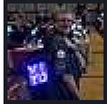
finals-2022-weltalles

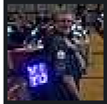
@vito created this private channel on October 3rd. This is the very beginning of the **finals-2022-weltalles** channel.
Add description Add people Send emails to channel

Monday, October 3rd



vito 3:46 PM
joined finals-2022-weltalles along with 10 others.

Friday, October 7th



vito 1:14 PM
Welcome to Hack-A-Sat 3 Finals chat!

1. These guidelines do not supersede the official rules; they're here to make chatting in Slack useful and productive for all of us.
2. The goals of these channels are to address hardware, infrastructure, and other gameplay issues.
3. **You should have access to both finals-2022 and #finals-2022-TEAMNAME . Please let Mission Control know if you don't! Do that now!**
4. All finals-2022 and #finals-2022-TEAMNAME conversations will be made public after the game ends. Don't chat anything you wish to keep private. Don't chat personally identifiable information.
5. Please be thoughtful with which team members engage in communication with organizers. While we don't want your team to miss important details due to someone taking a break or being busy, we also don't want to spend a bunch of time getting confused or de-conflicting what more people want.
6. That said, it's totally okay to have your whole team in both the finals-2022 and #finals-2022-TEAMNAME rooms reading.
7. Sending private or direct messages to a game operator will make it more difficult for operators and other members of your team to know what's going on. Please don't.
8. Both finals-2022 and #finals-2022-TEAMNAME can be used for official communication through the end of Hack-A-Sat finals. shout@hackasat.com is also still available for official communication.
9. Please review the contest rules and keep an eye out for updates at https://www.hackasat.com/

1:19
@hanemile i wasn't able to easily figure out who else from welt alles to invite here; if you could help me out with that, it'd probably be good for everyone :)

SEJeff 1:32 PM

was added to finals-2022-weltalles by vito, along with Managarmr. Also, ALLES CTF and Benno Fünfstück (ALLES) joined.

Friday, October 14th

ALLES CTF 4:25 PM

We thought and discussed for a long time and decided to go with the number 3

✅1 3️⃣1

1 reply

20 days agoView thread

Sunday, October 16th

explo1t 5:28 PM

was added to finals-2022-weltalles by Managarmr. Also, Batman and 13 others joined.

Saturday, October 22nd

meenmachine 10:55 AM

Here's your team container access credentials! Please verify you have access the game infrastructure from your AWS container after game start (5 minutes)

Zip

weltalles.zip

Zip

Th0mas 11:00 AM

was added to finals-2022-weltalles by Daniel Kilimnik. Also, EJ joined.

localo 2:47 PM

Heyho, can you check if the coffe.java file has been replaced?

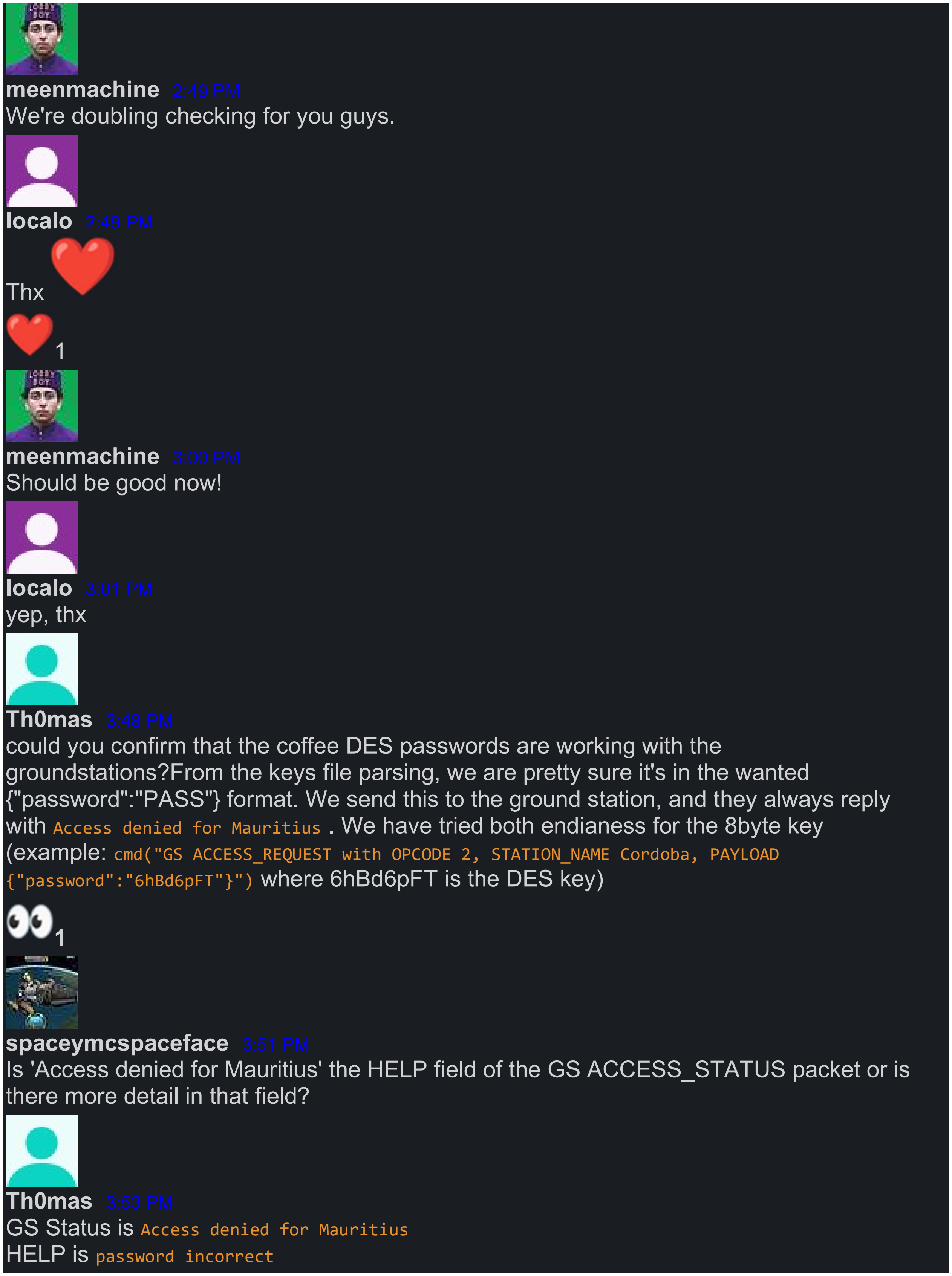
👀2

2:48

We currently observe that we always get back our own input

2:48

This was not the case half an hour ago



meenmachine 2:49 PM
We're doubling checking for you guys.

localo 2:49 PM
Thx ❤️

❤️ 1

meenmachine 3:00 PM
Should be good now!

