UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK
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UNITED STATES OF AMERICA,

v. 22 CR 673 (LAK)

SAMUEL BANKMAN-FRIED,

Defendant. Trial
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New York, N.Y.
October 17, 2023
9:40 a.m.

Before:

HON. LEWIS A. KAPLAN,

District Judge

APPEARANCES

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United States Attorney for the
Southern District of New York
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Also Present:
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Kristin Allain, FBI
Arjun Ahuja, USAO Paralegal Specialist
Grant Bianco, USAO Paralegal Specialist

Pages 1488-1490 SEALED by order of the Court)

(In open court; jury not present)

THE COURT: Good morning, everyone.

Let's get the jury and let's get the witness.

MR. ROOS: Judge, while we're waiting for folks, there's a few admissibility disputes between the parties on some expert exhibits that would come in tomorrow. I was hoping we could raise them with the Court sometime today. It doesn't have to be——any time before the end of the day. It's up to your Honor.

THE COURT: I'll try to keep that in mind.

(Continued on next page)

(Jury present)

THE COURT: Good morning, folks. I hope you had a nice evening.

Mr. Singh, you're still under oath.

The record will reflect the jurors and the defendant all are present, as they have been throughout.

Cross-examination, Mr. Cohen.

MR. COHEN: Thank you, your Honor.

NISHAD SINGH, resumed.

CROSS EXAMINATION

BY MR. COHEN:

Q. Good morning, Mr. Singh.

A. Good morning.

Q. I'd like to ask you, if I ask you a question that you can answer yes or no, please do so.

A. Sounds good.

Q. Do you recall yesterday you testified about FTX's business spending?

A. Yes.

Q. Things like sponsorships and venture investments, correct?

A. Yes.

Q. And I believe you testified at page 1313 that you thought the spend was too large or didn't make sense. Do you recall that, sir?

A. I don't recall exactly what I said. In many instances I

thought it was too large or didn't make sense, not in all.

Q. Okay. Fair to say that in certain instances you disagreed with the business rationale for the spend?

A. Right.

Q. You thought that spending on such items was too large.

A. Right.

Q. And is it fair to say that at certain times Sam had a different business judgment as to that spend?

A. Frequently.

Q. And Sam ran the business side of FTX, correct?

A. Yes.

Q. Now did FTX have a marketing group?

A. It had a lot of employees that worked on marketing in some capacity.

Q. And from time to time those employees would make recommendations to Sam about marketing initiatives, correct?

MR. ROOS: Objection, hearsay.

MR. COHEN: I'll rephrase, your Honor.

THE COURT: Yes, please.

Q. Do you know if from time to time the marketing group would make recommendations to Sam?

MR. ROOS: Objection. Hearsay.

THE COURT: Overruled.

The question is whether you know one way or the other.

A. Yes, I read in Slack——

THE COURT: No, no, no. The answer was yes. Just stop there.

Q. Let's talk for a moment about sponsorships. Was it your view, Mr. Singh, that FTX shouldn't have any corporate sponsorships?

A. I'm not sure that I had a view that extreme. I don't think I had a very precise view on what should happen.

MR. COHEN: If we could pull up Government Exhibit 343 in evidence, please.

Q. This is a document entitled List of Sponsorships. Do you recall going over this with us yesterday, Mr. Singh?

A. Yes.

Q. Okay. And counsel directed you to line 3.

MR. COHEN: Brian, could we have line 3.

Q. And that was the sponsorship for the Miami-Dade FTX Arena. Do you see that, Mr. Singh?

A. Yes.

Q. And you told us yesterday about the spend of 135 million on that sponsorship, correct?

A. Yes.

MR. COHEN: Okay. Now why don't we——Brian, if we might expand this and cover some things that weren't covered yesterday.

Let's take a look at the——Brian, move it a little bit more to my right.

Okay. Other way. Other way. Okay. That's good.

BY MR. COHEN:

Q. All right. If you can look at the heading that I'm circling, Mr. Singh, Deal Start Date and Duration, do you see that, sir?

A. I do.

Q. Is it fair to say that for the Miami-Dade FTX Arena, the duration of the sponsorship was 19 years?

A. Yes, that's what this suggests.

Q. Okay. With a start date of March 22, 2021.

A. That's what the spreadsheet says.

MR. COHEN: Okay. If we could continue, Brian, moving along on that same row, to the right.

If you go to the column entitled Outlay, and Brian, bring that all the way over, please.

Q. And that shows, Mr. Singh, the outlay per year of this $135 million commitment, correct?

MR. ROOS: Objection, foundation.

Q. Do you see that, sir?

THE COURT: Well, just a minute. We're not performing eye examinations here.

MR. COHEN: Sorry, Judge.

THE COURT: I mean, it says what it says.

MR. COHEN: Okay.

Q. Now, Mr. Singh, this sponsorship of the FTX Arena was aimed

at promoting FTX's brand and awareness, correct?

MR. ROOS: Objection, foundation.

THE COURT: Sustained.

Q. Did you have a view about whether or not it was a useful thing to promote FTX's brand?

MR. ROOS: Objection.

THE COURT: Ground?

MR. ROOS: Relevance.

MR. COHEN: This was——

THE COURT: Pardon me?

MR. COHEN: I'm sorry. I didn't mean to interrupt your Honor.

THE COURT: Go ahead. I'm looking to you for a response.

MR. COHEN: Oh. This was covered yesterday, and this is relevant because yesterday we were told that this was excessive spend with no purpose.

THE COURT: Overruled.

BY MR. COHEN:

Q. You can answer my question, Mr. Singh.

A. Do you mind repeating it.

MR. COHEN: Let's read it back.

THE COURT: The question was: "Did you have a view about whether or not it was a useful thing to promote FTX's brand?" That's the question. Please answer it.

A. I understood that it had business benefits and costs. The specific, you know——if I specifically thought any given transaction was useful depended on the details of that transaction.

Q. And the business benefits and costs were for Sam to weigh, correct?

A. Yes.

MR. COHEN: All right. We can take that down, Brian.

Q. Now you also mentioned yesterday——you covered a topic of venture spending. Do you recall that, Mr. Singh?

A. Yes.

Q. And one of the topics you covered was a company called K5. Do you recall that?

A. I do.

Q. And that was a company run by, among others, Michael Kives, correct?

A. Oh, forgive my pronunciation yesterday. Yes.

MR. COHEN: Can we pull up Government Exhibit 42, please.

Q. Do you recall going over this with counsel yesterday?

A. Yes.

Q. And if you look at the second line from the top, Mr. Bankman-Fried stated that "Mr. Kives is probably the most connected person I've ever met. In attendance at the dinner at his house were:" and then it lists a number of people who you

identified. Do you recall that?

A. I do.

Q. Okay. Did you——based on your working at FTX, did you have a view about whether there was a value in having connection with celebrities and entrepreneurs?

A. Yes, I believed that it could be valuable for the business.

Q. Depending on the circumstances, correct?

A. Right. Depending on the circumstances.

Q. And I believe you testified that you discussed with Mr. Bankman-Fried that someone like Mr. Kives could be a one-stop shop for such relationships, correct?

A. I discussed that in that Sam told me that, that it could be a one-stop shop for relationships.

Q. And this would eliminate the need to have multiple brokers trying to develop such relationships, correct?

A. I don't remember exactly what words Sam used, but he, in this document, says something to that effect, and I recall something to that effect being said in person to me.

Q. Did you agree with that, sir?

A. I didn't know. I didn't know who the other brokers were or the quality of the relationships Michael Kives had with these people.

Q. So you had no view on whether it was better to have one person or multiple brokers.

A. There was a cost of juggling multiple, but all else equal,

having more connections is better.

MR. COHEN: Now we can take that down, Brian.

Q. Based on your interaction with Mr. Bankman-Fried, did you have any understanding about whether or not the relationship with K5 involved something more than being in a broker relationship?

MR. ROOS: Objection, foundation.

THE COURT: Mr. Cohen, what do you say to that?

MR. COHEN: I asked his understanding, your Honor.

THE COURT: Yes, I understand. Why is his understanding on that appropriate?

MR. COHEN: Because, your Honor, again, yesterday we were told these were all reckless and frivolous investments, and I'm entitled to show that there was way more to it than we were told yesterday, so that's the relevance.

THE COURT: I'll allow it for a moment, anyway.

MR. COHEN: Okay. All I need is a moment, your Honor.

Can we read the question back, please.

THE COURT: Please read it back.

(Record read)

A. I know at least one other project that did not itself seem like it was just exercising K5's ability as a broker.

Q. What was that project, Mr. Singh?

A. Sam investing in a tequila brand run by a famous celebrity.

Q. Okay. You also mentioned that in addition to the Kives

relationship there were other venture investments that FTX spent on. Do you recall that, sir?

A. Yes.

Q. Okay. And you mentioned I believe a mining company, correct?

A. Bitcoin mining company.

Q. Bitcoin mining. And the judge explained to all of us that wasn't an in-the-ground mining company, correct?

A. And I tried my best and likely failed to clarify further.

Q. Now did you participate, Mr. Singh——let me back up.

Have you ever heard the term "due diligence"?

A. Yes.

Q. What does it mean to you?

A. The process of analyzing the internals of a company to understand how it functions.

Q. And is that done prior to investing in a company?

A. In general.

Q. Okay. Did you participate in any of the due diligence relating to the venture investments you described yesterday?

A. Give me a moment. I'm trying to think about if there is even a single one.

I did for Anthropic.

Q. And just to remind the jury, Anthropic was the AI company, correct?

A. Yes.

Q. And you participated in the due diligence in determining whether to make the investment, correct?

A. Not quite. The investment was first made, the large one, from Sam, and I was really proud of it, and I also wanted to make an investment, or view it as a donation, and so I separately went and talked with the Anthropic folks.

Q. So you asked to make a personal investment in the Anthropic company, correct?

A. No. Initially I thought it would be further investment or donation from Alameda.

Q. Didn't you just say you wanted to personally invest?

A. I wanted to be personally involved.

Q. Okay. Mr. Singh, can we try my question. Did you personally——did you——were you interested in personally investing in Anthropic?

A. Before——

Q. At any time.

A. Yeah, at any time, yes, at one point I was.

Q. Now you also testified yesterday about spending on Bahamas properties. Do you recall that, sir?

A. I do.

MR. COHEN: Can we call up GX 3, please.

Q. Do you recall providing testimony about GX 3, which was the list of the properties purchased in the Bahamas? Do you recall that, sir?

A. I do.

Q. Okay. Just quickly, before I forget, No. 2, it says Albany Lot 44, Conch Shack. Do you see that, sir?

A. Yes.

Q. What was that?

A. This was a house that was conveyed or——that was conveyed to Constance Wang or just one that she lived in.

MR. COHEN: Okay. And we can take this down.

Q. I believe you testified that you and Mr. Bankman-Fried and others, eight in total, wanted to live together in the Bahamas, correct?

A. I forget if it was exactly eight, but yes, a group of us wanted to live together.

Q. Fair enough. You and your girlfriend?

A. Yes.

Q. Mr. Bankman-Fried?

A. Yes.

Q. Mr. Yedidia and his girlfriend?

A. Yes.

Q. Others. Correct?

A. Yes.

Q. So you told us that you looked for——you looked for housing and you saw a place that was less expensive than the penthouse that was ultimately purchased. Do you recall that, sir?

A. A few places, yes.

Q. Few places. And when Mr. Bankman-Fried indicated he was interested in the Orchid 6 penthouse, you had a substantial disagreement. You told us that yesterday.

A. I had a disagreement.

Q. You didn't say substantial disagreement yesterday?

A. I forget exactly what I said yesterday.

Q. Didn't you tell us yesterday that you thought it was really expensive and super ostentatious?

A. Yes.

Q. Okay. But Mr. Bankman-Fried went ahead, went ahead with the purchase anyway, correct?

A. Right.

Q. And then you moved into the apartment.

A. I did.

Q. You and your girlfriend lived in one of the master bedroom suites, didn't you?

A. The nicest room in the house.

Q. And you lived there until you left the Bahamas in November of 2022, correct?

A. Correct.

Q. Okay. And prior——you told us this yesterday. Prior to November 2022, you were a billionaire.

A. So I believed.

Q. Okay. Mr. Bankman-Fried was a billionaire.

A. So I believed.

Q. The other members in the apartment were worth at least millions of dollars, correct?

A. So I believed.

Q. Would you regard it as really expensive for a group of billionaires and millionaires to live in a $30 million apartment?

A. The expense would be the same no matter the wealth of the people living in it.

Q. So your view is it was really expensive.

A. In absolute terms, yes.

Q. What about relative to the wealth of the people living in the apartment?

A. I don't really know what's reasonable for billionaires to do. I don't know other billionaires.

Q. So you have no view.

A. I felt confused about it.

Q. Okay. But not confused enough to move out.

A. Oh, I considered moving out many times.

Q. But you didn't.

A. I didn't.

Q. Okay. Now I want to move to a different topic, Mr. Singh. Bear with me a moment.

Do you recall yesterday that you told us that you were asked what your role was in the fraud against FTX's customers that you committed with the defendant? Do you recall being

asked that question, sir?

A. Or something to its effect, yes.

Q. Okay. Fair enough.

And you told us that "In September of 2022, I learned of the hole and even after that, implicitly and explicitly, I greenlit transactions that I knew must have been digging the hole deeper and therefore coming from customer funds." Do you recall giving that testimony yesterday?

A. Or something to that effect, yes.

Q. Okay. So you also testified yesterday that you first learned that customer funds were being deposited, FTX customer funds were being deposited in Alameda bank accounts as early as 2019. Do you recall that, sir?

A. Yes.

Q. And you gave us an example from 2019 and 2020, correct?

A. Sorry. I don't remember which examples I gave, but——

Q. That's fine. So I take it you didn't think that was wrong.

A. Not at the time.

Q. Okay. And then you told us yesterday that——and we'll get to this more in a bit——you told us about a sequence in June, beginning in June 2022, where you were asked to look into certain balances of Alameda. Do you recall that, sir?

A. I do.

Q. Okay. We'll get to that in a minute.

But you also told us that when you first learned about

the situation in June, "I thought Alameda had positive balances on FTX, that it was borrowing in lots in some places but that overall they had the money." Do you recall giving us that testimony?

MR. ROOS: Objection. I think Mr. Cohen is just rereading his testimony from yesterday.

MR. COHEN: I'm setting up the question, your Honor. This is cross-examination.

THE COURT: Mr. Cohen, I understand what's happening in this courtroom, and I don't need that. If you're reading from the transcript, read from the transcript and identify by page and line what you're reading from.

MR. COHEN: I thought I was. Okay. I will, your Honor.

THE COURT: Well, let's proceed that way.

MR. COHEN: Let's go to the transcript. For counsel and the Court's benefit, this is page 1404. You don't have to show it to the witness, but for counsel and the Court, lines 5 through 11.

BY MR. COHEN:

Q. "Q. What do you mean?"

"The June exercise, I thought Alameda had positive balances on FTX, that it was borrowing lots in some places but that overall, they had more money than they didn't. This suggested an entirely different reality. I was hoping that I

didn't really understand what Gary——what Gary meant by borrowing, but if I did, this was absolutely devastating."

Do you see that, sir? Did you hear that, sir? I'm sorry.

A. I hear that.

Q. And you gave that testimony yesterday.

A. I believe so.

Q. All right. So as of June——this is the date that you gave the testimony in——your concern was whether or not Alameda had assets to cover the borrowing.

A. I had other concerns as well.

Q. In the passage I just read, that was what you told us.

MR. ROOS: Speaks for itself.

THE COURT: Sustained.

Q. Now what were your other concerns in June?

A. The exercise showed that there were specific accounts that were extremely negative, like the main account. To be in that position suggested a use of "Allow Negative" that didn't meet the spirit that I expected these privileges to be used in.

Q. Okay. And so prior to June of 2022 was it your view that as long as the balances were offset by sufficient assets, the borrowing was appropriate?

A. That was not my view.

Q. What was your view?

A. On what specifically?

Q. Prior to June——I understand your testimony about June, and we'll come back to that——did you have a view about whether or not Alameda could borrow provided that the borrowing was supported by assets?

A. There were many circumstances in which I thought that would not be appropriate.

Q. You didn't think——you didn't think there were circumstances in which it would be appropriate.

MR. ROOS: Objection, vague and asked and answered.

THE COURT: Sustained.

Q. Mr. Singh, do you recall yesterday you told us you had many meetings with the government?

A. Yes.

Q. And I think you said you had about 20 such meetings.

A. That sounds right.

Q. And in those meetings the prosecutors would ask you questions?

A. They would.

Q. And you would try to answer them the best you could?

A. Correct.

Q. Okay. Do you recall meeting with them in——well, let me do it this way. Is it fair to say that your first meeting with the prosecutors was in November of 2022?

A. I believe that's right.

Q. November 21st?

A. I don't remember the exact date. Sorry. But I believe that's right.

Q. Is it fair to say that you had meetings in November, December, and January——November and December of 2022?

A. Yes.

Q. And then you had meetings with them again in January, February, and March of the following year?

A. Yes.

Q. And then you had additional meetings in May and August?

A. Sorry. I forget all the exact dates.

Q. And you had meetings in September and October.

A. Yes.

Q. Including a meeting this past week.

A. Yes.

Q. Do you recall having a meeting with the prosecutors on January 4th of 2023?

A. Sorry. I don't remember the specific dates of our meetings.

Q. A January meeting.

A. I remember meeting in January.

Q. Okay. Do you recall telling the prosecutors that to you, the idea of borrowing from anywhere, as long as you were good for it, didn't feel wrong?

A. I don't remember saying that.

MR. COHEN: Can we call up 3501-021 just for the

witness, please. Page 14.

Okay. If you can go to the last paragraph at the bottom, Brian.

And go to the last two sentences.

Q. Mr. Singh, read those to yourself and tell us whether or not they refresh your recollection that you told that to the prosecutors.

A. I don't——

MR. ROOS: Objection to the form.

THE COURT: What's the form objection?

MR. ROOS: To "telling it to the prosecutors" in the underlying question.

THE COURT: I'm sorry, what?

MR. ROOS: Just the formulation of the "do you recall telling that to the prosecutors."

THE COURT: Sustained as to form.

MR. COHEN: Let me see if we can address the Court's, counsel's issue.

BY MR. COHEN:

Q. Mr. Singh, read that to yourself, and does that refresh your recollection about what you said to the prosecutors?

A. Yes, but not about the exact topic we're talking about.

Q. So it doesn't refresh you about the topic we just discussed.

A. About borrowing in general? No. This refreshes me on

something specific I thought about bank accounts.

MR. COHEN: Okay. Then let's take that down.

Q. When you considered the assets that would be posted as security for the loans, did the nature——did you take into account the nature of the assets?

MR. ROOS: Objection, vague and foundation.

THE COURT: Sustained.

MR. COHEN: Sure.

Q. Coming back to——we were talking about what your thinking was prior to June of 2022. Do you recall that, sir?

A. I do.

Q. Okay. In the period prior to 2022 did you take——in thinking about what was going on at Alameda and whether anything was wrong, did you take into account the nature of the assets that Alameda was posting as collateral?

MR. ROOS: Objection, foundation.

THE COURT: Sustained.

Q. Now your view changed at some point? Or let me ask you a better question. When did you first believe you had done anything wrong?

A. I knew that I'd done something wrong when I helped doctor the Serum staking fees revenue.

Q. When was that, sir?

A. That was December 30th or 31st of 2021.

Q. Okay. And coming into the period prior to June, other than

the staking fees you just talked about, is there anything else you thought you had done wrong?

A. I'm not sure.

Q. And then you told us yesterday your view changed in September 2022; is that correct?

A. Sorry. On what specifically?

Q. About what you had done wrong.

MR. ROOS: Objection, vague.

THE COURT: Yes. I don't understand, Mr. Cohen. I thought the witness just said that he first believed that he did something wrong in December——I'm mistaken. Excuse me. You go ahead.

You can re-put the question.

MR. COHEN: Okay.

BY MR. COHEN:

Q. I want to understand, to the Court's comment, what you thought in September 2022 was wrong with your conduct.

A. My conduct before that point or after that point?

Q. Take it in steps. Let's do before first.

A. Before that point, I knew that in June, I had observed Alameda borrowing in large amounts in a way that didn't meet the expectations I had and what I'd been told about how Alameda would use things like "Allow Negative." Even in June, when I suspected there was wrongdoing there, I took cues from the people around me and didn't pursue it further.

In September, I understood not only had there been an enormous amount of borrowing but that the money wasn't there at all.

Q. Okay. So, all right. We're going to come back to June, we're going to come back to September. I don't want to do them in bits and pieces. Just let me cover another topic quickly.

Do you recall that yesterday counsel asked you questions about your compensation while you worked for FTX?

A. Yes.

Q. And I believe you told us that you made a salary of about 200,000?

A. Yes.

Q. And that you'd receive cash bonuses around 1 to 2 million; is that correct?

A. I think that's right.

Q. Now you also received loans from FTX, correct?

A. Many.

Q. And you touched on a loan yesterday, but I'd like to go over it with you in a bit more detail, sir. Let me just give you the foundation.

Is it fair to say that at a certain point you borrowed 477 million from FTX?

