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15

16   **UNITED STATES DISTRICT COURT**

17   **NORTHERN DISTRICT OF CALIFORNIA**

18   **OAKLAND DIVISION**

19 | Case No. 4:20-cv-05640-YGR-TSH

20   EPIC GAMES, INC.,

21   Plaintiff, Counter-defendant,   **EPIC GAMES, INC,'S FOUR-HOUR DEPOSITION DESIGNATION**

22   v.

23   APPLE INC.,   Judge: Hon. Yvonne Gonzalez Rogers

24   Defendant, Counterclaimant.

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1   Epic Games, Inc. respectfully submits the four-hour deposition designations

2 attached herein.

3

4

     Dated: April 27, 2021   CRAVATH, SWAINE & MOORE LLP
5
                                              Christine Varney
6   Katherine B. Forrest
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7   Yonatan Even
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9
                                              Respectfully submitted,
10
                                              By: /s/ Katherine B. Forrest
11   Katherine B. Forrest

12   *Attorneys for Plaintiff and Counter-defendant*
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Epic Games., Inc.'s Four-Hour Deposition Designation

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Deposition Designation of Adrian Ong
(February 24, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
1 hour 2 minutes 19 seconds	1 minute 17 seconds

Ong, Adrian (Vol. 01) - February 24, 2021   1 CLIP (RUNNING 01:03:32.737)

79 SEGMENTS (RUNNING 01:03:32.737)

1. PAGE 9:10 TO 9:12 (RUNNING 00:00:04.121)

2. PAGE 9:15 TO 9:18 (RUNNING 00:00:05.141)

3. PAGE 9:22 TO 10:12 (RUNNING 00:00:49.908)

4. PAGE 12:09 TO 13:25 (RUNNING 00:02:36.396)

5. PAGE 17:03 TO 17:15 (RUNNING 00:00:43.317)

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9. **PAGE 22:10 TO 23:05 (RUNNING 00:01:14.411)**

10. **PAGE 23:09 TO 23:17 (RUNNING 00:00:41.315)**

11. **PAGE 24:17 TO 25:05 (RUNNING 00:00:46.769)**

12. PAGE 25:14 TO 26:05 (RUNNING 00:01:08.980)

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14. PAGE 28:24 TO 30:25 (RUNNING 00:03:02.239)

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20. PAGE 34:14 TO 37:07 (RUNNING 00:03:47.190)

21. PAGE 37:25 TO 38:11 (RUNNING 00:00:37.861)

22. PAGE 38:13 TO 39:02 (RUNNING 00:00:45.619)

23. PAGE 39:16 TO 39:24 (RUNNING 00:00:32.729)

24. PAGE 41:12 TO 42:09 (RUNNING 00:01:23.496)

25. PAGE 43:04 TO 44:19 (RUNNING 00:02:23.632)

26. PAGE 45:01 TO 46:10 (RUNNING 00:02:02.142)

27. PAGE 46:13 TO 46:15 (RUNNING 00:00:11.743)

28. PAGE 46:17 TO 47:07 (RUNNING 00:01:05.129)

29. PAGE 47:15 TO 48:01 (RUNNING 00:00:34.157)

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31. PAGE 48:14 TO 48:19 (RUNNING 00:00:16.556)

32. PAGE 48:21 TO 51:06 (RUNNING 00:03:16.127)

33. PAGE 56:03 TO 56:04 (RUNNING 00:00:06.953)

34. PAGE 56:06 TO 57:01 (RUNNING 00:01:16.500)

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39. PAGE 60:20 TO 60:23 (RUNNING 00:00:10.335)

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41. PAGE 61:06 TO 61:18 (RUNNING 00:01:00.318)

42. PAGE 62:03 TO 62:05 (RUNNING 00:00:07.010)

43. PAGE 62:07 TO 62:16 (RUNNING 00:00:31.719)

44. PAGE 62:18 TO 63:03 (RUNNING 00:00:43.755)

45. PAGE 63:05 TO 64:16 (RUNNING 00:01:57.455)

46. PAGE 65:01 TO 65:17 (RUNNING 00:00:56.870)

47. PAGE 65:19 TO 65:25 (RUNNING 00:00:23.324)

48. PAGE 66:01 TO 66:04 (RUNNING 00:00:10.544)

49. PAGE 66:12 TO 66:24 (RUNNING 00:00:42.460)

50. PAGE 67:15 TO 67:19 (RUNNING 00:00:14.774)

51. PAGE 67:22 TO 67:22 (RUNNING 00:00:02.562)

52. PAGE 67:23 TO 68:05 (RUNNING 00:00:22.710)

53. PAGE 69:17 TO 69:21 (RUNNING 00:00:22.470)

54. PAGE 69:23 TO 70:09 (RUNNING 00:00:41.245)

55. PAGE 70:11 TO 70:15 (RUNNING 00:00:13.697)

56. PAGE 72:07 TO 72:10 (RUNNING 00:00:08.841)

57. PAGE 73:01 TO 73:04 (RUNNING 00:00:12.493)

58. PAGE 73:12 TO 73:14 (RUNNING 00:00:12.096)

59. PAGE 73:23 TO 74:07 (RUNNING 00:00:32.353)

60. PAGE 74:08 TO 74:10 (RUNNING 00:00:13.076)

61. PAGE 74:12 TO 74:12 (RUNNING 00:00:00.872)

62. PAGE 84:01 TO 84:03 (RUNNING 00:00:09.421)

63. PAGE 84:05 TO 84:06 (RUNNING 00:00:04.948)

64. PAGE 84:22 TO 85:03 (RUNNING 00:00:12.596)

65. PAGE 85:05 TO 85:07 (RUNNING 00:00:05.227)

66. PAGE 120:12 TO 120:13 (RUNNING 00:00:07.334)

67. PAGE 120:16 TO 120:21 (RUNNING 00:00:15.582)

68. PAGE 120:24 TO 120:25 (RUNNING 00:00:04.919)

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70. PAGE 152:04 TO 152:23 (RUNNING 00:01:37.081)

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72. PAGE 162:03 TO 162:22 (RUNNING 00:01:11.091)

73. PAGE 167:01 TO 167:04 (RUNNING 00:00:19.844)

74. PAGE 167:06 TO 167:20 (RUNNING 00:00:49.032)

75. PAGE 169:24 TO 170:08 (RUNNING 00:00:40.959)

76. PAGE 170:10 TO 170:19 (RUNNING 00:00:36.703)

77. PAGE 171:14 TO 172:16 (RUNNING 00:02:03.542)

78. PAGE 172:18 TO 173:06 (RUNNING 00:01:01.544)

79. PAGE 182:20 TO 183:25 (RUNNING 00:01:38.542)

23

Epic Games, Inc. v. Apple Inc., **No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)**

Deposition Designation of Phillip Shoemaker (Volume 1 & 2)
(January 12, 2021)
(January 14, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
41 minutes 22 seconds	16 minutes 41 seconds

<u>Shoemaker, Phillip B. (Vol. 01) - January 12, 2021</u>   1 CLIP (RUNNING 00:46:50.303)
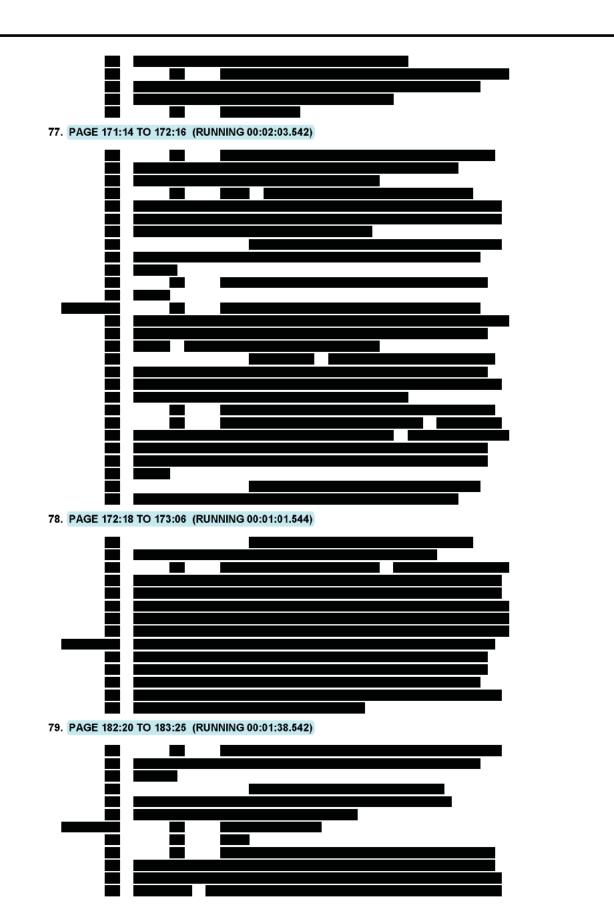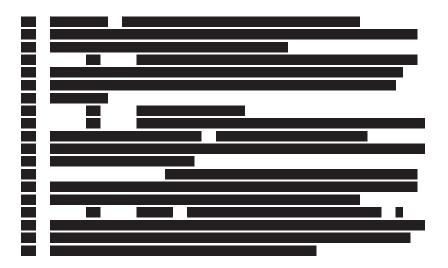
76 SEGMENTS (RUNNING 00:46:50.303)

1. PAGE 19:13 TO 19:15 (RUNNING 00:00:02.505)

```
13              THE VIDEOGRAPHER:  Will the reporter please
14     swear in the witness.
15              Thank you.
```

2. PAGE 19:17 TO 19:21 (RUNNING 00:00:11.132)

```
17                   PHILLIP B. SHOEMAKER,
18     having been first duly sworn by the reporter, was
19              examined and testified as follows:
20
21              THE WITNESS:  Yes, I do.
```

3. PAGE 20:08 TO 20:09 (RUNNING 00:00:05.125)

```
08              Please state your full name for the record.
09         A    My name is Phillip Burton Shoemaker.
```

4. PAGE 28:24 TO 29:01 (RUNNING 00:00:07.143)

```
24         Q    And it says that you worked at Apple
25     beginning at March 2009; is that right?
00029:01   A    That's correct.
```

5. PAGE 31:03 TO 31:05 (RUNNING 00:00:06.347)

```
03         Q    And what was your job description, as
04     explained to you at the time?
05         A    To build the App Store Review team.
```

6. PAGE 35:22 TO 36:01 (RUNNING 00:00:16.825)

```
22         Q    And what were the qualifications of the
23     then existing reviewers?
24         A    Qualifications were they could breathe,
25     they could think, and typically they came from the
00036:01   App Store -- or sorry, the Apple genius stores.
```

7. PAGE 36:02 TO 37:05 (RUNNING 00:01:30.290)

```
02     They were ex-Apple geniuses that we'd pull into the
03     team.
04         Q    And what kind of training did they have for
05     their role as reviewers?
06         A    We did a -- once they joined the company,
07     we put them through a multi-month process of them
08     learning the tools that we used to review apps, and
09     then go through the Wiki or knowledge base, if you
10     will, of what we allow in apps and what we don't
11     allow in apps.
12              And then a lot of the process focused on
13     who to send the app to when you have questions, who
14     to send the app to when you've done reviewed it and
15     you're happy and you want to approve it, and who to
16     send the app to when you're unhappy with the app and
17     want to reject it.
18              So it came a lot around understanding what
19     Apple would tolerate Dand what they wouldn't tolerate
20     with regards to features within the app.
21         Q    Okay.
```

```
22          And you mentioned a multi-month process and
23      a Wiki, et cetera.  Was all that in place already
24      when you arrived, or are these things that you
25      instituted?
00037:01      A    Some of it was in place.  I refined most of
02      that over time.  The multi-month process became a
03      two-week process under my helm, and we put out
04      guidelines rather than us having to guess at what's
05      allowed and what's not allowed.
```

8. PAGE 37:24 TO 38:07 (RUNNING 00:00:27.317)

```
24          Q    And what were the hiring criteria for new
25      team members?
00038:01      A    That they understood how to use a Mac, that
02      they understood how to use an iPhone, that they
03      understood a little about the Apple brand.  In that
04      first year, we were literally only hiring people
05      that had iPhones, had Macs, and came out of
06      somewhere within Apple, whether it was the Apple
07      stores or Apple corporate.
```

9. PAGE 38:08 TO 38:18 (RUNNING 00:00:31.740)

```
08          Q    And have those criteria changed over time?
09          A    Yes.  They changed over time because we
10      found that people outside of Apple could understand
11      how to protect the Apple brand.  We didn't have to
12      rely on people that had drunk the Kool-aid, so to
13      speak.
14          And we wanted to make sure that -- that
15      there were people that we could bring from all walks
16      of life to be able to review apps.  It wasn't just
17      an Apple employee thing.  It's something we could
18      roll out to a larger audience.
```

10. PAGE 44:03 TO 44:05 (RUNNING 00:00:09.501)

```
03          Q    How many times were you deposed in your
04      capacity as an Apple employee?
05          A    Roughly, I believe, about five times.
```

11. PAGE 44:17 TO 44:20 (RUNNING 00:00:10.379)

```
17          Q    And do you recall generally what topics
18      were you asked by Apple to be deposed as, as Apple's
19      representative?
20          A    Always App Store related.
```

12. PAGE 45:24 TO 46:02 (RUNNING 00:00:09.578)

```
24          Fair to say that your understanding is that
25      during your tenure, Apple considered you a trusted
00046:01      representative of the company?
02          A    Yes, that is correct.
```

13. PAGE 56:13 TO 56:17 (RUNNING 00:00:15.988)

```
13          How long does the human review process
14      typically take?
15          A    The numbers we've quoted in the past are
16      about 13 minutes per app when it's a new app.  About
17      six minutes per app when it's an updated app.
```

14. PAGE 57:05 TO 57:06 (RUNNING 00:00:04.030)

```
05          I have been gone for five years.  Right.
06      So a lot may have changed.
```

15. PAGE 63:22 TO 63:24 (RUNNING 00:00:13.946)

```
22              MR. EVEN:  So I would like to introduce
23      Exhibit 98.   That's Tab 36, Amal.
24              And Exhibit 99.   That's Tab 37.
```

16. PAGE 64:01 TO 64:12 (RUNNING 00:00:22.341)

```
00064:01            (Whereupon Shoemaker Exhibit 98 was
     02            marked for identification and
     03            attached hereto.)
     04            (Whereupon Shoemaker Exhibit 99 was
     05            marked for identification and
     06            attached hereto.)
     07    BY MR. EVEN:
     08       Q    So while Amal is making that available to
     09    you, the first article I'm referring to is an
     10    article from December 2017 named, "A Modern Content
     11    Store."
     12            Is that an article that you wrote?
```

17. PAGE 64:13 TO 64:20 (RUNNING 00:00:25.971)

```
     13       A   Yes, it is.
     14       Q   In this article, one of the predicates of
     15    it, you begin by saying that there's been no radical
     16    innovation in the way app stores operate over the
     17    past 10 to 20 years.
     18            Has there been any radical innovation in
     19    app stores since 2017?
     20       A   I don't believe so.
```

18. PAGE 66:01 TO 66:24 (RUNNING 00:01:31.341)

```
00066:01            And is this a correct copy of your
     02    December 2017 article?
     03       A   It appears to be, yeah.
     04       Q   And if you look at the end of the first
     05    paragraph and the beginning of the second paragraph,
     06    after you point out that there has been no radical
     07    innovation, you say (as read and/or reflected:)
     08                Today we are in dire need of a
     09            revolution.  We need digital stores
     10            that service multiple platforms,
     11            et cetera.
     12            Do you see that?
     13       A   Yes, I do.
     14       Q   And you wrote that?
     15       A   Yes, I did.
     16       Q   In your view, and based on your experience,
     17    how would a content store or an app store servicing
     18    both iOS and Android, for example, which I get is
     19    what you say by "multiple platforms," affect
     20    competition between Apple and Google?
     21       A    Well, I think the first thing is that this
     22    would give us an alternate app store, which we can
     23    download apps for our devices.  Right now there's
     24    only one for iOS.
```

19. PAGE 66:25 TO 67:04 (RUNNING 00:00:16.010)

```
     25            For Android, there's numerous, but for iOS,
00067:01    there's only one.
     02            I'm not sure how that would change or
     03    affect competition between the two platforms.  I'm
     04    not really certain.
```

20. PAGE 67:06 TO 67:09 (RUNNING 00:00:11.118)

```
     06            Could a Multiplatform App Store at least
```

```
07    make switching between the two platforms easier for
08    users?
09         A    Yes, I believe it would.
```

21. PAGE 69:20 TO 70:03 (RUNNING 00:00:26.616)

```
20         Q    If we go to page 3 of this article, at the
21    top you write (as read and/or reflected:)
22              Over time I realized that the
23            rules were often arbitrary,
24            arguable, and created by middle
25            aged white man ...
00070:01       Which you are one, as am I.  So ...
02              Turning to arbitrary first, which rules did
03    you consider to be arbitrary?
```

22. PAGE 71:12 TO 71:24 (RUNNING 00:00:45.684)

```
12              At the time a good one is App
13    Recommendation Apps.  Right.  Apple was fine for the
14    first five years of their life of the App Store life
15    with having app -- an app list apps that they
16    recommend for you to download.
17              But Apple got tired of that space because
18    it was driving more volume than their own App Store
19    was, their App Store charts, and decided to remove
20    that whole category of apps.
21              And many companies went out of business
22    because of that change.  They built entire company
23    around this feature that Apple decided to change.
24              So that was another arbitrary decision.
```

23. PAGE 72:01 TO 72:15 (RUNNING 00:00:40.350)

```
00072:01        You also called the rules arguable.
02              What did you mean by that?
03         A    Well, it's objectionable material.  Right.
04    If you look at what's porn.  Right.  I'll see when
05    I -- I'll know it when I see it.  Those were a lot
06    of the guidelines.  If you look at the guidelines
07    and you read them, you'll see that most are written
08    in a gray, a very subjective manner.
09              And developers read them one way, create
10    time, spend time, spend money to build an app and
11    submit it and we reject it because we interpret that
12    line differently.
13              When they're arguable, they're really
14    difficult to enforce, and it gets -- it breeds a lot
15    of anger, hence, my numerous death threats.
```