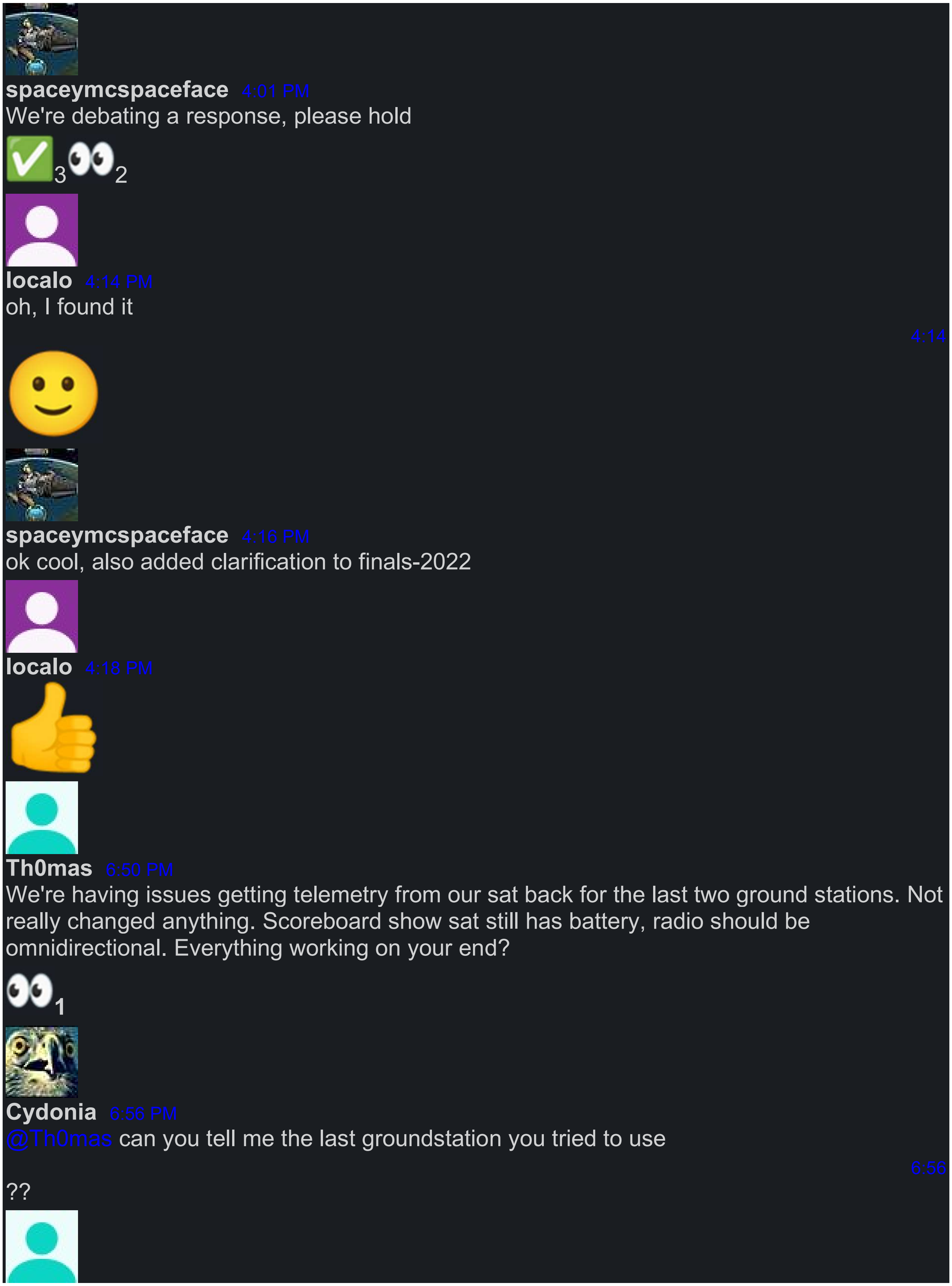
localo 3:01 PM
yep, thx

Th0mas 3:48 PM
could you confirm that the coffee DES passwords are working with the groundstations?From the keys file parsing, we are pretty sure it's in the wanted {"password":"PASS"} format. We send this to the ground station, and they always reply with `Access denied for Mauritius` . We have tried both endianess for the 8byte key (example: `cmd("GS ACCESS_REQUEST with OPCODE 2, STATION_NAME Cordoba, PAYLOAD {"password":"6hBd6pFT"}")` where 6hBd6pFT is the DES key)

👀 1

spaceymcspaceface 3:51 PM
Is 'Access denied for Mauritius' the HELP field of the GS ACCESS_STATUS packet or is there more detail in that field?

Th0mas 3:53 PM
GS Status is `Access denied for Mauritius`
HELP is `password incorrect`



spaceymcspaceface 4:01 PM
We're debating a response, please hold

✅3 👀2

localo 4:14 PM
oh, I found it

4:14

🙂

spaceymcspaceface 4:16 PM
ok cool, also added clarification to finals-2022

localo 4:18 PM

👍

Th0mas 6:50 PM
We're having issues getting telemetry from our sat back for the last two ground stations. Not really changed anything. Scoreboard show sat still has battery, radio should be omnidirectional. Everything working on your end?

👀1

Cydonia 6:56 PM
@Th0mas can you tell me the last groundstation you tried to use

6:56

??

Th0mas 6:56 PM
currently svalbard

6:56
before that LA and mcmurdoc

Cydonia 7:00 PM
i have some additional questions

7:00
its that you arent seeing telemetry right?

Th0mas 7:01 PM
correct. We have the impression satellite is just "gone"

Cydonia 7:02 PM
ok standby just a sec (reading thru the data)

👍 1

Cydonia 7:15 PM
We are pretty sure your satellite is dead, we think this occurred within the parameters of the game.
We can reset your software for you.

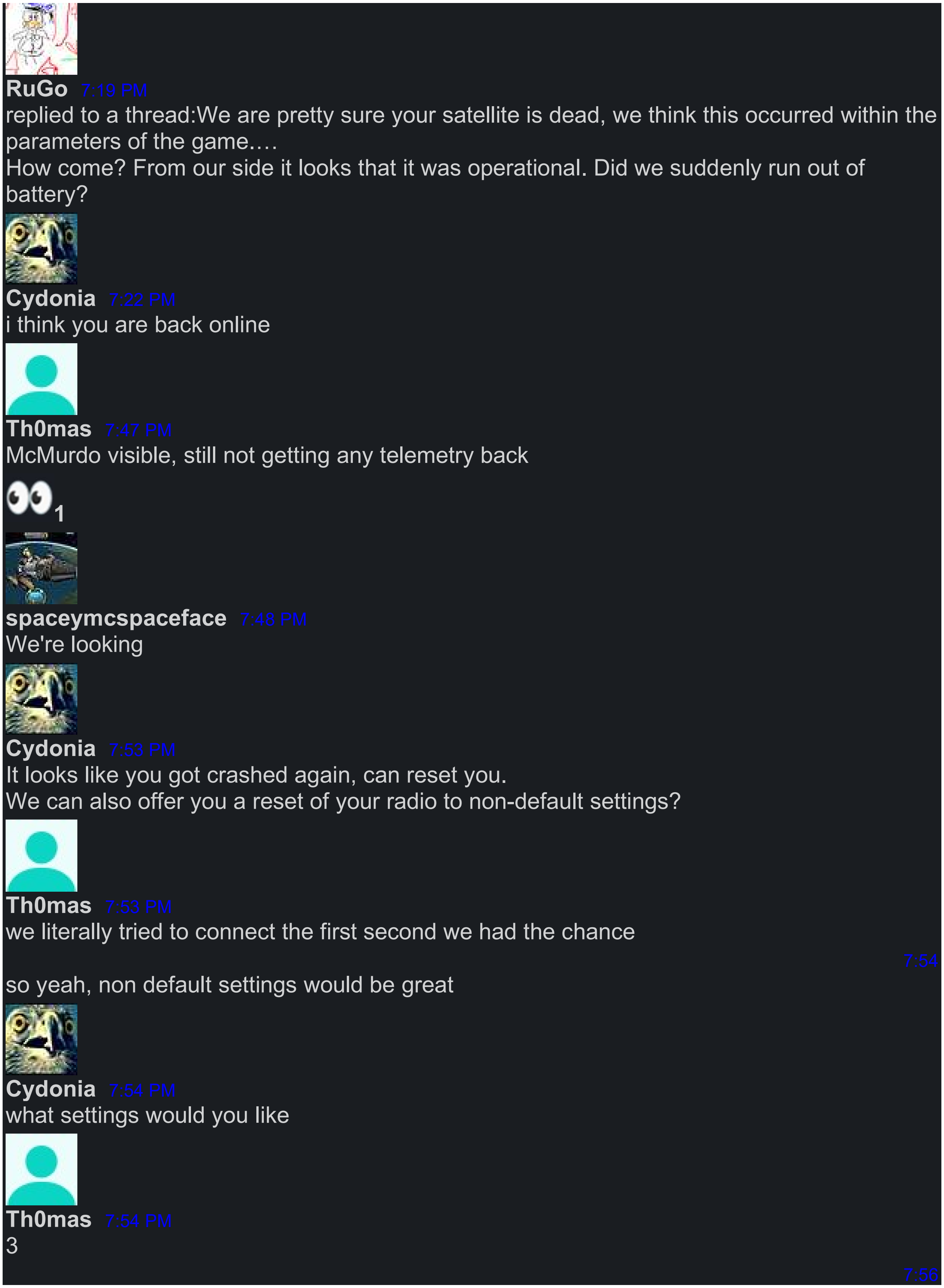
1 reply
12 days agoView thread

Cydonia 7:18 PM
we are making sure things came back up

Th0mas 7:18 PM
okay, sure thank you

7:19
any hints which parameters killed the sattelite?