A. In a sense.

Q. In a sense. And this was to purchase options?

A. Yes.

Q. Shares in FTX?

A. Yes.

Q. Okay. And it was to buy more equity in FTX, correct?

A. To buy my first equity in FTX.

Q. Okay. And you said that one of the reasons you were looking to do this was you wanted to donate the money to charity.

A. Right.

Q. Did you end up doing that?

A. No.

Q. Okay. And you said that there were taxes used with regard to how it was to be structured, correct?

A. The reason I believe——

Q. I'm sorry. Let me ask a better question, sir. The "this" being how the loans would be structured.

A. The reason it was structured this way was so that there was a smaller outlay of cash from Alameda, with the tradeoff being that I took on a large debt.

Q. Okay. And you just answer this yes or no, sir. You consulted with attorneys about how to structure this loan, correct?

A. Yes.

Q. Okay. I believe you mentioned Dan Friedberg; is that correct?

THE COURT: Well, Mr. Cohen, it's not clear whether

you're asking whether he did that in connection with this or whether he ever consulted Dan Friedberg about anything.

MR. COHEN: I meant in this, your Honor.

MR. ROOS: Objection. Misstates testimony then.

Q. Who were the lawyers you consulted with about this $477 million loan?

A. Can Sun; Joe Bankman; two of Sam's personal tax lawyers, David Forst, Sean McElroy, and others.

Q. Where did David Forst and Sean McElroy work, if you know?

A. I don't know. I think Fenwick & West but I'm not sure.

Q. Fenwick & West was an outside law firm?

A. Yes.

Q. And Can, C-A-N, Sun was the general counsel of FTX, correct?

A. Yes.

Q. Now documentation was prepared for that loan, correct?

A. Yes.

Q. And you signed that documentation.

A. Yes.

Q. Now you also——did you also receive a loan for $10 million?

A. I did.

Q. And that was for funds you wanted to provide to your parents, correct?

A. Family and friends.

Q. Okay. Family and friends. And that loan was in 2021,

correct?

A. Yes, I believe early 2021.

Q. And that was money you borrowed from FTX in order to pay to family members.

A. Not quite.

Q. Was it money you borrowed from FTX?

A. No.

Q. You didn't borrow it.

A. I did borrow it.

Q. Okay. So——

A. Sorry. To be clear——

Q. Let me try, Mr. Singh. Did you borrow $10 million from FTX?

A. No.

Q. No. How did it get to you?

A. Sam gave it to me.

Q. Sam gave it to you from——through FTX?

A. I don't think so.

Q. Okay. And those were funds that were used to pay for your family-related expenses.

A. They were gifts to family and friends, and some amount was donated.

Q. Okay. Why don't we now move to another topic, Mr. Singh. And let's talk about June, June of 2022.

Well, I think we have to go back a little bit. Do you

recall giving testimony yesterday about a bug in the fiat@ account system?

A. I do.

Q. And without getting too technical, the effect of this bug was to make it look like Alameda's balances were more negative than they really were, or that——let me rephrase——that Alameda owed more money to FTX than it really did?

A. The effect of the bug was that the fiat@ftx.com's stated balance was more negative than the——than what it should have actually been, and Alameda was consuming this balance and treating it as something that they were on the hook for, as I understood, and so Alameda overestimated how much they should have had in bank accounts to back customer deposits.

Q. So the net of it was Alameda overestimated the amount it owed to——back to FTX.

A. Yes.

Q. And I believe you told us yesterday that you first became aware of the bug in 2021.

A. I think either November or December of '21.

Q. And tell us again how you first learned of it.

A. It was in the Bahamas office. It was late at night. Gary and Adam sat a few desks away from me, and I overheard them talking about the bug.

Q. Okay. And what did you overhear?

A. I think Gary was explaining that it existed. Adam was

worried. Gary assured that the direction of the bug was safe, that Alameda overestimated, not underestimated how much it should keep in banks.

Q. Okay. Did they discuss——did they go over how big the bug was at that time?

A. I can't remember if they did. I remember asking for details, and at some point I had an understanding of the size——

Q. I'm just asking about the conversation with Gary and Adam. We'll get to the rest in a bit. Can you try——can we try again, Mr. Singh.

A. I can't remember if they said the size of the bug.

Q. Okay. And you mentioned that Gary said it was in a safe direction. What did you understand that to mean?

A. That Alameda believed because of the bug that they should be custodying more, not less cash than they actually needed to for customers.

Q. So it was safe from the FTX point of view.

A. Yes.

Q. Okay. Do you remember how, if at all, Mr. Wang and Mr. Yedidia reacted to this?

A. Adam was worried.

Q. I'm sorry?

A. Adam Yedidia was worried about it. After Gary gave his explanation, he seemed relaxed.

Q. Isn't it true that Gary joked about the bug?

A. Yes. I think that's right.

Q. He thought it was funny, correct?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. He seemed relaxed about it, you said.

MR. ROOS: Objection.

THE COURT: Sustained.

He said Adam seemed relaxed.

MR. COHEN: I don't think that was the testimony, your Honor, but I'll ask again.

Q. What was Gary's reaction?

MR. ROOS: Objection. It was either asked and answered or it's speculation.

THE COURT: Sustained.

And you're right, Mr. Cohen, he did say Gary.

MR. COHEN: So then I don't need to go back since it's already in the record.

THE COURT: You don't need to go back.

MR. COHEN: Then I won't. Okay.

(Continued on next page)

Q. Did you have any reaction at the time, Mr. Singh, of this conversation?

A. I did.

Q. What was your reaction?

A. I shared Adam's worry. After Gary explained that it was safe, I asked Gary if Alameda is in fact tracking this number. Gary said he's pretty sure but that it wouldn't hurt for me to confirm. I asked Caroline if they were. Caroline said they were.

Q. Let's move forward then to June of 2022 now, sir.

I believe you told us you had a communication with Caroline Ellison about Alameda's net asset value being close to zero.

Do you recall telling us about that yesterday?

A. Sorry. I don't.

Q. Do you recall speaking with Caroline Ellison at all in June of 2022?

A. Yes.

Q. By speak, just to be clear, I mean either orally or over Signal or Slack or so forth.

A. That's how I interpreted it, yes.

Q. What was the gist of the conversation about the state of Alameda's net asset value?

MR. ROOS: Objection. Hearsay.

THE COURT: Why isn't it, Mr. Cohen?

MR. COHEN: It goes to the effect on the listener, your Honor.

THE COURT: That's relevant why?

MR. COHEN: Because we are talking about the state of mind of one of the coconspirators or the alleged coconspirators.

THE COURT: Mr. Roos.

MR. ROOS: Maybe I guess we will see where the answer takes us.

THE COURT: Overruled.

MR. COHEN: Can we have the question read back?

THE COURT: Sure.

(Record read)

A. The conversation I remember was the one in which Caroline sent the spreadsheet that we talked about yesterday. I don't recall parts of this conversation referencing that Alameda's NAV was zero.

Q. Do you recall anything with Ms. Ellison about what the state of Alameda was in terms of its solvency?

A. In June?

Q. Um-hum.

A. No.

Q. Let's move forward because I think you covered a number of different sequences with respect to June and I want to make sure I understand them, sir.

Can you please tell us, as best you can, who you spoke with about this bug in June.

A. You would like me to list the people?

Q. I would like you to list the sequence, to the extent you can.

A. Sure. Tell me if I'm -- if my answer --

Q. Do your best, sir.

A. Caroline sent a spreadsheet, I think a Google Sheet, that contained a list of accounts labeled as if they were from Alameda's pointer system, so Alameda's nomenclature and the total value held in each. These were accounts that Alameda owned on FTX, things like the fiat account and their trading account. They showed some extremely large negative number when considered together.

Q. If I could stop you for a moment, sir. Who did she send that to, the Google Sheet that you referred to?

A. I know that she sent it to me, Sam, and Gary. I don't know if she also sent it to other people.

Q. Was this on one Signal communication?

A. I don't remember.

Q. Are you sure she sent it to you, Sam, and Gary?

MR. ROOS: Objection.

THE COURT: Overruled.

A. I am sure that the four of us got on a Google Meet and worked on like investigating it. I am not sure that she only

sent it to the four of us.

Q. Let's continue with the sequence, sir.

A. Sure. Sam sees the spreadsheet and said something to the effect of, this can't be right. There has got to be a bug. Let's look into it.

Q. This was in a different Signal or the same Signal?

A. I can't recall. Sorry.

Q. Keep going.

A. I asked Gary how I could help. Gary told me that I could try my best to identify the accounts in the FTX database that either belonged to Alameda explicitly or morally, morally meaning that in the end there were things that Sam was responsible for.

I took a stab. My stab was ignored. Gary took a stab. I added a column to add notes for which elements of Gary's list -- which items Gary had pulled that I thought weren't actually belonging to Alameda. And then I recall Gary pointed out the bug. He calculated the bug.

Q. If I can stop you for a moment, sir.

These conversations you have just been going through for us, were they all over Signal or Slack, or any of them in person?

A. A number of it was over Google Meet, like done orally.

Q. Were there any that were in person?

A. I think Gary was next to me in the office, but I don't

recall for sure. Sam may have been. I don't think Caroline was next to me.

Q. So you don't recall Caroline being there in person?

A. Not for this.

Q. You are not sure if Sam was there in person?

A. Correct.

Q. Keep going.

A. Gary identified the bug and calculated its effect size, which was around $8 billion. Caroline posted a screenshot of the graph that she had created that showed two things. One was Alameda's unexpected balance breaks over time or unexplained balance breaks, which I understood to mean something like unexplained changes in the balances that they were fetching, things that they couldn't reconcile against records of trades or withdrawals.

And then she posted the effect size, I think, that either Gary or I had given her of the bug over time. These charts showed two lines that were largely parallel, implying that this bug explained at least a large portion of what was unexplained in Alameda's observed balance breaks.

Q. If I could stop you there for a moment, Mr. Singh.

You used a couple of phrases I just want to go over. You used a phrase called balance break. What did you mean by that?

A. Balances in a trading system change over time. There are

also transactions that can explain those changes. If you infer just from the transactions that you received what balances would result from them and you compare them against the actual balances that you are retrieving and fetching live, sometimes there is a difference because you might be missing records or you might be misinterpreting records. That difference is a break.

Q. In this situation was the break the size of the bug, the effect of the bug?

A. I don't think it was exactly. I recall that this chart Caroline showed suggested that a large fraction of it was explained by the bug.

Q. Do you recall, when you first spoke -- you overheard Gary and Adam Yedidia at the end of 2021 talk about the bug, whether the topic of a break came up?

A. I don't recall.

Q. Now, when you learned that the break was $8 billion, were you surprised?

A. Yes.

Q. Were you surprised that it had not been tracked?

A. I was surprised -- no, not exactly.

Q. Didn't you just tell us that Gary assured you it was being tracked by Ms. Ellison and others?

A. Gary believed that it was being tracked. Caroline assured me that it was being tracked.

Q. So Gary's belief was incorrect?

MR. ROOS: Objection.

THE COURT: I think the witness can handle that question.

A. No. Gary wasn't incorrect.

Q. What about Caroline?

A. Caroline wasn't incorrect.

Q. So it hadn't been tracked?

MR. ROOS: Objection. Vague.

THE COURT: Sustained.

Q. Let me go back to your answer because I want to make it a little more focused. When you answered about what was being tracked, were you referring to the balances in the fiat@ account or the effect of the bug or, I guess, both?

A. Just the balances in the fiat account.

Q. Based on your interaction with the work you did in June, did you have a view about whether those balances had been tracked prior to June?

MR. ROOS: Objection.

THE COURT: Sustained. Form at least.

Q. The topic of the break come up?

A. Sorry. When?

Q. About whether the break had been tracked since the end of the prior year that had come on.

MR. ROOS: Objection. When?

MR. COHEN: Since 2021.

THE COURT: I don't understand what counsel means by the break at this point.

MR. COHEN: The bug. The size of the bug.

A. Sorry. Your question -- could you repeat the question?

Q. Sure.

Let me ask it this way. Mr. Singh, did you ever track the bug, size of the bug or its effect, prior to June 2022?

A. Not prior to June 2022 that I recall.

Q. Based on your interactions with others at Alameda and FTX, do you think anyone else did?

MR. ROOS: Objection.

THE COURT: Sustained.

If I understand what you said, Mr. Singh, Gary told you that he thought the size of the overstatement was being tracked. Caroline subsequently assured you that that was so. Is that right so far?

THE WITNESS: That's not quite right.

THE COURT: Then correct me, please.

THE WITNESS: Gary assured me that the full balance, not separately the size of the error, was being tracked. Gary assured me that the fiat@FTX.com balance, which included the bug, was being tracked. Caroline assured me it was. I don't think anybody told me that the size of the bug was being tracked over time.

THE COURT: I said the size of the overstatement, not the size of the bug, Mr. Singh.

The bug was an error in the computer code, right?

THE WITNESS: Correct.

THE COURT: And it had an effect, right?

THE WITNESS: Correct.

THE COURT: The effect was to overstate the amount owed by Alameda to FTX, correct?

THE WITNESS: Correct.

THE COURT: Please, Mr. Cohen, take it from there.

MR. COHEN: Can we have just the last exchange with his Honor read back, please?

THE COURT: Yup. I think his Honor may have asked that question. I just want to hear it again.

(Record read)

MR. COHEN: I think his Honor has covered it.

Q. Very quickly, Mr. Singh, the fiat account was tracked, not the amount of the bug?

A. Not the size of the error as a result of the bug.

Q. I am going to ask you to complete the sequence, but before you do that, you used a phrase called morally responsible for certain amounts. What did you mean by that?

A. There are some accounts in the FTX system that are explicitly under Alameda's name, things like info@AlamedaResearch.com. There are other accounts, like

Project Serum accounts, that on their face don't belong to Alameda Research but that I understood, in the end, Sam beneficially owned. Those accounts would be morally but not explicitly owned by Alameda or Sam, so those were to be included inside of this calculation.

Q. Meaning in the event that they were needed, you understood that Sam would make use of those assets for Alameda?

A. Really just that they fell under the large umbrella of things that Sam controlled, which was not just Alameda.

Q. But you considered it in connection with considering the assets of Alameda?

A. I was told to pull those balances.

Q. And you pulled them?

A. Gary ended up pulling them.

Q. Why don't we complete the sequence, sir.

MR. ROOS: Objection.

THE COURT: I think it's a little hard to start in the middle of the ocean at this point. Try to pin it down.

Q. You told us, Mr. Singh, about communications you had with Gary, Sam, and Caroline over communications about addressing the impact of the bug. Can you tell us what happened next.

A. Gary identified -- I think I may have said this. Forgive me if I'm repeating myself. Gary had identified the bug. He identified its effect size as of the current date then, so as of the date we were doing the exercise. Caroline demonstrated

that this bug explained a lot of what had been unexplained in Alameda's observed balance breaks.

I believe I asked -- said I thought this was fixed in November. I don't remember if I got a response, but it's a silly question. It hadn't been fixed. I don't recall everything that happened after that.

The next thing I do recall is sensing from others a palpable sense of relief and even celebration. Sam made a joke or sort of like comment on how it was amazing that such a large balance break could be explained just by a single thing, a single bug.

Q. We have now talked -- everything you just told us about the bug took place in June and July of 2022.

A. I think everything I just described now was on a single day, like a single -- in a single hour over Google Meet or something.

Q. It's a series of communications over Google Meet?

A. One Google Meet, one long discussion over Google Meet.

Q. With potentially some in-person communications as well?

A. Yeah.

Q. Do you believe you are clear on the sequence of what happened?

A. I don't think I remember everything about it.

Q. But on what you just told us, you believe you are clear on that, correct?

A. I'm stating the sequence the best to the best of my ability.

Q. Now, we talked about the 20 interviews you've had with the prosecutors, correct, sir?

A. Correct.

Q. Do you recall speaking with them in January of this past year, January 4?

A. I don't recall the specific date, but I do think I met with them in January.

Q. And at that point you had already had many meetings with them, correct?

A. Yeah. I had had more than one.

Q. Does it refresh you that you had more than five?

A. I would believe it.

Q. Fair enough. And you had gone over the topic of what happened in June with them, correct?

A. I think so.

Q. Isn't it fair to say that you told the prosecutors that you had a surprising amount of haziness when trying to recall events in June and July of 2022?

A. I don't remember saying those exact words, but I did acknowledge that there was a lot that I -- there was a lot that I didn't remember the details around from that time.

Q. In particular as to June and July of 2022.

A. I don't know if I said specifically those dates or months.

MR. COHEN: Why don't we call up for the witness only 3501-021, page 17.

Brian, if you could go to the second-to-last paragraph and call it out, pull it up.

Q. Mr. Singh, take a moment and read this to yourself. The question is whether it refreshes your recollection as to what you told the prosecutors about your haziness in the meeting with them on January 4, 2023.

A. Sorry. Could you repeat the ask again?

Q. Sure. This is whether or not it refreshes your recollection as to what you told prosecutors about your surprising amount of haziness in 2020 in June and July of 2022. Yes or no, does it refresh your recollection?

A. I still don't remember having said it specifically about June or July of 2022, but I could believe that I did.

MR. COHEN: We can take that down.

THE COURT: The question was, does it refresh your recollection, not whether you could believe that you did.

THE WITNESS: Fair point. The transcript or, I guess, the notes themselves don't actually refresh my recollection. I do separately remember --

THE COURT: You've answered the question.

Could we move on.

MR. COHEN: Yes, your Honor.

Q. Let's continue with what happened in June.

Do you recall telling us, Mr. Singh, that after the discussions we have already covered there was a discussion about fixing the bug?

A. Forgive me. I missed I think part of your sentence, but I do remember there being discussions about fixing the bug.

Q. Just to remind us, what were those conversations about?

MR. ROOS: Objection.

THE COURT: I imagine they were about fixing the bug. Isn't that what the point was?

MR. COHEN: It did occur to me, your Honor.

THE COURT: Good.

Q. Who was tasked with fixing the bug?

A. I wasn't involved in the project, so I don't know who was tasked with it. I do know that Gary and Adam worked on it.

Q. Was a document created to document what had happened with the bug fix?

A. Adam wrote one.

Q. Did you ever hear the term a postmortem document?

A. Yes.

Q. What did that refer to in this context?

A. A document describing an error or like a bug and the sequence of steps taken to address it and lessons to take.

Q. And did you have occasion to review the postmortem relating to the bug that Adam prepared?

A. I don't think that I read it in its entirety. I did talk

with Adam about it.

Q. Did you think that the fix had been done properly?

A. Yes.

Q. And the postmortem referred to the fix of the $8 billion bug, correct?

A. And other considerations around it.

Q. Such as?

A. There were identifying the exact size of the bug, had some complicated elements. Adam walked through a lot of the considerations that he and Gary had sort of thought through. Beyond talking about the fix for the bug, it talked about the mechanical process that they took to ensure it wouldn't happen again and ensure a safe migration.

Q. So the technical issues that had been involved in fixing the bug and making sure it wouldn't happen again?

A. Yes.

Q. Did you think this was an appropriate thing for Gary and Adam to be doing?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Did you have a view about whether or not this memorandum should have been prepared?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Let's move on, Mr. Singh.

You mentioned yesterday that there came a time when there was an attempt to split out the balance of the fiat@ account from Alameda and FTX.

Do you recall that, sir?

A. I do.

Q. And when in relation to the bug fix was this?

A. I believe it was after.

Q. Was it after the memo we just discussed?

A. I believe so, but I am not 100 percent certain.

Q. Can you describe for us what steps were taken to split out the balances.

MR. ROOS: Foundation.

THE COURT: Sustained.

Q. Were you involved with this at all, Mr. Singh?

A. No.

Q. Did you come to learn of it?

A. I came to learn that the exercise had been done.

Q. Did you learn the outcome of the exercise?

A. Some parts of it, yes.

Q. Tell us what you learned.

A. I learned that there had been an account, a new subaccount called FTX fiat old made under the info@AlamedaResearch.com main account, and that it now reflected the amounts owed by Alameda to FTX and that fiat@FTX.com now reflected the amounts that FTX owed to FTX.

Q. Are you done with your answer?

A. I am.

Q. Did you have an understanding of the purpose of the FTX underscore fiat underscore old account?

A. I inferred it.

Q. What did you infer?

MR. ROOS: Objection.

THE COURT: Ground.

MR. ROOS: Foundation, relevance.

THE COURT: What's the relevance?

MR. COHEN: The relevance is we heard about this sequence yesterday in a way designed to suggest it was done in secret and designed to keep this account from everyone.

MR. ROOS: Withdrawn.

MR. COHEN: I'm entitled to explore it.

THE COURT: The objection is withdrawn.

MR. COHEN: Can we have the question back, please.

THE COURT: Yes, of course.

(Record read)

A. I inferred that it was made and separated from fiat@FTX.com to track the correct amount that Alameda owed FTX in customer fiat deposits.

Q. To track it, correct?

A. Correct.

Q. Then there came a time when that account was moved again,

correct?

A. Yes.

Q. And I believe you told us about -- I am going to pronounce this incorrectly I'm sure -- the Seoyun account.

Do you recall that, sir?