24. PAGE 72:17 TO 73:20 (RUNNING 00:01:42.660)

```
17              Is there a reason why Apple, to your
18    understanding, have you heard discussions as to why
19    Apple moderates content on the App Store but not on
20    the phone more generally through, for instance,
21    Safari?
22         A    Well, I mean, it's tough.  Right.  The
23    content -- when you're in Safari, you don't say,
24    okay, Apple has vetted all the content I can find
25    out on the Internet.  Right.  They -- that would be
00073:01    ludicrous.  Right.  You can't do that.
02              On the App Store, Apple from Day 1 says, we
03    want to protect our customers.  And so they will
04    moderate content that goes through the App Store.
05    Apple has control of that.  Apple has no control
06    over what websites are created and what content is
07    going to be put on them.
08              Now, sure they could do some of these
```

28

```
09    ridiculous services that turn everything Disneyesque
10    that you can find on your iPhone, but that will
11    eliminate a large percentage of the population.
12            I think the Internet is intended to be free
13    to some extent, whereas, the App Store is about --
14    one of the key things we learned building the App
15    Store is that approving something that makes Apple
16    look really bad hurts.
17            It hurts Apple.  It hurts their stock
18    price.  It hurts the shareholders.  It can be very
19    bad.  So the App Store is a vetted, curated store,
20    whereas, the Internet is not curated by anyone.
```

25. PAGE 73:21 TO 74:05 (RUNNING 00:00:29.477)

```
21            Q    And so if I understand you correctly, what
22    you're saying is that Apple believes anything that
23    goes through the Apple App Store essentially has the
24    impromptu of Apple on it because of the approval
25    process?
00074:01       A    That is correct.
02             Q    Okay.
03                  And would the same impromptu attach to an
04    app downloaded from a different store?
05             A    No.  I can't imagine it would.
```

26. PAGE 75:14 TO 77:02 (RUNNING 00:02:02.262)

```
14                  Is that an article that you've penned
15    around late March 2019?
16             A    Yes, it is.
17             Q    If you go to page 5.  At the penultimate
18    paragraph, you see it begins with (as read and/or
19    reflected:)
20                  Over the years, Apple has
21                  struggled with using the App Store
22                  as a weapon against competitors.
23             A    Yes, I see that.
24             Q    What did you mean by that?
25             A    Yeah.  Interesting line, in retrospect.
00076:01            The App Store was -- for a while was one of
02    those places that everyone wanted to purchase space,
03    everyone wanted to have an app from the App Store.
04    And we saw that through the review process, the
05    number of submissions, et cetera.
06                  There were times when competing apps, apps
07    that we could arguably say compete with Apple in
08    some way or another, like Google Voice or
09    Rhapsody -- or Rhapsody Music subscription, faced a
10    lot of barriers in getting approved.
11                  And, to me, that was, you know, it was
12    curious.  Other apps didn't have this problem, but
13    we spent a lot of time thinking on what the slippery
14    slope implications were of approving an app like
15    Google Voice.
16                  Does that mean that people will stop using
17    the phone as a phone?
18                  Will your phone number disappear?
19                  Will the iPhone disappear, right, in guise
20    of a Google phone or something like that?
21                  There was always a lot of talk and
22    conjecture about that internally.
23                  But Google Voice and Rhapsody faced
24    daunting -- Google Voice took a year to approve.  A
25    year.  And I had to call the developer every couple
00077:01    of weeks, or get an angry phone call from the
02    developer every couple of weeks.
```

29

27. PAGE 78:13 TO 78:24 (RUNNING 00:00:31.039)

```
13        Q   On page 6 you note that Apple Arcade is the
14   type of app that Apple has consistently disallowed
15   on the store.
16           Do you see that?
17        A   Yes, I do.
18        Q   What is the guideline that Apple Arcade
19   violates, in your view?
20        A   A store within a store.  It was an
21   overarching rule that Apple had for many years, you
22   could not have a store within a store.  An app that
23   made other apps available within it was absolutely
24   not allowed.
```

28. PAGE 79:13 TO 80:10 (RUNNING 00:01:08.107)

```
13           Going to page 8 under the heading (as read
14   and/or reflected:)
15               Apple needs to play fair.
16           You write (as read and/or reflected:)
17               With the App Store being the
18           only way to install apps on the
19           iPhone and iPad, Apple has complete
20           and unprecedented power over their
21           customers' devices.
22           Do you see that?
23        A   Yes, I do.
24        Q   What are the options of a developer that's
25   unhappy with Apple to just leave the iOS platform
00080:01   and move to another platform?
02        A   They can move to Android.  That's
03   80 percent of the devices in the world.  Right.  I
04   mean, that's one alternative is to just pull
05   everything out of iOS and put it entirely on
06   Android.  That gets the majority of the world's
07   apps.  Right.
08        Q   In your experience, did most app developers
09   consider that a viable option for them?
10        A   No.  No, they didn't.
```

29. PAGE 80:20 TO 81:01 (RUNNING 00:00:29.753)

```
20        Q   Have you ever heard of developer
21   considering leaving iOS to move to a game console?
22        A   No, I have not.
23        Q   Did there come a time when you were
24   interviewed by congressional staffers as part of an
25   investigation by U.S. Congress?
00081:01   A   I recall.
```

30. PAGE 84:16 TO 85:08 (RUNNING 00:01:14.294)

```
16        Q   The report also states that you recalled an
17   instance when an app developer's compliant
18   application was rejected from the App Store, and
19   then the technology was appropriated by Apple for
20   its own offerings.
21           Do you recall saying that to the staffers?
22        A   The technology wasn't appropriated.  The
23   idea was appropriated.  The technology was still
24   inherent in the app, but Apple released a feature, a
25   similar feature about a year later.
00085:01   Q   And your understanding was that that
02   rejection from the App Store was not justified under
03   the guidelines?
04        A   That is correct.
05        Q   And so this would be an example of Apple
06   making sure it has a first-mover advantage through
```

```
07    the review process?
08         A    Yeah, I think so.
```

31. PAGE 88:02 TO 88:08 (RUNNING 00:00:30.521)

```
02              Do you remember when you thought that Apple
03    executives found reasons you thought were pretextual
04    for the non-approval of apps, the rejection of apps?
05         A    Yes.
06         Q    Can you give me an example of an app that
07    you thought was rejected on pretextual grounds?
08         A    Google Voice.
```

32. PAGE 88:09 TO 88:10 (RUNNING 00:00:08.180)

```
09         Q    Any others?
10         A    That's the only one I can remember.
```

33. PAGE 100:15 TO 100:18 (RUNNING 00:00:09.760)

```
15         Q    What were the numbers by the time you left
16    Apple?
17         A    By the time I left Apple, we were reviewing
18    about 100,000 apps per week.
```

34. PAGE 101:03 TO 101:10 (RUNNING 00:00:18.913)

```
03         Q    And you also say that this leads to an
04    increased number of mistakes being made.
05              Do you see that?
06         A    Yes, I do.
07         Q    And mistakes are when apps are being
08    approved that should be rejected?
09         A    Apps that are being approved that should be
10    rejected and rejected that should be approved, yes.
```

35. PAGE 108:10 TO 110:07 (RUNNING 00:02:47.800)

```
10         Q    Why does the review team need a set of
11    rules that are not open to the developers?
12         A    We crafted the guidelines to be very
13    subjective.  So we did not -- so we allowed
14    developers to try stuff, right, to push the
15    envelope, to try to show us something that's
16    allowable.  And we learned over the years that
17    developers will try interesting things, some of
18    which we like, and some of which we don't like.
19              But if we had very black and white rules,
20    developers would not have typically pushed the
21    envelope and tried to get interesting things into
22    the store.
23              So we wanted the guidelines to be
24    subjective for a while in order to see what type of
25    content, what type of apps we were going to get.
00109:01         Now, having said that, look, one of the
02    very first apps that we had an issue with was called
03    "Baby Shaker."  It was in the first three weeks of
04    my hiring.  And for all intents and purposes, that
05    didn't violate any guidelines, and three sets of
06    eyes.
07              This is when three reviewers would review
08    it.  They approved it.  Apple stock went down.  I
09    got a call from Steve.  I got a call from Al Gore's
10    office.  We got -- we had people picketing outside
11    of Apple because of one app approval that should not
12    have been approved.
13              And it was about quieting a baby by gently
14    shaking the phone, but if you shook it really hard,
15    you killed the baby.
16              And so that is the reason why we needed to
```

31

```
17   have more refined guidelines internally because
18   reviewers, they don't see the forest for the trees.
19   This was a dumb app.
20          If you shook it, it put X's over
21   the baby -- a picture of the baby's eyes.  No baby
22   was harmed in the making of this app.
23          But perception was that Apple's okay with
24   shaking babies.  So we'd have to reject -- or so we
25   got picketed.  And so we got a lot of bad press from
00110:01   that.  That's why we needed something a little more
02   defined than just the guidelines because the
03   guidelines are subjective.
04          Q    Is one of the goals of the review process
05   to protect -- to protect Apple's goodwill?
06          A    Yes.  It's to protect Apple's brand for
07   sure.
```

36. PAGE 117:01 TO 117:19 (RUNNING 00:00:49.499)

```
00117:01          Q    In Marketing Text, there's a guideline
02   about cross-platform information.
03              Do you see that?
04          A    Yes, I do.
05          Q    What is the goal of this guideline?
06          A    Well, for the guideline specifically, I can
07   address some points of it.  Not -- it won't be
08   complete.
09              But one of the issues that we always had is
10   that developers that create a cross-platform app
11   like to put in the marketing text for the App Store,
12   iOS App Store, they want to tell them -- tell you
13   about the features in their Android app.  It made no
14   sense.
15              So we didn't want that kind of information
16   in the iOS App Store.
17          Q    Did you have any list of bad words that
18   were searched for, such as Android or Windows?
19          A    I'm sure we did.
```

37. PAGE 117:20 TO 117:22 (RUNNING 00:00:08.196)

```
20          Q    And were apps generally prohibited from
21   pointing to their availability on other platforms?
22          A    Yes, they were.
```

38. PAGE 124:17 TO 124:22 (RUNNING 00:00:18.446)

```
17          Q    If you turn to Exhibit 102.  This is a
18   document dated March 13, 2009.
19              (Whereupon Shoemaker Exhibit 102
20              was marked for identification and
21              attached hereto.)
22              MR. EVEN:  It's APL-APPSTORE_01964696-707.
```

39. PAGE 125:02 TO 125:15 (RUNNING 00:00:44.859)

```
02          Q    Do you recall writing this document titled,
03   "My iPhone Developer Experience"?
04          A    Barely.  Vaguely.  Yes.
05          Q    Let me take a step back.  Did you write
06   this document; right?
07          A    Yes, I did.  Yes, I did.
08          Q    And you wrote it as part of your general
09   ordinary course of duties at Apple?
10          A    Yes.  I started on March 9th, 2009.  This
11   was four days later.  I was asked by Ron to write up
12   my developer experience working with the App Store
13   because -- because that's part of the reason they
14   hired me is what did I go through to get onto the
```

```
      15    App Store.
```

40. PAGE 126:20 TO 126:23 (RUNNING 00:00:11.750)

```
      20        Q    How often did you hear developers
      21    complaining about Apple's criteria being unclear
      22    while you were at Apple?
      23        A    Every day probably.
```

41. PAGE 133:20 TO 134:19 (RUNNING 00:01:23.257)

```
      20        Q    You mentioned earlier that you believed
      21    that in your later years at Apple, the accuracy of
      22    the review or the error rate went down.
      23             Do you remember that?
      24        A    Yes, I do.
      25        Q    And do you recall quoting to your
  00134:01    executives numbers around the 15 percent error rate
      02    around the 2015-16 time frame?
      03        A    Yes, I do.
      04        Q    And you mentioned earlier that you reviewed
      05    about, I think you said, 100,000 apps a week; is
      06    that right?
      07        A    Yes.
      08        Q    So that would still mean about 15,000
      09    mistakes each week; correct?
      10        A    That is correct.
      11        Q    If you turn to Exhibit 104.
      12             (Whereupon Shoemaker Exhibit 104
      13             was marked for identification and
      14             attached hereto.)
      15    BY MR. EVEN:
      16        Q    That is an e-mail exchange, dated
      17    January 4, 2006.  The top e-mail -- the last e-mail
      18    is from you.  And it bears Bates
      19    APL-APPSTORE_00058136-1838.
```

42. PAGE 135:01 TO 138:03 (RUNNING 00:03:36.626)

```
  00135:01        Q    Is this an e-mail that you wrote around
      02    early 2016?
      03        A    It looks to be.
      04        Q    And it's an e-mail that you wrote as part
      05    of your ongoing business and employment at Apple; is
      06    that right?
      07        A    Yes, that's correct.
      08        Q    And you are forwarding an e-mail from a
      09    Mr. Sasser to Mr. Schiller, dated the same day,
      10    January 4th, 2016.
      11             Do you see that?
      12        A    I do see that.
      13        Q    Who is Mr. Sasser?
      14        A    I don't recall.  A developer from Panic.
      15    Panic was a popular developer or a developer that
      16    had popular apps on the store.
      17        Q    Okay.
      18             And they had apps for both iOS and Mac; is
      19    that right?
      20        A    I believe so.  Yes.
      21        Q    And the review process applied both to the
      22    Mac Store and the iOS Store; is that right?
      23        A    Yes.  My team reviewed apps for the Watch,
      24    for the App Store and for the Mac Store, that's
      25    correct.
  00136:01        Q    If you turn to the second page of the
      02    document, at the bottom do you see that Mr. Sasser
      03    is saying that -- and this is underlined (as read
      04    and/or reflected:)
```

```
        05                  The app store takes parts --
        06              sorry -- of our job that we're
        07              already extremely good at -- like
        08              customer support, quick updates,
        09              easy refunds -- and makes them all
        10              more stressful and difficult, in
        11              exchange for giving Apple
        12              30 percent of our revenue.
        13              Do you see that?
        14         A    Yes, I do.
        15         Q    What's your understanding as to how the App
        16    Store made customer support more difficult for a
        17    developer like Panic?
        18         A    Well, if you look at the way the App Store
        19    works, technically Panic doesn't have any users.
        20    Apple has users.  Right.  Apple has customers.
        21              And those customers are able to purchase
        22    access to an app like Panic, but Panic doesn't get
        23    to know who they are.  They don't know their name.
        24    They don't have the credit card billing details.
        25    They don't know really anything about them.
00137:01              So it's a level of indirection.  And it's
        02    very difficult for a company like Panic to know, you
        03    know, if I write to Panic directly, say I bought
        04    your app, they can basically say, prove it.  I don't
        05    have any record of you buying my app.
        06              They have to go through the Apple channel
        07    to make that happen.  It's very difficult to connect
        08    the dots once you're running into customer
        09    service-related issues.
        10         Q    Okay.
        11              And if somebody wants to give a 1 star
        12    rating to Panic, can Panic do anything about it,
        13    talk directly to the customer, explain to them what
        14    they're not understanding about the app or anything
        15    like that?
        16         A    No, not directly.
        17         Q    How does the App Store make easy refunds
        18    more difficult for developers?
        19         A    Well, giving a refund from Apple is real
        20    easy.  You just go up to the app -- you just request
        21    a refund through a standard channel with Apple Care.
        22              The problem is that the developer doesn't
        23    really know about it.  Right.  I mean, if somebody
        24    requests -- if they go directly to Panic, in this
        25    instance, and say, I want a refund, Panic can't do
00138:01    it.  They say you have to go to Apple to get the
        02    refund.  And so they can get a refund from Apple.
        03              But it's another level of indirection.
```

43. PAGE 138:04 TO 138:07 (RUNNING 00:00:10.190)

```
        04              But I think -- I'm not sure what he means
        05    by that because honestly I've never had problems
        06    with getting a refund out of Apple on the App Store,
        07    but it's difficult for them to know.
```

44. PAGE 138:18 TO 138:21 (RUNNING 00:00:08.049)

```
        18         Q    And fair to say that this created another
        19    level of friction between developers and their
        20    users?
        21         A    Yeah, I would say so.
```

45. PAGE 144:10 TO 144:23 (RUNNING 00:00:46.869)

```
        10         Q    Did Apple have a policy against the
        11    disclosure to consumers of the 30 percent commission
```

```
12    that developers were paying?
13         A    I never saw anything in writing in the
14    guidelines, but, yes, that is an accurate statement.
15    We did not like to see that in the marketing text.
16         Q    And when you say did not like to see it,
17    that means that an app could get rejected for
18    putting something like that in the marketing text or
19    in an app itself?
20         A    Yes.  If an app were to say the monthly
21    subscription is 6.99, that's an extra 30 percent
22    because of Apple or something like that, yes.  We
23    would absolutely have them remove that.
```

46. PAGE 149:12 TO 149:14 (RUNNING 00:00:12.811)

```
12         Q    Have you ever heard anybody voice concerns
13    about the security of other in-app purchase APIs?
14         A    I have not.
```

47. PAGE 149:15 TO 150:05 (RUNNING 00:00:52.440)

```
15         Q    Based on your understanding, is IAP, in
16    fact, safer than, for instance, PayPal?
17         A    I believe it is, but I don't have any data
18    to back that up.  It just feels like it would be
19    more secure.
20         Q    And why do you think it feels more secure?
21         A    Because when you use in-app purchase,
22    you're using services that are built in on the phone
23    versus a third-party library that may or may not
24    have malware in it.  Right.
25              People can use infected libraries to give
00150:01    you third-party functionality.  And then your
02    password and user name are out there.
03              Whereas, I know if it's using the built-in
04    services of the iPhone, people can't be tracking
05    that information.  They can't be capturing it.
```

48. PAGE 150:22 TO 151:06 (RUNNING 00:00:33.090)

```
22         Q    Has the functionality of IAP involved
23    during your time at Apple in any material way?
24         A    It evolved in a variety of ways, including
25    things like extra protections in place so people
00151:01    could not make accidental purchases.  Right.  Or
02    their children making accidental purposes so -- or
03    purchases.
04              Requiring the password to be reentered
05    after 15 minutes.  Certain features like that
06    changed over time.
```

49. PAGE 151:09 TO 151:18 (RUNNING 00:00:30.470)

```
09         Q    You mentioned earlier that there came a
10    time when you and maybe others thought that maybe 30
11    percent was too high.
12              Do you remember that?
13         A    I do remember that.
14         Q    When was that discussion?
15         A    I would probably say late in my time at
16    Apple, 2015, 2016, developers were complaining about
17    the 30 percent.  I started hearing more and more
18    complaint about it.
```