👀 1



RuGo 7:19 PM
replied to a thread:We are pretty sure your satellite is dead, we think this occurred within the parameters of the game.…
How come? From our side it looks that it was operational. Did we suddenly run out of battery?

Cydonia 7:22 PM
i think you are back online

Th0mas 7:47 PM
McMurdo visible, still not getting any telemetry back

👀 1

spaceymcspaceface 7:48 PM
We're looking

Cydonia 7:53 PM
It looks like you got crashed again, can reset you.
We can also offer you a reset of your radio to non-default settings?

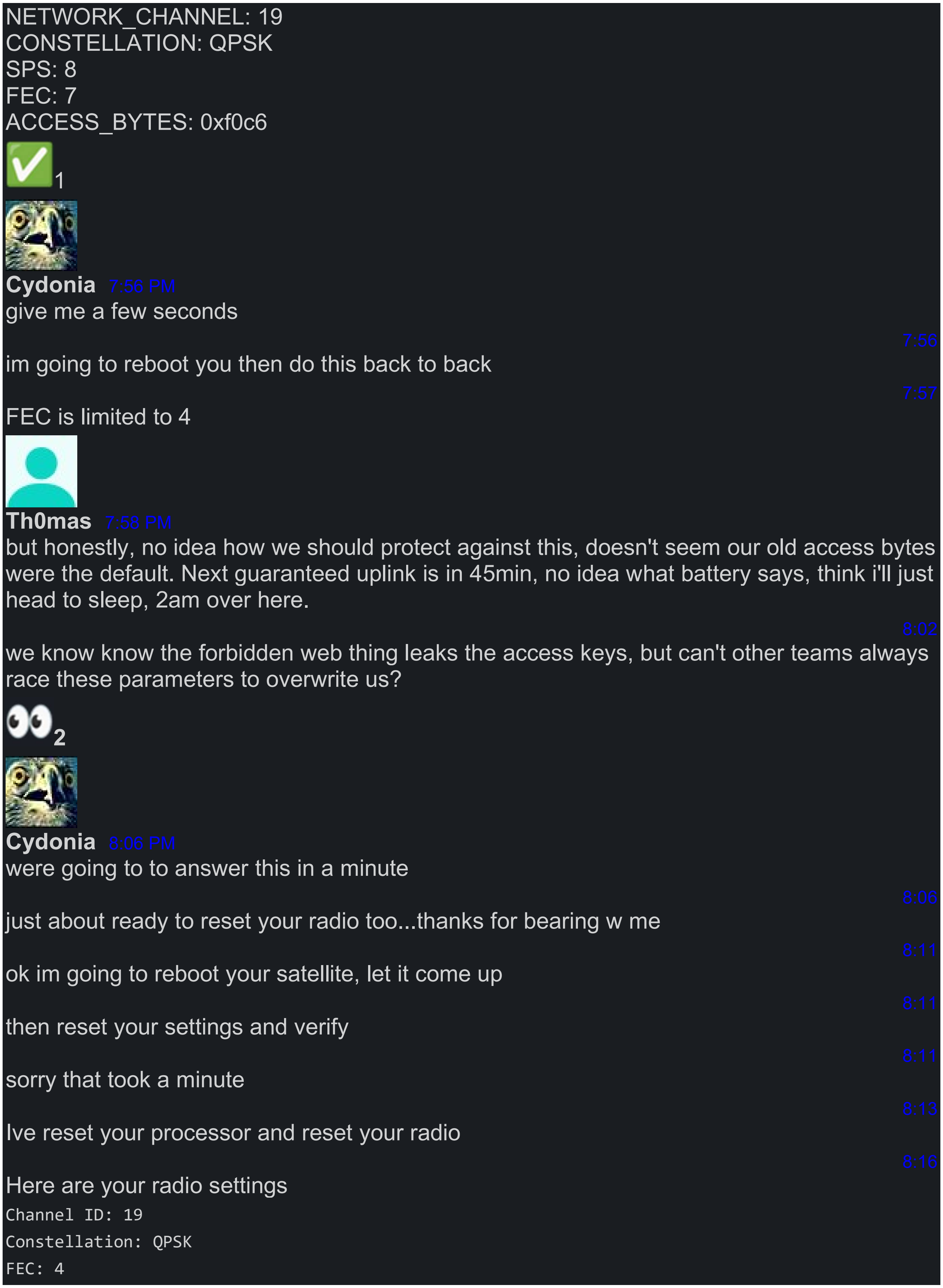
Th0mas 7:53 PM
we literally tried to connect the first second we had the chance

7:54
so yeah, non default settings would be great

Cydonia 7:54 PM
what settings would you like

Th0mas 7:54 PM
3

7:56



```
NETWORK_CHANNEL: 19
CONSTELLATION: QPSK
SPS: 8
FEC: 7
ACCESS_BYTES: 0xf0c6
```

✅ 1

Cydonia 7:56 PM

give me a few seconds

7:56

im going to reboot you then do this back to back

7:57

FEC is limited to 4

Th0mas 7:58 PM

but honestly, no idea how we should protect against this, doesn't seem our old access bytes were the default. Next guaranteed uplink is in 45min, no idea what battery says, think i'll just head to sleep, 2am over here.

8:02

we know know the forbidden web thing leaks the access keys, but can't other teams always race these parameters to overwrite us?