A. I do.

Q. Do you have any involvement with that?

A. I moved the subaccount to this Seoyun account.

Q. You were the person who moved the account from FTX old to Seoyun?

A. I either moved it or I asked Andrea to move it. Either way, I directed it.

Q. For record purposes Andrea is Andrea Lincoln?

A. Correct.

Q. Who worked with Adam and Gary, correct?

A. Right.

Q. What was your purpose for moving it?

A. I was told to.

Q. Who told you?

A. Sam told me to move it and a trader told me where I should move it to, such that it was still tracked.

Q. I believe you referred yesterday to -- the trader was Terence Choo, is that correct?

A. I think it was Terence Choo, but there is some chance it was Caroline Ellison.

Q. Both Caroline and Terence worked for Alameda, correct?

A. Correct.

Q. In the trading group at Alameda.

A. That's my understanding.

Q. They advised you where to move the account, correct?

A. They did.

Q. Did you know why -- withdrawn.

Did the topic of why this account, as opposed to another one, came up?

A. In that I specified the parameters that I viewed as important. I specified that it shouldn't be under one of the accounts that was in consideration for how much Alameda was charged line-of-interest fees on. And I asked what is another account that you guys are tracking that isn't in that set.

Q. And they provided you with the account?

A. Yes.

MR. COHEN: Your Honor, this might be a good time for our morning break.

THE COURT: OK. 11:15, folks.

(Recess)

THE COURT: The record will reflect that the defendant and the jurors all are present, as they have been throughout.

The witness is reminded he is still under oath.

Mr. Cohen, you may proceed when you are ready.

MR. COHEN: Thank you, your Honor.

Q. New topic, Mr. Singh.

I want to go back. Counsel covered with you some questions about certain of the code base features.

Do you recall your testimony about that yesterday?

A. Forgive me. I don't know what you mean by counsel.

Q. I mean Mr. Roos. I'm sorry.

A. I recall talking about code changes.

Q. Let me start with allow negative. My first question is a when question. When did you first learn about the allow-negative feature?

A. July 2019.

Q. How did you learn about that?

A. I was told to write it. I did.

Q. So you were the person who put it together?

A. In some sense, I wrote the code, but I was sort of given pretty clear and explicit instructions from others.

Q. When you wrote it in 2019, what was the purpose of the code?

A. It was to facilitate FTX admins moving FTT from designated accounts or making trades in FTT from designated accounts and to modernize an existing set of features that would allow accounting-oriented accounts to go negative.

Q. Was this at all in connection with market-making functions?

A. I am not sure.

Q. Did there come a time that you came to believe that the

allow-negative feature was used in connection with market-making functions?

A. Yes.

Q. When was that, sir?

A. I don't know precisely.

Q. Approximately is fine.

A. 2020.

Q. How did you learn of that?

A. I remember a conversation I had with Gary Wang in which I was thinking about making some changes to some code related to OTC trades, and I noticed that Alameda was the only provider --

Q. Could I interrupt you for a moment, sir. Can you tell the jury what OTC trades are.

A. Over the counter. I don't think that does a great job describing it. If I may.

Q. Does it mean not on the exchange?

A. No.

Q. Tell us what you are thinking.

A. It means not on an order book. So a customer could basically request -- just say I want to buy one Bitcoin. Tell me how many dollars that takes. They get back an answer. They have some time before they have to accept -- before they can -- before that sort of quote expires. They can say I accept and it happens. This is different from submitting an order on an order book.

Q. Please continue.

MR. ROOS: Objection. Calls for a narrative.

THE COURT: Sustained. Ask a more specific question, please.

MR. COHEN: Sure.

Q. You were describing for us how you came to the understanding of a connection, if any, between allow negative and market making.

A. As a part.

MR. ROOS: Objection. I don't think there was a question. He was just describing what the witness was testifying to.

THE COURT: Yes. I agree.

Q. Could you tell us the basis for coming to the view, if you did, that there was a connection between the allow-negative code and market making?

A. I am describing only one instance. There may have been others. Is that OK?

Q. Yup.

A. I was thinking about making some change, I can't recall what, to the code related to these OTC trades. I noticed that the balances of the provider, Alameda, weren't checked when accepting an OTC trade, meaning that if Alameda didn't have funds that would otherwise be necessary for making the trade, it could go through anyway.

I asked Gary about this. This is a reflection of allow negative. And he described to me the type of situation where this seems like the right thing for the exchange to do.

Q. Which was what?

A. I don't know if he gave this precise example, but one comes to mind.

THE COURT: Could we stick to what actually happened instead of what you think now.

THE WITNESS: Fair enough.

A. He gave an example. I can't remember the exact example. It seemed valid to me.

Q. Let me ask you this, Mr. Singh. As a result of the allow-negative feature, was Alameda allowed to sell tokens it didn't have at the time?

A. In some ways. But I have since discovered that that was -- allow negative was actually not the section of code proximately responsible for that.

Q. But at the time, meaning 2019 and 2020, that's what you believed?

THE COURT: Sorry. What is what he believed?

MR. COHEN: That the allow negative allowed Alameda to sell coins it did not yet own.

A. I don't know that I thought about it in 2019 and 2020. I expect that I was told that or thought about it in 2021 and certainly at least in one instance in 2022.

Q. In 2019, 2020, when you were working on the code, did you have a view about whether it permitted Alameda to purchase newly issued tokens?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Did you ever have a view about -- let me back up.

Did you participate, Mr. Singh -- let me back up.

Do you have an understanding of what it is to issue a token?

A. I have some understanding.

Q. Why don't you tell us that.

A. I am not sure I know that I am talking about what you are. Can you specify a little more what you mean?

Q. Sure. Do exchanges sometimes issue tokens?

A. Can you specify even further?

Q. For example, Binance issued BNB. Are you familiar with that?

A. Yes.

Q. And if Binance was issuing BNB or some similar token and a customer on Alameda wanted to buy at the issuance, would they be able to?

MR. ROOS: Objection. Foundation.

THE COURT: Yes. I think you have to lay a foundation for that.

Q. Based on your experience as the author of the

allow-negative feature in the code, are you familiar with whether those features had anything to do with Alameda's ability to buy newly issued tokens?

A. At the time I wrote the feature, I don't think I had anything relating to buying tokens.

Q. I meant selling tokens.

A. Even that. That was not the purpose that I was told it was made for.

Q. We talked yesterday about stablecoins.

Do you recall that, sir?

A. Yes.

Q. In your experience as the author of the allow-negative feature, did it have any impact on Alameda's ability to purchase stablecoins?

A. No.

Q. Did it have any impact on stablecoins at all?

MR. ROOS: Objection. Vague.

THE COURT: Overruled.

A. The feature changed nothing about Alameda's interaction with stablecoins.

Q. Did it have any effect at all?

MR. ROOS: Objection.

THE COURT: Asked and answered.

Q. Let me ask you this, Mr. Singh. It is going to take me a moment to pronounce this. Have you ever heard of a term called

auto de-leveraging event?

A. Yes.

Q. What's that?

A. It may take me a moment to explain. Is that OK?

Q. That's fine.

A. In the context of FTX, some liquidations were performed off market, which is to say an account that didn't have sufficient collateral to support its positions would enter liquidation. And, if it was getting close enough to being under water, those positions would be closed out or traded against designated backstop liquidity providers, as opposed to selling those positions in the market so it can be done more quickly.

Those backstop liquidity providers could continue to absorb these trades, as in act as the counterparty to these liquidations, so long as they met a few conditions.

If those conditions weren't met for any backstop liquidity providers for a given liquidation instance, then FTX enacted auto de-leveraging. This is not code I wrote, so I'm not super familiar, but my understanding of what this is is that it's essentially like picking other users that have not explicitly opted in being backstop liquidity providers to perform the same role for the sake of that liquidation.

(Continued on next page)

BY MR. COHEN:

Q. Let me see if I can just break this down.

You said that this situation arose when an account was in danger or at risk of being closed out. Can you explain what you mean by that.

A. Accounts were liquidated, under some circumstances; some liquidations could result in ADL events.

Q. Okay. And by closed out, is this what we were talking about——well, let me rephrase.

This means a customer has a position in an account and a certain amount of collateral and the value of the position starts to fall sufficiently that the——that that——actually, I forgot to ask you one more thing.

Have you ever heard the term "risk engine"?

A. Yeah.

Q. Okay. Did FTX have a risk engine?

A. Yeah.

Q. How did that——what was that?

A. A lot of things that went into it, I suppose. Do you mind clarifying some more.

Q. Did the risk engine have anything to do with closing out positions?

A. Right. Liquidations were a part of the risk engine.

Q. Okay. And so if the risk engine, which was basically computer run, noticed that an account was going below its

collateral limit, it would step in and liquidate that account, correct?

A. That's almost right. If it noticed that it had insufficient collateral to support its positions. There was not a collateral limit at play.

Q. So it would go into the customer's account and sell the positions to get it back in balance, correct?

A. That's not exactly how I'd put it.

Q. How would you put it, sir?

A. That the liquidation engine would sell, or buy, close out their positions, because the customer could be long or short.

Q. Okay. And then you referenced something called a backstop liquidity provider. What was that?

A. Designated accounts were used as the counterparties for some of the trades that were required to close out these positions.

Q. And was Alameda a backstop liquidity provider?

A. It was.

Q. Were other entities backstop liquidity providers?

A. Over time there were many.

Q. So if the engine was closing out an individual customer's account and there weren't sufficient assets, the backstop liquidity provider would step in, correct?

A. It didn't depend on if there were insufficient assets. The customer would be getting liquidated because they had

insufficient assets.

Q. And if that were the case, then the backstop liquidity provider would step in.

A. Right, under some further conditions.

Q. Okay. And what would happen if the backstop liquidity providers didn't themselves have sufficient collateral?

A. If none of them did——this would be one criterion for eligibility of a backstop to match against this liquidation. If there were no such eligible backstop liquidity providers, then the system would perform ADLs, or auto-deleveraging fills.

Q. What did that mean?

A. It meant——this area I'm a little uncertain about because I didn't write the code, but I believe it's that it selected other customers to perform the same role that the backstop liquidity providers would have, and serve as counterparties to the liquidation trade.

Q. Okay. So if customer A had an account that was going into liquidity——liquidation and that account had insufficient assets, the next stage would be the backstop liquidity providers, correct?

A. Sorry. Could you repeat that.

Q. Sure. If the——I want to see if we can make this a little bit more concrete for the jury.

So if customer A had an account that was being liquidated and had insufficient assets, I believe you told us

the next step would be to take it the level of the backstop liquidity providers.

A. It's getting liquidated because it has insufficient assets.

Q. Correct.

A. So in getting liquidated, it may go and get——it may enter a mode in which it will be liquidated against backstop liquidity providers.

Q. Correct. And then I think you told us that if they, the backstop liquidity providers, had insufficient assets, we'd have an auto-deleveraging event?

A. There were multiple conditions that could lead to a backstop being ineligible. One of them is that they had insufficient assets. If that——if those conditions are met for all backstop liquidity providers, then the system would enact ADLs.

Q. And that would mean the in——the account would be covered by the assets of other customers on the exchange.

A. Not quite.

Q. Okay. Tell us quite.

A. There is not an exchange of value. There's a very small exchange of value in a liquidation trade. It's not that——it's not that the liquidating account is underwater and therefore needs to get topped up by other customers. It's that——it's that they have positions on that are risky that need to be handed off to other customers. Those other customers, be them

backstop liquidity providers or those selected by ADL, receive the positions at slightly better than market value, being that in that moment they actually make some money. It's not that they're giving up their collateral for it, but they are taking on risk that they did not themselves put on.

Q. Right. So using our example now, customer B or customer C or so forth, in your words, are having positions handed off to them.

A. Yes.

Q. And they're going to get them at a favorable price, but they themselves are now at risk, correct?

A. Right. But it may turn favorable quickly.

Q. Let me call your attention to July of 2020. Did FTX experience an auto-deleveraging event?

A. I recall it——I recall one around early August, so it's possible that this one was in July.

Q. Okay. Why don't you tell us what happened.

MR. ROOS: Objection, foundation.

THE COURT: Sustained.

Q. Okay. What do you recall about the auto-deleveraging event that took place in July or August of 2020?

A. I recall that it happened that there were ADL fills for what I think was the first time in FTX's existence, meaning that the——forgive me, I'm using the abbreviation, or the acronym——the ADL system had kicked in, which meant that there

were no——there was a point at which there was a liquidation and there were no eligible backstop providers.

Q. So it went to the next level, to the customer level.

A. Right.

Q. Correct. Were you aware if FTX had any response to this?

A. Yes.

Q. What was it, sir?

A. I don't remember everything about it, but I can describe some things that I talked about with Sam and Gary——

Q. Just describe what you remember.

A. It was undesirable for customers to take on these positions without opting in, basically being ADL recipients, all else equal. All else equal, this probably——this sort of universe of FTX customers and FTX itself would have preferred that it go to the designated backstop providers. Gary dug into why it was the case that there were no eligible providers. Gary determined that it was because, among other things, Alameda was not eligible and that Alameda was not eligible because its free collateral was zero and that the reason that its free collateral was zero was not because it had a bunch of positions but because it had tons and tons of open orders out——open orders for the purpose of providing liquidity on the hundreds of markets or so. Those exhaust collateral.

Q. You said that having this auto-deleveraging event was undesirable. What did you mean by that?

A. It's my opinion. I don't know if I can sort of claim that there's a higher level truth to it being undesirable or not.

Q. Well, you just said it. I'm just trying to get at what you meant by it.

A. Yeah, forgive me. I was clarifying. My opinion, and the opinion espoused by Sam and Gary at the time, was that having random customers take on the——these positions and have them handed off to them is worse than having designated customers take them on.

Q. Okay. To your knowledge, Mr. Singh, was anything done in response to the auto-deleveraging event?

A. Yes.

Q. What was that?

A. So Gary inferred that it was because——a cause was that Alameda was putting out a ton of orders and therefore had low collateral, had zero free collateral, but free for the——for the purposes of placing more orders or accepting trades, not free in the sense if they were to be liquidated, because there's an assumption that orders can be canceled upon liquidation, which would have just them getting a lot of collateral back.

THE COURT: You used the term pre collateral or free collateral. Would you explain that.

THE WITNESS: Free collateral.

THE COURT: First of all, was it pre collateral or free collateral?

THE WITNESS: Free collateral. Free meaning available.

THE COURT: Okay.

A. Customers——to clarify that, customers in FTX deposited collateral. Collateral would be exhausted or, you know, made not free by putting on positions or by having open orders out on markets that, you know, were liable if traded against to create positions.

The latter thing, open orders, were primarily responsible, as Gary told me, for Alameda having zero free collateral at the time of the liquidation that caused the ADLs.

I believe you asked me what happened.

Q. I did. And were any steps taken with respect to the code base upon that determination?

A. Yes.

Q. What was that?

A. I think at first I added some alerts in the section of the code that would basically emit if Alameda had or others had zero free collateral, and if that was actually the cause, such that in the next instance if this happened, we had some more debugging visibility. We did, and it showed zero free collateral. It was talked about——but I don't remember if it actually happened——increasing Alameda's line of credit, because increasing it increases their free collateral. Lines of credit directly increased collateral and therefore free collateral.

Q. And——I'm sorry. Finish your answer if you're not done.
A. Ultimately, Sam asked me why would it depend at all on free collateral if Alameda is just going to exhaust it all in open orders, and we know that the open orders aren't themselves risky, but not consuming collateral in the same way that having to position does, then why don't we, for Alameda, just remove the condition that we attend to its free collateral when determining if it's an eligible backstop provider for a liquidation.
Q. And was that condition removed?
A. Yes.
Q. That meant in an auto-deleveraging situation Alameda could again step in and be another source of capital.
A. It meant——correct. Specifically, the difference is that if the sole cause of Alameda being an ineligible backstop provider was that it didn't have enough free collateral, that was no longer considered.
Q. And in your view, Mr. Singh, would that be helpful to customers?
A. Yes.
Q. Why?
A. In my view at the time, it would be helpful to customers.
Q. Why?
A. Because it would prevent the undesirable ADL as opposed to backstop fills.

Q. Did you ever hear the term "code commits"?

A. Yes.

Q. What does that mean to you?

A. A code commit is a package change of code submitted to a code base.

Q. Did you ever author code commits?

A. All the time.

Q. Okay. And were they——were these like notes you made for other developers to see?

A. There were elements of the code commits that were.

MR. COHEN: If we could call up for the witness——witness only——DX 1102.

Pursuant to Defense Exhibit S-3002, it's been stipulated that this document——

THE COURT: I'm sorry. DX 3002?

MR. COHEN: Yes, that's the stipulation as to the authenticity of this document.

BY MR. COHEN:

Q. Mr. Singh, can you take a moment and take a look at what's been marked as Defense Exhibit 1102.

A. I see it. And forgive me. This isn't what you asked, but——

THE COURT: Just a minute.

THE WITNESS: Yes.

THE COURT: You stick to answering the questions that

are asked, okay?

THE WITNESS: Okay.

MR. COHEN: I think we've worked it out, your Honor.

THE COURT: What have you worked out?

MR. ROOS: I was just asking Mr. Cohen if it's just this page. I couldn't tell. And assuming it's just this page, no objection.

THE COURT: Well, first of all, is 3002 being offered?

MR. COHEN: 3002 is the stipulation, your Honor.

THE COURT: Yes, but has it been offered?

MR. COHEN: We offer 3002.

THE COURT: Received.

(Defendant's Exhibit S-3002 received in evidence)

THE COURT: Now what about this 1102?

MR. COHEN: Your Honor——

THE COURT: Let's get the first question answered. Is it a one-page document?

MR. COHEN: It is not.

THE COURT: It is not.

MR. COHEN: It is not. We would like to offer page 1 and page 18, pursuant to the stipulation.

MR. ROOS: No objection to 1. And if we could just see 18.

No objection, to those two pages.

THE COURT: Pages 1 and 18 of Defendant's 1102 are

received.

(Defendant's Exhibit 1102 (pages 1 and 18 only) received in evidence)

MR. COHEN: Can we publish those to the jury, your Honor.

THE COURT: You may.

MR. COHEN: Brian, could you call them up, please.

BY MR. COHEN:

Q. All right. Let's start with page 1, Mr. Singh. Is this an example of a code commit, the top of page 1?

A. Yes, this is one representation of a code commit.

Q. So if you look at the——

MR. COHEN: Brian, if you could call out the top paragraph.

Q. Okay. So this one, for example, is author Gary Wang, date May 23rd, "add borrow column to balances." What's your understanding of what this means?

A. Forgive me. What do you mean by "this"?

Q. My question is simply: Is this an example of a type of code commit?

THE COURT: Asked and answered.

Q. Okay. Let's go to page 18.

Okay. If we could go to the top, the top box. We've been talking about the period of August 2020 and the auto-deleveraging event, and there's a line that says, "Author:

Nishadsingh1." Is that you, sir?

A. That's me.

Q. And there's an entry that says "address ADLs (#977)." Do you see that, sir?

A. I see it.

Q. What did that refer to?

A. A little easier if——I could be more confident if I read the corresponding code, but I assume this is one of the two changes I discussed so far——there were others——about making ADLs less likely.

Q. Okay. And continuing on the page.

MR. COHEN: If we go down to the next box. Go down further. Okay. Call that out.

Q. This is another code commit written by you, sir?

A. Yes.

Q. Okay. And it says, "be extra careful not to liquidate PMM, clean up messages." Do you see that, sir?

A. I do.

Q. Okay. What's a PMM?

A. The primary market maker, which meant Alameda.

Q. Okay. Because at the time it was the main market maker for FTX, correct?

A. PMM is also how the code referred to that.

Q. And what did you mean by "be extra careful not to liquidate"?

A. I think answering this requires me continuing the story of what happened in response to ADLs.

Q. Go ahead.

MR. ROOS: Objection.

THE COURT: What's the objection?

MR. ROOS: Calls for a narrative.

THE COURT: Yes. We have to take a very short break in any case.

MR. COHEN: Oh, okay.

THE COURT: I think ten minutes ought to be enough.

THE DEPUTY CLERK: Would the jury please come this way.

(Continued on next page)

(Jury not present)

THE COURT: Be seated, folks.

So you have something to take care of that was discussed earlier today. This is the time.

MR. COHEN: Okay. Thank you, your Honor.

(Recess)

(In open court; jury not present)

THE COURT: Mr. Roos, the point you wanted to take up at some point, the evidence issues, how long do we need for that?

MR. ROOS: Ten minutes.

THE COURT: All right. We'll do it after we send the jury to lunch.

MR. ROOS: Okay.

THE COURT: Okay. Let's go.

(Continued on next page)

(Jury present)

THE COURT: The record will reflect that the defendant and the jurors all are present, as they have been throughout.

You may continue, Mr. Cohen.

MR. COHEN: Thank you, your Honor.

If we could bring up the exhibit we were just looking at.

BY MR. COHEN:

Q. And these are more general questions, Mr. Singh.

As a general matter, who at FTX was able to access these codes, these codes we were looking at? The code commits. Excuse me.

MR. ROOS: Objection, foundation.

THE COURT: Yes. You need one.

MR. COHEN: Hmm?

THE COURT: Foundation.

MR. COHEN: Sure.

Q. Based on your experience as head of engineering at FTX, did you have an understanding of who might access the code commits we were just looking at?

A. They were available to the whole company in Slack, if nothing else. There were Slack logs of all the messages.

Q. Okay. Let me ask you another general question. From the FTX side, based on your experience as the head of engineering, who could have access; who could observe Alameda's accounts on

FTX?

MR. ROOS: Objection, same foundation.

THE COURT: Yes, sustained.

Q. Mr. Singh, based on your experience as the head of engineering, did you have an understanding about accessing customer accounts on the exchange, viewing customer accounts on the exchange?

MR. ROOS: Same objection.