50. PAGE 171:14 TO 173:21 (RUNNING 00:02:25.040)

```
14         Q    We talked earlier about a store within a
15    store.
16              Do you remember that?
17         A    Yes, I do.
```

```
18        Q    And you said that Apple had a general
19   policy not allowing that; right?
20        A    That's correct.
21        Q    And that was for some time in a more
22   internal policy that became more explicit and public
23   facing over time; is that fair?
24        A    That is correct.
25        Q    And do you -- what's your understanding of
00172:01   the rationale for the prohibition on a store within
02   a store?
03        A    Apple always believed in -- well, there
04   were multiple rationales.  One is that App Store was
05   to be the only way that you could install apps
06   into -- onto the iPhone.  Right.
07             And there was technological reasons for it.
08   There was privacy reasons, et cetera, but the only
09   way to get an app onto your phone was through the
10   App Store.
11             So that was issue No. 1.  Right.  We didn't
12   want anyone else to pretend that they were
13   downloading an app, et cetera.  And we didn't want
14   them to use other things like the enterprise
15   guidelines or enterprise certificates and
16   side-loading certificates.  They could only do it
17   through this one.
18             The other one was a little different.  It
19   was about meritocracy.
20             So the idea for the App Store has always
21   been that the best apps will rise to the top because
22   of reviews, ratings, and downloads.  Right.  The
23   apps that tend to get a lot of downloads, they'll
24   chart; right.
25             And if they are getting a lot of downloads,
00173:01   it's trending.  It means it's got some value.  And
02   those will rise up the charts because people, you
03   know, especially now when there's 2 million apps in
04   the store, it's very difficult to find apps.
05             And so you know what the hot ones are by
06   watching the charts and things that rise in the
07   charts.
08             Now, when you have a store in a store or
09   these app recommendation apps, you have third
10   parties meddling with that and people can pay to
11   place.
12             So let's say I go to one of these app
13   recommendation apps and I say I'll give you $10,000
14   put me at the top of your list, they'll put you at
15   the top of their list and suddenly that terrible app
16   is trending.
17             And that app is changing the Apple charts
18   and people are downloading this piece of garbage
19   over and over and over.
20             That was kind of the reason.  Those are the
21   two reasons that I recall.
```

51. PAGE 175:04 TO 175:13 (RUNNING 00:00:27.216)

```
04             Let me introduce Exhibit 111.  That's an
05   e-mail chain, Bates stamped APL-APPSTORE_09425339.
06             (Whereupon Shoemaker Exhibit 111
07             was marked for identification and
08             attached hereto.)
09   BY MR. EVEN:
10        Q    That's another e-mail chain you wrote in
11   the ordinary course as part of your job at Apple;
12   right?
13        A    Yes, it is.
```

52. PAGE 175:14 TO 175:16 (RUNNING 00:00:08.003)

```
14        Q   And you're given here ERB meeting notes.
15            Do you see that?
16        A   Yes, I do.
```

53. PAGE 175:17 TO 176:07 (RUNNING 00:00:36.129)

```
17        Q   And do you see at the top of the second
18    page there's an app name called The Web Store,
19    discover the top fun and useful or whatever from
20    developer Orange?
21            Do you see that?
22        A   Yes, I do.
23        Q   And you say it's rejected.  And in the
24    comment you say (as read and/or reflected:)
25                We do not want apps that
00176:01          replace our store with web apps.
02            Do you see that?
03        A   Yes, I do.
04        Q   What was the rationale for not wanting a
05    web app store?
06        A   I think the comments sum that up.  They
07    don't want to replace the store with web apps.
```

54. PAGE 180:22 TO 181:03 (RUNNING 00:00:28.489)

```
22        Q   So while this is updating, let me introduce
23    Exhibit 113.  That's a document dated November 23,
24    2011.
25        A   Okay.
00181:01      Q   Again, an e-mail chain and it's
02    APL-APPSTORE_05267651.
03            If you can take a look at that.
```

55. PAGE 181:04 TO 181:12 (RUNNING 00:00:11.455)

```
04        A   Okay.  I see it.
05            (Whereupon Shoemaker Exhibit 113
06            was marked for identification and
07            attached hereto.)
08    BY MR. EVEN:
09        Q   This is another e-mail that you wrote and
10    received as part of your ordinary course of
11    employment at Apple; right?
12        A   Yes, it is.
```

56. PAGE 181:13 TO 181:23 (RUNNING 00:00:17.800)

```
13        Q   And on the second page, the very first
14    e-mail in the chain, you're saying, (as read and/or
15    reflected:)
16                I'm removing the Big Fish
17            games app immediately.  I have no
18            guideline to remove their app, but
19            have been asked by the ERB to hide
20            it.  I will be doing so
21            immediately.
22            Do you see that?
23        A   Yes, I do.
```

57. PAGE 181:24 TO 182:01 (RUNNING 00:00:07.250)

```
24        Q   What do you mean by "hide it"?
25        A   It means remove it.  Just remove it from
00182:01    the App Store so nobody can see it.
```

58. PAGE 182:23 TO 183:09 (RUNNING 00:00:32.380)

```
23            What do you mean by (as read and/or
24    reflected:)
```

```
     25                 I have no guideline to remove
00183:01            their app On.
     02       A    I don't recall.
     03       Q    Doesn't it mean that there is no guideline
     04    that actually supports the ERB's decision that you
     05    can point to and say to the developer, here's the
     06    problem?
     07       A    That's how it reads, but it's 2011.  I
     08    figured there were guidelines at the time that
     09    disallowed this.  Maybe not.  I don't recall.
```

59. PAGE 184:07 TO 184:11 (RUNNING 00:00:17.311)

```
     07       Q    So let's turn to Exhibit 114.  Let me
     08    introduce it.
     09                 That's a November 23, which is the same
     10    date, November 23, 2011, and it's e-mails from you.
     11    This is APL-APPSTORE_05267654.
```

60. PAGE 184:12 TO 184:18 (RUNNING 00:00:05.409)

```
     12                 (Whereupon Shoemaker Exhibit 114
     13                 was marked for identification and
     14                 attached hereto.)
     15    BY MR. EVEN:
     16       Q    That's another e-mail that you wrote in the
     17    ordinary course of your employment at Apple; right?
     18       A    Yes.
```

61. PAGE 184:19 TO 185:20 (RUNNING 00:00:53.936)

```
     19       Q    And it's a little more lively in its
     20    language?
     21       A    Yes, it is.
     22       Q    And Mr. Neumayr -- I hope I'm not
     23    butchering his name -- says (as read and/or
     24    reflected:)
     25                 If we clearly said to them "we
00185:01            removed it because we do not allow
     02            app stores in an app inside the App
     03            Store."
     04            Which is a quote from your e-mail that
     05    we've just seen.
     06       A    Yeah.
     07       Q    (As read and/or reflected:)
     08                 Why wouldn't we also say this
     09            publicly as a statement?
     10            Do you see that?
     11       A    Yes, I do.
     12       Q    And you respond (as read and/or reflected:)
     13                 Because it's chicken shit.  We
     14            don't have a guideline for this.
     15            Do you see that?
     16       A    Yes, I do.
     17       Q    Fair to say that at the time you thought
     18    that there was no guideline that supported this
     19    decision?
     20       A    I -- yes.  I would trust what I said then
```

62. PAGE 185:21 TO 185:22 (RUNNING 00:00:05.130)

```
     21    about the guidelines then than I would now.  I don't
     22    remember those guidelines.
```

63. PAGE 185:24 TO 185:24 (RUNNING 00:00:01.497)

```
     24                 So if we turn to 115.
```

38

64. PAGE 185:25 TO 186:15 (RUNNING 00:00:58.977)

```
        25   ///
  00186:01            (Whereupon Shoemaker Exhibit 115
        02            was marked for identification and
        03            attached hereto.)
        04            THE WITNESS:  Okay.
        05   BY MR. EVEN:
        06        Q   Now we're jumping two years forward.  So
        07   this is a February 5, 2013 e-mail.
        08   APL-APPSTORE_07087422-4224.
        09            That's another e-mail exchange that you had
        10   as part of your ordinary course of employment at
        11   Apple; is that right?
        12        A   Yes, it is.
        13        Q   And this is, again, concerning Big Fish; is
        14   that right?
        15        A   Yes.
```

65. PAGE 186:24 TO 187:04 (RUNNING 00:00:13.814)

```
        24        Q   And that's about some other iOS application
        25   that Big Fish submitted; correct?
  00187:01        A   That is correct.
        02        Q   Not the one that was removed back in 2011;
        03   right?
        04        A   That's correct.  Yes.
```

66. PAGE 188:10 TO 188:25 (RUNNING 00:00:33.098)

```
        10        Q   Going all the way to the top, you write
        11   again (as read and/or reflected:)
        12                Big Fish Unlimited is seen as
        13            a game store within an app.  This
        14            is not allowed.  Phil and Eddy have
        15            been adamant about this, despite my
        16            protests.  We have no clear
        17            guidelines around this.
        18            Do you see this?
        19        A   Yes, I do.
        20        Q   And this is now February 2013 and still
        21   there are no guidelines; correct?
        22        A   So it appears, yes.
        23        Q   And Phil and Eddy are Phil Schiller and
        24   Eddy Cue; correct?
        25        A   Yes, that is correct.
```

67. PAGE 189:07 TO 189:11 (RUNNING 00:00:14.280)

```
        07        Q   And so as of February 2013, you thought
        08   that a game subscription is a promising business
        09   model that should be allowed?
        10        A   Personal belief, probably -- yes, that is
        11   correct.
```

68. PAGE 195:09 TO 195:11 (RUNNING 00:00:00.031)

```
        09            (Whereupon Shoemaker Exhibit 116
        10            was marked for identification and
        11            attached hereto.)
```

69. PAGE 195:16 TO 195:22 (RUNNING 00:00:18.916)

```
        16        Q   This is an e-mail dated July 18, 2011.
        17            Is this another e-mail that you wrote
        18   during your employment at Apple?
        19        A   I believe so.  Yes, it looks like it.
        20        Q   And it was part of the ordinary course of
        21   fulfilling of your duties at Apple?
        22        A   Yes.
```

70. PAGE 196:10 TO 196:25 (RUNNING 00:00:33.925)

```
10        Q    And Ms. Doerr writes in the second sentence
11   (as read and/or reflected:)
12              The system is not perfect and
13          scams can still perpetuate in the
14          App Store where reviews can be
15          gamed in short term and even
16          possibly long-term monetary gains
17          can be made by unscrupulous
18          developments.
19          Do you see that?
20        A    Yes, I do.
21        Q    Do you agree that that's a correct
22   statement?  The system was never perfect and scams
23   did still perpetuate the App Store from time to
24   time?
25        A    Sure.  Yes.
```

71. PAGE 204:02 TO 204:10 (RUNNING 00:00:26.803)

```
02              Was there anything about the App Review
03   process that was not susceptible to replication by
04   another App Store should another App Store decide to
05   do it?
06        A    No, I don't think so.
07        Q    It was just a matter of investing the money
08   and taking the time and thinking about the problem
09   and addressing it?
10        A    That's right.
```

72. PAGE 214:23 TO 215:02 (RUNNING 00:00:17.520)

```
23        Q    Would you agree with me that there were
24   instances that malware got onto iPhones?
25        A    Yes, I agree with that.
00215:01        Q    And malware got onto the App Store?
02        A    Yes.
```

73. PAGE 216:03 TO 216:14 (RUNNING 00:00:41.402)

```
03        Q    Do you recall an instance where a foreign
04   government had managed to put some malware into the
05   App Store?
06        A    Yes, I do.
07        Q    What was that instance?
08        A    A researcher from a university in China
09   submitted an app that when you played the game, it
10   would randomly go into your contact list and replace
11   all the phone numbers with 8s.  8888888.
12              And Chinese government brought that to our
13   attention to say -- to criticize us for our review
14   process.
```

74. PAGE 229:20 TO 229:23 (RUNNING 00:00:22.715)

```
20              MR. EVEN:  If you turn to Exhibit 119.
21        Q    And scroll to page 367.  This document is
22   even bigger than the Wiki, I believe.
23        A    Yeah.  Yeah, it is.
```

75. PAGE 230:03 TO 231:03 (RUNNING 00:01:14.277)

```
03        Q    At the top of the page, there's a paragraph
04   starting with (as read and/or reflected:)
05              Subcommittee staff learned
06          that Apple has engaged in conduct
07          to exclude rivals ...
08          Do you see that?
09        A    Yes, I do.
```

40

```
10        Q    And do you see that it says (as read and/or
11    reflected:)
12                For example, Mr. Shoemaker
13            explained that Apple's senior
14            executives would find pretextual
15            reasons to remove apps from the App
16            Store, particularly when those apps
17            competed with Apple services.
18        A    Yes, I do.
19        Q    Do you recall sharing those views with the
20    staffers?
21        A    Not in so many words, but I had a lot of
22    conversations with them.  I -- I do recall saying
23    that -- yes.  I guess, yes, I did have that
24    conversation with them.
25        Q    And we saw some examples of instances like
00231:01    that today about Google Voice and some of the Big
02    Fish situation and things like that; is that fair?
03        A    Yes.
```

76. PAGE 248:13 TO 251:04 (RUNNING 00:03:16.905)

```
13    are listening, what is the difference between a web
14    app and an iOS app for the App Store?
15        A    So an iOS app is an application that has
16    been written in a specific programming language like
17    Objective-C and Swift.
18            And you write it on a Mac -- on a Mac or
19    other type of computer.  And you access specific
20    APIs to do the functionality that you want.
21            You want to put buttons on the screen.  You
22    do that with Objective-C or Swift.
23            If you want to get access to the contacts
24    or access to any of the deeper functionality in iOS,
25    you use an app for that.
00249:01            Now -- I'm sorry.  You use an API for that
02    to access it within your app.
03            So you can have a lot of functionality,
04    full integration with the hardware device, access to
05    the camera, access to the screen, drawing pixels on
06    the screen, creating games, et cetera.  And it's a
07    full, robust type of development environment on
08    which you develop.  And that's available on iOS.
09            When you go to the web and you do a web
10    app, you're creating what's called "lowest common
11    denominator functionality."  You're now creating an
12    app -- an app with HTML and JavaScript.
13            So, first of all, you have much slower
14    processing.  It's a slower app because it's the same
15    stuff you see on a website.  It's the HTML and
16    JavaScript.  So you have limited functionality where
17    you can put a pixel on the screen.  It's not as
18    powerful.
19            You don't have access to all of those APIs
20    built into the underlying operating system because
21    your lowest common denominator.  You want it to run
22    on iOS.  You want it to run on windows.  You want it
23    to run on Mac, and you want it to run on Android.
24    So suddenly you're eliminating a lot of
25    functionality for that.
00250:01            Now, these operating systems can expose a
02    little stuff that can be -- expose some of these
03    deeper APIs to be used by web apps, but doing so
04    also opens up security problems, a way, a back door
05    into getting to the code.
06            You want to expose as little as you can to
07    these web apps because web apps don't go through a
```

41

```
08   review process.  Websites don't go through a review
09   process.
10           If you launch a website and it can access
11   underlying functionality like maybe your contacts,
12   suddenly every website you go to has the potential
13   of stealing your information.  Stealing your data.
14   And that's something that we want to disallow.
15           So a web app essentially is a website that
16   you say make a web app version of this.  And all
17   that does is it takes all of these files, these
18   HTML, these JavaScript files, and puts it into a
19   small container, and it lives on the springboard, on
20   the home screen, if you will, of your iOS device.
21           It looks like an app.  It's an icon.  But
22   it's a web app.  You're not going to have a lot of
23   functionality there.  You click it.  It's just like
24   saving a Safari link on your desktop and launching
25   an app.  So there's a lot of limited functionality.
00251:01   You can't do as much there.
02       Q   So at bottom, would you say that a web app
03   is no substitute for a true iOS app?
04       A   Yes, I would.
```

<u>**Shoemaker, Phillip (Vol. 02) - January 14, 2021**</u>   1 CLIP (RUNNING 00:11:37.692)

---

20 SEGMENTS (RUNNING 00:11:37.692)

---

1. PAGE 356:05 TO 356:13 (RUNNING 00:00:13.228)

```
05              THE REPORTER:  Raise your right hand,
06    please.
07
08                    PHILLIP BURTON SHOEMAKER,
09    recalled as a witness by counsel for Plaintiff, being
10    first duly sworn, testified as follows:
11
12              THE WITNESS:  Yes, I do.
13              THE REPORTER:  Thank you.
```

2. PAGE 452:09 TO 452:15 (RUNNING 00:00:24.733)

```
09              And this is Bates Stamp 04 -- 00424815.
10    Exhibit 176.  It is an e-mail from you,
11    Mr. Shoemaker, to Peter stone.  It is dated
12    March 6th, 2013.  New app process.
13              Is this an e-mail that you would have sent
14    in the course of your employment at Apple?
15         A.   Yes.
```

3. PAGE 452:19 TO 452:25 (RUNNING 00:00:24.269)

```
19         Q.   And this is a discussion about whether the
20    apps were reviewed for viruses.
21              And according to this e-mail, the apps are
22    reviewed for -- are reviewed -- are scanned -- I'm
23    sorry.  Are scanned with the Norton iAntivirus and
24    the ClamXAV; is that correct?
25         A.   That is correct.
```

4. PAGE 453:17 TO 454:04 (RUNNING 00:00:34.895)

```
17         Q.   Okay.  And do you know how iTunes scanned
18    for viruses, other than through the Norton and the
19    ClamXAV?
20         A.   No.  I did not.
21         Q.   So do you know if they did a scan for the
22    .exes?
23         A.   Yes.
24              Before I left, I know they were scanning the
25    binaries for anything inside of the .zip file, which
00454:01    is also an app.  They would scan those.  Whether they
02    had .exes or .dlls in there, they would scan them for
03    viruses -- well-known viruses using tools like Norton
04    antivirus.
```

5. PAGE 480:07 TO 480:15 (RUNNING 00:00:31.532)

```
07              So yesterday you mentioned an instance where
08    Apple rejected an app and then released a similar
09    feature on a tone.
10              Do you recall that?
11         A.   Yes.
12         Q.   And what was the feature in question?
13         A.   It was wireless syncing of -- of data.
14         Q.   Wireless syncing between which devices?
15         A.   iPhone and your Mac.
```