👀 2

Cydonia 8:06 PM

were going to to answer this in a minute

8:06

just about ready to reset your radio too...thanks for bearing w me

8:11

ok im going to reboot your satellite, let it come up

8:11

then reset your settings and verify

8:11

sorry that took a minute

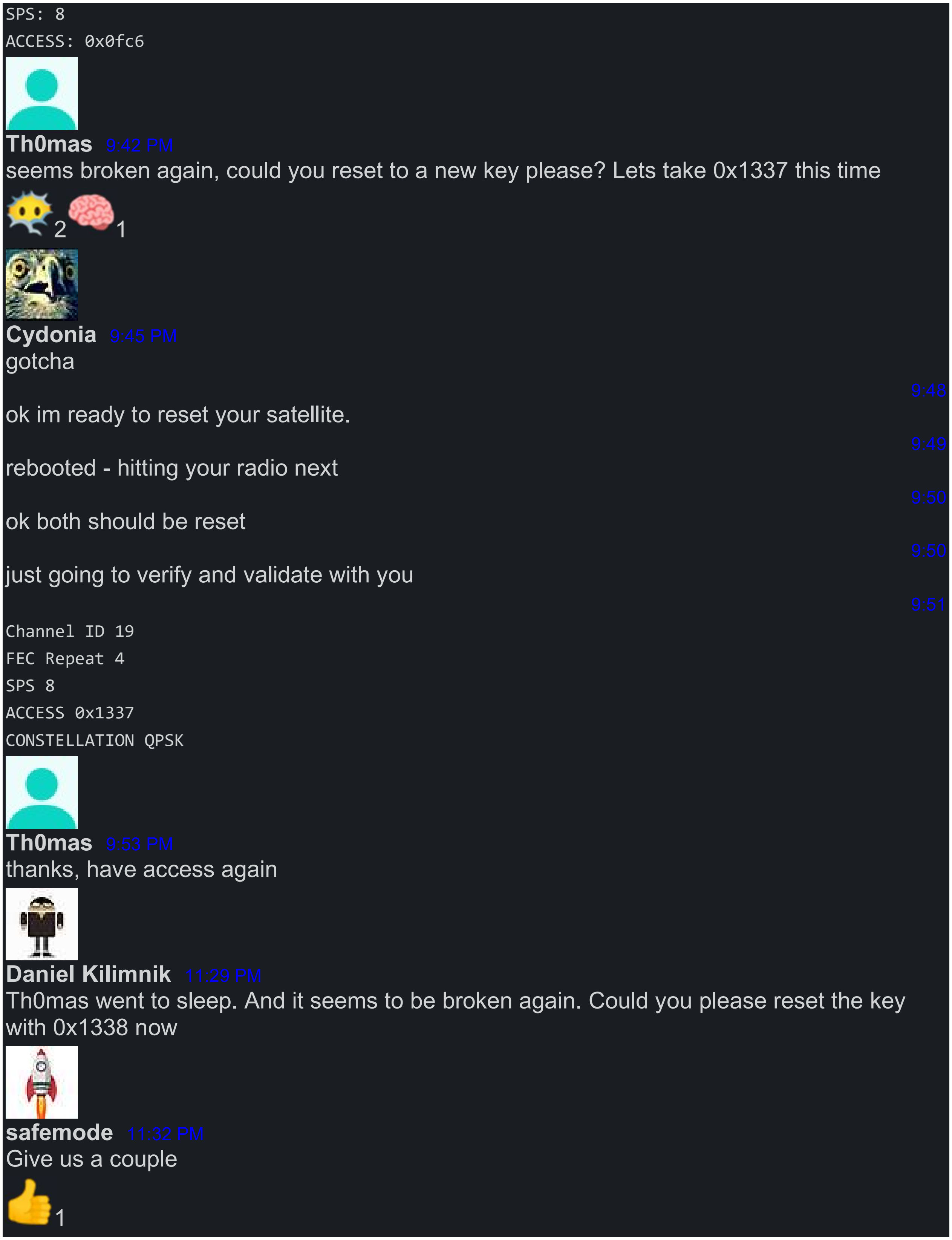
8:13

Ive reset your processor and reset your radio

8:16

Here are your radio settings

```
Channel ID: 19
Constellation: QPSK
FEC: 4
```



```
SPS: 8
ACCESS: 0x0fc6
```

Th0mas 9:42 PM
seems broken again, could you reset to a new key please? Lets take 0x1337 this time

🤯 2 🧠 1

Cydonia 9:45 PM
gotcha

9:48
ok im ready to reset your satellite.

9:49
rebooted - hitting your radio next

9:50
ok both should be reset

9:50
just going to verify and validate with you

9:51

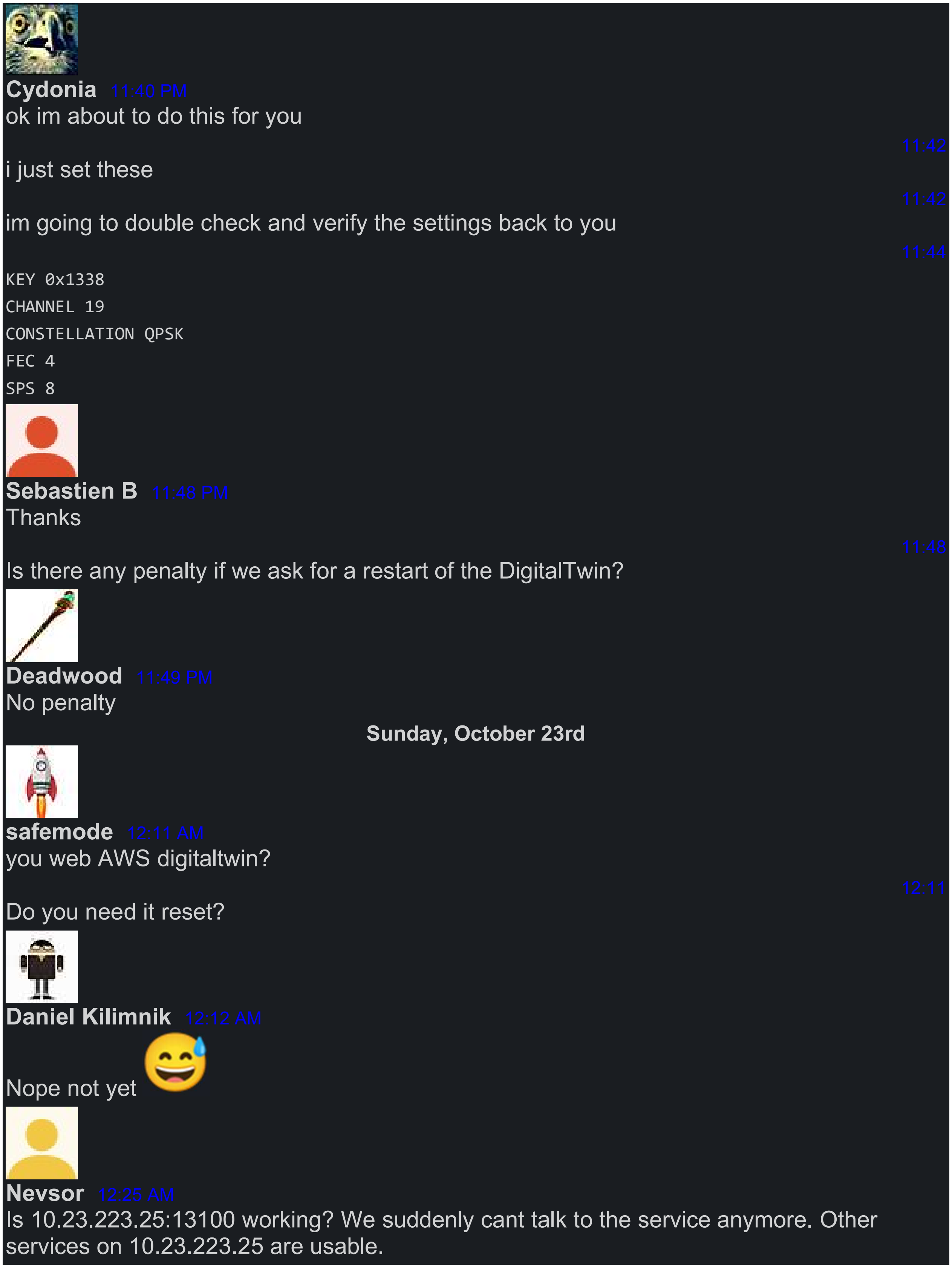
```
Channel ID 19
FEC Repeat 4
SPS 8
ACCESS 0x1337
CONSTELLATION QPSK
```

Th0mas 9:53 PM
thanks, have access again

Daniel Kilimnik 11:29 PM
Th0mas went to sleep. And it seems to be broken again. Could you please reset the key with 0x1338 now

safemode 11:32 PM
Give us a couple

👍 1



Cydonia 11:40 PM

ok im about to do this for you

11:42

i just set these

11:42

im going to double check and verify the settings back to you

11:44

```
KEY 0x1338
CHANNEL 19
CONSTELLATION QPSK
FEC 4
SPS 8
```

Sebastien B 11:48 PM

Thanks

11:48

Is there any penalty if we ask for a restart of the DigitalTwin?

Deadwood 11:49 PM

No penalty

Sunday, October 23rd

safemode 12:11 AM

you web AWS digitaltwin?