THE COURT: Yes. Look, this isn't a matter of opinion. He either knows or he doesn't know.

MR. COHEN: Yeah.

Q. Did you know, Mr. Singh, whether you could see the Alameda accounts on the FTX exchange?

A. Whether I personally could?

Q. Yes.

A. Yes, I could.

Q. How were you able to do that?

A. The way any other FTX staff member could, using the admin portal.

Q. Okay. And the admin portal was a portal on FTX?

A. Yes.

Q. So for an FTX person to look at customer accounts and balances, so forth.

A. That was not the purpose.

Q. What was the purpose?

A. Customer support reasons might require looking at a customer's——

Q. Understood, understood, understood. But in addition to that, it allowed the FTX side to look at the customer accounts.

A. Yes.

Q. Okay. Let's move to another topic, Mr. Singh.

Did you ever hear of an entity called FTX US Derivatives?

A. Yes.

Q. What was that?

A. A company that used to be named LedgerX, I believe.

Q. And what business was LedgerX in?

A. It operated crypto options.

Q. And let me back up. Do you know who ran LedgerX?

A. Zach Dexter in the period that I was aware of.

Q. And just to set a foundation, what period was that?

A. 2021 and 2022.

Q. Did there come a time that FTX acquired LedgerX, if you know?

A. Yes.

Q. About when was that?

A. Also sometime in '21 or '22.

THE COURT: Before or after Zach Dexter was running it?

THE WITNESS: I believe after.

Q. And did Mr. Dexter continue to run the company even after it was acquired, or run what used to be LedgerX?

A. That's my belief, but I have no firsthand knowledge.

Q. Okay. Now Mr. Dexter, he was not a founder of FTX, correct?

A. He wasn't.

Q. He was not a founder of Alameda, correct?

A. Correct.

Q. Okay. What did FTX US Derivatives's trading platform deal in, if you know?

A. Forgive me. Are you referencing the potential integration into FTX.US or what Zach Dexter's existing company did?

Q. Integration.

A. The integration would support futures to be offered to US customers, pending approval.

Q. And you said pending approval. What did you mean by that, sir?

A. There was some regulatory process they were engaging in to get approval to list these futures.

Q. Do you know what entity they were seeking to get approval from?

A. At least the CFTC and maybe others.

Q. And I believe you told us yesterday that the CFTC was the commodities trading commission, I think was how you put it.

A. Yeah. Forgive me. I don't remember——I don't know exactly

what it is, but——

Q. Did you, Mr. Singh, have any involvement with this process of trying to get approval?

A. I believe I described yesterday the only part that I participated in.

Q. What was that?

A. It was Zach Dexter——it was me fulfilling Zach Dexter's request to show Alameda's historical collateral and collateral needs in their main account.

Q. And for this application for approval, did the topic of how liquidations were handled at FTX come up?

MR. ROOS: Objection, foundation.

THE COURT: Sustained.

Q. Did you know, sir, based on your interactions with Mr. Dexter, what topics came up in connection with the application for approval?

MR. ROOS: Same, and calls for hearsay answer.

THE COURT: Sustained.

Q. Did you have occasion, Mr. Singh, to review any materials in connection with the application?

A. There was at least one point in September of 2022 when Zach Dexter sent me an excerpt from the application.

Q. What did that excerpt refer to?

MR. ROOS: Objection.

THE COURT: Ground.

MR. ROOS: Hearsay.

Q. What was the topic of the——

A. Special privileges for Alameda.

Q. And did you review that, sir?

A. I responded to it, yes.

Q. And you responded to Mr. Dexter.

A. Yes.

Q. What was the nature of the response?

MR. ROOS: Objection, hearsay.

THE COURT: Why not, Mr. Cohen?

MR. COHEN: It's for the effect on the listener, your Honor.

THE COURT: On Mr. Dexter?

MR. COHEN: No. Excuse me. It's for Mr. Singh's state of mind.

MR. ROOS: Relevance.

THE COURT: Sustained.

MR. COHEN: Hmm?

THE COURT: Sustained.

MR. COHEN: I'm sorry. Okay.

THE COURT: 401 and 403.

BY MR. COHEN:

Q. Oh, let me go back. I meant to ask you: You testified yesterday about Alameda's line of credit. Do you recall that, sir?

A. Yes.

Q. And I think you told us that the line of credit at some point was set to $65 billion, correct?

A. I believe that was its value at the time of the collapse.

Q. Did you have any experience in understanding the amount of——amount that was actually drawn down on the letter of credit?

A. I calculated how much the main account was drawing on.

Q. When did you do that, sir?

A. I believe it was early September.

Q. Okay. That was my question. Prior to that point, prior to September, were you involved with any calculations of the actual drawdowns on the letter of credit?

A. In a way.

Q. What do you mean by that?

A. There was an exercise I believe sometime in 2021 to write code that would charge Alameda on one definition of its used line of credit. I made modifications to it after Gary wrote it.

Q. What modifications did you make?

A. I can't remember all of them. One of them was including more forms of collateral that Sam had proposed.

Q. Okay. Yes or no: In connection with that modification you worked on, did you come to learn about the usage of the line of credit prior to September 2022?

A. In the sense that it matched the definition used by this line of interest processor.

Q. Did you come to learn the number, the value, the balances used?

A. I remember——I remember one of the——indirectly.

Q. What do you mean by that?

A. I remember the revenue associated with this, with these fees, and I knew the rate that Alameda was charged on its used line of credit. Dividing one by the other suggests what the used line of credit was.

Q. And what was it?

A. I recall at some point it being $2 billion because they were charged one basis point.

Q. Okay.

A. And the daily revenue from them was $200,000.

Q. And approximately when did you do that analysis?

A. Would have been mid or late '21.

Q. New topic, Mr. Singh. You testified about an adjustment involving something called EcoSerum. Do you recall that, sir?

A. Are you referring to the Serum staking fees?

Q. Yes.

A. I recall that.

Q. Okay. And rather than me trying to summarize it, why don't you tell us what you testified to about that.

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Okay. Mr. Singh, didn't you tell us yesterday that you were asked to look at the staking fees, for Serum?

MR. ROOS: Objection. Misstates his testimony.

THE COURT: Sustained.

Q. Okay. Mr. Singh, let me back up.

What are staking services, Mr. Singh?

A. I can describe what Serum staking was in the context of FTX.

Q. That would be fine.

A. Serum was a token. It was available on FTX in both locked and unlocked forms. FTX supported staking facility in which customers could designate their Serum balances as staked, which would make them unsellable but would, on an hourly or daily cadence——that changed over time——reward them with some interest, also paid out in either Serum or locked Serum. This mirrored a lot of staking behaviors of other coins on——in various other contexts.

Q. Did FTX charge a——receive any payment for these services?

A. Only in the sense that I doctored them.

Q. Well, in your experience you said this was——this took place on other exchanges as well. In your experience did other exchanges receive payment for providing staking services?

MR. ROOS: Objection, foundation.

THE COURT: Sustained.

MR. COHEN: He just said it.

Q. Okay. Mr. Singh, did you have experience with other exchanges and their——whether or not they charged for staking services?

A. I had experience with some elements of other exchanges. I do not have experience with other exchanges' staking services.

Q. Now I believe you testified that Mr. Bankman-Fried directed you to backdate the Serum staking services document, correct?

A. No.

Q. Okay. Tell us.

A. Forgive me. Tell us what?

Q. You said no, so I don't want to get your testimony incorrect. What was your testimony, Mr. Singh?

A. Sam instructed me to backdate the payments. I didn't know anything about the document.

Q. But that ultimately did not take place, correct?

A. Sorry. What didn't take place?

Q. You ended up not doing the backdated transaction, correct?

A. No, I did. I backdated them.

Q. Okay. But you said you're not aware of the document, correct?

A. I'm not a——there was a document shown yesterday relating to an agreement between EcoSerum and FTX. That was not a document that I had seen until after the collapse of FTX.

Q. Let's turn to a new topic, Mr. Singh.

I believe you testified yesterday that there came a time that you got involved in political spending, correct?

A. Yes.

Q. Okay. About when was that?

A. In 2018, I became really excited about Prop 12 in California.

Q. And as a result of that, did you make any donations?

A. I did in that I believe I deducted from my floating balance at Alameda so Alameda would pay——like, would donate it.

Q. Okay. And turning to later in time, 2021 or so, did there come a time that you started to make donations in much larger amounts?

A. Yes.

Q. Okay. And I believe you told us that the process was that——well, is it fair to say that you wanted to make donations but you didn't want to be in the weeds with respect to the process?

A. For some of them.

Q. Okay. Which ones?

A. I——it's hard for me to enumerate them all.

Q. Okay. Is it fair to say that in terms of your political donations, you worked with various political consultants?

A. Sam and Gabe and Barbara.

Q. Did you also work with someone named Michael Sadowsky?

A. Yes.

Q. And Keenan Lantz?

A. Yes.

Q. Okay. And Gabe was Mr. Bankman-Fried's brother?

A. Yes.

Q. And he was a friend of yours from high school.

A. Dear friend.

Q. Right. And you worked with him in terms of political——political spending, correct?

A. Yes.

Q. You said you engaged him as a consultant, correct?

A. I don't think I said that, but I did.

Q. You did. In fact, you signed a——or you entered into a written consulting agreement with him, correct?

A. Yes.

Q. And Mr. Sadowsky was also an experienced political consultant, correct?

A. I don't know his experience.

Q. Okay. Well, did you believe he was in that field?

A. Yes.

Q. Okay. What about Mr. Lantz?

A. I don't——I don't know if I knew anything about Keenan Lantz's background.

Q. Okay. And the process was, at least with respect where the consultants were involved, that they would make recommendations to you about where to make donations and you would decide

whether you wanted to make them, correct?

A. There were many different processes.

Q. All right. Well, why don't you go through each one if there was more than one.

A. It will take some time.

Q. Why don't you just go through them by topic.

THE COURT: I'm sorry. By topic?

MR. COHEN: Yeah. I don't want to have to have the witness give a long narrative.

MR. ROOS: Objection.

THE COURT: Ask a question.

MR. COHEN: I will. Okay.

BY MR. COHEN:

Q. Were there times, sir, when you would receive a communication from Mr. Sadowsky about a contribution he suggested you make?

A. I can't remember if it was Sadowsky or Gabe, but there were times when I did receive communications from them about donations they'd want me to make.

Q. And then you would tell them whether you wanted to make them or not, correct?

A. In some cases.

Q. Okay. Well, why don't we take a look at——one moment.

Why don't we take a look at GX 477, please, in evidence.

Do you recall this document, sir?

A. I do.

Q. Okay. This is a chain between you and Mr. Sadowsky, correct?

A. It is.

Q. And the blue section at the top is your writing, correct, or your comment?

A. Yes.

Q. So you were saying to Mr. Sadowsky that you were averse to "explicitly woke stuff." What did you mean by that?

A. I preferred not to be giving to causes that were explicitly far on the left.

Q. Okay. But then you go on to say, "but if it's especially good or if it's hard to interact productively with Democrats without that, I understand." Do you see that, sir?

A. I do.

Q. Okay. And if we could scroll down to the next page.

And in the gray is Mr. Sadowsky's responses, right?

A. Right.

Q. Okay. And the bottom of the page, he says, so——at the bottom, second from the bottom here, "So if you're not comfortable about it, you should think about that a lot." "You should think about how comfortable you're going to be with it." Do you see that, sir?

A. I do.

Q. Mr. Sadowsky was telling you that if you weren't comfortable with that donation, you didn't have to make it.

A. I'm not sure if that's what he was saying.

Q. Are you saying that Mr. Sadowsky was telling you to make donations you didn't want to make?

A. I think when he says it here, it may be in reference to me being the centralized face of their spending and not specifically this donation.

Q. Okay. And in reference to that, if you didn't want to be the central face of the spending, you didn't have to, correct?

A. Not clear to me he's saying I didn't have to.

Q. Okay. In your view, did you feel that you were required to be the face of the political spending?

A. Not required.

Q. Okay. All right. So you told us also about a chat you were on called Donation Processing. Do you recall that, sir?

A. I do.

Q. And that was a chat involving someone named Ryan Salame?

A. Yes.

Q. And again, who was he?

A. He went by many titles, among them CEO of FTX digital markets.

Q. Okay. And prior to that he had been at Alameda, correct?

A. Maybe concurrent with that.

Q. And I believe you said that this was a Signal chat called

Donation Processing, correct?

A. Correct.

Q. And the way it would work is Mr. Salame would prepare a wire transfer, correct, to a political candidate?

A. That was part of what was coordinated in that thread, yes.

Q. And in that thread it would be presented to you for you to approve or not, correct?

A. I would be pinged to click OK in my email.

Q. And if you didn't click OK, it wouldn't be sent.

A. In some sense.

Q. In some sense. So you're saying that donations were made without you clicking yes.

A. Many of them were.

Q. Okay. And the ones in the queue, in the donation processing queue.

A. Yes.

Q. Okay. So you're saying that when Mr. Salame pinged you to okay the donation, that was unnecessary?

THE COURT: That's not what he said. They pinged him with wire transfers.

THE WITNESS: Right.

Q. So are you saying that wire transfers would go out of your account without you responding to the pings you received from Mr. Salame?

A. I think ones of some sizes would, and not all donations

using my name were done in this manner anyway.
Q. Well, on the ones in the donation——in the Donation Processing chat, that's what I'm asking about now.
A. There were ones discussed in that chat that did not go through my PrimePlus bank account and did not require me to click OK.
Q. Now the funds that you received to make political donations, they were loans to you, correct?
A. In a loose sense, some of them were loans.
Q. Well, didn't you feel that you were obligated to pay them back, sir?
A. That is a loose sense in which I felt that they were——might have been loans.
Q. Well, you were either obligated to pay them back or you weren't, right?
A. I don't think it's that simple.
Q. Okay. So when you saw transfers into your account for political donations, didn't you view them as loans to you that you were on the hook for?
A. I viewed them as things I was on the hook for.
Q. And to take it out of colloquialism, "on the hook for" means you had to pay them back.
A. I expected and wanted to pay them back. "Had to" relies on affirmative mutual understanding that may not have existed in some cases.

Q. So you did have to pay them back or you didn't have to pay them back?

A. I am not sure what the donor, or what, like, the loanee thought, or what the person lending to me, the lender, thought.

Q. So if I'm understanding you correctly, you didn't think you were on the hook for the loans.

A. I expect——I wanted to pay them back. That is distinct from there being any understanding or discussion about that.

MR. COHEN: Okay. Can we call up 3501-28, please.

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Mr. Singh, during the time you worked for FTX did you file tax returns?

A. Yes.

Q. And did you have an accountant who prepared them for you?

A. Robert Lee.

Q. And did you provide your accountant with information about the political donations you made?

A. Some of them, yes.

Q. Because you wanted to take account of them in payment of your taxes, correct?

A. Or make them just known to the people thinking about my finances, yes.

Q. Okay. Now let me back up and ask a foundation question.

You mentioned yesterday a person named Jayesh Peswani.

Do you recall that?

A. Yes.

Q. And just to remind the jury, who was he?

A. The head of finance at FTX.

Q. Okay. And I think you mentioned yesterday that you asked——sometime in 2021 you asked Mr. Peswani for a list of Alameda's loans to you.

A. I think I asked for that in October of 2022.

Q. And what was your reason for asking?

A. I expected it to list a lot of transfers to me.

Q. Okay. You expected it to list transfers to you because you wanted to understand what you were responsible for, correct?

A. I wanted to confirm it matched what had flown through my bank account.

Q. So you just wanted to know what was going through your bank account; you didn't really think you were responsible for it.

A. It was my desire and expectation to repay some of the transfers that had gone through my account. I didn't know if there was separate accounting of it, and I never talked about those expectations, or asked for something that could document that.

(Continued on next page)

Q. So you were unclear, you're telling us, about whether or not you had a responsibility to pay the loans back?

A. Yes. To clarify, I am not sure they were loans, the transfers.

Q. Isn't it true, Mr. Singh, that you thought that the money going into your account were donations that you were obligated to repay?

A. Obligated is complicated and might rely on mutual understanding.

Q. That you were on the hook for those funds?

MR. ROOS: Objection. Asked and answered.

THE COURT: We have done this already, Mr. Cohen.

MR. COHEN: Let's call up 3501-103, please.

MR. ROOS: Objection, foundation. 611/612.

Q. Do you recall in one of your many interviews being interviewed by the government attorneys on February 24 of this year?

A. I don't remember exact dates.

Q. You recall being interviewed in February?

A. Yes.

Q. And you recall telling the prosecutors that you thought of the money going to you to make donations as money that you were obligated to pay and that you were on the hook for those funds?

A. I don't remember the exact words I used.

Q. Was that the substance of what you told them?

A. That's similar.

Q. That you were on the hook for them?

A. That I believed that I was on the hook and I wanted to repay them.

Q. Now, didn't you also believe, sir, that when you received these transfers that you wanted to have them booked as loans?

A. Sorry. Could you repeat the question?

Q. Sure. When you received what you called -- I'm trying to use your language -- transfers to make political donations, you thought of them as loans and tried to get them booked as loans.

A. I expected that they would be booked as loans.

Q. And you tried to get them booked as loans, correct?

A. In a sense.

Q. Do you recall speaking with the government in January?

A. Yes.

Q. January 19?

A. Um-hum.

Q. You recall telling the prosecutors that when you did see the transfers into your account, you thought of them as loans and tried to get the transfers booked as loans.

A. I don't remember exactly what I said. It seems believable.

Q. Sorry?

A. Seems believable.

MR. COHEN: Your Honor, this might be a good time to take our lunch break.

THE COURT: Give me an idea of how much more you have.

MR. COHEN: I will certainly finish today, and probably about an hour, hour and a half.

THE COURT: We will take the lunch break, members of the jury. The lawyers and I have a little business to do, so we will make it a little longer today. I'll see you back at let's say five to 2.

(Jury not present)

THE COURT: Mr. Roos, what's on your mind?

MR. ROOS: Thank you, your Honor. If it's OK, I'll approach and give you a binder that has the witness materials for tomorrow.

THE COURT: Thank you.

MR. ROOS: Your Honor, I have just handed up to you the government exhibits that we intend to use tomorrow with Professor Peter Easton, who is the government's expert witness relating to accounting and financial calculations and tracing. We conferred with defense, and they helpfully identified their areas of objections so we could work this out before we are in front of the jury. I will just go sort of in order of the issues as I understand them.

THE COURT: We will try.

MR. ROOS: The first issue, as I understand it, is that one of the exhibits, which compares the balance of customer funds on the FTX database to the balance of funds

within FTX's wallets, hot wallets we have heard about in the case, it compares those two lines and it's Government Exhibit 1051, if your Honor wants to take a look.

As I understand the objection, your Honor, it's a Rule 16 objection, which is that, in the defense view, it's outside the scope of the --

THE COURT: I'm sorry. Back up.

It's a Rule 16 objection, and then I lost you because you looked down.

MR. ROOS: My apologies.

It's a Rule 16 objection, as I understand it, to the timing of the disclosure relating to the opinion that's reflected in the exhibit.

THE COURT: What's the objection, Mr. Cohen?

MR. LISNER: Your Honor, I'll address on behalf of the defense, David Lisner.

This graph purports to show it's not just assets, crypto assets, between what's shown in the site and what's shown in wallets.

Professor Easton's expert disclosure, as far as I could tell, and me and Mr. Roos have not yet had a chance to compare language, but I don't see any place where an opinion about the balance of crypto assets between wallets and the database is reflected in his disclosure, and he is not offered as a crypto expert. As I understand, tallying up the amount of

crypto assets in a wallet is not necessarily as simple as a bank account.

For that reason, we think this is outside of the disclosure.

THE COURT: I thought it was about timing.

MR. LISNER: That's the words Mr. Roos used.

The words I would have used is, Professor Easton's Rule 16 disclosure does not provide an opinion or describe an opinion regarding the balance of crypto assets. The closest I could find is opinion 9, which describes Alameda's balances, but this exhibit expressly excludes Alameda's balances and that's in a footnote.

MR. ROOS: Few things, your Honor.

THE COURT: It would have been helpful if somebody had told me that we were going to discuss this, because I have not looked at that Rule 16 disclosure in at least two months. I have no idea what it says today.

MR. LISNER: Apologies, your Honor. We received this and all other exhibits and backup for Professor Easton Saturday night at 11 p.m. This is the quickest we are able to address this.

MR. ROOS: Just to be clear on that, we produced the initial draft of this slide, and I think this is the answer to the disclosure question, we produced it on September 8, when we produced our exhibits.

And the question under Rule 16(g), in analyzing whether or not there is an appropriate disclosure, is whether or not there is a prejudice to the defense.

I would direct your Honor to two cases as you are considering this issue. The first is the Second Circuit's decision in *Tin Yat Chin*. I have a copy. I don't have a copy for everyone, but I can hand up my copy to the Court. I will give the cite. It's 476 F.3d 144. There the circuit, Judge Rakoff writing for the circuit, considered whether the government's disclosure of an expert, not just a slide, but an expert, one day before his testimony was unduly late and prejudicial, and the Court concluded that the district court's decision to give an extra day, so a one-day continuance, was sufficient. Here they have had this exhibit for about six weeks now, so that's more than enough time to prepare. There is no evidence of prejudice.

The second case I would point to is a district court decision by Judge Caproni. The case is *Rosario*. It has a Westlaw cite of 2014 WL 6076364. There she held that the production of the slides in that case for the witness provided sufficient disclosure to meet Rule 16's requirements.