6. PAGE 484:20 TO 485:17 (RUNNING 00:01:40.097)

```
20          Q.   You mentioned yesterday that there were
21     generally no viruses on iOS; is that correct?
22          A.   That is correct.
23          Q.   And I think you have stated that that is
24     because unlike Windows and, to some extent, Mac OS,
25     iOS is a more modern OS; is that right?
00485:01         A.   Yes.   That is correct.
02          Q.   And I think you said that -- one aspect that
03     is relevant to the issue of susceptibility to viruses
04     was that iOS has what you called a sandbox model; is
05     that right?
06          A.   Yes.   That is correct.
07          Q.   And sandbox model, if I understand
08     correctly, it that essentially each application
09     remains in its own little compartment and can't reach
10     out of that unless the user or app allows it; is that
11     right?
12          A.   Yes.   That is correct.
13          Q.   And if I understand in your answers then
14     when it comes to malware, iPhones are -- are, you
15     know, super safe because iOS in the sandbox model are
16     very robust.
17          A.   That is correct.
```

7. PAGE 487:06 TO 487:11 (RUNNING 00:00:24.101)

```
06               And so what you are telling me is that for
07     viruses, sandbox -- a sandbox model is very effective
08     and human review is not.  And for malware, really,
09     neither one is very effective because it is just very
10     hard to catch.   It is just a real problem.
11          A.   I would agree with that.
```

8. PAGE 488:02 TO 488:11 (RUNNING 00:00:30.522)

```
02          Q.   Now, Apple does allow other app stores on
03     Mac OS; is that right?
04          A.   Yes, they do.
05          Q.   And Apple does allow direct download of
06     applications, what is called siloing onto Mac
07     computer; right?
08          A.   Yes, they do.
09          Q.   And an iOS, even though it is more secure,
10     Apple does not allow app stores for siloing; right?
11          A.   That is correct.
```

9. PAGE 488:12 TO 488:16 (RUNNING 00:00:27.722)

```
12          Q.   So would you agree with me that to extend --
13     to the extent anyone claims that Apple needs a close
14     guard on iOS to prevent viruses, for instance, that
15     is just not true?
16          A.   For viruses, yes.   That is correct.
```

10. PAGE 490:13 TO 490:19 (RUNNING 00:00:25.029)

```
13          Q.   You mentioned yesterday that there were some
14     dumb decisions made by some reviewers who put certain
15     apps on halt.
16               Do you recall that?
17          A.   Yes, I do.
18          Q.   And that was with respect to apps that
19     supported a competing watch; right?
```

11. PAGE 490:20 TO 491:07 (RUNNING 00:00:42.115)

```
20          A.   Yes.
21          Q.   And so we covered yesterday that competing
```

```
22    apps sometimes faced issues at the ERB because of
23    positions taken by your superiors; is that right?
24         A.   Yes.
25         Q.   And based on the story of this competing
00491:01  watch, I understand that competing apps also
02    sometimes faced problems with the review process
03    because of your -- of your underlings, the people who
04    reported to you.
05              Is that fair?
06         A.   Yes.  Overzealous reviewers, yes.  That is
07    correct.
```

12. PAGE 491:11 TO 491:21 (RUNNING 00:00:26.310)

```
11              They are they are overzealous in protecting
12    Apple; right?
13         A.   I would say they are more overzealous in
14    protecting themselves and their job.  They were
15    afraid they would get fired if they did something
16    incorrect.
17         Q.   Okay.  And they thought that they might get
18    fired because they thought that Apple would not want
19    to approve things that are competing against Apple;
20    is that right?
21         A.   That is my understanding, yes.
```

13. PAGE 510:01 TO 510:12 (RUNNING 00:00:32.890)

```
00510:01        Q.   Okay.  And would a jail broken iPhone still
02    have sandboxing as part of its iOS?
03         A.   No.  It would not.
04         Q.   Okay.  So again, you had spoken earlier with
05    Mr. Even about how sandboxing was the be all/end all
06    safeguard against viruses.
07              But would that safeguard exist in jail
08    broken iPhones?
09         A.   It would not, no.
10         Q.   And how seriously did Apple, during your
11    time there, take the threat of jail breaking?
12         A.   Very seriously.
```

14. PAGE 517:21 TO 518:15 (RUNNING 00:01:02.276)

```
21         Q.   And did Apple or the App Store review
22    process ever make changes or modifications in
23    response to developer feedback?
24         A.   Yes.
25         Q.   And how frequently did that occur?
00518:01        A.   A lot of things changed based on feedback.
02    As far as the process was concerned, we were
03    continually refining the process based on feedback.
04    The guidelines were -- were one of the clearest forms
05    of -- of feedback causing changes at Apple.  When
06    developers would complain about one of our
07    guidelines, the executives, the ERB, we would all get
08    together and discuss those guidelines and ultimately
09    make changes to them if we found they were warranted
10    or not if we didn't, and we would release those
11    guidelines -- updated versions of those guidelines;
12    so that -- that happened -- those guidelines changed
13    probably twice a year, but that was -- that was just
14    one of the ways in which we would -- we would change
15    based on feedback.
```

15. PAGE 551:12 TO 552:10 (RUNNING 00:01:04.607)

```
12         Q.   Going back to the question, Mr. Shoemaker.
13              Why were you concerned that there would be
14    an exodus of developers from iOS to Android?
```

```
15        A.   The -- the Apple App Store was -- was built
16   for our customers, our consumers, the people
17   downloading apps.  And we never had -- you know, we
18   never had consumers complaining about -- about the
19   app review process; right?
20        Consumers never did that.  That was
21   developers.
22        But -- but my concern was if we didn't
23   improve the app review process, developers might
24   start pulling out and then making their games or
25   their apps only available on the -- the Android
00552:01   store.  It was just a -- to me, it was always -- you
02   know, it was always the concern.  You always want to
03   strive to be better than you were the day before.
04   And so, for me, I was always concerned about that,
05   and I didn't want to be the reason why something like
06   that happened.
07        Q.  And did developers ever threaten to take
08   their apps off of iOS and move exclusively to
09   Android?
10        A.   Yes.
```

16. PAGE 555:02 TO 555:13 (RUNNING 00:00:27.350)

```
02        Q.   Okay.  And speaking of it being heated,
03   I note that on the bottom of this e-mail on page
04   there he concludes by saying:
05             "If Apple keeps treating developers that
06             way, all of the small and medium developers
07             will run away to other platforms.  The
08             developers are the future of Apple."
09        Is this a complaint that you heard -- or
10   a threat, I should say, that you heard from other
11   developers?
12        A.   Yes.  We -- we -- I had heard this threat
13   before.
```

17. PAGE 562:14 TO 562:19 (RUNNING 00:00:09.507)

```
14             MS. AHMAD:  Nineteen, yes.
15             MR. PHILLIPS:  Okay.
16             (Defense Exhibit Number DX-19
17             was marked for identification.)
18   BY MS. AHMAD:
19        Q.  Mr. Shoemaker, will you pull up Exhibit 19?
```

18. PAGE 562:21 TO 563:08 (RUNNING 00:00:45.486)

```
21        Q.   So this is an e-mail exchange between you,
22   P.B. Shoemaker direct, and Zenus Song at Apple.
23        Is this an exchange that you had in the
24   regular course of your work for Apple?
25        A.   Okay.  Yes, it is.
00563:01        Q.   And who are you writing to when you address
02   it team and send it to P.B. Shoemaker direct?
03        A.   So those were my direct reports; so my
04   managers in my organization.
05        Q.   All right.  And I wanted to -- well, take
06   a look at the e-mail and tell me if you recall
07   generally the subject matter that you recount here.
08        A.   Yes.  I do -- I do recall this.
```

19. PAGE 565:07 TO 565:10 (RUNNING 00:00:10.008)

```
07        Q.   Well, what was your understanding from these
08   conversations with Android users as to why they had
09   more concerns on Android than they would have had on
10   an iOS?
```

46

20. PAGE 565:13 TO 565:25 (RUNNING 00:00:41.015)

```
13          THE WITNESS:  Because the users -- I'm
14   sorry.  Because -- because Android didn't -- I'm
15   sorry.  Google did no checks.  If you submit an app
16   to the -- the store, it basically made it onto the
17   store after going through some of the automation
18   stuff, but malware and privacy apps would get in
19   pretty easily -- private -- I'm sorry.  When I say
20   privacy, I mean apps that can affect your privacy,
21   that would take information, et cetera, would often
22   make it into the store.  There are hundreds of news
23   articles about those kinds of apps.  And we felt our
24   users felt it was much more comfortable doing that on
25   the App Store.
```

Epic Games, Inc. v. Apple Inc., **No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)**

Deposition Designation of Eddy Cue
(February 8, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
33 minutes 13 seconds	1 minute 40 seconds

94 SEGMENTS (RUNNING 00:34:52.201)

1. PAGE 24:12 TO 24:14 (RUNNING 00:00:07.380)

```
12        Q   Mr. Cue, what's your job title at present?
13        A   I'm the senior vice president of Internet
14    services and software at Apple.
```

2. PAGE 25:13 TO 25:19 (RUNNING 00:00:33.399)

```
13            What are your job responsibilities at
14    present?
15        A   I manage a lot of Apple services, examples
16    being Maps, iCloud, along with our media, which is
17    Apple TV+, Apple Music.  I manage an engineering
18    team for Apple Arcade.  I manage Apple Pay, Apple
19    Card.
```

3. PAGE 26:12 TO 27:17 (RUNNING 00:01:39.583)

```
12            Have you had any job responsibilities that
13    related to the App Store at all since you became
14    vice president of Internet services in approximately
15    the mid 2005ish time frame?
16        A   I did.
17        Q   And what were those responsibilities at
18    that time?
19            So we're going back now approximately to
20    sort of around 2005, 2007, in that time.
21        A   Yeah.
22            Well, let's just start from the beginning
23    of the App Store, which is roughly around that time.
24    I don't know the exact dates, but when the App Store
25    was started, my team did the engineering work of
00027:01   creating the App Store, the back-end parts of the
02    App Store.
03            And then we also were programming the App
04    Store.  What I mean by "programming" is which apps
05    were featured when you opened certain pages.
06            And those were my two primary
07    responsibilities.
08        Q   Did those responsibilities for the App
09    Store change at all over time?
10        A   They have.
11        Q   And in what ways have they changed?
12        A   The responsibility for managing the
13    features and what I would call running the store on
14    a day-to-day basis are managed by Phil Schiller.
15            I still manage all of the engineering
16    components, meaning the engineers that do the work
17    for creating it and maintaining it.
```

4. PAGE 45:11 TO 45:14 (RUNNING 00:00:06.240)

```
11        Q   And one of the things that makes the iPhone
12    attractive to users is a robust set of apps.
13            Would you agree with that?
14        A   I do.
```

5. PAGE 47:15 TO 47:19 (RUNNING 00:00:08.456)

```
15          Q   At the time that the iPhone was launched,
16     there weren't native apps that were being written
17     for the iPhone by third-party developers; is that
18     right?
19          A   That's correct.
```

6. PAGE 61:25 TO 62:01 (RUNNING 00:00:03.605)

```
25          Q   Would Android -- do Android apps work on
00062:01     the iOS platform?
```

7. PAGE 62:03 TO 62:05 (RUNNING 00:00:06.220)

```
03              THE WITNESS:  Again, Android is something
04     completely different and wouldn't work.  So I don't
05     understand.
```

8. PAGE 63:05 TO 63:06 (RUNNING 00:00:03.442)

```
05              Is it the case that Android apps do not
06     work on the iOS platform?
```

9. PAGE 63:08 TO 63:09 (RUNNING 00:00:05.606)

```
08              THE WITNESS:  Again, the Android app itself
09     is written to the Android SDK and wouldn't run.
```

10. PAGE 63:10 TO 63:12 (RUNNING 00:00:08.083)

```
10              But many Android app developers build iOS
11     apps using RSDK, and so many of the apps are
12     available on both platforms.
```

11. PAGE 64:03 TO 64:04 (RUNNING 00:00:05.409)

```
03              Let's take a look at PX 403.  PX 403, if
04     the witness has it.
```

12. PAGE 64:07 TO 64:12 (RUNNING 00:00:10.186)

```
07              This is a document, single-page document
08     that is dated 3 January 2010, bearing the Bates
09     number at the bottom -00120802.
10              (Whereupon Cue Exhibit 403 was
11              marked for identification and
12              attached hereto.)
```

13. PAGE 65:13 TO 65:18 (RUNNING 00:00:11.694)

```
13              And do you see that you are a cc on this
14     document?
15          A   I do.
16          Q   And do you believe that you received it on
17     or about 3 January 2010?
18          A   I'm sure I did.
```

14. PAGE 67:13 TO 67:19 (RUNNING 00:00:28.815)

```
13          Q   Let's turn to PX 404, if you have that,
14     Mr. Cue.  I'll identify it for the record.
15              It's a document, two-page document, from
16     Mr. Cue to Mr. Cook and Mr. Schiller, subject:  Back
17     to School next year, bearing the Bates number at the
18     bottom -09114427 through -28, dated 15 February
19     2013.
```

15. PAGE 67:23 TO 67:23 (RUNNING 00:00:01.034)

```
23              THE WITNESS:  I do have that.
```

16. PAGE 68:01 TO 68:02 (RUNNING 00:00:02.315)

```
00068:01            Let me know when you've had an opportunity
      02    to review the document.
```

17. PAGE 68:03 TO 68:13 (RUNNING 00:00:22.384)

```
      03        A   Okay.  I have.
      04        Q   All right.
      05            Do you see that in the first paragraph, you
      06    say (as read and/or reflected:)
      07                Getting customers using our
      08                stores (iTunes, App and iBookstore)
      09                is one of the best things we can do
      10                to get people hooked to the
      11                ecosystem.
      12                Do you see that?
      13        A   I do.
```

18. PAGE 70:15 TO 70:20 (RUNNING 00:00:19.121)

```
      15        Q   And so is it fair to say that part of what
      16    you're saying here is that in order for a consumer
      17    to buy a Samsung, they might have to spend hundreds
      18    of additional dollars in order to have the same
      19    content on a new Samsung device as they already had
      20    on their iPhone?
```

19. PAGE 70:22 TO 70:25 (RUNNING 00:00:08.155)

```
      22            THE WITNESS:  Yes.  In the case of, it's --
      23    if they were buying a Samsung phone, they would have
      24    to buy some of these things again if they wanted to
      25    have the exact same thing there.
```

20. PAGE 79:04 TO 79:06 (RUNNING 00:00:08.867)

```
      04            Now, the App Store, do you believe it's
      05    been financially successful since it was first
      06    introduced?
```

21. PAGE 79:08 TO 79:11 (RUNNING 00:00:04.700)

```
      08            THE WITNESS:  To whom?
      09    BY MS. FORREST:
      10        Q   To Apple.
      11        A   Yes.
```

22. PAGE 84:01 TO 84:09 (RUNNING 00:00:30.836)

```
00084:01            Would you agree with me that there are
      02    different ways in which the App Store has been able
      03    to create revenue streams?
      04            For instance, through subscriptions --
      05        A   Oh --
      06        Q   -- or IAP or ad search, things like that.
      07        A   Yes.  We have come up with different ways
      08    over time to allow developers to charge customers in
      09    different ways.
```

23. PAGE 85:10 TO 85:12 (RUNNING 00:00:08.453)

```
      10        Q   Does Apple obtain revenue through IAP?
      11        A   There is a commission revenue share with
      12    in-app purchase, yes.
```

24. PAGE 85:16 TO 85:17 (RUNNING 00:00:14.330)

```
      16            Does Apple make revenue through the
      17    subscription sales that developers are able to make?
```

25. PAGE 85:19 TO 85:22 (RUNNING 00:00:09.036)

```
19              THE WITNESS:  In addition to -- in addition
20      to in-app purchase, developers are able to sell
21      digital subscriptions in which there is a rev share
22      of commission as well.
```

26. PAGE 87:23 TO 88:06 (RUNNING 00:00:29.991)

```
23              When a search -- when a user enters a
24      search query in the App Store --
25         A   Yes.
00088:01   Q   -- the first result that is now returned is
02      a monetized ad; correct?
03         A   If an ad is available, that's correct.
04         Q   And Apple obtains revenue from the
05      monetization of those ads; is that correct?
06         A   That's correct.
```

27. PAGE 89:01 TO 89:05 (RUNNING 00:00:09.391)

```
00089:01            Would you agree with me that Apple has made
02      over a billion dollars in revenue from the
03      monetization from the first search result in the App
04      Store?
05         A   I do.
```

28. PAGE 89:13 TO 89:21 (RUNNING 00:00:17.467)

```
13              So PX 406 is from Mr. Cue to Mr. Schiller,
14      dated 15th July 2009.  And it bears the Bates number
15      at the bottom -06216718.
16              (Whereupon Cue Exhibit 406 was
17              marked for identification and
18              attached hereto.)
19      BY MS. FORREST:
20         Q   And if you would let me know, Mr. Cue, when
21      you have had an opportunity to review this document.
```

29. PAGE 89:22 TO 90:07 (RUNNING 00:00:24.138)

```
22         A   I have.
23         Q   Okay.
24              And is this a document that you wrote to
25      Mr. Schiller on or about the 15th of July 2009?
00090:01   A   It is.
02         Q   Okay.
03              And the second e-mail below yours is from
04      Mr. Schiller to you -- actually to Mark, which I
05      take it as Mark Donnelly, who is indicated as a cc
06      on this document?
07         A   That's correct.
```

30. PAGE 90:09 TO 91:13 (RUNNING 00:00:58.863)

```
09              And it says (as read and/or reflected:)
10                 Mark, Steve has asked if we
11                 could send him the data for the App
12                 Store financial model.  He wants to
13                 understand the profits and costs
14                 (the assumption is that it is at
15                 best slightly positive given all
16                 the free apps, which is fine).
17                 Thanks, Phil.
18              Do you see that?
19         A   I do.
20         Q   Do you -- to the best of your -- did you
21      understand the Steve here to be Steve Jobs?
22         A   That's what I believed.
23         Q   Okay.
```

```
24              And you respond, quote (as read and/or
25     reflected:)
00091:01                We are definitely making money
02              so we are fine and Mark can send
03              you the data.
04              Is that right?
05        A    That's correct.
06        Q    Okay.
07              And when you said, "We are definitely
08     making money," what did you mean?
09        A    Again, we were taking high-level business
10     models of the amount of revenue coming in versus
11     some of the costs associated with running the store.
12     And it wasn't -- it was -- it was not in the red.
13     It was in the positive.
```

31. PAGE 91:17 TO 91:20 (RUNNING 00:00:17.047)

```
17              Do you remember a point in time when there
18     was a debate as to whether or not iMessage should be
19     opened to Android, and Android users would be able
20     to utilize iMessage on an Android platform?
```