12:11

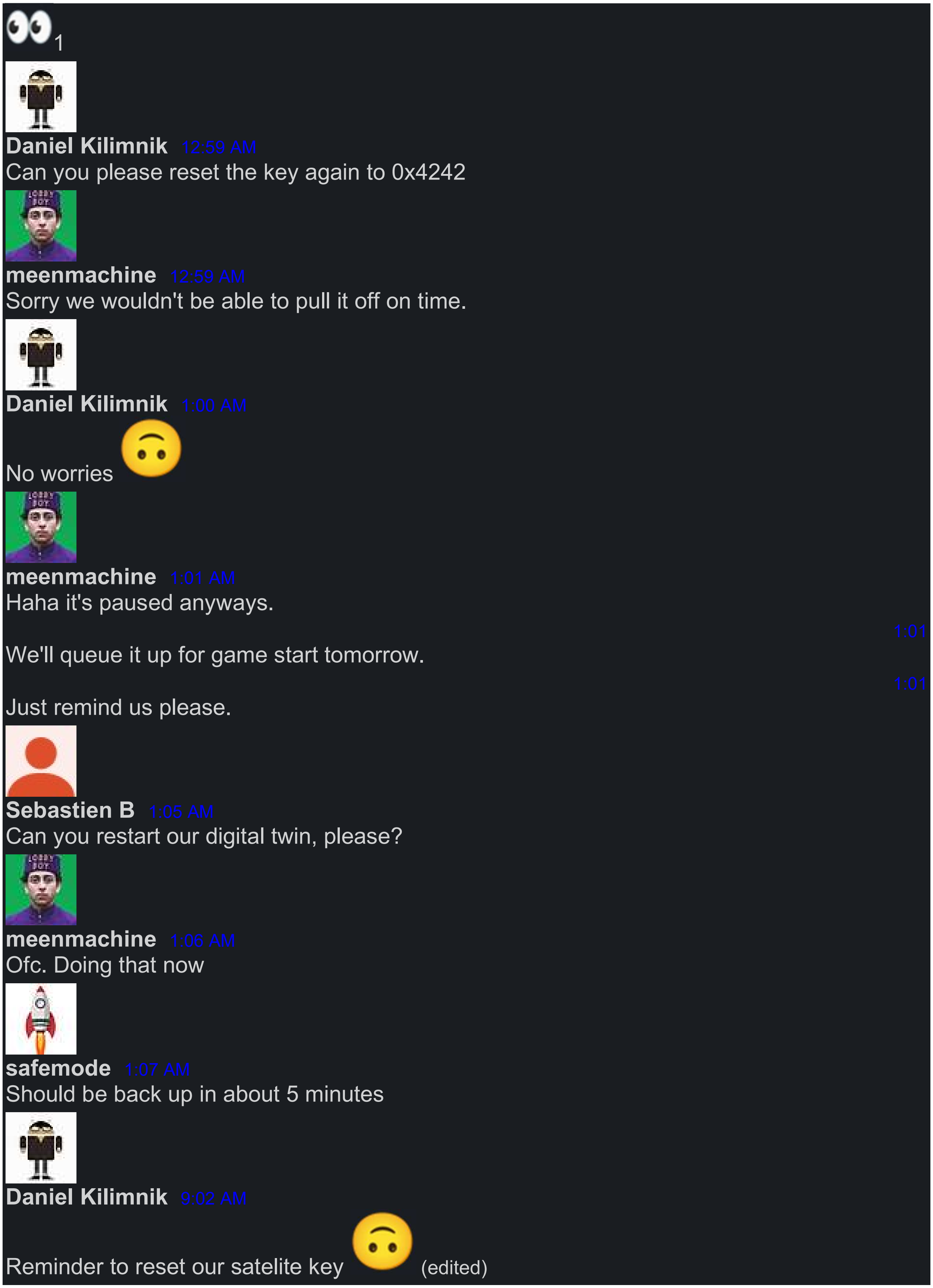
Do you need it reset?

Daniel Kilimnik 12:12 AM

Nope not yet 😅

Nevsor 12:25 AM

Is 10.23.223.25:13100 working? We suddenly cant talk to the service anymore. Other services on 10.23.223.25 are usable.



👀 1

Daniel Kilimnik 12:59 AM
Can you please reset the key again to 0x4242

meenmachine 12:59 AM
Sorry we wouldn't be able to pull it off on time.

Daniel Kilimnik 1:00 AM
No worries 🙃

meenmachine 1:01 AM
Haha it's paused anyways.

1:01
We'll queue it up for game start tomorrow.

1:01
Just remind us please.

Sebastien B 1:05 AM
Can you restart our digital twin, please?

meenmachine 1:06 AM
Ofc. Doing that now

safemode 1:07 AM
Should be back up in about 5 minutes

Daniel Kilimnik 9:02 AM
Reminder to reset our satelite key 🙃 (edited)

❗ 3

spaceymcspaceface 9:05 AM
ACK

9:06

I have a sticky note on my screen preventing me from doing anything else once the game starts

9:06

😄

Cydonia 9:06 AM
ive got this queued up once we come back online

Cydonia 9:21 AM
time is ticking again

9:21

im about to do your reset

9:25

veryifying now

9:26

```
ACCESS 0x4242
CHANNEL 19
CONSTELLATION QPSK
FEC 4
SPS 8
```

9:26

that should do it

Nico Gründel 10:41 AM
Can you reset our radio parameters with an access token of 0x4243?

Deadwood 10:46 AM
Sec. Will get to this shortly

3 replies

Last reply 11 days agoView thread

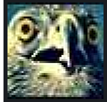
Nevsor 11:02 AM
10.23.223.25:13100 seems to be down again

Deadwood 11:09 AM
Confirmed. Will bounce.

1 reply
11 days agoView thread

Nico Gründel 11:14 AM
replied to a thread:Sec. Will get to this shortly
Bump

View newer replies



Cydonia 11:21 AM
@Nico Gründel i can reset you

11:21
sorry for the delay

11:24
im going to do this now and then repeat the settings back to you in this channel

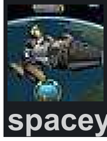
👍 1

11:25
ok i just reset you im going to verify this really quick

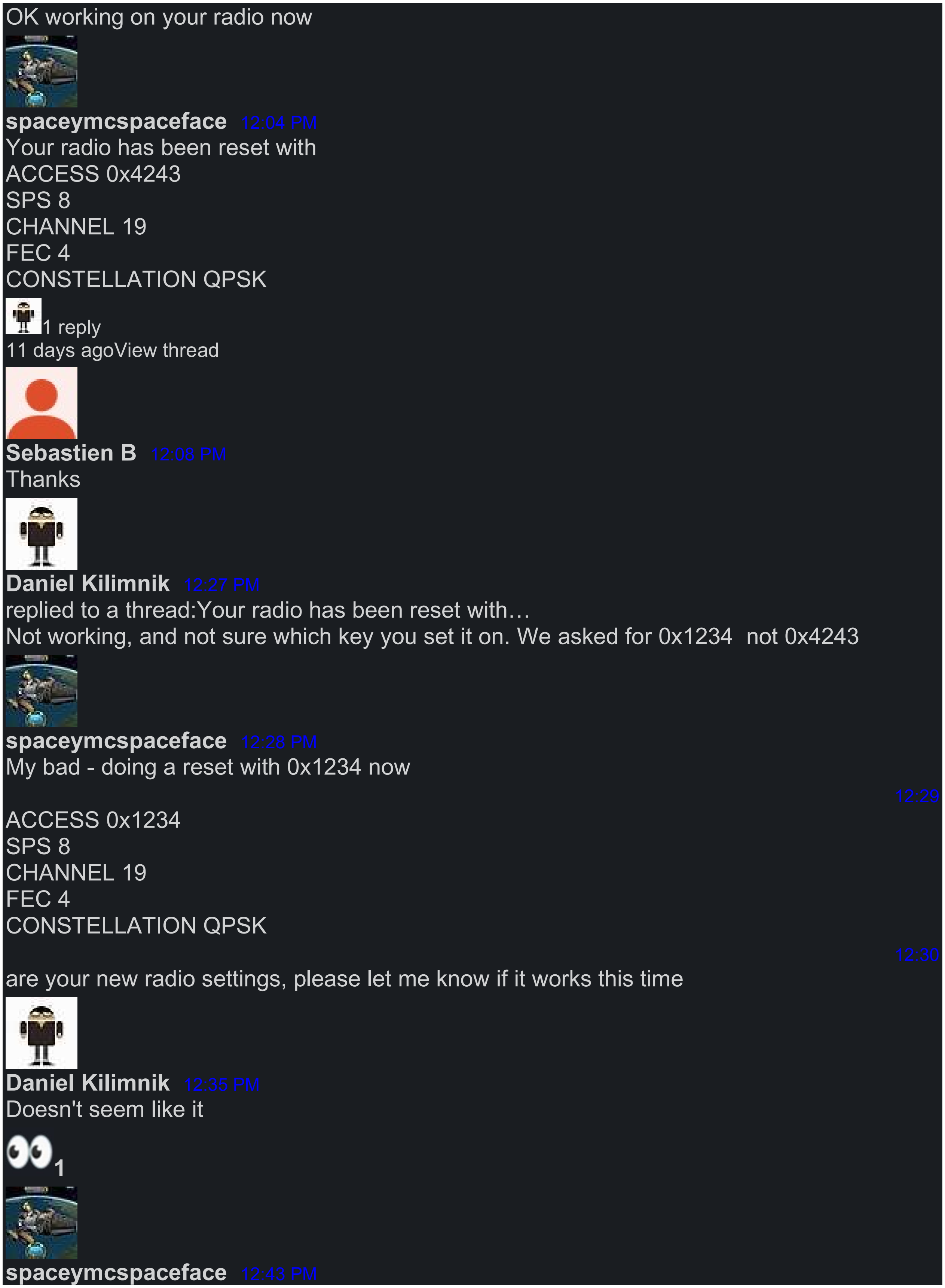
11:26

```
ACCESS 0x4243
SPS 8
CHANNEL 19
FEC 4
CONSTELLATION QPSK
```