THE COURT: Is there an opinion he is going to give about this?

MR. ROOS: His opinion is going to be that the amount in FTX's cryptocurrency wallets, there was a difference between

what was in there and what was reflected in FTX's database for customer deposits, so the black line meaning this is what the database said they had in customer deposits. What FTX was actually keeping in cryptocurrency balances was considerably smaller.

THE COURT: Mr. Lisner, where is the prejudice to the defense?

MR. LISNER: The prejudice is, your Honor, while we may have had a version of this slide, it's based on tens of thousands, maybe hundreds of thousands of database entries that we received Saturday night. But, more importantly --

THE COURT: Did they or did they not produce this to you on or about September 8?

MR. LISNER: I don't currently have a recollection of this particular slide. We may have, but we did not receive the data.

May I add one other point, your Honor?

THE COURT: I'm sorry. I don't understand the distinction you're drawing.

MR. ROOS: Here is the version.

THE COURT: Please hand it up.

I am asking Mr. Lisner what the distinction is between the graph and the data.

MR. LISNER: The distinction, your Honor, is that the graph is driven by an enormous amount of numbers, and we just

received the numbers the other day. So what this graph was based on we didn't previously have.

The other point I would add, and I'll rest after this, your Honor, is I believe from Mr. Roos jumping to case law about late disclosure, I take that as an admission that it was not fairly captured by Professor Easton's expert disclosure.

THE COURT: You will take it as an admission, and I will think about it.

MR. LISNER: Understood.

THE COURT: This graph, Mr. Roos, that you handed me, which is marked Government Exhibit 1051, does not actually look to me like the one in the book.

MR. ROOS: The difference, your Honor, is the temporal period. If your Honor sees the black-and-white version I printed out for you, which is draft, it goes back to 2019, the ultimate exhibit is just 2021, 2022, so it sort of elongates it, but it's otherwise the same analysis.

THE COURT: Same data?

MR. ROOS: Same data.

THE COURT: For the overlap period.

MR. ROOS: Correct.

THE COURT: I will consider that.

Next issue.

MR. ROOS: The second issue, as I understand it, is that the defense is objecting to admitting certain of the

government's exhibits, a majority of them, I think. No objection to using them as demonstratives.

I'll tell you that the government's plan is that there are exhibits in the binder before your Honor that are the results of the financial analysis. They come in two forms: Balance data over time, either bank accounts or data from the FTX transaction database, and the other form of analysis is financial tracing, so money flowing through accounts.

Those exhibits the government is offering into evidence, and they are all within the 1000 series. The government also intends to use certain demonstratives, such as, you know, a portion of a document to ask the witness whether or not he has analyzed the source of the funds for the investment that is reflected on the document, and for those we are not proposing to offer those demonstratives, which are in the 3000 series, into evidence.

I think the dispute, just to narrow it for the Court, is whether or not the 1000 series exhibits can be offered into evidence, and the government's view, informed, I think, again by the case law, is that both under the rules relating to experts, so a 703 chart, and the rules relating to summary charts, under 1006, that these are admissible into evidence.

THE COURT: Thank you.

Mr. Lisner, first of all, is it correct that we don't have an issue about the 3000 series?

MR. LISNER: No. We do have one issue. I think we have two categories of issues. I can describe them for you.

THE COURT: Yes.

MR. LISNER: In the 3000 series these are slides that, as Mr. Roos pointed out, the government intends to use as demonstratives. We have no problem with that, but a number of them include call-outs or pictures of documents not in evidence. If the government purports to publish excerpts of documents not in evidence, that's our concern.

For a lot of the documents I think we could work something out with the government, and I'm happy to speak with Mr. Roos over the lunch break, but the principle is, they shouldn't be allowed to publish documents not in evidence under the guise of demonstrative.

THE COURT: The expert is entitled, if memory serves, under Rule 703, to explain the basis for his opinions, and the opinion need not be based entirely on material in evidence, as long as the non-evidentiary material is evidence of a sort that experts in the field rely upon.

Now, obviously, there is a potential there at an extreme for abuse, and I appreciate that, but I'm not understanding why I should assume, as a categorical matter, that anything that's non-evidentiary that the expert refers to in justifying the opinion shouldn't be placed in front of the jury.

MR. LISNER: I think in 703, for material that is inadmissible for which the expert relies, there is a balancing test of whether it's sufficiently probative, which we take your point. It could be published, but not all of these documents appear to be relevant to the analysis. There are news articles which are hearsay.

And, again, I'm happy to speak with Mr. Roos over the break --

THE COURT: They are not hearsay to the extent that they are offered to illustrate the basis for the expert's opinion, but I certainly welcome your working on this further with Mr. Roos, because the problem I'm having with your argument about the 3000 series right now is that you are taking the categorical position, implicitly anyway, that anything that's not evidentiary that's called out in one of these demonstratives is inherently, simply by virtue of being non-evidentiary, unduly prejudicial and so forth, and that's not the way that analysis works.

MR. LISNER: I understand, your Honor. I take the point. Why don't we work out what we can and maybe whatever is left, an appropriate limiting instruction perhaps.

THE COURT: That's fine.

MR. ROOS: For what it's worth, I think besides the news articles, we intend to offer the exhibits that are cited in there, which may just sort of moot the issue.

THE COURT: Don't eat up my lunch with that. You eat up your lunches.

What about the 1000 series, Mr. Lisner?

MR. LISNER: The 1000 series is for only part of them. We are fine with admitting them as summary Exhibits 1000 up through 1017. But from 1017 to 1050, these are a series of, I guess I'll call them flow charts that purport to show or describe the flow of funds became bank accounts for certain transactions. For example, 1039 is the one I happen to have open in my book. This appears to be expert conclusion and not a 1006 summary or include expert conclusions and not be based solely on the underlying bank records, and I think maybe with more foundation we can get there.

The issue that we see is, Professor Easton is, according to his Rule 16 disclosure, is going to tell us everything was commingled between bank accounts, customer funds and FTX Alameda funds. And then these slides purport to separate it out, which funds are which. I don't know how Professor Easton continued to do that, but it sounds like an accounting conclusion and not a fair 1006 summary.

THE COURT: You invited my attention to 1039. You start off at the left side of the flow chart with $11 million in customer funds from customer bank accounts, and the only other inflow reflected is a $200,000 inflow over a couple-day period both going into North Dimension.

I can understand conceptually what you are talking about, but if 99 percent of it is from one source and 1 percent of it from the other, what difference does it make? It's immaterial. Isn't it?

MR. LISNER: It may be, but sitting here, I don't know that. So that's why I have to --

THE COURT: All you have to do is ask yourself what 200,000, as a percentage of 11.2 million, is, and then you know the answer.

MR. LISNER: That may be true, but the backup data for this, again, is a spreadsheet that drives this. We received it in 3500 material. And that spreadsheet says, in the absence of time stamps and similar sized inflows, we performed a conservative LIFO analysis. It sounds like there was an analysis applied to the numbers to get to this chart, and that's what the issue is for us.

THE COURT: We all know what a LIFO analysis is, don't we. So does the witness. Last in, first out.

MR. LISNER: Yes, your Honor.

THE COURT: Standard accounting, right?

MR. LISNER: Yes.

Professor Easton is being offered as an accounting expert.

THE COURT: Does that take care of that group?

MR. LISNER: That's everything on that group. That's

all of our objections.

THE COURT: We did make some progress here. I hope you can get to the goal line in time for your dessert.

See you later.

(Luncheon recess)

AFTERNOON SESSION

2:00 p.m.

THE COURT: Let's get the witness and the jury.

(Jury present)

THE COURT: The record will reflect that the jurors and the defendant all are present, as they have been throughout.

I hope everybody had a pleasant lunch break.

The witness is still under oath.

You may proceed, Mr. Cohen.

MR. COHEN: Thank you, your Honor.

BY MR. COHEN:

Q. Mr. Singh, let me call your attention to September of 2022, OK, sir?

A. OK.

Q. We talked about it briefly this morning. I want to come back to it.

I believe you told us that, in or about September, you received a message from Mr. Bankman-Fried about whether or not to close Alameda?

A. I received a message that had a link to a Google Doc that described arguments for doing so.

Q. And this was the Google Doc you described as being headed we came, we saw, we researched?

A. I think that was the title.

Q. And this was to you and to Gary, is that correct?
A. I know for certain it was to the two of us. I don't know if it was also shared with others.
Q. And I believe you testified yesterday that one of the topics it addressed was public relations about the relationship between Alameda and FTX.

Do you recall that, sir?

A. I do.
Q. And another topic was I think what you described as the leadership of Alameda, correct?
A. Yes.
Q. Do you recall whether any other topics were discussed in that document?
A. Give me a moment.
Q. Sure.

THE COURT: Isn't the document in evidence?

MR. ROOS: Yes.

MR. COHEN: Why don't we just call it up then.

GX-18.

Thank you, your Honor.

Q. This is much easier. Why don't we take a look at GX-18. Yesterday you went through it for us in the middle of the page, the reasons. You see that, sir?
A. Yes.
Q. And we talked just a moment ago about the PR hit relating

to Alameda and FTX and then current Alameda leadership.

Do you see that, sir?

A. Yes.

MR. COHEN: Brian, if you could reduce that, please. Go to the next page.

Come back to the first page.

I found it.

If you could call out the box, the reasons again. Look at entry number 2.

Q. The current leadership of Alameda is good, but not good enough to be able to trust with such a big operation. Then continuing to A. The fact that we didn't --

MR. COHEN: Can you highlight A, please, Brian.

Q. The fact that we didn't hedge as much as we should have alone cost more in EV than all the money Alameda has ever made or will ever make. That's the kind of critical mistake we're likely to make if I'm not actually running the show there.

Mr. Singh did you have an understanding of what EV was?

A. Expected value.

Q. Do you recall anything else that was discussed about hedging in this chat or around this chat?

MR. ROOS: Objection. Hearsay.

THE COURT: Sustained.

Q. Continuing down to 5 the topic was: Alameda is making some

money trading, but not enough to justify its existence.

Do you recall discussing that, sir?

A. I remember a comment from Gary giving his thoughts on this point in the chat.

Q. What do you remember?

MR. ROOS: Objection. Hearsay.

MR. COHEN: It goes to state of mind, your Honor.

THE COURT: Whose state of mind?

MR. COHEN: The coconspirators.

THE COURT: Mr. Roos, what do you say to that?

MR. ROOS: I'll withdraw this objection for now.

THE COURT: All right.

MR. COHEN: Could we have the question read back?

THE COURT: What do you remember was the question.

A. I remember Gary saying in the chat something to the effect of, I think Alameda is making 300 or $400 million a year. Sam, are you sure that the PR hit is worth more than that.

MR. COHEN: We can take this down.

Q. I believe you testified that after this was sent -- this GX-18 was sent across, you came to your own view about whether Alameda should be shut down, correct?

A. I had an idea. I don't think I had an overall view on whether it should or shouldn't happen.

Q. I believe you testified that your idea was that Alameda ought to be taken down off the FTX exchange, is that correct?

A. Not necessarily that it ought to. It just struck me as sort of like a less costly solution that maintained many of the same advantages.

Q. Then you had a number of chats with various people about the issue about whether or not Alameda should be -- should be -- go out of business, correct?

A. There was one Signal chat after this in hashtag organization in which some of that was discussed.

Q. Who was on that chat, sir?

A. Myself, Sam, Caroline, Gary.

Q. Were there separate chats just between you, Gary, and Caroline?

A. Those existed in Signal. I don't remember if we used them to talk about this.

Q. So you don't remember one way or the other?

A. I don't remember one way or the other.

Q. I think you also told us that there was some in-person meetings about the topic of closing down Alameda.

Do you recall that?

A. Yes.

Q. Who was at those meetings?

A. There was one meeting that I called immediately after posting in hashtag organization and getting some responses. Myself, Gary, Caroline attended.

Q. Mr. Bankman-Fried did not attend?

A. He did not attend.

Q. Whether it was at that meeting or otherwise, you told us about an exchange where you inquired about whether the borrows could be paid back.

Do you recall that, sir?

A. It didn't come up in that meeting. It was the elephant in the room in that meeting.

Q. Did it come up afterwards?

A. With Sam.

Q. Did it come up in your conversation with Ms. Ellison and Mr. Wang?

A. No, not the in-person one.

Q. What about on the chats?

A. Not that I recall, except for the chat with the four of us.

Q. What do you remember from that?

A. From the chat with the four of us, you mean?

Q. Yes.

A. I don't remember more than what's in my direct, but I could restate a lot of it.

Q. No need.

I think you told us that you asked whether or not returning Alameda's borrows was possible, and Ms. Ellison responded that it was not possible.

Do you recall testifying to that, sir?

A. I don't think those are my exact words.

Q. What were your exact words?

A. I enumerated the main things that I thought would be required to close Alameda down at FTX. One of them, I believe my phrasing was, close out all Alameda accounts. Caroline responded: That's impossible. I asked which part of it. She clarified the part about closing out accounts.

Q. Your understanding was, it was not possible because there were not sufficient assets to pay back the borrows, correct?

A. At first I was confused. That became my understanding over the course of the day.

Q. And this was based on what Ms. Ellison had said?

A. Ms. Ellison, Gary, and Sam.

Q. Now, did you do any verification of your own about this topic, any work of your own on this?

A. No.

Q. Let me move forward. I believe you testified that you had a conversation with Mr. Bankman-Fried on the balcony of the Orchid penthouse.

Do you recall that, sir?

A. I do.

Q. Before we get into it, let me just ask this question.

you told us about Mr. Bankman-Fried's demeanor yesterday. What was your demeanor, your state of mind?

A. I was very nervous. I was awaiting an explanation and eventually an apology. I was pacing.

Q. Were you anxious?

A. Yes.

Q. Were you stressed?

A. Yes.

Q. I think you told us that later in November you regarded yourself as suicidal.

A. And for a few months after.

Q. At that time as well?

A. Yes.

Q. You testified yesterday that --

MR. COHEN: Counsel, it's page 1406, line 12.

Q. First, how did the conversation begin? I said: Caroline is really freaked out about the NAV situation and so am I.

Do you recall that, sir?

Later on in the passage you were asked: What, if anything, did the defendant say in response?

MR. ROOS: Objection.

THE COURT: Start again, Mr. Cohen.

MR. COHEN: I'm trying to short-circuit this, Judge.

THE COURT: I appreciate that. But you start with a question and then you interpolate another question.

MR. COHEN: Maybe I should go slower then.

Q. Mr. Singh, do you recall speaking with Mr. Bankman-Fried about Caroline Ellison freaking out?

A. Yes.

Q. And she was freaking out over the point you had just made about the ability to pay back the borrows, correct?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. What was she freaking out about?

MR. ROOS: Same objection.

THE COURT: Sustained.

Q. Do you recall in that conversation that -- according to you, Mr. Bankman-Fried said, page 1406 to 1407: I am not sure what there is to worry about. NAV is fantastic by almost any measure. It was super positive, even if you don't include FTX and FTX US equity.

Do you recall that, sir?

A. Yes.

Q. And you told us you did not react positively to that, correct?

A. I asked further questions.

Q. Did you talk about any other topics in the meeting at the balcony?

MR. ROOS: Objection.

THE COURT: What's the objection?

MR. ROOS: Hearsay. He can answer yes or no.

THE COURT: Yes. You can answer yes or no and stopped when you have answered yes or no.

Q. Yes or no, did you talk in the balcony meeting about the

topic of FTX's marketing expenses?

A. Talked about expenses.

Q. Did you express the view that FTX going forward ought to keep expenses down?

A. Something to that effect, I did.

Q. Because you thought it was important going forward that FTX spend as little as possible until customers were repaid, correct?

A. I specifically was concerned about frivolous spending that may not pan out to be useful.

Q. So you wanted certainly frivolous spending to not be done, is that correct?

A. Correct.

Q. Other business spending to be as limited as possible.

A. I don't think I said exactly that.

Q. What did you say, sir?

A. I think I just asked if Sam would now sort of take seriously the act of cutting down on the expenses and curbing future ones.

Q. Now, you had mentioned yesterday that around this time you considered resigning from FTX, correct?

A. Correct.

Q. I meant to ask you, prior to September 2022, had you ever considered resigning?

A. Yes.

Q. When was that?

A. Once in 2018, once before moving to Hong Kong, a few times after distressing conversations with Sam or Gary.

Q. So this is over the four-year period from 2018 to 2022?

A. Yes.

Q. Mr. Singh, did you ever purchase an apartment in Orcas Island, Washington?

A. I did.

Q. When did you do that?

A. I did that in October of 2022.

Q. And Orcas Island is in Washington State or off Washington State?

A. Right.

Q. This was an apartment you purchased with friends?

A. It was a house that I alone purchased, though I intended it to be used by me and friends.

Q. And the purchase price was $3.7 million?

A. Correct.

Q. And you borrowed that purchase price from the FTX exchange, correct?

A. Correct.

Q. And you did this after the September meeting with Mr. Bankman-Fried you've been telling us about, correct?

A. I did.

Q. And in fact the closing for the apartment took place on

November 1, didn't it, sir?

A. I don't remember the exact date.

Q. Isn't it fair to say that you wired the funds sometime after October 2022?

A. Or late October, yes.

Q. Now, coming into that meeting did you expect FTX to go forward as a company, the September meeting on the balcony?

A. Would you mind clarifying what you mean by go forward?

Q. Well, did you expect that FTX would last as a business going forward?

A. Certainly for some amount of time, yes.

Q. Didn't you expect it to last as a business for years?

A. I am not sure what I expected.

Q. Well, do you recall speaking with the prosecutors on January 19 of this year?

A. I don't remember the specific dates in my meetings with them.

Q. Do you recall saying to them that in September you believed that FTX would last for years despite the awful situation?

A. I don't remember saying that.

MR. COHEN: Can we call up 3501-028.

If we can turn to page 8, third paragraph. Call that out, Brian.

Q. Read this to yourself, Mr. Singh, and I ask you, yes or no, if it refreshes your recollection that you told the prosecutors

that you believed FTX would last for years despite the awful situation.

It's the next paragraph below, Mr. Singh.

THE COURT: I'm sorry. 3501-28 what?

MR. COHEN: It's the paragraph we have just pulled up. I apologize. Page 8. Same page. Just the one below, your Honor.

A. This does refresh my memory.

Q. What's your memory, sir?

A. That I did tell prosecutors I thought FTX might last for years, not that it would.

Q. Let's move forward, sir.

Let's now go to November 2022.

MR. COHEN: Pull up GX-480A, please.

Q. This is a chat between you and Mr. Bankman-Fried that you reviewed yesterday.

Do you recall that, sir?

A. I do.

Q. And it's from November 6 of 2022.

A. Yes.

Q. The blue is you and the gray is Mr. Bankman-Fried?

A. Yes.

Q. In the first entry you say that one thing that seriously helped me is if I didn't have debts. I think most of them are loans, 500 million for me exercising, more for U.S.

investments. I hope we can unwind these but not sure.

Sir, this refers to the loans you have told us about earlier in your testimony, correct, that you took from FTX?

A. This refers to the 477 million on paper loan used for exercising and other loans made through me, Sam, and Gary to capitalize FTX US for it to make investments.

Q. And here you're seeking to have them unwound, correct?

A. I am hoping they could be unwound. I am not sure.

Q. Now, you are telling Mr. Bankman-Fried that it would help you not to have any debts, correct?

A. Right.

Q. By having the loans unwound.

A. Right.

Q. Then going to the third paragraph up here: Maybe 80 million extra or so are donations, personal, etc., that went through my bank account and are in my name, so 120 million pretax or something. I'm not sure that's the exact number.

Is that a reference to the political donations we talked about before the break?

A. It's a reference to that and more.

Q. What's the more?

A. Borrows from my FTX account against my FTT collateral.

Q. Anything else?

A. The 10 million that Sam gave me a few years earlier.

Q. You are telling Mr. Bankman-Fried here that you don't want

to be responsible for that, correct?

A. Right.

MR. COHEN: Can we continue down, Brian, to the gray.

Q. Mr. Bankman-Fried says: Will think about this. What does trade mean? Excuse me. I think about this. You say thanks. What does trade mean? And you explain. Sell FTT or SRM earlier in 2022. Is that correct?

A. Yes.

Q. SRM, we covered, is Serum?

A. Serum tokens.

Q. Your idea here was to set up a backdated trade so that you would not be responsible for these amounts you had borrowed, correct?

A. Correct.

Q. And that ended up not happening, correct?

A. Correct. I didn't go through with it.

MR. COHEN: We can take that down.

Q. Mr. Roos asked you a series of questions about your cooperation with the government.

Do you recall that, sir?

A. I do.

Q. I think we have established that you had at least 20 meetings with the prosecutors, correct?

A. I can't remember if we said at least.

THE COURT: I think we have covered that two or three

times today.

Q. Just to put this in sequence, you entered into a cooperation agreement with the government, correct?

A. I did.

Q. That was on February 28?

A. I don't remember the exact date. That sounds about right.

Q. Prior to that, you had a number of meetings with the government.

A. Yes.

Q. So you had meetings in November, December, and January with the government?

THE COURT: Mr. Cohen, we did all that before lunch.

MR. COHEN: There is a piece we have not done yet, your Honor.

THE COURT: Let's get to it, please.

MR. COHEN: OK.