32. PAGE 91:22 TO 92:09 (RUNNING 00:00:35.118)

```
22              THE WITNESS:  I remember the time of
23     wanting to do an iMessage app on Android ourselves
24     so that you could -- on Android Talk to iMessage.
25     So we would do the app.
00092:01     BY MS. FORREST:
02        Q    So that would be Apple writing on the
03     Android platform an iMessage app?
04        A    That's correct.
05        Q    Would there have been -- in that version,
06     would there have been cross-compatibility with the
07     iOS platform so that users of both platforms would
08     have been able to exchange messages with one another
09     seamlessly?
```

33. PAGE 92:11 TO 92:12 (RUNNING 00:00:04.212)

```
11              THE WITNESS:  That was certainly the
12     discussion and the view that I had.
```

34. PAGE 92:13 TO 92:16 (RUNNING 00:00:12.055)

```
13              That wouldn't be the case over time because
14     of the features that were added to Messages, but at
15     that time, I think we could have made a version on
16     Android that worked with iOS.
```

35. PAGE 92:17 TO 93:01 (RUNNING 00:00:21.741)

```
17     BY MS. FORREST:
18        Q    And there were several individuals,
19     including Mr. Schiller, who disagreed with you; is
20     that right?
21        A    That's correct.
22        Q    And Mr. Schiller's view prevailed; is that
23     right?
24        A    Yeah.  I mean, you can say -- I mean,
25     obviously he didn't think we should do it, and we
00093:01     didn't do it, so you could say he prevailed.  But I
```

36. PAGE 93:02 TO 93:02 (RUNNING 00:00:03.147)

```
02     don't think he was instrumental in the decision.
```

37. PAGE 96:07 TO 96:21 (RUNNING 00:00:40.051)

```
07              PX 407 is a document that is dated 8 April
```

```
08    2013, from Mr. Federighi, F-e-d-e-r-i-g-h-i, to
09    Mr. Cue, copying Mr. Schiller and Mr. Cook.  It's a
10    document that bears the Bates numbers -09702122
11    through -23.
12              (Whereupon Cue Exhibit 407 was
13              marked for identification and
14              attached hereto.)
15              MS. FORREST:  Exhibit 408 is a document
16    from Mr. Schiller to Mr. Cue, copying Mr. Federighi
17    and Mr. Cook, dated 8 April 2013, bearing the Bates
18    numbers -09702116 through -118.
19              (Whereupon Cue Exhibit 408 was
20              marked for identification and
21              attached hereto.)
```

38. PAGE 97:08 TO 97:11 (RUNNING 00:00:12.710)

```
08              Do you recognize, first, what's been marked
09    as PX 407, which is the 8 April 2013 document from
10    you to Mr. Federighi -- I'm sorry -- from
11    Mr. Federighi to you?
```

39. PAGE 97:12 TO 97:12 (RUNNING 00:00:00.771)

```
12         A    I do.
```

40. PAGE 97:14 TO 99:23 (RUNNING 00:01:56.198)

```
14              And do you see in the middle of the page
15    there, there's a message from you dated April 7,
16    2013, where you said (as read and/or reflected:)
17                   We really need to bring
18              iMessage to Android.  I have had a
19              couple of people investigating this
20              but we should go full speed and
21              make this an official project.
22              Do you see that?
23         A    I do.
24         Q    Okay.
25              And was that a belief that you held at that
00098:01   time in April of 2013?
02         A    That was, yes.
03         Q    Okay.
04              And then above that at 10:04 p.m. on the
05    same day, you say (as read and/or reflected:)
06                   Do we want to lose one of the
07              most important apps in a mobile
08              environment to Google?  They have
09              search, mail, free video and
10              growing quickly in browsers.  We
11              have the best messaging app and we
12              should make it the industry
13              standard.  I don't know what ways
14              we can monetize it but it doesn't
15              cost us a lot to run.
16              Do you see that?
17         A    I do.
18         Q    And did you believe that statement when you
19    wrote it?
20         A    I did.
21         Q    Okay.
22              Then Mr. Federighi writes to you and he
23    says (as read and/or reflected:)
24                   Do you have any thoughts on
25              how we would make switching to
00099:01              iMessage (from WhatsApp) compelling
02              to masses of Android users who
03              don't have a bunch of iOS friends?
```

54

```
04                 iMessage is a nice app/service, but
05                 to get users to switch social
06                 networks we'd need more than a
07                 marginally better app.  (This is
08                 why Google is willing to pay
09                 $1 billion--for the network, not
10                 for the app).
11                 And then it goes on (as read and/or
12        reflected:)
13                      In the absence of a strategy
14                 to become the primary messaging
15                 service for to bulk of cell phone
16                 users -- that's a mistake in the
17                 text -- I am concerned the iMessage
18                 on Android would simply serve to
19                 remove an obstacle to iPhone
20                 families giving their kids Android
21                 phones.
22                 Do you see that?
23        A    I do.
```

41. PAGE 100:17 TO 101:04 (RUNNING 00:00:41.916)

```
17        Q    Let's turn to PX 408.  And this is another
18   series of texts.
19             This one, if you look at the bottom of the
20   page, the first page of PX 408, you'll see that it's
21   the continuation of the discussion that's just been
22   left behind in PX 407.
23             And you'll see that Mr. Schiller is writing
24   to you, and he says (as read and/or reflected:)
25                 iMessage was created as a
00101:01          feature of iOS that brings value to
02                 our iPhone users.
03                 Do you see that?
04        A    I do.
```

42. PAGE 102:20 TO 102:23 (RUNNING 00:00:18.766)

```
20        Q    Do you -- in your view, do you believe that
21   not having iMessage on Android has created an
22   obstacle to families giving their kids Android
23   phones?
```

43. PAGE 102:25 TO 102:25 (RUNNING 00:00:01.439)

```
25                 THE WITNESS:  No, not at all.
```

44. PAGE 109:04 TO 109:18 (RUNNING 00:00:45.516)

45. PAGE 109:19 TO 110:17 (RUNNING 00:01:21.644)

46. PAGE 114:14 TO 114:19 (RUNNING 00:00:22.575)

```
14              MS. FORREST:  PX 416 is a two-page document
15      that is dated 4 March 2016 from Mr. Cook to Mr. Cue
16      and Mr. Federighi.  And it bears the Bates numbers
17      at the bottom -02970610 through -11.
18          Q    Tell me when you've had an opportunity to
19      review this document, Mr. Cue.
```

47. PAGE 114:20 TO 115:02 (RUNNING 00:00:14.418)

```
20          A    I've reviewed it.
21          Q    All right.
22               Did you receive this document on or about
23      the 4th of March 2016?
24          A    I did.
25          Q    And did you receive it in connection with
00115:01    your duties and responsibilities at Apple?
02          A    I did.
```

48. PAGE 115:17 TO 116:08 (RUNNING 00:00:49.309)

```
17               PX 413 is a document that is from Sanjay,
18      S-a-n-j-a-y, Mathur, M-a-t-h-u-r, to Eddy Cue and
19      Mr. Schiller, dated 14 November 2020.  It bears the
20      Bates numbers at the bottom -05589233, running
21      consecutively through -240.
22               (Whereupon Cue Exhibit 413 was
23               marked for identification and
24               attached hereto.)
25      ///
00116:01    BY MS. FORREST:
02          Q    And the next document is PX 414, which is
03      from Todd Teresi, T-e-r-e-s-i, to Mr. Cue and
04      Mr. Schiller, dated 2 September 2019, bearing the
05      Bates numbers at the bottom -09654732 through -746.
06               (Whereupon Cue Exhibit 414 was
07               marked for identification and
08               attached hereto.)
```

49. PAGE 117:13 TO 117:19 (RUNNING 00:00:15.560)

```
13          Q    And did you receive PX 413 on or about the
14      14th of November 2020?
15          A    Yes.
16          Q    And you received it in connection with your
```

```
17    duties and responsibilities at Apple?
18         A    Yes.
19         Q    And if we turn to PX 414, this is for an
```

50. PAGE 117:24 TO 118:01 (RUNNING 00:00:10.190)

```
24              Is this also one of those same weekly
25    reports relating to search ads?
00118:01   A    Yes, it is.
```

51. PAGE 120:20 TO 121:01 (RUNNING 00:00:18.759)

```
20              Did you receive a copy of Exhibit 80 with
21    Exhibit 79 on or about the 20th of June 2013?
22         A    I did.
23         Q    And did you receive that -- those materials
24    in connection with your duties and responsibilities
25    at Apple?
00121:01   A    I did.
```

52. PAGE 126:20 TO 126:25 (RUNNING 00:00:13.211)

```
20         Q    Let me just sort of try the question again.
21              Putting aside the reasons why, did you ever
22    try to move your library of movies and filmed
23    entertainment from an iPhone to an Android?
24         A    I did not because I know that that doesn't
25    work.
```

53. PAGE 128:07 TO 128:25 (RUNNING 00:00:44.325)

```
07              So Exhibit 415 is a document from Mr. Cue
08    to a number of individuals, the first of whom is
09    Mr. Jeff Robbin, R-o-b-b-i-n; it's dated 3 September
10    2013.  Subject (as read and/or reflected:)
11                   9 smart and useful features of
12              Apple's iPhone ecosystem that make
13              it hard to switch-tech news and
14              analysis.
15              Bearing the Bates numbers at the bottom
16    -09184163 through -66.
17              (Whereupon Cue Exhibit 415 was
18              marked for identification and
19              attached hereto.)
20    BY MS. FORREST:
21         Q    My first question to you, Mr. Cue, when
22    you've had an opportunity to review this is whether
23    you recognize it.
24         A    Again, I don't recall, but I'm sure I sent
25    it.
```

54. PAGE 135:08 TO 136:14 (RUNNING 00:01:42.311)

```
08              How was the 30 percent arrived at?
09         A    Back when we started the App Store, we
10    wanted to look at what the markets were for
11    distributing software and what the commission rates
12    were at those times.
13              And so we looked at the industry that was
14    out there selling mainly hard goods of software.
15    There wasn't really any kind of App Store.  Again,
16    we were -- something that was brand-new that was
17    created by us, but there were other ways to
18    distribute software before us.
19              And so we looked at those models, and they
20    all tended to be anywhere from 40 to 50 percent,
21    plus there was some significant cost in returns and
22    other things that wouldn't happen in our App Store.
23              And so looking at the different market, we
24    came up with 30 percent, which was a huge decrease
```

```
        25   to what everyone was paying at the time.  And we
00136:01   thought we'd get developers really excited about
        02   participating in the platform.
        03        Q   Who were the individuals who were involved
        04   in the decision as to what percentage commission to
        05   charge in that regard?
        06        A   I believe the primary members, as I recall,
        07   was myself and Steve.
        08        Q   And you say "Steve," you mean Steve Jobs?
        09        A   Sorry.  Yes.  I meant Steve Jobs.
        10        Q   Anyone else?
        11        A   Again, I think that the decision, I'm sure,
        12   was made by myself and Steve.  There were -- there
        13   could have been others that participated in it, but
        14   I think the decision was left to the two of us.
```

55. PAGE 137:23 TO 138:14 (RUNNING 00:00:48.648)

```
        23        Q   Do you recall whether or not the costs of
        24   development of the SDKs, for instance, that
        25   developers were going to be using to write apps
00138:01   figured into the choice of the 30 percent
        02   commission?
        03        A   I don't recall.  I don't know.
        04        Q   Do you know whether or not the costs of any
        05   tools were used as part of the decision-making
        06   process as to what level of commission to charge?
        07        A   Again, I don't recall, it may have been,
        08   but, again, wasn't the primary vehicle we used.
        09        Q   Do you recall whether any additional
        10   developer services and the cost of those services
        11   was factored into the selection of the amount of the
        12   commission?
        13        A   Again, it may have but wasn't the primary
        14   vehicle.
```

56. PAGE 139:05 TO 139:14 (RUNNING 00:00:25.670)

```
        05   piece.  I am sure that somebody from finance would
        06   look or decide whether that price was -- we would
        07   lose a lot of money.  So I'm sure that that was
        08   viewed as a price that would lose a lot of money
        09   from that viewpoint.
        10        But, again, I don't recall it from that
        11   point.  We wanted to do something that was highly
        12   competitive so that developers would join.
        13        And so we wanted it to be cheap compared to
        14   anything that they had experienced before.
```

57. PAGE 141:13 TO 141:20 (RUNNING 00:00:25.501)

```
        13        So I guess what I'm trying to figure out is
        14   between the time that you and Steve Jobs came up
        15   with the 30 percent commission until today, have you
        16   been involved in any discussions where people have
        17   exchanged either through in-person meetings or
        18   e-mail exchanges, here's our breakdown as to why we
        19   need the 30 percent cost or the 30 percent
        20   commission?
```

58. PAGE 141:22 TO 142:09 (RUNNING 00:00:31.597)

```
        22        THE WITNESS:  Sorry.  If you phrased in
        23   that way, the answer would be no.  The discussions
        24   that would have taken place, and, again, I -- not my
        25   primary thing so I wouldn't have paid attention to
00142:01   it.
        02        We obviously monitor our costs and what our
        03   costs are in running Apple at different points and
```

```
04    different locations and different pieces of it.  So
05    I'm sure there are people that are looking at the
06    cost of doing things around it.
07              As it relates to the 30 percent of, like,
08    here's our justification for doing that, no, I don't
09    recall having a conversation like that.
```

59. PAGE 143:25 TO 144:06 (RUNNING 00:00:18.722)

```
   25              So we've marked as Plaintiffs' Exhibit 417
00144:01    a document from Mr. Schiller to Mr. Cue, dated 28
   02    July 2011, bearing the Bates numbers at the bottom
   03    -00138494 through -97.
   04              (Whereupon Cue Exhibit 417 was
   05              marked for identification and
   06              attached hereto.)
```

60. PAGE 145:06 TO 145:13 (RUNNING 00:00:20.866)

```
   06              Did you receive this document on or about
   07    the 28th of July 2011?
   08         A    I did.
   09         Q    And did you receive it in connection with
   10    your duties and responsibilities at Apple?
   11         A    I did.
   12         Q    Do you recall receiving this document?
   13         A    I don't, but seeing it now, I'm sure I did.
```

61. PAGE 150:05 TO 150:12 (RUNNING 00:00:19.396)

```
   05         Q    So at you sit here today, because I want to
   06    make sure I move away from what might be possible to
   07    what you can actually recall, are you aware of any
   08    developers who have said that they would not launch
   09    a native iOS app because of the 30 percent
   10    commission structure?
   11         A    Yes.  I'm aware that some developers have
   12    said that.
```

62. PAGE 151:18 TO 152:12 (RUNNING 00:00:48.257)

```
   18              So let's take a look at PX 418.  I'll
   19    identify it while you take a look at it.
   20              It's to Eddy Cue from Matt Fischer, dated 7
   21    March 2011, bearing the Bates number at the bottom
   22    -45793 through -45794.
   23              (Whereupon Cue Exhibit 418 was
   24              marked for identification and
   25              attached hereto.)
00152:01    BY MS. FORREST:
   02         Q    If you could let me know when you've had an
   03    opportunity to look at this, I would be
   04    appreciative.
   05         A    I've looked at it.
   06         Q    Okay.
   07              Did you receive a copy of what's been
   08    marked as PX 418 on or about the 7th of March 2011?
   09         A    I do.
   10         Q    And you received that in connection with
   11    your job at Apple?
   12         A    I did.
```

63. PAGE 153:23 TO 154:02 (RUNNING 00:00:13.769)

```
   23              So you -- the document indicates that Kazaa
   24    was not going to launch a native iOS app because of
   25    the 30 percent commission, but the only information
00154:01    you have about that is what's contained in this
   02    document, which is PX 418; is that right?
```

64. PAGE 154:04 TO 154:04 (RUNNING 00:00:01.722)

```
04              THE WITNESS:  That's all I recall, yes.
```

65. PAGE 154:07 TO 154:12 (RUNNING 00:00:21.732)

```
07              Are you aware that there was a time when
08     Netflix ran a series of experiments to determine
09     whether or not IAP was, in fact, increasing the
10     number of subscribers it was obtaining in various
11     geographies?
12         A    I am.
```

66. PAGE 154:25 TO 155:03 (RUNNING 00:00:17.650)

```
25              And do you recall that Netflix indicated to
00155:01    Apple that IAP customers had much shorter
02     subscription lives due to voluntary churn than
03     non-IAP customers?
```

67. PAGE 155:05 TO 155:05 (RUNNING 00:00:01.471)

```
05              THE WITNESS:  Sorry.  I'm aware of that.
```

68. PAGE 163:11 TO 163:15 (RUNNING 00:00:21.798)

```
11         Q    Are you aware of anyone, as you sit here
12     today, who has switched from using an iPhone to an
13     Android because of the -- a particular availability
14     of an app on Android that was not available on iOS?
15         A    Again, I can't name somebody, no.
```

69. PAGE 164:03 TO 164:19 (RUNNING 00:00:53.045)

```
03              Are you aware that there was a point in
04     time in August of 2020 when Epic Games began to
05     include an additional payment processing method
06     within the Fortnite app?
07         A    Yeah.  Let me -- just to make sure we agree
08     on terminology here, they came up with a new
09     payment -- a direct payment method to them.
10              I -- when you say "payment processing,"
11     it's whatever, I don't know what you mean by that.
12              But, again, they provided a direct payment
13     mechanism to them.  So I am aware of that.
14         Q    Okay.
15              Are you aware of any studies that have
16     occurred or analyses as to whether or not there were
17     any security vulnerabilities introduced onto any
18     iPhone as a result of that direct payment method
19     from Epic?
```

70. PAGE 164:21 TO 164:21 (RUNNING 00:00:02.138)

```
21              THE WITNESS:  I don't recall anything.
```

71. PAGE 168:07 TO 168:18 (RUNNING 00:00:22.438)

```
07              You are aware of apps which have sold
08     things to customers, and the customers have claimed
09     they have been defrauded by those apps; correct?
10         A    Correct.
11         Q    Okay.
12         A    Correct.
13         Q    And that has occurred from time to time
14     since the beginning of apps that were available to
15     sell things to consumers; is that right?
16         A    Since we've built our App Store, you mean?
17         Q    Yeah.
18         A    Yes.
```

72. **PAGE 169:01 TO 169:04 (RUNNING 00:00:09.475)**

```
00169:01              There have been apps which have been in the
      02    App Store, which you have received complaints from
      03    time to time, have been defrauding customers; is
      04    that right?
```