Daniel Kilimnik 11:43 AM
Can you reset our sat again please. New Key: 0x1234



spaceymcspaceface 12:01 PM



OK working on your radio now

spaceymcspaceface 12:04 PM

Your radio has been reset with
ACCESS 0x4243
SPS 8
CHANNEL 19
FEC 4
CONSTELLATION QPSK

1 reply
11 days agoView thread

Sebastien B 12:08 PM

Thanks

Daniel Kilimnik 12:27 PM

replied to a thread:Your radio has been reset with…
Not working, and not sure which key you set it on. We asked for 0x1234 not 0x4243

spaceymcspaceface 12:28 PM

My bad - doing a reset with 0x1234 now

12:29

ACCESS 0x1234
SPS 8
CHANNEL 19
FEC 4
CONSTELLATION QPSK

12:30

are your new radio settings, please let me know if it works this time

Daniel Kilimnik 12:35 PM

Doesn't seem like it

👀 1

spaceymcspaceface 12:43 PM

checking with team

12:46

I've verified your radio settings took
ACCESS 0x1234
SPS 8
CHANNEL 19
FEC 4
CONSTELLATION QPSK

12:46

Checking your fsw....

12:49

Can you let me know when your last attempted contact was and from which groundstation?

Sebastien B 12:50 PM

Svalbard during the last pass

spaceymcspaceface 1:01 PM

I think we found the issue

1:02

Working on it

spaceymcspaceface 1:11 PM

Your fsw has been rebooted, please try again when you can and let us know if you re-establish contact

Sebastien B 1:11 PM

OK, next contact in 8mn and 30s

1:12

Is access code still 0x1234?

spaceymcspaceface 1:17 PM

yes confirmed

1:20

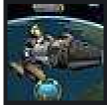
hopefully contact?

Sebastien B 1:22 PM

Contact, however the get_radio config does not match what we use image.png

1:24

After changing our config for science, do we need to revert to this or to the ones we are actually using? On the sat only or both on sat and ground? (edited)



spaceymcspaceface 1:30 PM

we did an out of band reset of your radio

1:30

if you send a new radio config to it, that screen should update correctly

Sebastien B 1:35 PM

Re-sent the current radio config with this commands: (edited)

Sebastien B 1:35 PM

```
new_access="4660"
RADIO_PASSWORD = "nosy-model"
cmd("RADIO UPDATE_RADIO_CONFIG WITH CCSDS_FUNCCODE 3, ACCESS_BYTES "+new_access+", FREQUENCY 0
, SAMPLE_PER_SYMBOL 4, CONSTELLATION 1, PASSWORD "+RADIO_PASSWORD)
```

1 reply

11 days agoView thread

Sebastien B 1:36 PM

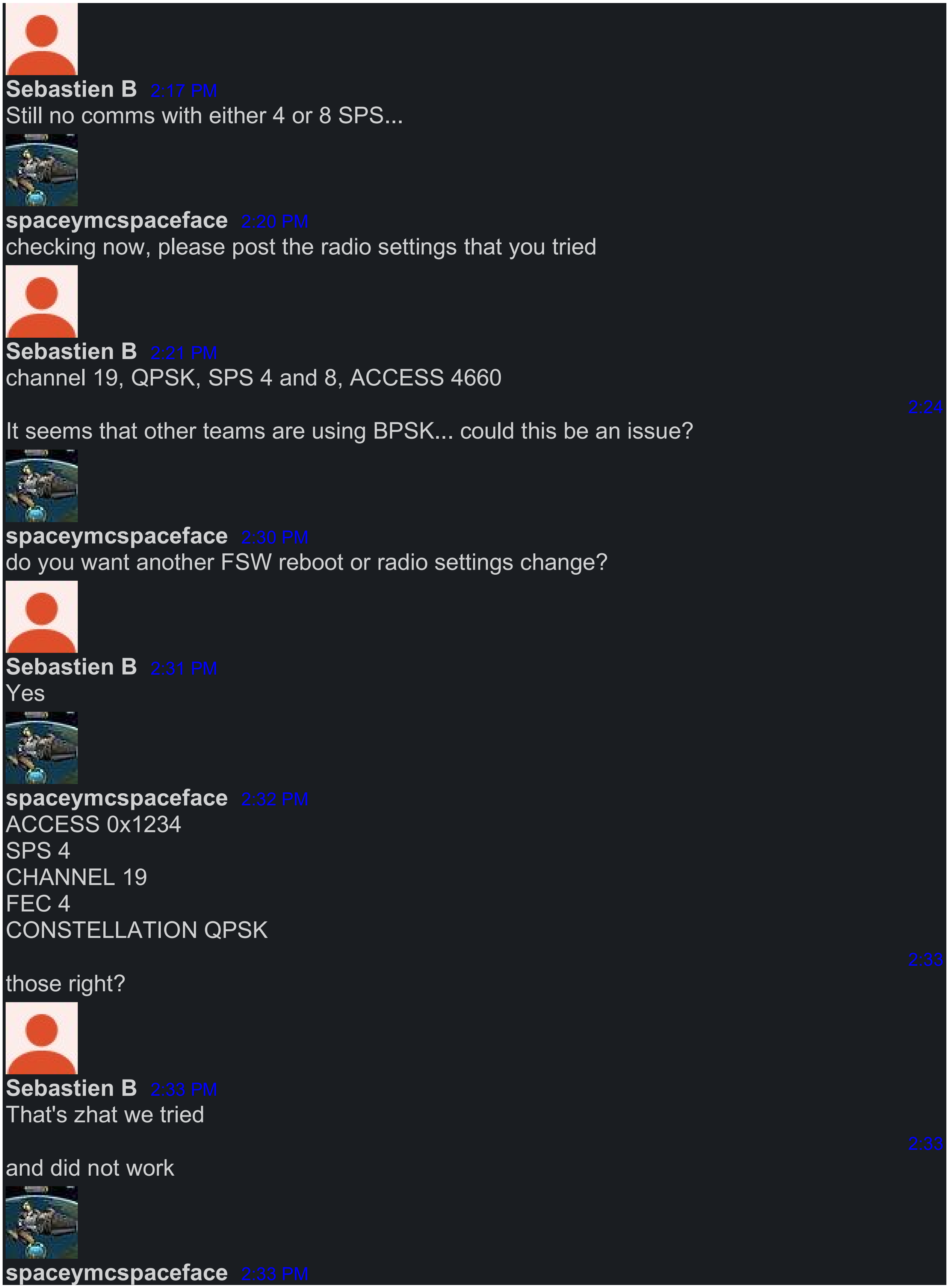
This killed the comms so impossible for us to check if the telemetry packet is now correctly updated...

safemode 1:39 PM

checking

Sebastien B 1:44 PM

Will try again in 30mn in Svalbard



Sebastien B 2:17 PM
Still no comms with either 4 or 8 SPS...

spaceymcspaceface 2:20 PM
checking now, please post the radio settings that you tried

Sebastien B 2:21 PM
channel 19, QPSK, SPS 4 and 8, ACCESS 4660

2:24
It seems that other teams are using BPSK... could this be an issue?

spaceymcspaceface 2:30 PM
do you want another FSW reboot or radio settings change?