Q. In the meetings before you had the cooperation agreement, you entered into a different agreement called a proffer agreement, correct?

A. I did.

MR. COHEN: We would like to offer 3501-11.

MR. ROOS: No objection.

THE COURT: Received.

(Defendant's Exhibit 3501-11 received in evidence)

MR. COHEN: Go to the second page, Brian.

Q. This was signed by you and your attorneys and the lawyers for the government?

A. I can't remember if all the signatures here are exclusively -- are within that group, but at least I know that some of them are.

Q. Do you recognize your own signature?

A. I do.

MR. COHEN: Let's go back to the first page. If we could call out the second paragraph, number 1.

Q. It says in bold: This is not a cooperation agreement.

Do you see that, sir?

A. I do.

Q. The government had not yet decided whether they would offer you a cooperation agreement at this point, correct?

A. I don't know what was in their heads. I had not yet been offered a cooperation agreement.

MR. COHEN: You can pull that back down, Brian.

If we can pull out paragraph 3.

Q. These proffer agreements would cover your interviews during this period with the government before a cooperation agreement was reached.

A. Correct.

Q. Maybe we don't have to go through line by line.

Is it your understanding, sir, that the government could use the information it received in these interviews to

pursue leads against you?

A. Yes.

Q. Even if you never got a cooperation agreement?

A. That's my understanding.

Q. Is it your understanding that if you made false statements in these interviews, you could be separately prosecuted for them?

A. Yes.

Q. Regardless of whether you got a cooperation agreement?

A. That's my understanding.

Q. Now, is it fair to say, Mr. Singh, that you were interviewed by the government on January 19 of this year?

A. I don't remember the exact dates, sorry.

Q. That's OK.

Do you recall the government asking you about the purchase of the Orcas Island house?

A. I remember discussing it with them.

Q. Isn't it true that you told them that you thought that there were points along the way when you had a pit in your stomach and felt things were wrong, but the purchase of the house was not one of those times?

A. I don't remember if those were my exact words.

Q. Words to that effect?

A. I don't remember.

MR. COHEN: Why don't we pull up 3501-28 at page 9.

If we can go to page 9 just for the witness, bottom of 9. Go back. I think we might have to go to page 10.

Go back to 9. I'm sorry, Brian. Top of 9. I got it.

Pull out the paragraph at the top of 9.

Q. Read the first paragraph to yourself. My question is simply whether it refreshes your recollection of you telling the prosecutors there are points along the way when you had a pit in your stomach and felt things were wrong, but the purchase of the home was not one of those times.

A. Sorry. I don't see an exhibit in front of me.

THE COURT: We are now getting into the area of essentially reading a document that's not in evidence. I know what you are trying to do, but it's not working, so try a different way.

A. My screen is blank.

Q. Your screen is blank.

MR. COHEN: Can we put his screen back up and then we will move on. Top of page 9.

(Continued on next page)

THE COURT: Please put a question.

MR. COHEN: Okay. Is it back up? I'm sorry.

THE COURT: Yes.

BY MR. COHEN:

Q. Again, Mr. Singh, yes or no: Does the passage at the top of that page, page 9, refresh your recollection about whether you told the prosecutors there were points along the way when you had a pit in your stomach and felt things were wrong but the purchase of the home was not one of those times?

A. Not really.

Q. Okay. Do you recall in that same meeting being asked about the political donations——

MR. ROOS: Can we take down the document.

MR. COHEN: Yes, please.

Q. Do you recall being asked in the same meeting about whether or not the political donations you made were loans to you?

MR. ROOS: Objection to what meeting.

Q. The meeting with the government on January 19th.

A. I don't remember what was discussed at each meeting exactly.

Q. Do you remember telling the government in January, whether you remember the date, that you did not feel like you——let me back up——there were points along the way when you had a pit in your stomach and felt things were wrong but you did not feel like that when you treated the transfers from Alameda as loans

without questioning further?

A. Still not sure I said that.

Q. You're not sure whether you ever told the government that the transfers from Alameda were not loans to you?

A. Sorry. Do you mind repeating the question.

Q. Yeah. Did you ever deny to the government that the transfers from Alameda were loans to you?

A. I don't know if I——I characterized them and described how I viewed them. I don't know that I——I can't remember what exactly I said.

Q. Did there come a time in January where you understood the government was frustrated with your proffer?

MR. ROOS: Objection.

THE COURT: Sustained.

Q. Did there come a time when you met with the government and you went over the topic of the Orcas Island house again?

A. I can't remember if we went over it multiple times or not.

Q. Okay. After the time we've just been discussing.

MR. ROOS: Objection.

THE COURT: What's the objection?

MR. ROOS: Vague.

THE COURT: Rephrase.

Q. You just told us about a meeting in January with the prosecutors——you didn't remember the date——where you talked about the Orcas Island house, correct?

MR. ROOS: Objection. I think he said he couldn't recall that, could not recall that.

THE COURT: Answer the question, Mr. Singh. if you can.

A. I recall speaking with the prosecutors at some point, at least one point, about my purchase of the Orcas Island home, even after I knew that it was drawing on customer funds.

Q. Do you recall telling the prosecutors, as of January 24th, that you viewed the spending as egregious and unnecessary?

A. Which spending?

MR. ROOS: Objection.

Q. On the Orcas Island house.

THE COURT: Well, rephrase the question, please.

Q. After the——do you recall having a meeting with the prosecutors in January, on January 24th, on or about January 24th, in which you told them that the spending on the Orcas Island house was egregious and unnecessary?

A. My spending on it was egregious, unnecessary, and selfish.

Q. Okay. Did you tell them that your spending on the political donations was egregious and unnecessary?

A. I don't recall what I said, but I agree with those descriptions.

Q. And you previously denied that that was the case.

A. Not that I recall.

Q. Okay. Now Mr. Roos showed you your plea agreement——excuse

me——your cooperation agreement.

MR. COHEN: Let's call that back up, 3501-002.

Q. If you start at the——right here, that lists out the counts you pled guilty to, correct?

A. Right. That's——that describes the first count and——

Q. We don't need to go through them all.

MR. COHEN: If we can go to the next page.

And pull out Count Six, Brian.

Q. Is it fair to say that one of the counts you pled guilty to, Mr. Singh, was a conspiracy to violate the Federal Election Campaign Act?

A. Yes.

MR. COHEN: I have nothing further, your Honor.

THE COURT: Thank you.

Redirect.

MR. ROOS: I'm sorry, your Honor. Could we have one moment with your Honor at the sidebar.

THE COURT: You may.

(Continued on next page)

(At the sidebar)

MR. ROOS: The last question was: "Did you conspire to violate the Federal Campaign Election Act?" "A. Yes." I intend to ask: "Who did you conspire with?" I just want to put that out there, in light of the prior rulings. I think they've opened the door. With any limiting instruction——

MR. COHEN: We would ask for a limiting instruction.

THE COURT: I'll give a limiting instruction.

MR. ROOS: Okay.

(Continued on next page)

(In open court)

REDIRECT EXAMINATION

BY MR. ROOS:

Q. Mr. Singh, the last question Mr. Cohen asked you was whether you pleaded guilty to conspiring to violate the Federal Campaign Election Act. Do you recall that question?

A. I do.

Q. Who did you conspire with?

THE COURT: Excuse me. Members of the jury, you're about to hear the answer to that question, and I remind you that regardless of the answer to that question, Mr. Bankman-Fried, for reasons that do not concern you, is not charged in this case with any violation or conspiracy to violate the federal election campaign laws.

Now you may answer the question.

A. Sam Bankman-Fried and Ryan Salame.

Q. You were asked earlier today if some notes——a few times today——if some notes refreshed your recollection. Do you remember those questions?

A. Some of them, yes.

Q. Did you take those notes that you were shown?

A. No.

Q. At your meetings with prosecutors, did you observe anyone taking notes?

A. Yes, sometimes.

Q. Did anyone ever ask you to review the notes?

A. Never.

Q. Prior to today had you ever seen them?

A. I've never seen those notes until today.

Q. Were you ever asked to review them for accuracy?

A. No.

Q. And have you ever read the entirety of the notes?

A. I don't think, except for today, I've ever read any amount of the notes.

Q. You were asked at the end there about a property you bought, a home. What happened to that property?

A. I forfeited it.

Q. What do you mean?

A. It was totally——

MR. COHEN: Objection.

THE COURT: What's the objection?

MR. COHEN: Beyond the scope.

MR. ROOS: He opened the door.

THE COURT: Overruled.

Q. Go ahead.

A. I bought it at a time when I understood that I was putting myself ahead of customers by doing so. I was embarrassed and ashamed. Forfeiting it seemed like one of the ways to right that one small wrong, at least a little. So the wrong wasn't small but the righting was small.

Q. You were asked some questions about auto-deleveraging event. Do you remember those questions this morning?

A. I do.

Q. And you were shown some computer code. Do you remember that?

A. I was shown code——commit snippets.

Q. Thank you. You were shown a code commit.

A. Yes.

Q. When was that from?

A. When was which part from?

Q. The code commit about auto-deleveraging.

A. August 2020.

Q. Now do you recall testifying yesterday about Alameda having a negative balance in September 2022?

A. Yes.

Q. And how big was the negative balance?

A. Gary told me Alameda was borrowing $13 billion in September 2022.

Q. And when Alameda was borrowing $13 billion in September 2022, was that the result of auto-deleveraging?

A. I fail to see the relationship between them. No.

Q. You were asked about earlier today a loan for 700——for $477 million. Do you remember those questions?

A. I do.

Q. What was the purpose of the loan?

A. The purpose of the loan was nominally for me to exercise my shares. I had money sufficient to do so otherwise. This particular loan was a part of a structure that Sam proposed with the goal of having Alameda lay out less cash than it would if I just exercised the original options I had.

Q. To be clear, did $477 million ever go to you?

A. No. It was really only on paper.

Q. You were also asked earlier today——

THE COURT: Before you go on, you used the phrase "exercise my shares." Please explain to the jury what you meant by that.

THE WITNESS: Sorry. Exercise my options.

Before the event in which I got the large $477 million loan, I already had a large amount of options with a very low strike price. Sam's proposal was to redo them to strike them at a much higher price, such that it would cost me more to exercise them but that this way there wouldn't be tax that ultimately Alameda would have to pay by letting me sell more FTT.

THE COURT: Now explain what you meant by "strike," please.

THE WITNESS: Options are contracts that give you the right to get equity if you pay some amount. That amount is the strike price. So in my case, I think my original options had a strike price of $2.60 something cents, meaning that in order to

get one share of equity, it would be $2.60 some cents to get a share of equity. They were restriked to be like some $10.86, I think, meaning that I'd have to pay more to get the equity, $10.86 I think for each share. So exercising after them being restricken would cost me more than exercising them in the state that they were granted to me.

THE COURT: Proceed, counselor.

MR. ROOS: Thank you, your Honor.

BY MR. ROOS:

Q. Mr. Singh, you were asked earlier today about some political donations and you said they were loans "in loose sense." What do you mean by "loose sense"?

A. These were amounts that I discovered had been transferred to me often after the fact. It is the case that I intended to repay them all until September, when I realized I no longer could. That's the only sense in which they are loans. There wasn't paperwork, there wasn't a discussion of the transfers to me that I was a part of, and when I——I requested loan sheets, like lists of loans that Alameda had given, when asked from Jayesh, from Caroline, and from Can Sun, did not——they did not include many of these transfers as obligations I had to pay back. So they weren't——they weren't really loans.

Q. Now you were asked a few questions a few moments ago by Mr. Cohen about times you considered resigning. Do you remember those questions?

A. I do.

Q. And you testified that you thought about resigning from FTX a few times; is that right?

A. Yes.

Q. How, if at all, was your contemplated resignation in the fall of 2022 different?

A. Oh, it was extremely different. In the fall of '22, I want——the reason I wanted to resign was because I knew that I was becoming party and participating in something heinously criminal; that to keep running the business without divulging to others that there was a hole, I would be betraying customers that deposited their money into the hole, betraying my other employees. The scale of wrongdoing was enormous. In previous cases where I considered resigning, my considerations were really just focused on me——things like if working in finance and trying to make money was better than working directly at a philanthropy, things like that.

MR. ROOS: No further questions.

THE COURT: Thank you.

Any recross?

MR. COHEN: No, your Honor.

THE COURT: All right. Thank you. You're excused, sir.

(Witness excused)

THE COURT: Next witness.

MS. KUDLA: The government calls Agent Richard Busick.

THE DEPUTY CLERK: Please step around and raise your right hand.

(Witness sworn)

THE DEPUTY CLERK: Thank you. Please be seated.

And can you please state your name and spell your last name for the record.

THE WITNESS: My name is Richard Busick, B-U-S-I-C-K.

THE COURT: You may proceed, Ms. Kudla.

MS. KUDLA: Thank you, your Honor.

RICHARD BUSICK,

called as a witness by the Government,

having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MS. KUDLA:

Q. Agent Busick, where do you currently work?

A. I'm a special agent with the Federal Bureau of Investigation, also known as the FBI.

Q. And how long have you been a special agent?

A. For over 21 years.

Q. And are you assigned to a particular unit at the FBI?

A. Yes, I'm a member of the Cellular Analysis Survey Team, also known as CAST.

Q. And how long have you been a member of the CAST unit?

A. I've been a member of the CAST unit for approximately two

years.

Q. Broadly speaking, what are your responsibilities and duties within that unit?

A. As a member of the CAST unit, we——we locate cellphones and mobile devices in the context of investigations and also to assist in locating people in realtime. We do this by utilizing the business records provided by the service providers, such as AT&T, T-Mobile, and Verizon, and by analyzing those records, we can determine which cell sites within the network a phone connected to at particular times, and then we can use that information to determine the approximate location of that phone at those times.

Q. And Agent Busick, have you received training related to the high-level cell site analysis you've just described?

A. Yes, I have.

Q. What types of training have you received?

A. There's a pretty extensive training pipeline to become a member of the CAST unit. Begins, as you might expect, with a basic course called Basic Historical Cell Site Analysis, where we learn the basics of what I just described, using the business records to determine the approximate locations of phones based on the data kept by those service providers when those phones connect to the network.

Q. And after the basic level of courses, have you received any advanced coursework?

A. Yes, following the basic course, I attended an advanced historical cell site course, where we delved into a bit more detail and got a lot of practical and hands-on experience, actually determining the locations of phones based on cellular records, producing maps and written reports, and just conducting general analysis, as well as developing an increased——an improved understanding of each of the providers' cellular networks and how they operate.

Q. And Agent Busick, as part of that training, does it ever require any completion of exams?

A. Yes, it does, and as it——as that training progressed, there were regular examinations that we were required to successfully complete.

Q. And are you required to conduct any ongoing training requirements, Agent Busick?

A. Yes, I am. So in order to become a member of the CAST unit, you have to complete a four-week certification course, which I did in fact complete. And that course involved more in-depth instruction and meeting with the representatives of each of the major service providers, so we met with custodians of records and cellular network engineers from AT&T, Verizon, and T-Mobile, to discuss in greater detail how their own networks operate, the types of records they maintain, and so forth. We had a lot of practical and hands-on experience in conducting historical cell site analysis. We received 40 hours

of instruction in radio frequency theory from the Florida Institute of Technology, where we learned, again, in greater detail about cellular network architecture, how cellphones work, and so forth, and we also received instruction and got hands-on practical experience conducting cellular network surveys or drive tests, where we can use some technology to actually determine the precise coverage areas of particular cell sites of interest.

Q. And approximately how many times have you performed a cell site analysis?

A. Well over a thousand times.

Q. And have you ever testified in court before as an expert in cell site analysis?

A. Yes, I have, approximately 18 times.

Q. And is that in both state and federal courts?

A. Yes, it is.

MS. KUDLA: Your Honor, at this time the government offers Special Agent——

THE COURT: Not necessary. Go ahead.

Q. Special Agent Busick, were you asked to perform a cell site analysis in connection with a particular cellphone?

A. Yes, I was.

Q. And at a general level, what were you asked to do?

A. At a general level, I was given a set of records for a particular phone——in this case it was an AT&T phone——and I was

asked to determine initially whether the records indicated that the phone was located or using cellular architecture within Manhattan during a particular time frame; and then later on, I was given more specific time frames and particular locations and asked to determine whether those records were consistent with that phone being located in——at or in the vicinity of those locations at those times.

MS. KUDLA: Mr. Bianco, can we please now show for the witness what is marked for identification as Government Exhibit 1080.

Q. And Agent Busick, do you recognize this?

A. Yes, that's the cover page to my report.

Q. And does this report summarize your analysis?

A. Yes, it does.

Q. Now did you prepare Government Exhibit 1080 after examining AT&T cellphone records?

A. Yes, I did.

MS. KUDLA: And at this time, your Honor, the government offers, pursuant to stipulation 2004, a stipulation as to business record authenticities, and pursuant to that stipulation, the government also offers Government Exhibits 1118 and 1122 as authentic copies of records from AT&T?

THE COURT: Government Exhibits 2004, 1118, and 1122 are received.

(Government's Exhibits 2004, 1118, and 1122 received

in evidence)

MS. KUDLA: Your Honor, may we publish Government Exhibit 1118?

THE COURT: Yes.

BY MS. KUDLA:

Q. Agent Busick, what is——now that the jury can see this, what is Government Exhibit 1118?

A. This is a page from the cellular records from AT&T for cellphone 650-906-9179, which I used for my analysis in this case.

Q. And did you review more than one file type for your analysis?

A. Yes. AT&T provides the files in two formats. It provides a pdf file, which makes for easy viewing and reference; and they also provide the identical records in a text file, which is actually the file that we upload into the software that we use for mapping, but contains the same information as the pdf.

Q. And Agent Busick, which file type are we looking at here?

A. So this here is the pdf file.

Q. And is Government Exhibit 1122 the text file?

A. I believe it is, yes.

Q. Now, Agent Busick, did you prepare Government Exhibit 1080 after examining the AT&T records that we see in Government Exhibit 1118?

A. Yes, I did.

Q. Agent Busick, how many——approximately how many pages of data are captured by Government Exhibit 1118?

MS. KUDLA: And we could take——Mr. Bianco, could we go to the last page of this document.

I think it's 14,941.

A. That is about right.

Q. Okay. And is it fair to say, Agent Busick, that there are thousands of rows of data in this exhibit?

A. Yes, there are.

Q. Now does Government Exhibit 1080 accurately summarize certain portions of these records?

A. Yes, it does.

MS. KUDLA: Your Honor, the government offers Government Exhibit 1080 pursuant to Rule 10006.

THE COURT: 1006.

MS. KUDLA: 1006.

THE COURT: But it's received. You just got carried away with the pages.

MS. KUDLA: Fair enough.

(Government's Exhibit 1080 received in evidence)

BY MS. KUDLA:

Q. Agent Busick, we'll turn back to your summary in a minute.

MS. KUDLA: And we can take down Government Exhibit 1118 at this time.

Q. First, I'd like to just discuss the basic concept involved

in cell site analysis. At its most basic level, how does a cellphone make or receive a phone call?

A. The important thing to understand about a cellphone is that it's basically a radio. It's——a good way to think about a cellphone and how it works would be to think about a pair of walkie-talkies that you may have played with as a child, or maybe your kids have played with, or if you have one and you give one to a friend, and you're within a short distance from each other, usually line of sight, you press the button and you can talk back and forth between those walkie-talkies. A cellphone is working on the same principle, that rather than talking directly to another cellphone, it's sending a signal out which is being received by a cell site that's been established by a service provider for the purpose of connecting with nearby cellphones.

Q. Agent Busick, I think that was my next question. What is a cell site?

A. So a cell site is nothing more than a particular location where the service provider placed antennas for the purpose of connecting with nearby cellphones. You might think of a cell tower, you may think of, on the standalone towers, that triangular structure on the top with the antenna that we see everywhere on the sides of highways and so forth. That's one example. Although it doesn't have to be on a tower. It may be on the sides of buildings, could be on lampposts or other poles

on the street or even inside of buildings. The important thing is it's just a particular location where the service provider has placed those antennas.

Q. And how do cellphones interact with the cell site?

A. So while your phone is off, before it's even connected to the network, it's scanning the signals from nearby cell sites looking for the cell site that provides it with the best signal, so that when you make or receive a call, you have a good quality connection and can make that call. So it's constantly scanning the network, looking for that best signal, as well as identifying itself to the network as to where it's located in the network, so if somebody calls your phone, the service provider can appropriately route it to your call, so that by the time you pick up your phone and punch in a number and press send to make a call, your phone already knows which cell site is providing that best signal, and when you press send, your phone is communicating with that nearby cell site and then it's being routed throughout the network to wherever its ultimate destination is, whether that's on the other side of the street, across the country, or around the world.

Q. Now you've mentioned the term "service provider." Who operates cell sites?

A. So each cell site——each service provider operates their own network of cell sites. So AT&T operates a network of AT&T cell sites, T-Mobile operates T-Mobile cell sites, and Verizon

operates Verizon cell sites. So if you——

Q. On that point, do service providers maintain data about certain cellphone interactions with cell sites?

A. Yes, they do.

Q. And what type of cellphone interactions are captured?

A. So in this case, where we're looking at an AT&T phone, AT&T maintains records for every connection between that phone and the network, to include when a call is made or received, when a text message is sent or received, or when that phone is utilizing data connection, data services. This might include using the internet, any types of apps, anything that's using cellular data to connect to the network.