73. **PAGE 169:06 TO 169:09 (RUNNING 00:00:12.822)**

```
      06              THE WITNESS:  We have had apps in the store
      07    that have defrauded customers that have potentially
      08    taken their data, you know, all kinds of security
      09    and privacy issues.
```

74. **PAGE 169:12 TO 169:15 (RUNNING 00:00:10.377)**

```
      12              And when Apple learns of those issues,
      13    Apple attempts to take action, responsive action, to
      14    eliminate those issues; is that right?
      15       A    That's correct.
```

75. **PAGE 170:09 TO 170:12 (RUNNING 00:00:10.878)**

```
      09              Are you aware of an instance in which a
      10    direct payment method has resulted in specific
      11    software changes that have introduced a security
      12    vulnerability?
```

76. **PAGE 170:14 TO 170:14 (RUNNING 00:00:01.854)**

```
      14              THE WITNESS:  I'm not sure.
```

77. **PAGE 171:23 TO 172:01 (RUNNING 00:00:14.751)**

```
      23              Are you aware of any of the credit card
      24    platforms that you have used as having introduced
      25    particular security vulnerabilities onto the iPhone
00172:01    hardware?
```

78. **PAGE 172:03 TO 172:09 (RUNNING 00:00:15.357)**

```
      03              THE WITNESS:  No.  I don't think that would
      04    be possible.
      05    BY MS. FORREST:
      06       Q    And how about for PayPal?  Are you aware of
      07    the utilization of PayPal in connection with IAP in
      08    any way as having introduced a security
      09    vulnerability onto the hardware?
```

79. **PAGE 172:11 TO 172:12 (RUNNING 00:00:03.099)**

```
      11              THE WITNESS:  Again, onto the hardware
      12    itself, I don't believe that's possible.
```

80. **PAGE 173:05 TO 173:09 (RUNNING 00:00:13.514)**

```
      05       Q    As you sit here today, can you recall any
      06    studies or analyses that Apple has done that
      07    examines potential performance differences between
      08    Web apps and native apps?
      09       A    Again, I don't recall.
```

81. **PAGE 188:02 TO 188:09 (RUNNING 00:00:18.726)**

```
      02              But you're aware that consumers from time
      03    to time spend money on both apps and in-app
      04    purchases, aren't you?
      05       A    Yes, I am.
      06       Q    Okay.
      07              Do you have any information that indicates
      08    to you what the average consumer spends on apps over
      09    the life cycle of an iPhone?
```

82. PAGE 188:11 TO 188:13 (RUNNING 00:00:04.977)

```
11              THE WITNESS:  No, I don't recall.  But
12    there may have been something published, but I don't
13    recall, no.
```

83. PAGE 188:25 TO 189:03 (RUNNING 00:00:12.150)

```
      25              Are you aware of any marketing material
00189:01    that Apple publishes that indicates how much the
      02    average consumer can expect to spend on apps over
      03    the life cycle of a phone?
```

84. PAGE 189:05 TO 189:05 (RUNNING 00:00:01.775)

```
05              THE WITNESS:  Again, I don't know.
```

85. PAGE 189:18 TO 189:22 (RUNNING 00:00:11.361)

```
18              So as you sit here today, you're unaware of
19    any analyses within Apple that look at the amount
20    that the average consumer would spend on apps; is
21    that right?
22        A    Correct.  I don't recall any.
```

86. PAGE 190:04 TO 192:16 (RUNNING 00:02:32.040)

87. PAGE 192:17 TO 192:22 (RUNNING 00:00:19.796)

```
17              And so in reality, this e-mail was actually
18      good news, good news, because the bad news was
19      something we could correct.  And over time we have
20      corrected it and actually have a much higher rate
21      of -- or I should say a much lower rate of voluntary
22      churn based on all of the changes that we've made.
```

88. PAGE 194:18 TO 194:20 (RUNNING 00:00:09.791)

```
18              Let's turn to PX 421.  And let me ask if
19      you've received this document on or about July 30th,
20      2018, in connection with your job at Apple?
```

89. PAGE 194:21 TO 194:21 (RUNNING 00:00:01.037)

```
21      A   Yes.
```

90. PAGE 201:24 TO 201:25 (RUNNING 00:00:07.524)

```
24      Q   Is there any plan right now to allow Web
25      apps to be offered in the Apple Arcade?
```

91. PAGE 202:02 TO 202:03 (RUNNING 00:00:03.158)

```
02              THE WITNESS:  I don't think so.  I haven't
03      heard of any.
```

92. PAGE 247:15 TO 247:20 (RUNNING 00:00:15.950)

```
15      Q   Do you know -- well, has Apple, to your
16      knowledge, conducted any studies as to the relative
17      pricing of apps on the App Store vis-a-vis the
18      Google Play Store?
19      A   I'm not aware of any study that I can
20      recall.
```

93. PAGE 248:13 TO 248:20 (RUNNING 00:00:29.905)

```
13              Are you aware of anyone who has ever
14      switched from an iPhone to an Android because they
15      perceived there to be some difference in the pricing
16      of apps across the two platforms?
17      A   I don't recall ever hearing that.
18      Q   Is that something that Apple has studied,
19      to your knowledge?
20      A   No.  I don't recall ever seeing that.
```

94. **PAGE 333:16 TO 334:09 (RUNNING 00:01:07.276)**

```
16              MS. MANIFOLD:  Let's look at Exhibit 438,
17      which is an exhibit dated February 6, 2011.  It's
18      from Mr. Jobs to you.  It's called Mag- -- easy for
19      me to say -- "Magazine subscription write-up."  It's
20      Bates stamped APL-APPSTORE_07175768.
21              (Whereupon Cue Exhibit 438 was
22              marked for identification and
23              attached hereto.)
24      BY MS. MANIFOLD:
25          Q   I'll give you a minute to look at it, but
00334:01    my main question to you, is this an exchange that
02      you had with Mr. Jobs in or about February 6th of
03      2011?
04          A   It is.
05          Q   And did you receive this exchange in the
06      ordinary course of business as part of your duties
07      and -- did you receive this document as part of your
08      duties and responsibilities at Apple?
09          A   I did.
```

<u>*Epic Games, Inc. v. Apple Inc.*</u>**, No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)**

Deposition Designation of Scott Forstall (Volume 1 & 2)
(March 8, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
36 minutes 12 seconds	32 minutes 5 seconds

82 SEGMENTS (RUNNING 01:03:58.057)

1. PAGE 13:13 TO 13:15 (RUNNING 00:00:03.000)

```
13                    SCOTT FORSTALL,
14  having been administered an oath, was examined and
15  testified as follows:
```

2. PAGE 14:05 TO 14:06 (RUNNING 00:00:04.273)

```
05           Please state your full name for the record.
06      A.   Scott James Forstall.
```

3. PAGE 22:02 TO 22:05 (RUNNING 00:00:09.750)

```
02      Q.   And so going back to the date I mentioned
03  earlier, your departure from Apple was publicly
04  announced in late October 2012; is that right?
05      A.   Correct.
```

4. PAGE 37:23 TO 38:01 (RUNNING 00:00:07.715)

```
23      Q.   Understood.  So let me clarify.  Was Xcode
24  an integrated development environment when it was
25  released in 2003?
00038:01    A.   Yes.
```

5. PAGE 38:06 TO 38:08 (RUNNING 00:00:09.027)

```
06      Q.   And was Xcode used internally at Apple to
07  develop applications for the Mac?
08      A.   Yes.
```

6. PAGE 40:08 TO 40:09 (RUNNING 00:00:03.915)

```
08           Did Apple ever charge third party developers
09  for OS X?
```

7. PAGE 40:12 TO 40:15 (RUNNING 00:00:18.096)

```
12           So while I was there, you're asking was the
13  IDE a free download?
14      Q.   Yes, that's what I'm asking.
15      A.   Yes, I believe it was.
```

8. PAGE 40:24 TO 41:04 (RUNNING 00:00:23.060)

```
24      Q.   And you understood at the time that the
25  more -- the better applications that developers could
00041:01  offer for Mac, that would help Apple make its
02  customers, its Mac customers, happier and hopefully
03  enlarge the number of Mac -- Mac customers that Apple
04  has, correct?
```

9. PAGE 41:06 TO 41:13 (RUNNING 00:00:24.598)

```
06           THE WITNESS:  Having more robust platform
07  with nominal applications from Apple and third party
08  developers is good for the platform, the customers
09  and the developers.
10  BY MR. EVEN:
11      Q.   And when you say it's good for the platform,
12  it's good for Apple it's going to sell more
13  computers, right?
```

10. PAGE 41:15 TO 41:18 (RUNNING 00:00:07.937)

```
15            THE WITNESS:  It would likely sell more
16  computers.  It also may make customers who've already
17  bought a computer happier because they have that
18  application.
```

11. PAGE 52:21 TO 53:23 (RUNNING 00:02:05.600)

```
21       Q.   When did you become involved with
22  development of the iPhone?
23       A.   You're asking when I became or when Apple
24  started or the year, part of the project, what --
25       Q.   I'm asking when you became, that was my
00053:01  question.  When did you become involved?
02       A.   Well, I helped start the project itself.  So
03  from day one.
04       Q.   And what year was that?
05       A.   I think it would -- it's hard to capture
06  exactly when you consider the iPhone piece of it,
07  'cause we actually started by developing for a tablet
08  and then we shifted to developing a phone and put the
09  tablet on hold and then came back and developed the
10  iPad post iPhone.
11            I think it was around 2003, 2004, when that
12  work began.
13       Q.   When you say "that work began," you're
14  referring to the early work on a tablet?
15       A.   Correct.
16       Q.   And when did that work morph into a work --
17  into work on a phone?
18       A.   2004, 2005, I think.
19       Q.   And were you tasked with creating the
20  operating system for that phone?
21       A.   Yes.  I was tasked with creating the
22  operating system and the user interface for all the
23  software.
```

12. PAGE 54:06 TO 54:13 (RUNNING 00:00:44.285)

```
06       Q.   And was macOS 10 used as the basis for that
07  operating system that you oversaw building?
08       A.   Broadly speaking, yes.  There's many aspects
09  of macOS 10.  Some of those code bases were modified
10  to be used as the basis of iPhone OS 1.0.  Some of
11  the code bases were cleaved.  Some of the code bases
12  were replaced.  It was on a functionality and module
13  basis.
```

13. PAGE 57:02 TO 57:05 (RUNNING 00:00:11.899)

```
02       Q.   And who was the main proponent of using the
03  macOS 10 as the basis for the operating system for
04  the phone?
05       A.   I was.
```

14. PAGE 58:07 TO 58:17 (RUNNING 00:00:50.406)

```
07            What did you view as the main advantage of
08  using macOS 10 as the basis for a phone operating
09  system?
10       A.   We built macOS 10 specifically to be a
11  modern operating system as different from, as we
12  talked earlier, macOS 7, macOS 8, macOS 9.  So many
13  of the facilities for protected memory, preemption
14  are available in macOS 10.
15            So it had exactly the modern operating
16  system facilities we would want to use in any
17  project.
```

15. **PAGE 62:11 TO 62:14 (RUNNING 00:00:09.940)**

```
11       Q.   Mr. Forstall, let me mark as Exhibit 869 a
12  document Bates stamped APL-EG_00422472.
13            (Exhibit 869 was marked for identification
14       and is attached hereto.)
```

16. **PAGE 63:02 TO 63:05 (RUNNING 00:00:17.341)**

```
02       Q.   Mr. Forstall, do you see this is a December
03  31, 2006 e-mail from Ms. Meriko Borogove to you and
04  copying some others?
05       A.   Yes.
```

17. **PAGE 64:19 TO 64:21 (RUNNING 00:00:12.623)**

```
19       Q.   Was the ultimate phone released with an
20  operating system that's based on macOS 10?
21       A.   Yes.
```

18. **PAGE 65:18 TO 66:10 (RUNNING 00:01:04.590)**

```
18            Who was Ms. Borogove?
19       A.   She was an engineering manager in my team.
20       Q.   And she writes in the second paragraph
21  (as read):
22                Our security model around
23                preventing third parties from
24                installing and running their own
25                code ...
00066:01            And she continues.  Do you see that
02  sentence?
03       A.   I do.
04       Q.   And so at that time, the security approach
05  taken by Apple was to not allow any third party apps
06  to be installed on the phone, correct?
07            MS. MOYE:  Object to the form.
08            THE WITNESS:  Our plan for the first release
09  of the iPhone was not to enable native compiled third
10  party apps to install and run on the iPhone.
```

19. **PAGE 66:12 TO 66:20 (RUNNING 00:00:50.833)**

```
12       Q.   And Ms. Borogove then described some of the
13  steps that were taken by Apple to make sure that
14  native compiled apps cannot be installed on the
15  phone, correct?
16       A.   Correct.
17       Q.   And Apple needed to take many steps to
18  prevent such installation because macOS 10 was built
19  in part to allow native compiled applications to be
20  installed on it, correct?
```

20. **PAGE 66:22 TO 66:23 (RUNNING 00:00:09.042)**

```
22            THE WITNESS:  MacOS 10 enabled developers to
23  compile, install, and run applications.
```

21. **PAGE 77:16 TO 77:20 (RUNNING 00:00:28.671)**

```
16            And so my question was:  With respect to
17  third party applications, was there a difference of
18  view among executives at Apple as to whether Apple
19  will or will not open the iPhone for such
20  applications after it had released the first iPhone?
```

22. **PAGE 77:22 TO 77:23 (RUNNING 00:00:04.390)**

```
22            THE WITNESS:  On this particular question,
23  it's a great example where the specificity matters.
```

23. PAGE 77:24 TO 78:12 (RUNNING 00:00:58.365)

```
24  There were executives at Apple that thought we should
25  never release the ability for third parties to do any
00078:01  natively compiled applications.
02          There were executives who thought -- and
03  they thought we should just have web applications
04  and -- and then websites running with web standards
05  inside of the browser or browsers on the platform,
06  the browser.
07          There were executives who thought we should
08  have a hybrid model of some web technologies and some
09  native abilities.  And then there were executives who
10  thought we should provide a platform to enable third
11  parties to build fully native applications on the
12  platforms.
```

24. PAGE 78:16 TO 79:06 (RUNNING 00:01:08.107)

```
16          Who are the executives who fell into the
17  first bucket that you mentioned that felt that Apple
18  should never open up the platform to third party
19  native applications?
20      A.    Steve Jobs was the most prominent of those.
21  I don't remember specifically who else argued that
22  point.  But Steve -- Steve thought that we should not
23  enable third party app development at all, as needed
24  app development.
25      Q.    And is it fair to say that you stood on the
00079:01  other side of this, the other send of the spectrum on
02  that particular issue?
03      A.    I was probably the -- the most vocal
04  advocate for enabling third party app development in
05  an App Store, and this is discussions Steve and I had
06  multiple times, heated ways.
```

25. PAGE 81:02 TO 84:06 (RUNNING 00:05:25.230)

```
02      Q.    And you believed that native apps are going
03  to, as you say here, provide a better experience for
04  iPhone users, correct?
05      A.    Correct.
06      Q.    And looking back 15 years later, do you have
07  any doubt that you were right at the time?
08      A.    No.
09      Q.    And why did you think that native apps will
10  provide a better experience?
11      A.    There are many, many reasons.  If you build
12  a native app, you get to use the built-in frameworks
13  as they were intended, as they were designed for a
14  touch interface.  You have all the facilities we
15  built to quickly build, iterate, debug these native
16  applications.
17          I mean, I can go on and on and on for the
18  benefits of native application versus a web
19  application, and they are voluminous.  They -- they
20  are faster.  They use less memory.  They can take
21  advantage of the native graphics, libraries, in a way
22  that is either not available or would have to be
23  shoehorned in for a web app or a different kind of
24  application.
25          So you can go -- you can go through and we
00082:01  can go through for hours the advantages, but I would
02  say the most telling reason is when we were building
03  the original iPhone, we were building most of the
04  built-in apps as native apps.  So mail, calendar, we
05  were building these as native apps.  And they
06  performed fantastically, the behavior felt right.
```

07 They loaded quickly. They -- you could switch
08 between applications quickly. It was an exceptional
09 experience.
10   We wanted web applications, because Steve
11 had not agreed with me to enable third party apps in
12 the first version, I still had the team building it
13 as a platform so that we could quickly enable third
14 party apps. This was part of my direction to the
15 team the whole time, even though Steve had said no.
16   But we wanted to make it so third party apps
17 that were based on web technologies and would be
18 enabled in version 10 would work as -- as best as we
19 could possible make them, because I still wanted
20 these to be a good experience, the best experience
21 they could be.
22   So we built a few of our own apps. I think
23 it was like weather, stocks, maybe the calculator, I
24 think there was like three of those that we built as
25 web technology apps, and they were similar to what a
00083:01 third party could have built when we shipped.
02   And, in fact, in January of 2007 when we had
03 the keynote and launched the iPhone, those were
04 web-based apps at the time of that launch, and they
05 did not perform well. We could tell using it that
06 they were not as good as performing as the built-in
07 apps.
08   Now, you can always through software start
09 to try to improve things, make its launch a little
10 better, use a little less memory, get a faster
11 processor, get more memory in the next iteration of
12 the iPhone. You can do things to try to make it can
13 better.
14   But because of the architecture, it sits as
15 an extra layer on top of the native layer, and
16 therefore, it's never going to be faster than the
17 native layer. There might be some advantages about
18 how the code loads in a modular fashion or something
19 else. But it just, for us, it wasn't as good as the
20 native ones.
21   And therefore, after we announced the iPhone
22 and demonstrated the iPhone between that and June 29,
23 we rewrote all those apps as native apps and they --
24 they shipped as native apps on the first version of
25 the iPhone.
00084:01   So even though there are arguments people
02 can and did make for using web technologies as the
03 sole way for third parties to build apps, my
04 experience was very clear that those apps would not
05 be as good as native apps, and I wanted to have the
06 best possible apps in the platform we could.

26. PAGE 85:01 TO 85:09 (RUNNING 00:00:42.650)

00085:01   Q.   Fair to say that pretty quickly after the
02 launch of the iPhone, it became pretty clear that
03 there was huge demand from developers for the ability
04 to build native apps for the iPhone?
05   A.   Yes.
06   Q.   And one of the ways that this became clear
07 was that third party developers approached you and
08 asked whether they could do that; is that right?
09   A.   Yes.