Sebastien B 2:31 PM
Yes

spaceymcspaceface 2:32 PM
ACCESS 0x1234
SPS 4
CHANNEL 19
FEC 4
CONSTELLATION QPSK

2:33
those right?

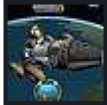
Sebastien B 2:33 PM
That's zhat we tried

2:33
and did not work

spaceymcspaceface 2:33 PM

I mean for the reset

Sebastien B 2:34 PM
let's do access 0x4321 and BPSK instead



spaceymcspaceface 2:37 PM
OK, your radio settings are currently
ACCESS 0x4321
SPS 4
CHANNEL 19
FEC 4
CONSTELLATION BPSK

Sebastien B 2:38 PM
thanks

Sebastien B 3:18 PM

```
cmd("RADIO UPDATE_RADIO_CONFIG with CCSDS_FUNCCODE 3, ACCESS_BYTES 17185, FREQUENCY 0,
SAMPLE_PER_SYMBOL 4, CONSTELLATION 0, PASSWORD nosy-model")
```

3:18

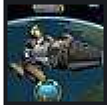
This killed comms again

3:18

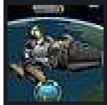
It is the same config you just settup

3:19

We re-sent this packet per your instruction in order to get RADIO CURRENT_RADIO_CONFIG tlm updated

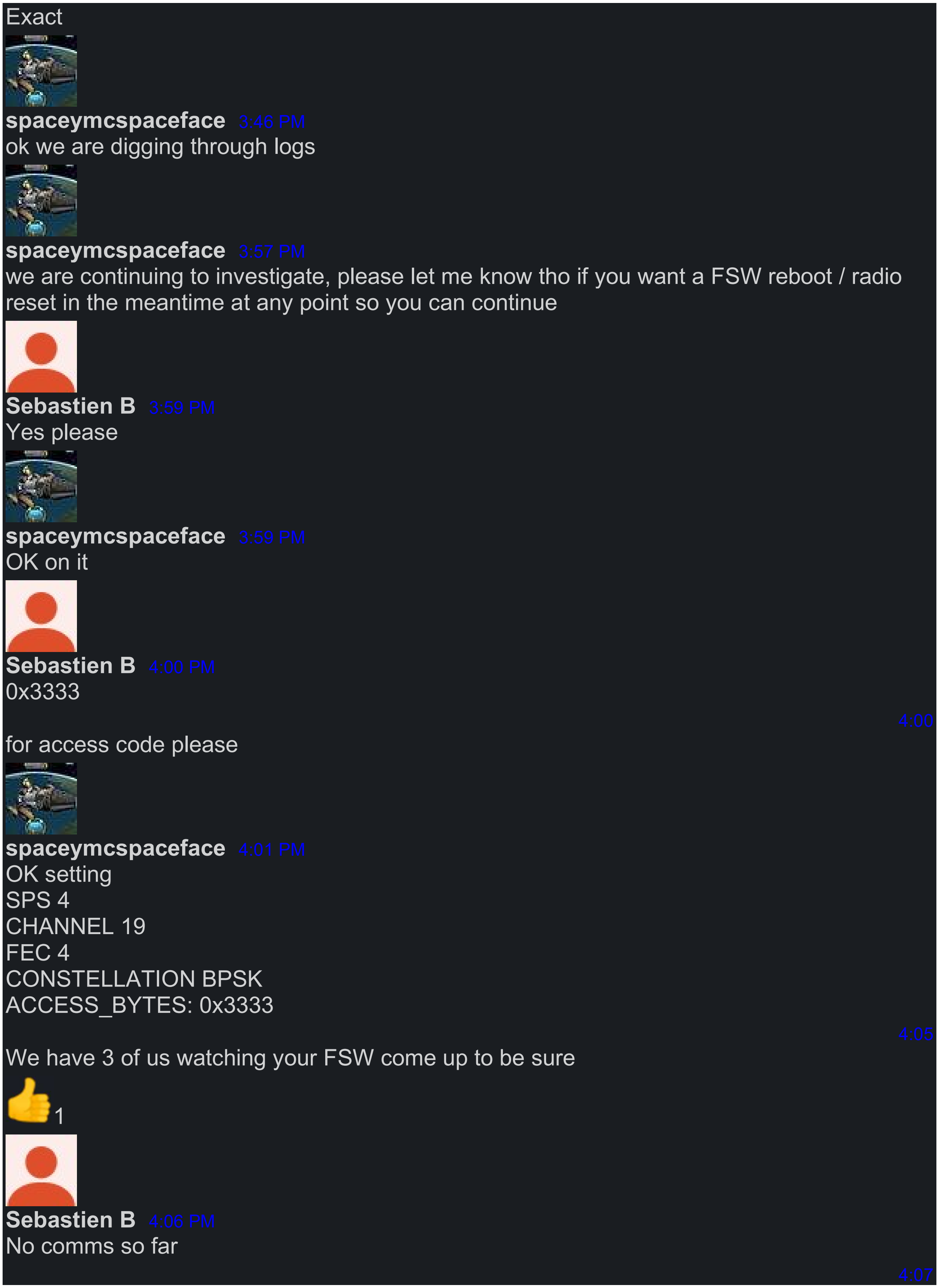


spaceymcspaceface 3:30 PM
Taking a look now



spaceymcspaceface 3:42 PM
Can you clarify for me, did you have access to your sat (received some downlink bytes)? And then you sent that command, and then you no longer had contact, right?

Sebastien B 3:43 PM



Exact

spaceymcspaceface 3:46 PM
ok we are digging through logs

spaceymcspaceface 3:57 PM
we are continuing to investigate, please let me know tho if you want a FSW reboot / radio reset in the meantime at any point so you can continue

Sebastien B 3:59 PM
Yes please

spaceymcspaceface 3:59 PM
OK on it

Sebastien B 4:00 PM
0x3333

4:00
for access code please

spaceymcspaceface 4:01 PM
OK setting
SPS 4
CHANNEL 19
FEC 4
CONSTELLATION BPSK
ACCESS_BYTES: 0x3333

4:05
We have 3 of us watching your FSW come up to be sure

👍 1

Sebastien B 4:06 PM
No comms so far

4:07

we arte in view of svalbard

spaceymcspaceface 4:08 PM

Your flight software is in a very interesting state, we are trying to bring it back up

🤔 1 🍉 1

1 reply

11 days agoView thread

Sebastien B 4:08 PM

```
channel       = 19
constellation = 'BPSK'
sps           = 4
fec_repeat    = 4
```

Daniel Kilimnik 4:23 PM

replied to a thread:Your flight software is in a very interesting state, we are trying to bring it back up

Any news on it?

spaceymcspaceface 4:28 PM

We are still working on it

Cydonia 4:28 PM

weve got multiple people on it

Sebastien B 4:29 PM

same ^^

spaceymcspaceface 4:57 PM

We haven't ignored you, we are still trying to bring you back up

Cydonia 5:07 PM
hey

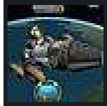
5:07
sorry this took so long

5:07
your satellite was in a crazy bad state and we had to do alot of stuff....but TLDR it is recovered

😂 2

5:07
what radio settings would you like

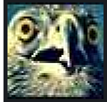
5:08
@Sebastien B



spaceymcspaceface 5:09 PM
SPS 4
CHANNEL 19
FEC 4
CONSTELLATION BPSK
ACCESS_BYTES: 0x3333

5:09
?

