previous response, this was an oversight on our part. This information can now be found in our FAQ <https://spacechain.com/faqs/>

I would like to thank SpaceChain for doing the right thing and now being transparent about token distribution. If SpaceChain is resubmitted, I would not claim that 5.3 is not satisfied anymore. However this submission was made before they added this to their FAQ, so it would not be fair to penalize challengers (which are the one which will lose their deposits if SPC is accepted) as when they created the challenge / appealed, this info was not transparent. I think the violation of the point 5.3 is the easiest to verify as even SpaceChain admitted it.

## Conclusion

In this appeal, I removed the claim 2.2 but still maintain the others. I think that claims by order of strength are:

- 1) 5.3 (admitted and corrected by SpaceChain, it will not be brought up in future cases but for this submission, it is the state at the moment of the submission which should matter).
- 2) 2.1
- 3) 3.2
- 4) 3.1