Q. Now generally, what determines which cell site a cellphone will connect to?

A. So the cell site is looking for that best signal. All things being equal, the best signal we would expect to be from the nearest cell site. The closer you are to an antenna broadcasting a signal, the better that signal and the stronger that signal is going to be. There are other factors that do determine which cell site a phone will connect to, especially in a very dense cellular environment like New York City, where there are a lot of cell sites everywhere, but distance is that most important factor.

Q. Speaking of density, how would you describe the density of the cell sites in New York City?

A. Extremely dense, especially within Manhattan itself. Due to the volume, not just the density of population but the volume of AT&T customers, it's extremely dense. There are cell sites virtually everywhere. There's usually more than one on a block.

MS. KUDLA: And Mr. Bianco, can we please publish Government Exhibit 1080, slide 3, please.

Q. Agent Busick, what is shown in slide 3?

A. So this is an illustration of the AT&T network in the greater Manhattan area. Each of those blue dots represents the specific location of an AT&T cell site, and you can see Manhattan located in the center of the screen. Those dots are basically on top of each other to the point where we can't really discern the exact location of individual dots, again, owing to that density of usage in Manhattan. And you can see that as we leave Manhattan and we get further outside of the city, especially, say, if we travel west into New Jersey towards the left and upper left portion of the screen, where that population density and usage density is less, those cell sites are located a bit further apart because less architecture is needed to support the same——to support the customers in those areas.

Q. Focusing for a moment on the density of cell sites in the New York City metropolitan region, how does that assist, if at all, with your ability to identify a cellphone location?

A. So each cell site is designed by the network or by the service provider to provide coverage to a specific coverage area within its immediate vicinity. Now the further apart those cell sites are located, the larger those coverage areas are going to be, and so what we're——what I'm doing when I'm conducting my analysis is looking at which cell site a phone connected to and, based on an approximation of the coverage area, determining an approximate location of where that phone would be. So therefore, the larger the coverage area, the less precise we can be about locating the phone. If cell sites are miles apart, that's going to be a much larger area. Now in somewhere like Manhattan and other parts of New York City where those cell sites are located very close together, that coverage area is going to be a bit more precise because the distance between cell sites is much less.

Q. Now, Agent Busick, you had mentioned cellphones typically connect to the strongest and clearest signals. What are some, if any, reasons that they may not do so?

A. So there are several factors that might affect which cell site is actually providing that best signal that the phone connects to. One of those is geography or terrain. In New York City we could think of things like large buildings. An example I like to use is that if we were standing outside the front door of, say, the Empire State Building and just on the other side of the Empire State Building on the same block was a

cell site that was the closest one to us, but between us and that cell site was the Empire State Building, however, on the same side of the building I'm on, say, three blocks away is another cell site that I can actually see with my own eyes and there's no obstructions, even though that one is slightly further away, I might actually receive a better signal from that one because there's just nothing obstructing it. So that's one of the——one of the typical factors that could affect where that better signal is going to come from. The important thing to know is that the phone has to be within the designated coverage area of that particular cell site. So if I'm in Manhattan near the Empire State Building, I'm not going to connect to a cell site down by the World Trade Center because there's hundreds, at least, if not thousands of cell sites between those two areas. So I'm going to need to be in the general vicinity of the cell site that I'm connecting to.

MS. KUDLA: At this time, Mr. Bianco, can you please turn to slide 4.

Q. Agent Busick, are you familiar with the term "sectors"?

A. Yes, I am.

Q. And using slide 4, can you describe to the jury what a sector is.

A. So many times, many cell sites are set up with what we call sectors. So what we're looking at on the screen here would be a bird's-eye view on the right of what I call a typical

cellphone tower. Like I mentioned earlier, think of that standalone, you know, steel structure with a triangular-shaped thing on top with the antennas on it. This is looking directly over that. And you can see on each side of that triangle there are some things that are sticking out of it. Those are the actual antennas which are broadcasting signals. So what the networks will often do in order to provide better coverage and increased capacity within——from particular cell sites is they'll sectorize those, those sites, and what that means is, you can see on the top of this there's antennas that are facing the top of the screen, which is labeled as north. Those would be sector 1, and that's broadcasting a signal that's going to be radiating out in roughly this direction, within the red area depicted.

If we were to move clockwise around the cell site and more towards the lower right portion of the screen, we can see there are antennas on this side that's broadcasting signal out in this direction. That would be sector 2. And if we were in that general area of the——in relation to the tower, we'd expect to be receiving signal from sector 2. And so on as we continue around the tower.

Now why this is important or helpful is that within the records provided by AT&T and all the providers, they will indicate not just which particular cell site a phone connected to but if that site is sectorized and there are antennas

broadcasting a specific direction, it will indicate that as well, which helps us to know approximately which direction from the tower the phone was located at the time it made that connection.

Q. So Agent Busick, you just referenced service provider records. So let's turn back to the AT&T records to put this all together.

MS. KUDLA: Mr. Bianco, can you please publish what's in evidence now as Government Exhibit 1118. Let's turn to page 22.

And can we highlight the top portion of this page, including row 1.

Q. Okay. So Agent Busick, moving from left to right in row 1, I'm going to have you briefly identify just a few of these columns. In particular let's start with Conn. Date. What does that refer to?

A. So that refers to the connection date or the date of this particular connection between the phone and the network.

Q. And then the next row is connection time, Conn. Time. What is that?

A. That's the time of day that the phone connected to the network, given in military or 24-hour time, and it's also given in what's called UTC, or Universal Coordinated Time.

Q. And why is Universal Coordinated Time typically used?

A. All the cellular providers typically use Universal

Coordinated Time for consistency, because as a phone travels, say, you know, throughout the country or around the world, across time zones, it just keeps one consistent time zone that all records are kept in, and in conducting an analysis, we just need to convert UTC time to the local time to know what time that phone connected relative to where we are.

THE COURT: And the UTC time relates to Eastern Time how?

THE WITNESS: So UTC time is either four or five hours ahead of Eastern Time, depending on whether we're in Eastern Standard or Eastern Daylight Time. Currently we're in Eastern Daylight Time, which is generally the summertime months, and so UTC time is four hours ahead of the current time. So in the record that we're looking at here, this was actually February 11th, so that would be Eastern Standard Time, which is five hours behind UTC time, so we would subtract five hours from the given time, which would give us 1803:47, which would be 6:03 p.m.

THE COURT: Thank you.

BY MS. KUDLA:

Q. Now let's move to the right to Originating Number. Let's look at that column for a moment. What is the originating number?

A. So the originating number is the number that originated the particular call that we're looking at. So you can see just

above that line is a——something that says Voice Usage For and this is our target number here, that 650-906-9179. If this was an outgoing call made by that phone, we would expect to see that number in the Originating Number column. Because this was an incoming call, the number that is displayed there is the number of the phone which called our target phone.

Q. And that leads us to the Terminating Number.

A. The Terminating Number is just the opposite. So here we can see that that terminating number ends in 9179. That's because it was an incoming call to our target phone. Again, if it was an outgoing call placed by our target phone, we would see the number there that our phone called.

Q. And then finally, let's look at the last column, Cell Location. Can you describe what's in this row, or column.

A. The cell location provides information about the particular cell site that the phone connected to at the beginning of this call. So we see a long string of numbers there, separated by colons. The first long number is the unique identifier within the entirety of AT&T network of the particular antenna that that phone connected to on the cell site that it connected to at the time, and the next number is the number of the cell site itself. So each cell site will often have numerous antennas within that particular site so we get the identifiers for both of those.

Next, we have the latitude and longitude——think GPS

coordinate——of the actual cell site itself, so that's the location of the antenna——not the phone but the antenna that the phone connected to at the time.

And then as we scroll over, the next column, which is really the last column that's important, which says 0, that gives us the azimuth or direction from the tower that that signal is being broadcast. So 0-degree azimuth would correspond to a signal being broadcast at 0 degrees or due north. If we think back to that previous slide, that was that red area towards the top of the page.

Q. And Agent Busick, what do you do with the data that you've just described when performing your cell site analysis?

A. So I do a couple things. First of all, I take the text version of this file with the identical information, I upload it into some mapping software we use, which assists us in visualizing the data on a map, so I import that, and then within, you know, the particular time frames of interest, I can determine which connections were made and the approximate location of the phone at that time based on that cell location information. I also take this information here from this pdf and I correlate it with a cell site list from AT&T, which is a list that provides the information for all of the cell sites within the AT&T network, and I verify that the cell site identifiers here and the location that are provided are in fact accurate and do accurately correspond to what is displayed on

the map itself.

MS. KUDLA: Mr. Bianco, we can take this down now.

THE COURT: Is this a good place for our break?

MS. KUDLA: Yes, your Honor.

THE COURT: Fifteen minutes, folks.

THE DEPUTY CLERK: Will the jury please come this way. Please bring your notebooks.

(Recess)

MS. SASSOON: Your Honor, I think the parties would like to discuss scheduling at the end of the today day so either 4:30 or ending five minutes early, whatever.

THE COURT: I would love to discuss it too.

(Jury present)

THE COURT: The record will reflect that the defendant and the jurors all are present, as they have been throughout.

You may continue, Ms. Kudla.

MS. KUDLA: Thank you, your Honor.

BY MS. KUDLA:

Q. Before the break, Agent Busick, we were looking at some AT&T records. I would like to now focus on the analysis that you performed in this case.

You had called out the number 650-906-9179, is that correct?

A. That is correct.

Q. Who provided you with that number?

A. That number was provided to me by the government.

Q. And is that the number that you used to conduct your cell phone analysis?

A. Yes, it was.

MS. KUDLA: At this point, your Honor, the government offers Government Exhibit 342, pursuant to Government Exhibit 2003, a stipulation as to authenticity, and this is a true and correct email.

THE COURT: Received.

(Government Exhibit 342 received in evidence)

MS. KUDLA: May we publish, your Honor?

THE COURT: You may.

MS. KUDLA: Mr. Bianco, can we please zoom in on the bottom portion of page 1 and the top of page 2.

On September 4, 2022 at 8:42 a.m., pdavis51@gmail wrote: Sam, my son Christopher is being engaged as a consultant for an NFT entity that is considering your platform. Grateful if you were to take a call to discuss. My son is copied on this email. Thanks.

And the reply, on September 4, 2022, at 12:38 p.m. from Sam Bankman-Fried, sam@ftx.com wrote: I'd be happy to. Christopher, I'm 650-906-9179.

Q. Agent Busick, is the number that's highlighted on the screen the same number that you analyzed?

A. Yes, it is.

MS. KUDLA: We can take that down now.

Q. Now, earlier you testified the type of analysis that you conducted with respect to the location of this cell phone number. Was there a particular time period you were asked to analyze?

A. Yes. Generally speaking, I was asked to analyze a time frame between roughly June of 2021 through November of 2022.

Q. What was the first thing that you were asked to do with

respect to this time period?

A. I was initially asked to analyze the records to determine if there were dates within those records in which the phone utilized cell sites located within Manhattan.

MS. KUDLA: Mr. Bianco, at this time can we please publish Government Exhibit 1080, slide 5.

Q. What's shown on slide 5, Agent Busick.

A. This is a list of the dates within that time frame in which the phone number ending in 9179 utilized cell sites, AT&T cell sites located in Manhattan, which would also be consistent with the phone being located within Manhattan during those times.

Q. Were these dates determined use the cell site analysis that you just described to the jury?

A. Yes, it was.

Q. You also testified earlier to a second portion of your analysis.

Agent Busick, were you asked to determine approximate vicinity, location of the cell phone during particular dates and times during this time period?

A. Yes, I was.

Q. And is that analysis also contained in Government Exhibit 1080?

A. Yes, it is.

Q. Before we turn to that, let's orient the jury on some of the items that they will see.

MS. KUDLA: Mr. Bianco, can we please turn to slide 6 now at this time.

Q. Starting on the left of slide 6, can you please describe what is shown in the three-sector illustration.

THE COURT: Is this slide 6 or slide 5?

MS. KUDLA: I apologize, your Honor. It's slide 5. No. It is slide 6.

THE COURT: OK.

A. In the upper left, where it says three-sector illustration, you'll see a map. On that map are blue dots which, again, are those AT&T cell sites. Dots is a location of a AT&T cell site. You can see how many there are just in that small area. You can see a red wedge where the two arms of that wedge meet in the center in one of those blue dots. It's a cell site that was utilized for this particular connection. And we can see that there is a shaded circle, which is facing roughly to the upper right portion of the map that indicates the direction of that sector or the direction that that signal was being broadcast from that cell site during that connection.

Now --

THE COURT: Go ahead.

THE WITNESS: I'm sorry, your Honor.

THE COURT: Go ahead.

A. Just to make it clear, the red circle doesn't denote the extent of the coverage area. That's just a visual aid to help

illustrate which direction that signal is being broadcast, especially when there is more than of these on a page. The phone may be located within that circle, but it could be just as likely located outside of that circle or arc area.

THE COURT: Just for the sake of clarity, in the binder you gave me, it's page 5.

MS. KUDLA: Your Honor, I believe you had an older binder of Agent Busick last week, and we provided a more recent copy today.

THE COURT: That's encouraging, but it's different.

Anyway, I have the same page. It's just numbered differently.

MS. KUDLA: Your Honor, we discovered the problem. There is a cover page. This is slide 5 in your binder.

Can we move down to the bottom portion.

Q. You described the three-sector illustration.

MS. KUDLA: Can we go to the omni directional antenna illustration.

A. Sure. So we previously discussed a sectorized antenna, but there is also another type of antenna or cell site that service providers use. That's called omni directional. That's where there was just a single antenna broadcasting in 360 degrees. Good way to think about this would be if we were to think about a pole, a sectorized antenna would have say three flood lights on the top, each one pointing out in a different direction

illuminating a different direction around that particular pole. An omni directional site would be more like a table lamp uncovered with just the bulb on there that was broadcasting in 360s. They are generally used to provide coverage to smaller areas.

The differences is that we don't know which direction from the phone or from the cell site that the phone was located at the time that it made a connection, so we illustrate that with a circle.

However, like the illustration up above, the circle is not a hard boundary of the coverage area of that cell site. While an approximation, the phone could be located within the circle or it could be outside of the circle.

Q. Let's turn to the description on the right, the event box illustration. What are the items that we see here?

A. The event box is the information from the records which corresponds to the display on the map, such as at the left. The event book we are looking at here actually corresponds to the three-sector illustration in the upper left.

So what it indicates up in the blue header band there, where it says CID, that's the unique identifier of the cell site, along with the sector that that phone connected to during that particular connection. And then down below is the information about what that connection was, so we see a date and time. The time has been converted into local time. This

is Eastern Daylight Time on August 12 of 2022 at 12:00 p.m. This was an incoming call to the target phone, which is our phone ending in 9179. It was a voice call. And the phone on the other end of the line was 750-748-9222.

Q. For clarity, Agent Busick, in response to a couple of questions today, what time zone did you use during your analysis?

A. All of the maps that I prepared are in local time, in this case that is eastern time. It will vary between Eastern Standard or Daylight Time, depending on the time of the year, but all times have been converted from the original records to local time.

MS. KUDLA: Mr. Bianco, we can take Government Exhibit 1080 down now.

And at this time, your Honor, the government offers Government Exhibits 221, 223, and 224, 281, and 282, 285 through 287, 290 through 293, and 302.

THE COURT: 297, did you say?

MS. KUDLA: No, your Honor. 290 to 293. And, finally, 302. We offer those pursuant to government stipulation 2003-A2 as true and correct emails.

THE COURT: Government Exhibits 221, 223, 224, 281, 282, 285 to 287 inclusive, 290 to 293 inclusive, and 302 all are received.

(Government Exhibits 221, 223, 224, 281, 282, 285-287,

290-293, and 302 received in evidence)

MS. KUDLA: Your Honor, may we publish Government Exhibit 293 at this time?

THE COURT: Yes.

MS. KUDLA: Can we zoom in on the top portion of this.

Q. Agent Busick, prior to your testimony today, have you reviewed Government Exhibit 293?

A. Yes, I have.

Q. And did you review similar appointment-type documents marked in Government Exhibits 281 through 282, 285 through 287, 290 through 293, and 292?

A. Yes, I have.

Q. Did you review these documents before or after you conducted your initial cell site analysis?

A. I reviewed them afterwards.

Q. Let's focus for a moment on the middle portion of this appointment of Government Exhibit 293, where it says start on September 21, 2022, 11 p.m. and ends 9/22/2022 at 1 a.m.

Is any particular time zone listed there?

A. There is no time zone listed.

Q. Based on your review of Government Exhibit 293 and the other exhibits that we have just listed, did you form an opinion about what time zone is listed in this appointment start/end time?

A. Yes.

Q. What was that opinion?

MR. EVERDELL: Objection.

THE COURT: What's the objection?

MR. EVERDELL: Basis for the opinion.

THE COURT: I imagine we will hear that in a minute.

Q. What was the opinion, first?

A. Well, in this particular case and in this email we can see up above in the subject line an invitation with a date and time listed, which is September 21, 2022, from 7 p.m. to 9 p.m. EDT or Eastern Daylight Time. That would be 11 p.m. to 1 a.m. from the 21st to the 22nd in UTC time, which would indicate to me that in this email here the start and end time are given in UTC time.

Q. In your analysis, did you see similar examples in the other exhibits that you reviewed?

A. I did, yes.

Q. And the UTC time as you described before, is that a common unit for -- in the AT&T records? Is there any relationship to what you see here?

A. UTC time is often a common reference time zone that can account for travel between time zones and so forth, and local time can be converted directly from UTC time.

MS. KUDLA: Mr. Bianco, can we please publish Government Exhibit 281 on the left. We can take down 293 now at this time. Publish 281 on the left and Government Exhibit

1080, slide 7 on the right.

Your Honor, you are right, it will show slide 6 in your presentation.

Let's zoom in right now on Government Exhibit 281. It says: Appointment from eric.bai@Binance.com to, among others, sam@ftx.com and cz@binance.com. The subject is Binance investment, FTX sync-up. The start is June 8, 2021 at 2 p.m. End time June 8, 2021 at 3 p.m.

Agent Busick, is 10 to 11 a.m. Eastern Daylight Time equivalent to 2 to 3 p.m. UTC on June 8, 2021?

A. Yes.

Q. Now, is that the time period that you analyzed with respect to the cell site analysis?

A. It is, yes.

MS. KUDLA: Can we now focus on Government Exhibit 180, slide 7, and zoom in on that.

Q. Briefly describe what we see in slide 7 to the jury.

A. This displays two particular cell sites utilized by the 9179 phone on June 8 of 2021. The first connection is the lower -- on the lower center part of the screen at 10:13 a.m. That's a data connection between a phone and the network when cellular data was utilized. And then, at 10:59 a.m., in the upper center portion of the screen we see a second connection, again data connection, both of these connections utilizing cell sites located within Manhattan.

Q. Did you apply the same type of cell site location analysis that you described to the jury for this analysis here?

A. Yes, I did.

Q. Is that consistent throughout?

A. Yes.

MS. KUDLA: We will try to speed it up a little bit.

Mr. Bianco, can you please publish Government Exhibit 282 on the left and slide 8 of Government Exhibit 1080 on the right, and Government Exhibit 1471 also on the right.

And Government Exhibit 1471, your Honor, is in evidence.

Let's zoom in on Government Exhibit 282. It's from natalie@ftx.com to sam@alameda-research.com. Subject: Invitation: Quick photoshoot for Forbes story at Equinox Hotel, Friday, September 17, 2021, 8:30 a.m. to 8:45 a.m (HKT). And then start and end, we can highlight those. That's September 17, 2021, 12:30 a.m. to 12:45 a.m.

Q. Agent Busick, is 8:30 to 8:45 a.m. Eastern Daylight Time on September 16, 2021 equivalent to the start and end times that we see here?

A. Yes, it is.

MS. KUDLA: Let's take that down now.

Can we zoom in on Government Exhibit 1080, slide 8.

Q. What is the green dot that we see here?

A. The green marker in the upper center portion of the screen

denotes the location of the Equinox Hotel, 33 Hudson Yards, New York, New York.

Q. Now, based on your analysis, what opinion did you form about the location of the cell phone at approximately 8:27 p.m. Eastern Daylight Time?

A. The records are consistent with the phone being located at or in the vicinity of the Equinox Hotel during this time.

MS. KUDLA: Mr. Bianco, can we please zoom in on Government Exhibit 1471.

At this time now, Mr. Bianco, can we please publish Government Exhibit 285 on the left and Government Exhibit 1080, slide 9 on the right.

Can we please zoom in on Government Exhibit 285. It's from pauline@thesaltfund.com to sam@ftx.com, among others. The subject: Updated invitation: SALT fund. And then the start and end time, September 17, 2021, 2:30 p.m.; September 17, 2021, 3:30 p.m.

Agent Busick, is 10:30 to 11:30 a.m. Eastern Daylight Time equivalent to the time shown here?

A. Yes, it is.

MS. KUDLA: Let's take that down now.

One thing that I forgot to mention. In Government Exhibit 285, the location is shown as Bluestone Lane, 55 Hudson Yards, 55 Hudson Yards, New York, New York.

Let's take that down and focus on Government Exhibit

1080, slide 9.

Q. First off, Agent Busick, what is the blue dot that we see the little square dot?

A. That marker denotes the location of 55 Hudson Yards, New York, New York.

Q. Based on your cell site analysis, what, if anything, did you determine about the location of the phone between the time period of 10:43 a.m. and 11:11 a.m. on September 17, 2021?