Sebastien B 5:09 PM
0x4444 access code please



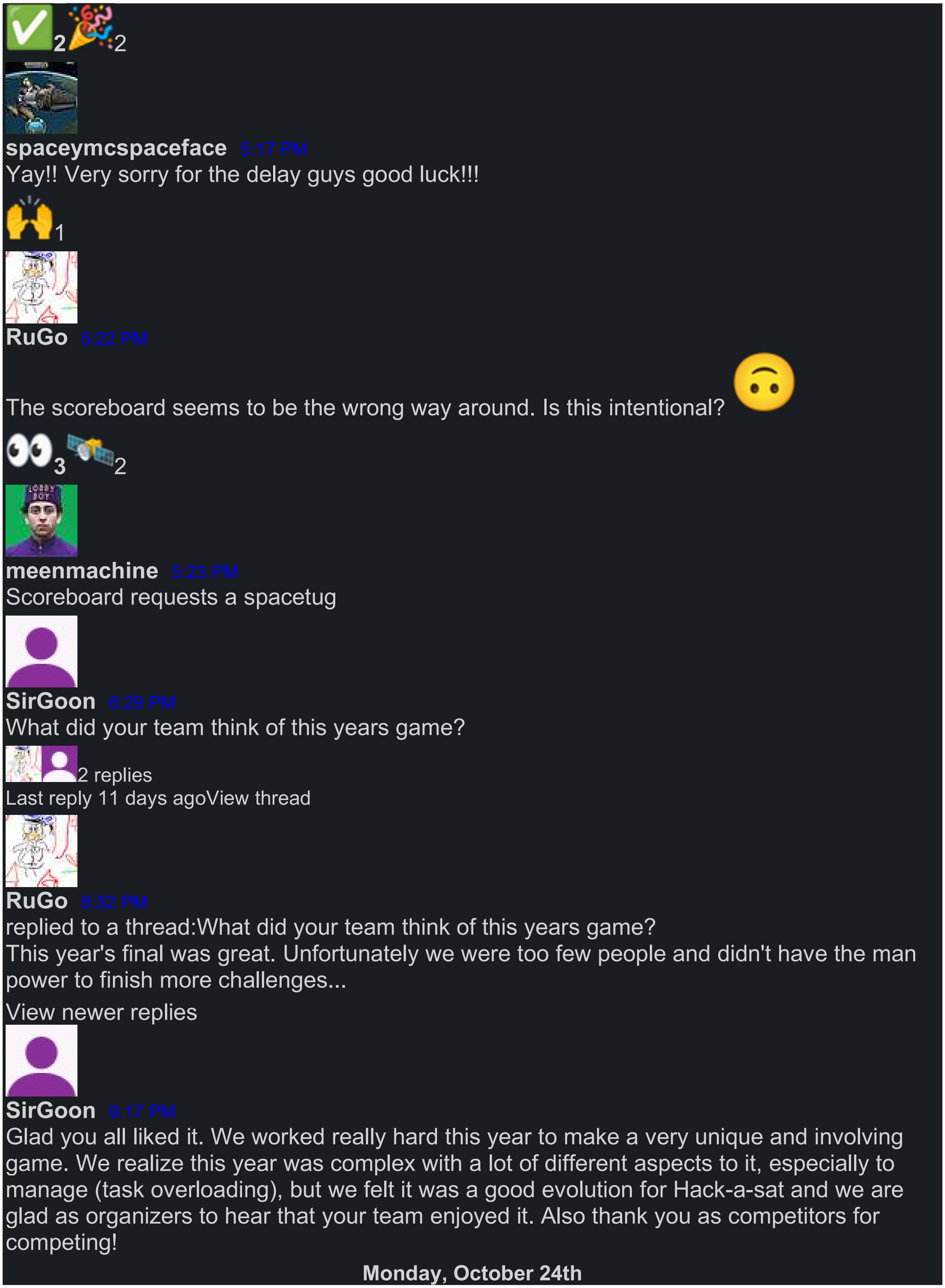
Cydonia 5:10 PM
verifying now

5:11
ok verification

```
ACCESS CODE 0x4444
CHANNEL ID 19
CONSTELLATION BPSK
FEC REPEAT: 4
SPS: 4
```

Sebastien B 5:14 PM
No signal at McMurdo...

5:17
Comms are back just now



✅2 🎉2

spaceymcspaceface 5:17 PM

Yay!! Very sorry for the delay guys good luck!!!

🙌1

RuGo 5:22 PM

The scoreboard seems to be the wrong way around. Is this intentional? 🙃

👀3 🛰️2

meenmachine 5:23 PM

Scoreboard requests a spacetug

SirGoon 6:29 PM

What did your team think of this years game?

2 replies

Last reply 11 days agoView thread

RuGo 8:32 PM

replied to a thread:What did your team think of this years game?

This year's final was great. Unfortunately we were too few people and didn't have the man power to finish more challenges...

View newer replies

SirGoon 9:17 PM

Glad you all liked it. We worked really hard this year to make a very unique and involving game. We realize this year was complex with a lot of different aspects to it, especially to manage (task overloading), but we felt it was a good evolution for Hack-a-sat and we are glad as organizers to hear that your team enjoyed it. Also thank you as competitors for competing!

Monday, October 24th

RuGo 7:33 AM

Some impressions from our team, in case you're interested 😄 (edited)

3 files

❤️ 5

2 replies

Last reply 10 days agoView thread

Tuesday, October 25th

ALLES CTF 12:50 PM

Hey, thanks again for the great CTF. We talked to some guys of you at Defcon and they told us, you could send us the banner with WeltALLES! written on it.

Deadwood 12:54 PM

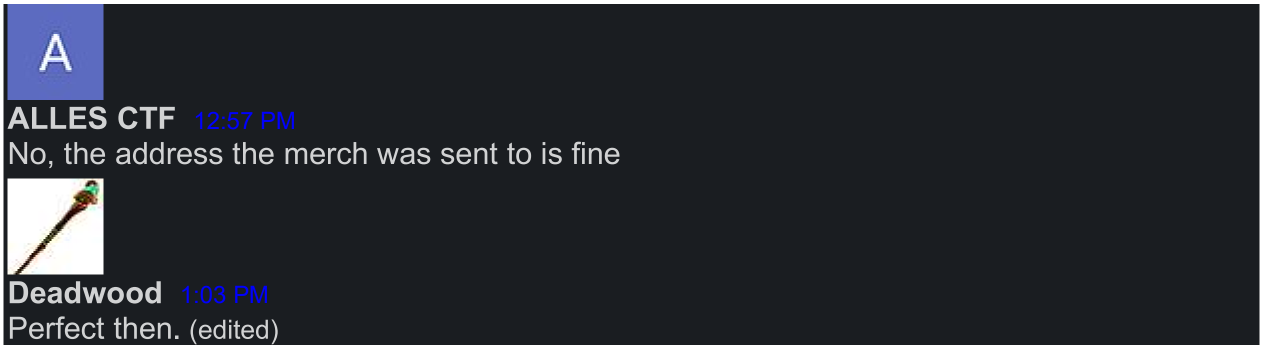
Yes, those are being shipped to you.

ALLES CTF 12:54 PM

Do you need an address?

Deadwood 12:55 PM

Would it be different than previous addresses used for the team? I know they were boxed up yesterday--I do not know if they've already shipped.



ALLES CTF 12:57 PM
No, the address the merch was sent to is fine

Deadwood 1:03 PM
Perfect then. (edited)