27. PAGE 85:19 TO 85:24 (RUNNING 00:00:28.145)

19   Q.   And was one indicator that there were
20 constant attempt by hackers to essentially remove all
21 the protections that Ms. Borogove presented to us

```
22   awhile -- in the e-mail we read a little bit ago and
23   start loading third party applications, native
24   applications on to jail broken phones?
```

28. PAGE 86:01 TO 86:05 (RUNNING 00:00:21.761)

```
00086:01              THE WITNESS:  After we shipped, developers
     02   started jailbreaking phones and writing native
     03   applications and I took that as an indication of
     04   their passion to build applications, native
     05   applications, for the iPhone.
```

29. PAGE 87:13 TO 88:14 (RUNNING 00:02:10.071)

```
     13       Q.   Fair to say that at the time you understood
     14   that the attempts to block this tsunami of attempt
     15   of -- of third party obligations was futile and
     16   better for Apple to join in, rather than fight these
     17   attempts?
     18              MS. MOYE:  Object to the form.
     19              THE WITNESS:  So I would not say it that
     20   way.
     21   BY MR. EVEN:
     22       Q.   How would you --
     23       A.   I would say we were very concerned about
     24   people building viruses or malware for the phone, and
     25   so any activity that I saw that involved jailbreaking
00088:01   and then trying to create malicious code, we would
     02   vigilantly respond to and were not concerned, even if
     03   it were a tsunami that we would give up on that.
     04              We were going to be vigilant for all time as
     05   protecting people in the security and the privacy of
     06   their phones.  I thought as I'd argued a year earlier
     07   and -- and beyond that, that we should be creating a
     08   platform and both enable and encourage developers to
     09   build native apps for the phones.
     10              So I did not see this as a bad thing that
     11   developers wanted to dedicate their time and energy
     12   and lives to building something cool for our
     13   platform.  If that cool thing was not malware or a
     14   virus or something problematic.
```

30. PAGE 89:02 TO 89:25 (RUNNING 00:01:32.960)

```
     02       Q.   And one concern with jailbreaking I take it
     03   was that just like the mechanisms that Ms. Borogove
     04   wrote about that were not discriminating between
     05   malware and so-called good applications, once a phone
     06   is jail broken, all third party applications can go
     07   on it without any distinguishing between malware or
     08   malicious applications and good applications,
     09   correct?
     10              MS. MOYE:  Object to the form.
     11              THE WITNESS:  The danger with jailbreaking
     12   is, it breaks down, depending on how it's done,
     13   potentially all of the consumer protections build
     14   into the operating system.
     15              Now, jailbreaking in general like this can't
     16   be done accidentally.  So consumers are still
     17   protected in general, but if you do these certain
     18   things which involve plugging into a computer and --
     19   and going through a set of machinations, it does not
     20   only allow maybe some positives the consumer might
     21   believe or the developer might perceive of installing
     22   an application, a game in this case, but it has the
     23   very dangerous and significant downsides for
     24   consumers of opening their phone up to potential
     25   viruses or malware.
```

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31. PAGE 90:19 TO 90:22 (RUNNING 00:00:09.891)

```
19      Q.    Got it.  What was your official title at the
20  time?
21      A.    Senior vice-president of software, iPhone
22  software something.
```

32. PAGE 98:15 TO 103:15 (RUNNING 00:09:40.910)

```
15      Q.    Mr. Forstall, let me mark as Exhibit 873 a
16  document Bates stamped APL-EG_00460878, and this is
17  an October 1 chain between yourself and Mr. Lamiraux,
18  if I'm pronouncing that right, and the subject is:
19  Re:  Cocoa Touch apps.
20          (Exhibit 873 marked for identification and is
21      attached hereto.)
22  BY MR. EVEN:
23      Q.    My first question is, is this an e-mail
24  chain you exchanged with Mr. Lamiraux in early
25  October 2007 in the ordinary course of your work at
00099:01  Apple?
02      A.    Give me a minute to look it over.
03      Q.    Sure.
04      A.    Okay.  Yes, this is an e-mail I received
05  during the normal course of business.
06      Q.    This is an e-mail you received and an e-mail
07  that you sent, right, it's an exchange of e-mails
08  between you and Mr. Lamiraux, correct?
09      A.    There is an e-mail that I sent to Henri and
10  there is his response as well.
11      Q.    So let's start with the subject.  What is
12  Cocoa Touch?
13      A.    Cocoa Touch is a name we used for the frame
14  works, notably normally the high level frame works
15  for Cocoa on the iPhones, the native frame works.
16          Now, it's used in multiple ways, sometimes
17  it's used to mean all the frame works, sometimes it's
18  used just to mean the user interface level.
19      Q.    Okay.  And when you wrote here:  Cocoa Touch
20  apps as the subject of your e-mail, that pertains to
21  native apps, third party apps on the iPhone, correct?
22      A.    Right.  I'm distinguishing here between web
23  apps which we had and continue to have and this is
24  talking about natively compiled iPhone apps for third
25  parties using the Cocoa Touch frame works.
00100:01  Q.    And -- you're writing (as read):
02              I'm trying to capture the issues
03          with taking Cocoa Touch public.
04          What am I missing.
05          Do you see that?
06      A.    I do.
07      Q.    And so -- and below, you try to capture the
08  issues with, that you've identified with opening up
09  the -- the iPhone for third party native apps,
10  correct?
11      A.    Correct.
12      Q.    And what was the role of Mr. Lamiraux?
13      A.    Henri led the team, the engineering team, he
14  was an engineering director, reporting directly to
15  me.  He was responsible for some of the native
16  frameworks and many of the native apps.
17      Q.    When you say "the native apps" you mean
18  Apple developed native apps, correct?
19      A.    The apps that shipped on the iPhone as part
20  of iPhone OS, correct.
21      Q.    And first you point to several risks in
22  making Cocoa Touch public, correct?
23      A.    Correct.
```

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```
24      Q.   And you say, for example, the risks of
25  viruses.  That's one you identify, correct?
00101:01    A.   Correct.
02      Q.   Another one is:  Harder to switch
03  processors.
04           Why is it harder to switch processors?
05      A.   Yeah, this is a really big deal.  When you
06  have a native app, it is compiled into the
07  instruction set of a specific processor.  For
08  instance, if you're on a Windows machine now-a-days,
09  it's probably compiled into an Intel instruction set.
10           And what we had found when I -- you know,
11  I've worked at NeXT and we had actually switched
12  processors and then at Apple we had switched
13  processors again, if you have natively compiled apps
14  out there, that native binary will not just run on
15  your new processor.  You have multiple options for
16  this.
17           And so we talked earlier about this when we
18  brought up macOS 10 that we had, you know, like
19  Classic, but that's this, this blue box Classic
20  emulation mode that tries to take those processor
21  instructions and convert them into one that can run
22  on the new processor.
23           So in this case when I'm talking about was a
24  risk, well, if Apple is building only natively
25  compile applications and third parties are building
00102:01  web applications, a huge advantage to those third
02  parties of those web apps is no matter what Apple
03  does with the processor, those keep running, because
04  they're interpreted.
05           So each time you get a new, if Apple
06  switches iPhone -- this is true today.  If Apple
07  switches to a new processor those web apps have this
08  big advantage that they just keep running going
09  forward, because interpreted on the -- on the
10  processor.
11           And if Apple is running all -- all native
12  apps come from Apple, then to introduce a new phone
13  with a new processor, all you need to do is Apple
14  will recompile every one of those apps, the source
15  code to those apps, to the new processor and then
16  release it.
17           The liability here is if you now have third
18  party natively compiled apps and you want to bring
19  out a new processor which you think will be faster,
20  more security, whatever, and there will be advantages
21  this new processor might have, and there are third
22  party native apps in the marketplace that customers
23  are relying upon, you have to find some solution for
24  those customers.
25           The solution could be convince the
00103:01  developers to take that source code and recompile it
02  for the new processor.  Which might work.  But if
03  that, let's say that company is out of business or no
04  longer is staffing that app any more, doesn't want to
05  put in the amount of money and time and effort it
06  would take to recompile that, you get stuck.
07           So then you -- look, do you simulate it also
08  or do you have customers now who are left not being
09  able to buy a new iPhone because doing so would then
10  disable functionality in the form third party apps
11  they've come to rely upon for their business.
12      Q.   So essentially you get breakage with some of
13  the third party apps potentially if you switch
14  processors?
15      A.   Correct?
```

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33. PAGE 108:22 TO 108:24 (RUNNING 00:00:10.324)

```
22      Q.   Let me now mark Exhibit 875, APL-EG_0098292.
23           (Exhibit 875 was marked for identification
24      and is attached hereto.)
```

34. PAGE 109:12 TO 109:23 (RUNNING 00:00:30.342)

```
12      Q.   First question was, what is "MacOS X
13  Embedded"?
14      A.   I think the authors of this document took it
15  to mean iPhone OS which would be used on the iPhone
16  and it was to be used to iPod Touch at the time, but
17  I think they're taking it to mean the same thing.
18      Q.   Okay.  And is this a document you had
19  received in the ordinary course of your work at
20  Apple?
21      A.   Likely.  I mean, I don't see a e-mail trail
22  anything, but this -- I would have expected to have
23  received this document.
```

35. PAGE 110:08 TO 110:13 (RUNNING 00:00:15.971)

```
08      Q.   And the document is prepared by three
09  people, Mitch Adler, John Wright, and Dallas
10  De Atley.
11           Do you see that?
12      A.   Well, it says "et al."  So it's prepared by
13  more than just them, but three named authors.
```

36. PAGE 111:02 TO 111:09 (RUNNING 00:00:33.826)

```
02      Q.   And were they -- was part of their -- was
03  part of their job to oversee security?
04      A.   Part of their job was to oversee security.
05      Q.   And did they oversee security on both
06  macOS 10 and iPhone or just one of them?
07      A.   I believe they were in groups that oversaw
08  security on both platforms and I do believe they
09  oversaw security on both platforms.
```

37. PAGE 111:10 TO 112:20 (RUNNING 00:02:19.911)

```
10      Q.   So going to the first page, do you see that
11  the document begins by saying (as read):
12               The transition from a closed
13               system to one with a more open
14               developer model demands answers to
15               questions of control and security.
16           Do you see that?
17      A.   I do.
18      Q.   Going further down under applications, they
19  say they assume the (as read):
20               Existence of a robust sandbox to
21               contain applications and developers.
22           Do you see that?
23      A.   By the way, I would not have characterized
24  the way they characterized that first statement, for
25  the record.
00112:01         So what's your second question.
02      Q.   What do you mean by you would not have
03  characterized the way they characterized, sorry?
04      A.   The statement you read said:  The transition
05  from a closed system to one with more open
06  developer -- a more open developer model demands
07  answers to questions of control and security.
08      Q.   Got it.
09      A.   And I would characterize ours as not a
10  closed system, because we did have both a web
```

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```
11  browser.  So all web applications ran, and we
12  supported these web apps.  I don't remember if the
13  web apps by this time could be placed on the home
14  screen as well, which I thought was important enough
15  that I think I'm the lead patent holder on that
16  patent.  So that was an important thing.
17          So -- so calling it a closed system, which
18  is their words, not mine, I would not say that.  I
19  would say that we were going to a -- more developer
20  opportunities with native apps.
```

38. PAGE 117:13 TO 117:18 (RUNNING 00:00:09.016)

```
13      Q.   And they say (as read):
14               Distribution through the web
15           should be supported, but Apple will
16           provide no transfer protection.
17           Do you see that?
18      A.   I do.
```

39. PAGE 117:25 TO 118:02 (RUNNING 00:00:09.934)

```
25          Q.   And "through the web" here means through a
00118:01  website operated by the developer or through a store
02  operated by a third party, correct?
```

40. PAGE 118:04 TO 118:05 (RUNNING 00:00:05.019)

```
04           THE WITNESS:  Well, it doesn't say, but it
05  would be through a mechanism that is not iTunes.
```

41. PAGE 118:07 TO 118:08 (RUNNING 00:00:06.753)

```
07      Q.   And not the App Store, correct?
08      A.   And not the App Store.  The Apple App Store.
```

42. PAGE 118:25 TO 119:17 (RUNNING 00:00:53.803)

```
25          Q.   And if you go to appendix C, developer
00119:01  scenarios, the first one is:  Guy in his basement.
02           Do you see that?
03      A.   I do.
04      Q.   And I gather this is their speak for small
05  time developers, stand alone developer, correct?
06      A.   Yes.
07      Q.   And under 3:  Decide you have final version
08  to deploy, do you see that they say what the
09  developer needs to do, A -- or 3.1, sorry (as read):
10               Submit to Apple for signing and
11           then get signed image and deploy as
12           you wish.
13           Do you see that?
14      A.   I do.
15      Q.   And deploy as you wish here again, means
16  distribute in whichever way you believe best serves
17  your interests, correct?
```

43. PAGE 119:19 TO 119:24 (RUNNING 00:00:14.296)

```
19           THE WITNESS:  I could define it as you wish,
20  but you get assigned image and you deploy it
21  yourself.
22  BY MR. EVEN:
23      Q.   And "deploy" here means distribute, correct?
24      A.   Correct.
```

44. PAGE 125:12 TO 125:12 (RUNNING 00:00:01.979)

```
12  Exhibit 877.  And tab 877 -- sorry, PX877 is
```

45. PAGE 125:13 TO 125:15 (RUNNING 00:00:05.791)

```
13  APL-EG_01025133.
14          (Exhibit 877 was marked for identification
15      and is attached hereto.)
```

46. PAGE 127:03 TO 127:08 (RUNNING 00:00:34.474)

```
03      Q.   And this, too, came from your files, fair to
04  assume that this, too, is a document that you would
05  have received back in 2007?
06      A.   If you're correct about the date it was
07  created, I would have received it sometime around
08  when it was created, I'll expect.
```

47. PAGE 129:08 TO 129:24 (RUNNING 00:00:49.273)

```
08      Q.   Under Distribution Method, on page 2 you see
09  that it says (as read):
10              We will distribute third party
11          applications through the iTunes
12          Music Store.  However, our model
13          will allow for third parties to
14          distribute their own applications
15          and for enterprise customers to
16          deploy to their own devices.
17          Do you see that?
18      A.   I do.
19      Q.   And do you recall that there was a time
20  around October or November of -- of 2007, sorry,
21  where that was the plan of record at Apple, that
22  third parties could sign their applications as we've
23  seen before and then distribute as they wish, as this
24  last document we saw --
```

48. PAGE 130:05 TO 131:12 (RUNNING 00:01:28.868)

```
05              THE WITNESS:  Let me start with the first.
06  This statement says (as read):
07              We will distribute third party
08          applications through the iTunes
09          Music Store.
10          Okay.  Second sentence says (as read):
11              However, our model will allow for
12          third parties to distribute their
13          own applications ...
14          It does not say our policy is to allow that.
15  This is a technical document from a technical team
16  who is building the security infrastructure, and so
17  their statement here is that the model -- the
18  technical infrastructure they're building will allow
19  for other distribution mechanisms.
20  BY MR. EVEN:
21      Q.   Good.  Thank you.
22          And then it goes -- if you go further below,
23  do you see it says (as read):
24              Signing does not imply a specific
25          distribution method, and it's left
00131:01        as a policy decision as to whether
02          Apple signed application are posted
03          to the online store, or we allow
04          developers to distribute on their
05          own.
06          Do you see that?
07      A.   I do.
08      Q.   And do you recall that there was a time
09  around October or November 2007 when that policy
10  decision has not yet been made, it is up in the air?
11      A.   There was a time when that decision had not
```

```
      12  yet been made.
```

49. PAGE 142:24 TO 145:08 (RUNNING 00:05:36.701)

```
      24      Q.   Do you recall that there was a debate within
      25  Apple about whether Apple should allow distribution
00143:01  only through the App Store or whether it should allow
      02  developers to distribute native apps through other
      03  means?
      04      A.   So there were discussions about what the
      05  distribution mechanisms could be, and as you pointed
      06  out in one of the white papers we looked at, it
      07  talked about potential mechanisms in the operating
      08  system for how to make each of these secure in
      09  different ways.
      10          And then there were discussions about how
      11  effective those different mechanisms could be and
      12  what mechanisms we should enable for our customers.
      13      Q.   Fair to say that there was a contingent
      14  within Apple that thought that developers should be
      15  able to distribute their apps through a different
      16  mechanism than the App Store?
      17          MS. MOYE:  Objection to the form.
      18          THE WITNESS:  There were discussions about
      19  how we could enable developers to distribute their
      20  apps, one being the App Store, another being
      21  distribute them sort of directly the way, say, people
      22  do on Windows.  Although, I think Windows might have
      23  an App Store also now.  But distribute, you know,
      24  through Windows.  Back in the day, you had to
      25  distribute through shrink wrap at a physical store.
00144:01          So we had discussions about the merits and
      02  dangers of distributing in different ways, within a
      03  company, and then beyond the company.
      04  BY MR. EVEN:
      05      Q.   And you don't recall arguments about whether
      06  Apple should or should not allow distribution through
      07  the web, for example?
      08      A.   I remember going through the various
      09  options.  I can't point to a specific conversation
      10  about some of these mechanisms, but I can recall my
      11  thinking on the reasons for doing certain ways and
      12  why certain mechanisms might be better or worse than
      13  others, and why we came to the conclusion that we
      14  did.
      15          And I'm certain there were people giving
      16  input and opinions on the merits for each of these
      17  different mechanisms, and that's just responsible to
      18  consider different mechanisms and the pros and cons
      19  of them.
      20          MR. EVEN:  Jessica, can you bring up 478,
      21  please.
      22      Q.   Who were the main proponents of distribution
      23  only through the App Store?
      24      A.   Sorry.  Is there a document I'm supposed to
      25  be looking at?
00145:01      Q.   Nope.
      02      A.   Okay.  Sorry.  I thought you said -- who
      03  were the proponents?  After we had gone through the
      04  discussion, I think basically all of the execs were
      05  proponents of the App Store, plus our enterprise
      06  distribution models as being the two best mechanisms
      07  to protect our mutual customers and get wide
      08  distribution for developers.
```

50. PAGE 161:20 TO 162:04 (RUNNING 00:00:42.406)

```
      20      Q.   Do you recall you gave a presentation, I
```

```
21  think we discussed that earlier, in March 2008,
22  introducing the SDKs for the iPhone?
23      A.    In 2008, we had an event where we launched
24  and publicly announced the iPhone SDK, in App Store.
25      Q.    And you personally presented in that -- in
00162:01  that event and specifically the portion about the
02  SDK, correct?
03      A.    Correct.
04      Q.    If you look at Exhibit 880.
```