A. At 10:43 a.m., the phone utilized a cell site, the lower center portion of the page, within the vicinity of Pennsylvania Station. And at 11 a.m., there were two text messages to the 9179 phone, which would be consistent with the 9179 phone being located at or in the vicinity of 55 Hudson Yards at that time.

MS. KUDLA: Mr. Bianco, can we now publish what's in evidence as Government Exhibit 286 on the left and Government Exhibit 1080, slide 10 on the right. Let's zoom in on Government Exhibit 286.

Q. This is from Antony Lewis to, among others, sambankman-fried@ftx.com. Subject: Temasek/FTX. The location: 375 Park Avenue, 14th floor, New York, New York. And the start and end time is listed here.

Agent Busick, is 6:30 to 7:30 p.m. east coast standard time on November 16, 2021 equivalent to 11:30 p.m. to 12:30 a.m. UTC time?

A. Yes, it is.

MS. KUDLA: Now let's turn to slide 10 of Government Exhibit 1080. Let's zoom in on that.

Q. Between 6 p.m. and 7:30 p.m. east coast standard time, what, if anything, did you determine about the cell site location during that time period?

A. So as we can see in the inset on the left, at 6:14 p.m., the phone utilized the cell site in the vicinity of Teterboro, New Jersey, displayed up here where we circled on the screen, and the records are consistent with that phone traveling into Manhattan from that time. We can see, at 6:53 p.m., utilizing a cell site just to the west of the Lincoln Tunnel. And then, at 7:10 p.m., utilizing a cell site on the Manhattan side of the Lincoln Tunnel. We last see it at 7:30 p.m., under the dark blue flag there, which denotes 375 Park Avenue, New York, New York. And then the zoomed-in map includes that 7:30 p.m. interaction along with several other interactions between the phone and the network, all of which would be consistent with the phone being located at or in the vicinity of 375 Park Avenue.

Q. What period of time was the cell phone in the vicinity of 375 Park Avenue, New York, New York?

A. From roughly 7:30 to 8:51 p.m.

MS. KUDLA: Mr. Bianco, can we please publish now Government Exhibit 287 on the left and Government Exhibit 1080, slide 11 on the right.

Now, this is from natalie@ftx to sam@ftx.com. Subject: Updated invitation with the mayor at Thursday, March 3, 2022, 8:30 p.m. to 10 p.m. Eastern Standard Time. Location: Osteria La Baia, 129 West 52nd Street. Start and end time here.

Q. Is the start and end time that we see here on March 4, 2022 equivalent to 8:30 to 11 p.m. east coast standard time on March 3, 2022?

A. Yes.

MS. KUDLA: Now, let's turn to government Exhibit 1080, slide 11.

Q. What is the pink dot that we see here?

A. The pink marker in the center of the screen denotes 129 West 52nd Street, New York, New York.

Q. What was the time period of your analysis for here?

A. 8:37 p.m. to 9:56 p.m. on March 3, 2022.

Q. Based on your cell site analysis, what opinion did you form about the location of the cell phone during this date and time period?

A. The records are consistent with the phone being located at or in the vicinity of 129 West 52nd Street during this period.

MS. KUDLA: Your Honor, pursuant to Government Exhibit 2001, a stipulation as to authenticity, the government offers Government Exhibit 873.

THE COURT: Is 2001 in, Andy?

MS. KUDLA: It is in evidence, your Honor.

THE COURT: It is?

MS. KUDLA: Yes.

May we publish Government Exhibit 873, page 12 of that exhibit?

THE COURT: It's received, the whole exhibit.

(Government Exhibit 873 received in evidence)

MS. KUDLA: On March 4, 2022, at 12:04 p.m., SBF retweeted from Ryne Miller: Fantastic dinner with at New York City mayor. New York City is in great hands, hashtag Eric Adams.

We can take that down.

Mr. Bianco, can we please publish what's in evidence as Government Exhibit 302 on the left and Government Exhibit 1080, slide 12 on the right.

Let's first start with Government Exhibit 302, page 1, and let's zoom in on the portion from the message from Ali Baltrusaitis on July 1, 2022 at 11:32 a.m.

Ms. Baltrusaitis sends a message to Natalie Tien at FTX writing: Hi, Natalie, happy almost 4th of July. Hope you have some fun plans for the long weekend. Please find the latest requests from 32 investment firms for the upcoming group dinner on July 19. If there are any firms that FTX team would like us to prioritize a seat for, please let us know.

We can take that down and zoom in now on the response

from Ramnik Arora.

Ramnikarora@ftx.com writes to Natalie Tien regarding the FTX group dinner July 19 in some decreasing order of priority: Standard investments, Coatue, D1 Capital, and a list of names.

We can take that down.

Can we zoom in now on the map and Government Exhibit 1080, slide 12.

Q. Agent Busick, what is shown in slide 12 with respect to the cell phone location on July 19, 2022 between 6 p.m. to 9:30 p.m. east coast standard time?

A. This slide depicts the cellular connections between the 9179 phone and the AT&T network during that 6:16 p.m. to 9:28 p.m. time frame, located in the vicinity of 11 Madison Avenue in New York, New York, which is denoted by the maroon flag in the center right portion of the screen.

MS. KUDLA: Mr. Bianco, we can take that down now.

Can we please publish Government Exhibit 290 on the left and Government Exhibit 1080, slide 13 on the right.

Let's focus on Government Exhibit 290 first. This is from jasmin.lee@iextrading.com to, among others, sam@ftx. Subject: FTX/IEX. Location: 3 World Trade Center. Start, August 17, 2022, 3:30 p.m.; end, August 13, 2022, 5:30 p.m.

Q. Agent Busick, is 11:30 a.m. to 1:30 p.m. Eastern Daylight Time the equivalent of the UTC time you see here?

A. Yes, it is.

MS. KUDLA: Let's turn to the map in Government Exhibit 1080, slide 13.

Q. What is the date and time that was analyzed here?

A. August 17, 2022 between 11:39 a.m. and 1:15 p.m.

Q. What's shown in the yellow dot?

A. This shows connections between the 9179 phone and the AT&T network in the vicinity of 3 World Trade Center, New York, New York, denoted by the bright yellow flag in the center of the screen.

Q. What did your cell site analysis show?

A. The records are consistent with the phone being located at or in the vicinity of 3 World Trade Center during this time frame.

MS. KUDLA: Let's now turn to Government Exhibit 291 on the left and let's do Government Exhibit 1080, slide 14 on the right.

Mr. Bianco, can we zoom in. Thank you.

This is from Mike McKay to, among others, sam@ftx.us. Subject: SBF meeting with New York Governor Hochul. Location: LTBD. Most likely, Capital Grille on East 42nd Street, but waiting on the governor's schedule to confirm the location. Start, September 16, 2022 at 9 p.m.; end, September 16, 2022 at 9:30 p.m.

Q. Agent Busick, is this 5 p.m. to 5:30 p.m. Eastern Daylight

Time?

A. Yes, it is.

MS. KUDLA: Let's look at slide 14.

Q. Did you analyze the location of the phone on September 16, 2022 between 5 and 6 p.m. at that time?

A. Yes.

Q. What opinion did you form about the location of the cell phone between that time period on that day?

A. Between 4:58 p.m. and 5:48 p.m., the phone utilized two cell sites located within Manhattan, generally the east Midtown area, which would be consistent with the phone being located in the Midtown East area during this time.

MS. KUDLA: Can we now publish Government Exhibit 292 on the left and Government Exhibit 1080, slide 15 on the right.

And zoom in on Government Exhibit 292. This is from natalie@ftx.com to sam@ftx.com. Subject: Updated invitation. Meeting with President Clinton at Tuesday, September 20, 2022, 4 p.m. to 5 p.m. Eastern Daylight Time. Location: New York Hilton Midtown, 1335 Sixth Avenue, New York, New York. Start and end that we have here is September 20, 2022, 8 p.m. to 9 p.m.

Q. Agent Busick, is this 4 to 5 p.m. Eastern Daylight Time?

A. Yes, it is.

MS. KUDLA: Let's turn to Government Exhibit 1080, slide 15 now, and zoom in on that.

Q. Did you analyze the location of the cell phone during this same time period for the date and time?

A. Yes, I did.

Q. And what is the purple dot that we see here?

A. The purple marker in the center of the screen denotes a location of 1335 Sixth Avenue, New York, New York.

Q. What opinion did you form about the location of the cell phone on September 20, 2022 between 3:16 and 5:02 p.m. Eastern Daylight Time?

A. The records are consistent with the phone being located at or in the vicinity of 1335 Sixth Avenue during that time frame.

MS. KUDLA: Mr. Bianco, can we please publish Government Exhibit 221 on the left and Government Exhibit 1080, slide 16 on the right.

Let's zoom in on Government Exhibit 221.

On September 20, 2022, at 12:20 p.m. Eastern Daylight Time, ascaramucci@skybridge.com wrote: Connecting you here. Sam, I am also joining Thomas at a Steelers game November 20. Let us know if you want to come. Hope he will invest in our latest FTX round.

On September 21, 2022 at 3:34 a.m., Sam Bankman-Fried sends an email to Anthony Scaramucci and thomas9@tulinvest.com: Thanks.

Let's take that down.

Q. Agent Busick, first of all, is 11:34:09 p.m. Eastern

Daylight Time on September 20, 2022 equivalent to 3:34 a.m. UTC on 9/21/22?

A. Yes, it is.

MS. KUDLA: Let focus and zoom in on slide 16 in Government Exhibit 1080.

Q. Did you analyze that time period and date with your cell site analysis?

A. Yes, I did.

Q. What opinion did you form about the location of the cell phone during that date and time period?

A. During that time period, specifically between 11:17 p.m. and 11:48 p.m. on September 20, 2022, the phone was located roughly in the midtown Manhattan area utilizing the cell sites depicted.

MS. KUDLA: Let's please publish Government Exhibit 293 on the left and Government Exhibit 1080, slide 17 on the right.

This is from natalie@ftx.com to sam@ftx.com. Subject: Updated invitation. New York small group dinner with H.E. Yasir Al Rumayyan, September 21, 7 p.m. to 9 p.m. Eastern Daylight Time. The location is The Pierre A Taj Hotel, New York, 2 East 61st Street. There is the start and end time shown here.

Q. Agent Busick, is this consistent, the 11 p.m. to 1 a.m. time period shown here, consistent with 7 to 9 p.m. Eastern

Daylight Time?

A. 7 to 9 p.m. on the 21st, yes, correct.

MS. KUDLA: Let's turn to slide 17 in Government Exhibit 1080.

Q. Did you analyze this 7 to 9 p.m. Eastern Daylight Time period on September 21, 2022?

A. Yes, I did.

Q. And what is the red dot that we see here?

A. The red marker roughly in the center of the screen denotes the location of 2 East 61st Street, New York, New York.

Q. And what opinion did you form about the location of the cell phone on this date and time period?

A. The records are consistent with the phone being located at or in the vicinity of 2 East 61st Street, particularly between 7:42 and 9:42 p.m.

MS. KUDLA: Mr. Bianco -- just so everybody is aware, we are nearing the end of the number of slides.

Let's please publish in evidence Government Exhibit 223 on the left and Government Exhibit 1080, slide 18 on the right.

On September 21, 2022, at 7:16 p.m., okharif@bloomberg.net wrote: Hi, Sam. How are you? I saw the CNBC story that you are trying to raise 1 billion. Could you please confirm if this is true on background.

Let's focus now on the response from Sam Bankman-Fried

to Olga Kharif on September 22, 2022 at 3:34:47 a.m. On background: Potentially true, though not a hundred percent that we'll do it. If we did, it would likely be in the next few months. Not yet confirmed who invested would be.

Q. Agent Busick, is 3:34 a.m. UTC equivalent to 3:34 p.m. Eastern Daylight Time on September 21, 2022?

A. 11:34 p.m. on the 21st.

Q. Thank you.

MS. KUDLA: Let's turn to slide 18, Government Exhibit 1080.

Q. Based on your analysis, Agent Busick, was the cell phone located in Manhattan on this date and during this time period?

A. Yes, it was. Utilizing the cell site depicted at the center of the screen at 11:08 and 11:53 p.m. on September 21.

MS. KUDLA: So let's please publish Government Exhibit 224 on the left and Government Exhibit 1080, slide 19 on the right, and let's focus on the middle message, September 22, 2022 at 8:02 a.m.

The message: We now have a meeting penciled in with the Saudi Minister of Investment, Khalid Al Falih, at 5:10 to 5:30. Hopefully that works for Sam. His session at the event with Alfred Chuang is scheduled for 3:50 to 4:05.

Let's focus on the response now. It's from Sam Bankman-Fried -- a little bit higher, Mr. Bianco, the top portion of the email -- Sam Bankman-Fried, on September 22,

2022, 3:33 to Anthony Scaramucci, among others: Follow-up from dinner. Mr. Bankman-Fried replies: I'm flexible.

Let's turn to slide 19, Government Exhibit 1080 at this point in time.

Q. Agent Busick, were you asked to analyze the location of the cell phone between 3:30 p.m. and 5:30 p.m. on September 22, 2022?

A. Yes, I was.

Q. And what did your analysis show with respect to the location of the phone during that time period?

A. The phone utilized the cell sites depicted at the center of the screen located roughly the southeast corner of Central Park in Manhattan between 3:28 and 5:28 p.m.

MS. KUDLA: We will turn to our last one at this point in time.

The government offers, subject to connection, Government Exhibit 527, and it's subject to connection through a later witness.

MR. EVERDELL: Your Honor, we do object on hearsay grounds, understanding this is subject to connection, but we object on hearsay grounds.

THE COURT: Received subject to connection.

(Government Exhibit 527 received in evidence)

MS. KUDLA: Mr. Bianco, can we please publish Government Exhibit 527 on the left and Government Exhibit 1080,

slide 20 on the right.

Mr. Bianco, on Government Exhibit 527 can we zoom in at the bottom of page 2. It's from Curtis Ashton on September 24, 2022 at 11:15. There you go.

From Ashton Curtis to robertboroujerdi@thirdpoint.com. Subject: FTX/Sam BF. Bob, I'm putting together a very small investor lunch with Sam Bankman-Fried on October 14 from 12 to 2 p.m. in NYC.

We can take that down now.

Q. Agent Busick, were you asked to analyze the location of the cell phone on October 14, 2022 between 12 and 2 p.m. Eastern Daylight Time?

A. Yes, I was.

MS. KUDLA: Let's zoom in on Government Exhibit 1080, slide 20.

Q. What opinion did you form about the location of the cell phone on that date and time period?

A. The phone was located within Manhattan between 12:06 p.m. p.m. and 1:26 p.m. on November 14. And more specifically, between approximately 12:26 p.m. and 1:26 p.m., the phone was located at or in the vicinity of 11 Madison Avenue in New York, New York, depicted by the maroon flag in the lower center portion of the screen.

MS. KUDLA: Your Honor, no further questions.

THE COURT: Is there any cross-examination?

MR. EVERDELL: Just briefly, your Honor.

CROSS-EXAMINATION

BY MR. EVERDELL:

Q. Good afternoon, Special Agent Busick.

A. Good afternoon.

Q. Special Agent Busick, you were asked to create your cell site analysis by the government, is that right?

A. That's correct.

Q. This is what you've been testifying to here today, right?

A. Correct.

Q. And the government specified which phone number they wanted you to analyze, right?

A. They did.

Q. That was the 650-906-9179 number, right?

A. That's correct.

Q. I am just going to refer to that as the 9179 number for convenience. Is that OK?

A. Of course.

Q. The government also provided you with the data that you used to create your analysis?

A. They did, yes.

Q. They gave you the records from the phone company AT&T that were related to that phone number, is that right?

A. That's correct.

Q. And those records included the cell site data that you used

to create your analysis, right?

A. Yes.

Q. I think you said the government asked you to analyze the cell site data to determine where that particular phone was located at certain dates and times, right?

A. Correct.

Q. And they provided the dates and times that they wanted you to analyze, right?

A. That's correct.

Q. Now, the records from the phone company, from AT&T that you used to do your analysis, they showed that the phone with the number we just discussed was connecting to cell towers at various locations at various times, right?

A. Yes.

Q. The goal of your analysis was to locate the cell phone to the best of your ability in relation to those cell towers, right?

A. Correct.

Q. You said a few things that might affect that analysis, the accuracy of that analysis, right?

A. I don't think I said the accuracy of it. Could you be more specific?

Q. Sure. Your ability to locate the cell phone in a particular spot would depend on things like, you said, density of cell towers?

A. Yes, correct.

Q. Might also depend on, you said, terrain, right?

A. Correct.

Q. If there were a big building, I think you mentioned, that was potentially blocking a signal, the phone wouldn't necessarily signal off of the closest tower next to it, right?

A. It's possible, correct.

Q. It might have to seek out a signal for a cell site that's further away, right?

A. Slightly. But it would have to be within the coverage area of whichever cell site it connected to.

Q. When we look at your analysis that you did, which was GX-1080, it shows instances where that cell phone, the 9179 cell phone, was active near a particular cell tower, right?

A. Correct.

Q. But the phone records you used to create your analysis don't contain any information about who was using that phone at those times, correct?

A. That's correct.

Q. It just gives you information about where the device itself may have been located, correct?

A. That's correct.

Q. So your analysis doesn't say anything about who is using that cell phone at those dates and times on those pages we just looked at, right?

A. Correct. I cannot determine that via the records.

MR. EVERDELL: I just want to take a look at one quick example from the page.

If we go to slide 13. This is Government Exhibit 1080 in evidence. If we go to slide -- I believe it's 13.

Q. This is one that you discussed on your direct examination, is that right?

A. Yes.

Q. And so this is a page that shows the 9179 cell phone or it shows cell sites in the vicinity of 3 World Trade Center, is that correct?

A. Correct.

Q. On August 17, 2022, correct?

A. That's correct.

Q. You testified that this seems to show the 9179 cell phone interacting with the cell towers on the side here, right?

A. Yes.

Q. On that date it appears that it was an incoming call at 11:39, correct?

A. That is correct.

Q. So this shows that that cell phone was interacting with these towers in the vicinity of 3 World Trade Center on that date, right?

A. Yes.

Q. But, again, it does not say who is using the phone at that

time?

A. Correct.

Q. And it does not say what was discussed on any calls that may be reflected in the records?

A. That's correct.

Q. That is true for all of the instances that you put in your analysis on Government's 1080, correct?

A. It is, yes.

MR. EVERDELL: Nothing further, your Honor.

THE COURT: Thank you.

Anything else?

MS. KUDLA: No, your Honor.

THE COURT: I have one question. I think it's one question.

The government provided you with the AT&T records for the entire period, roughly June of '21 through November of '22, is that right?

THE WITNESS: Yes. And the records did extend a bit beyond that.

THE COURT: A bit beyond.

So the dates you looked at were the dates on which the records indicated that the cell phone was connecting with towers in Manhattan, is that right?

THE WITNESS: I first looked throughout the records to determine when the records indicated that the phone was

connecting with cell sites in Manhattan and then, in regards to the specific dates and times, those were provided to me by the government.

THE COURT: Did the dates and times that the government provided you coincide with dates you had identified from telephone company records that the phone had been used in Manhattan?

THE WITNESS: Yes, that's correct.

THE COURT: I have no further questions.

Do counsel have any?

MS. KUDLA: None from the government, your Honor.

MR. EVERDELL: No, your Honor.

THE COURT: Thank you. You're excused, Agent Busick.

(Witness excused)

THE COURT: Folks, we are going to quit very early tonight, 4:26. We will see you tomorrow at 9:30.

Counsel remain.

(Jury not present)

THE COURT: Scheduling.

MS. SASSOON: Yes, your Honor.

Tomorrow we are going to be calling Shamell Medrano, Peter Easton, Cory Gaddis, Eliora Katz.

THE COURT: Slow down. You're outpacing me.

The third person was?

MS. SASSOON: Cory Gaddis, Eliora Katz. I will just

read through the witnesses that will take us through Thursday: Paige Owens, Bob Boroujerdi, and Can Sun.

Now, the government is not confident that that's going to take us to the end of the trial day on Thursday, but we have two to three people scheduled for the following Thursday, when trial picks up, who have travel booked from either out of state, and one witness, who is a customer victim, who was here in court last Friday, but we ended early, and he didn't get to testify, but he is not available this week.

What we would propose is, if the Court is amenable, if our witnesses don't take us through the day on Thursday, ending early, which will give the parties an opportunity to work on the jury instructions your Honor has asked for by the end of the day Thursday, and then we would complete our case the following Thursday morning.

The defense has rebuttal expert notice, if any, due to us three days before we rest, so this will also give them a little more time beyond having to give us that notice today if we were to rest this Thursday.

THE COURT: Thank you.

What's the state of play, Mr. Cohen, with you, bearing in mind I am not holding you to anything?

MR. COHEN: Yes, your Honor.

We would agree with the schedule that the government proposed, subject to your Honor's approval. We are still

working through whether we are going to put a case on and, if so, of what nature. But I continue to believe that if we do put on a case, it won't be more than a week, week and a half at the max.

THE COURT: That suggests to me we are done the first week in November, worst case, right?

MR. COHEN: Yes. It might be sooner, your Honor.

THE COURT: I think I'm as informed as I can be about now.

Thank you. I'll see you all in the morning.

(Adjourned to October 18, 2023, at 9:30 a.m.)

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