51. PAGE 162:05 TO 162:12 (RUNNING 00:00:18.729)

```
05              (Exhibit 880 was marked for identification
06      and is attached hereto.)
07  BY MR. EVEN:
08      Q.    Do you recognize this as a transcript
09  prepared by Apple of the event on March 6, 2008,
10  launching the iPhone SDK?
11      A.    Yeah.  This appears to be a transcript of
12  that event.
```

52. PAGE 162:13 TO 162:16 (RUNNING 00:00:12.098)

```
13      Q.    After you were done introducing the SDKs,
14  you turned the -- the baton over to Mr. Jobs to
15  present the App Store; is that right?
16      A.    Yes.
```

53. PAGE 163:14 TO 164:11 (RUNNING 00:01:17.544)

```
14      Q.    If you go to the page ending in 075.
15      A.    Okay.
16      Q.    And you see that in the fourth paragraph
17  beginning:  "Now, developers."
18              Do you see that paragraph?
19      A.    I do.
20      Q.    And in the middle of the paragraph, Mr. Jobs
21  says (as read):
22              When we sell the app through the
23              App Store, the developer gets
24              70 percent of the revenues right off
25              the top.  We keep 30 to pay for
00164:01              running the App Store.
02              Do you see that?
03      A.    I do.
04      Q.    And going to the next paragraph he says,
05  second full sentence after the second question mark
06  (as read):
07              So when a developer wants to
08              distribute their app for free, there
09              is no charge for free apps at all.
10              Do you see that?
11      A.    Followed by "applause."  Yep.
```

54. PAGE 164:12 TO 164:25 (RUNNING 00:00:36.304)

```
12      Q.    And do you see that in the next paragraph,
13  Mr. Jobs said -- talks about some apps that will not
14  be allowed.  And then he says (as read):
15              ... we have exactly the same
16              interest as the vast majority of our
17              developers, which is to get a ton of
18              apps out there for the iPhone and we
19              think we've invented an incredibly
20              great way to do it ...
21              Do you see that?
22      A.    Yes.
23      Q.    You were there and heard all that being said
24  at the time, right?
```

```
         25     A.   Yes.
```

55. PAGE 165:01 TO 166:14 (RUNNING 00:02:04.050)

```
00165:01        Q.   Now, if you go to the page ending in 079.
      02        A.   Okay.
      03        Q.   And Mr. Jobs is being asked what sorts of --
      04   the bottom half of the page (as read):
      05               What sorts of safeguards have you
      06               built in to make sure that all these
      07               apps and applications that are going
      08               to be coming on to the iPhone are
      09               secure?
      10               Do you see that?
      11        A.   I do.
      12        Q.   And Mr. Jobs says how are we going to do
      13   that, and first he explains the way we're going to do
      14   it is that developers have to register with us, and
      15   for that $99 that they paid to join the program they
      16   actually get an electronic certificate, and that
      17   tells us who they are, and so if they write a
      18   malicious app we can track them down, we can tell
      19   their parents.
      20               Do you see that?
      21               (Reporter clarification.)
      22   BY MR. EVEN:
      23        Q.   Do you see that?
      24        A.   I do.
      25        Q.   And that is a version of the same signing
00166:01   mechanism that we have discussed now over multiple
      02   documents, correct?
      03        A.   That is part of this, yes.
      04        Q.   And then on the next page, Mr. Jobs says
      05   (as read):
      06               The other thing we can do since
      07               the distribution of their
      08               applications is going to be through
      09               the App Store, if we're alerted to a
      10               malicious app that we didn't catch,
      11               we'll turn off the spigots so no
      12               more people download it.
      13               Do you see that?
      14        A.   Yes.
```

56. PAGE 171:05 TO 171:16 (RUNNING 00:00:37.901)

```
      05        Q.   So let's look at that question, and that's
      06   on page 081.  And the question is at the top third --
      07   third sort of bullet, third paragraph (as read):
      08               Isn't the fact that Apple is
      09               going to be the exclusive
      10               distributor for all these
      11               applications raise some questions
      12               about monopolies and so forth?  What
      13               if a developer doesn't want to
      14               distribute through the App Store?
      15               Do you see that question?
      16        A.   I do.  I didn't realize that you attended
```

57. PAGE 173:05 TO 174:07 (RUNNING 00:01:25.966)

```
      05        Q.   Mr. Forstall, going down the page, you see
      06   that there's some back and forth, and then Mr. Jobs
      07   said (as read):
      08               Also, just to make it a little
      09               clearer, we don't intend to make
      10               money off the App Store.
      11               Do you see that statement?
```

```
12      A.    I see that statement on the page.
13      Q.    And do you see that then Mr. Jobs then
14  explained that Apple doesn't make a lot of money off
15  of iTunes.  Do you see that?
16      A.    I do.
17      Q.    And then he says -- I'm reading (as read):
18              ... in the case of the iTunes
19              Music Store, we give all the money
20              to the content owners and we are
21              basically giving all the money to
22              the developers here and if that 30
23              percent of it pays for running the
24              store, well that will be great.
25              Do you see -- did I read that correctly?
00174:01      A.    Yes.
02      Q.    And the 30 percent that Mr. Jobs is alluding
03  to is the 30 percent commission that Apple keeps when
04  there's a distribution of a paid app through the
05  store, correct?
06      A.    It's 30 percent of the gross revenue of an
07  app through the App Store.
```

58. PAGE 174:08 TO 174:10 (RUNNING 00:00:12.992)

```
08      Q.    You understand that for the past decade or
09  so, the 30 percent that Apple keeps does much more
10  than pay for running the store, correct?
```

59. PAGE 174:12 TO 174:13 (RUNNING 00:00:06.450)

```
12              THE WITNESS:  I understand that app -- the
13  30 percent is making Apple a profit.
```

60. PAGE 183:22 TO 184:01 (RUNNING 00:00:12.132)

```
22      Q.    So with that, Mr. Forstall, if you can go to
23  Exhibit 882, which is APL-EG_00260094.
24              (Exhibit 882 was marked for identification
25          and is attached hereto.)
00184:01      MR. EVEN:  This document is a e-mail
```

61. PAGE 184:02 TO 184:07 (RUNNING 00:00:21.793)

```
02  correspondence between Mr. Forstall and Mr. Schiller,
03  dated January 21, 2008.
04      Q.    Mr. Forstall, is this an e-mail chain that
05  you sent and received as part of the ordinary course
06  of your employment at Apple?
07      A.    Yes.
```

62. PAGE 187:21 TO 188:07 (RUNNING 00:00:42.051)

```
21      Q.    Okay.  And I think you mentioned earlier
22  today when talking about, for instance, something
23  like HTML5, you mentioned that HTML5 is sort of
24  agnostic to the underlying processor because you --
25  the developers write for HTML5, right?  And so HTML5
00188:01  is a cross-platform platform in that sense?
02      A.    HTML5 standards are interpreted code so they
03  are agnostic to the specific processor on which they
04  run.
05      Q.    And in that sense they serve as a
06  cross-platform platform for web app developers,
07  correct?
```

63. PAGE 188:09 TO 188:12 (RUNNING 00:00:12.655)

```
09              THE WITNESS:  For web app developers and web
10  developers in general, they can serve as a
11  cross-platform development platform, which sometimes
```

```
12   can work very well.
```

64. PAGE 188:13 TO 189:03 (RUNNING 00:01:00.060)

```
13           Now, they run inside of a browser generally,
14   and browsers have been built up with an enormous
15   amount of security over time.  I mean, even though
16   you see viruses sometimes come through web browsers,
17   but the more mature ones are getting better and
18   better at it.
19           Just as an aside, sometimes that works
20   really great and it's interesting like today we're
21   doing this deposition and we are using a native app,
22   which is Zoom so we can see each other, and then
23   we're using a web app to exchange documents.
24           Well, those documents, you know, that's an
25   important way to go and they're secure and that's
00189:01   being done through an app inside of a web browser,
02   too, HTML5 and beyond standards, so both mechanisms
03   of building can work well.
```

65. PAGE 189:21 TO 190:08 (RUNNING 00:00:27.436)

```
21       Q.   And so back then, too, you thought that what
22   they're planning is really a cross-platform platform
23   as you called it?
24       A.   Yes.
25       Q.   And you then say (as read):
00190:01           While I would prefer developers
02           use web standards -- you mention a
03           couple -- or go native if they want
04           more, I'm not sure we shouldn't take
05           the high ground and let them build
06           it and complete.
07           Do you see that?
08       A.   I do.
```

66. PAGE 192:23 TO 193:02 (RUNNING 00:00:17.436)

```
23       Q.   And Mr. Schiller has taken -- upon hearing
24   it has taken the initial opposite view to yours,
25   correct?
00193:01       A.   It sounds like his initial opinion is very
02   different from mine.
```

67. PAGE 193:03 TO 194:08 (RUNNING 00:01:23.379)

```
03       Q.   And at the end of the day, Mr. Schiller also
04   says (as read):
05           In the grand scheme of things --
06           of APIs we could choose to support
07           beyond our own, if we ever did
08           support another (which I don't
09           recommend), Yahoo's Widget API is
10           not even close to the most important
11           one we would pick, some of the other
12           ones I listed above (like Flash) are
13           way more important ...
14           Do you see that?
15       A.   I do.
16       Q.   Flash was another cross-platform platform?
17       A.   In some ways.  I mean, Flash is a pretty big
18   conversation in and of itself.
19       Q.   I understand.  I'm not trying to hear the
20   entire Flash story.
21       A.   Well, there's a long Flash story in here
22   which is -- I mean, yeah.  'Cause we tried to work
23   with them also.  Yes.  Flash can be used as a
24   cross-platform platform as well.
```

```
      25      Q.   And then Mr. Schiller (as read):
00194:01                Besides, we have a way to do
      02           Widgets that competes with theirs,
      03           so who cares?
      04           Do you see that?
      05      A.   I do.
      06      Q.   And did Apple end up supporting the Yahoo
      07  widget engine?
      08      A.   We did not.
```

68. PAGE 194:09 TO 194:20 (RUNNING 00:00:44.060)

```
      09      Q.   Did you end up supporting Flash?
      10      A.   We did not ship Flash.  We tried to make
      11  Flash work.  We helped Adobe.  We -- we definitely
      12  were interested.  Again, this is one where I thought
      13  if we could help make it work, this could be great.
      14  Flash has been such a problem because it -- the way
      15  that it hooks into systems, it's been a virus
      16  nightmare on -- on Windows, even on the Mac.
      17           And when we got it running on iOS, the
      18  performance was just abysmal and embarrassing and it
      19  could never get to something which would be consumer
      20  value add.
```

69. PAGE 194:21 TO 194:22 (RUNNING 00:00:03.632)

```
      21      Q.   And so you never shipped with Flash either?
      22      A.   We did not.
```

70. PAGE 195:01 TO 195:10 (RUNNING 00:00:26.039)

```
00195:01      Q.   Did you support Java?
      02      A.   We did not.
      03      Q.   And he also mentioned Adobe's Air.  Do you
      04  support Adobe Air?
      05      A.   I do not believe so.
      06      Q.   What about Microsoft Silverlight?
      07      A.   We did not support that.  I don't even know
      08  if that exists anymore, but we did not support that.
      09      Q.   And Qualcomm's Brew?
      10      A.   We did not support that.
```

71. PAGE 195:22 TO 196:03 (RUNNING 00:00:26.779)

```
      22      Q.   I wasn't suggesting that.  I asked whether
      23  you recall that there were cross-compilers available
      24  from third parties that allowed people to develop
      25  apps that would run on iOS.
00196:01      A.   I think people were trying to create
      02  cross-compilers.  I don't remember if any of those
      03  were used in the real world.
```

72. PAGE 196:04 TO 196:07 (RUNNING 00:00:14.590)

```
      04      Q.   Do you recall that Apple at some point
      05  decided to ban the use of cross-compilers for
      06  developing apps for the -- for iOS?
      07      A.   Yes.
```

73. PAGE 198:10 TO 198:14 (RUNNING 00:00:14.132)

```
      10      Q.   Cross-compilers are used for cross-platform
      11  development, right?
      12      A.   In general they can be used for a couple
      13  things, but yes, they can be used for cross-platform
      14  development.
```

74. PAGE 206:14 TO 206:21 (RUNNING 00:00:12.042)

```
      14           (Exhibit 886 was marked for identification
```

```
15        and is attached hereto.)
16  BY MR. EVEN:
17       Q.    Do you see this is an e-mail from Philip
18  Schiller to yourself, copying Mr. Jobs on July 16,
19  2011?
20       A.    Give me a minute.  There's a lot of e-mails
21  in here, so I'm going to scan through it briefly.
```

75. PAGE 207:01 TO 207:06 (RUNNING 00:00:14.197)

```
00207:01       Q.    Mr. Forstall, is this an e-mail that you
02  received?
03       A.    Yes.
04       Q.    And is in an e-mail that you received as
05  part of the ordinary course of your work at Apple?
06       A.    Yes.
```

76. PAGE 208:02 TO 208:03 (RUNNING 00:00:03.628)

```
02             And Mark here again is Mr. Zuckerberg?
03       A.    Yep.
```

77. PAGE 208:04 TO 208:06 (RUNNING 00:00:18.353)

```
04       Q.    And so Facebook wanted to have either an
05  embedded web view or links to web apps in its iPad
06  native app, correct?
```

78. PAGE 208:08 TO 208:15 (RUNNING 00:00:23.502)

```
08             THE WITNESS:  Facebook was looking in their
09  iPad app to enable embedded apps with inside of that
10  app.
11  BY MR. EVEN:
12       Q.    And you told them they can't do that,
13  correct?
14       A.    We said they should not include embedded
15  apps inside of the native app.
```

79. PAGE 209:25 TO 210:11 (RUNNING 00:00:57.300)

```
25       Q.    And the concern is that if Facebook did
00210:01  this, if it did include these links, then it would
02  operate as a storefront for web apps, correct?
03             MS. MOYE:  Objection to the form.
04             THE WITNESS:  The idea is if they were doing
05  this -- I mean, there's many issues, it could be very
06  confusing to users if they're making it appear to be
07  an app store, but it's not taking you to the native
08  apps you can download on to a platform.  It's unclear
09  exactly what the point of that directory of links
10  with inside of an application would -- would present
11  itself as.
```

80. PAGE 211:08 TO 212:01 (RUNNING 00:01:07.900)

```
08       Q.    Mr. Forstall, what you told Mr. Zuckerberg
09  is not to include embedded apps in the Facebook iPad
10  app either in an embedded web view or as a directory
11  of links that would redirect to Safari.  This speaks
12  to HTML5 web apps, correct?
13       A.    No --
14             MS. MOYE:  Objection to the form.
15             THE WITNESS:  This speaks to what Facebook
16  would do in its native iPad app.  Facebook when using
17  HTML, HTML5, all web standards, as a website which
18  is, you know, how you probably access Facebook when
19  you're sitting on your Windows machine or your Mac,
20  that uses web standards and works exactly how they
21  built Facebook from day one.
```

```
22              This is talking about what do they do in the
23    native iPhone or iOS app and iPad app, in this case.
24    BY MR. EVEN:
25        Q.   I understand that, but that wasn't my
00212:01  question, Mr. Forstall.
```

81. PAGE 212:02 TO 212:04 (RUNNING 00:00:15.815)

```
02              My question was:  You told Mr. Zuckerberg
03    that Facebook should not embed or link to HTML5 apps
04    from its native app, correct?
```

82. PAGE 212:06 TO 212:09 (RUNNING 00:00:19.344)

```
06              THE WITNESS:  I said -- the message that I
07    delivered was that Facebook in their native app
08    should not redirect to links that would take you to
09    Safari in this directory.
```

84

Forstall, Scott (Vol. 02) - March 8, 2021   1 CLIP (RUNNING 00:07:40.616)

13 SEGMENTS (RUNNING 00:07:40.616)

1. PAGE 230:05 TO 230:11 (RUNNING 00:00:44.125)

```
05  Q.    Mr. Forstall, do you recall that after the
06  App Store opened, there were developers who deployed
07  mechanisms for collection of payments within their app;
08  for instance, through opening an embedded web app,
09  collect payment, things of that nature?
10  A.    I remember there was some sort of payment thing.
11  I don't remember the specifics.  I remember generally.
```

2. PAGE 230:16 TO 230:18 (RUNNING 00:00:16.143)

```
16  Q.    Okay, but you were aware that developers found
17  ways to -- to make sales within their app, and collect
18  payment for those sales?
```

3. PAGE 230:20 TO 230:22 (RUNNING 00:00:08.518)

```
20          THE WITNESS:  I remember a general concept
21  that some developers were trying to collect payment
22  through their apps.
```

4. PAGE 230:24 TO 231:02 (RUNNING 00:00:18.824)

```
24  Q.    And do you recall there came a time when Apple
25  decided to offer its own payment mechanism for
00231:01  applications that sold digital content?
02  A.    Yes.
```

5. PAGE 231:06 TO 231:08 (RUNNING 00:00:12.291)

```
06  Q.    And applications that sold physical goods remained
07  free to use whatever other mechanisms they wanted.
08  They couldn't use the Apple mechanism.  Correct?
```

6. PAGE 231:15 TO 231:19 (RUNNING 00:00:18.786)

```
15          THE WITNESS:  Apps could not use Apple's
16  in-app purchase for the sale of physical goods.
17  BY MR. EVEN:
18  Q.    But they could use other mechanisms.  Correct?
19  A.    Yes.
```

7. PAGE 232:05 TO 232:07 (RUNNING 00:00:17.530)

```
05  Q.    But apps that sold digital content were required
06  to do so using the IAP API.  Correct?
07  A.    Correct.
```

8. PAGE 234:08 TO 234:08 (RUNNING 00:00:02.128)

```
08  Q.    If you look at Exhibit 888, Exhibit 888 is Bates
```

9. PAGE 234:09 TO 234:17 (RUNNING 00:00:43.244)

```
09  stamped APL-APPSTORE_10080247.  And it's a cover
10  email attaching a -- what appears to be a slide deck,
11  with the tagline "App Commerce Models."  Do you see
12  that?
13  A.    I do.
14  Q.    And is that an email that you received together
15  with its -- with its attachment on 11 December 2008 in
```

16 the ordinary course of your work at Apple?
17 A.   Yeah.

10. PAGE 252:06 TO 252:13 (RUNNING 00:00:29.053)

06 Q.   Okay. We discussed earlier that there were some
07 apps on the App Store prior to the release of IAP
08 that were using their own payment mechanisms for
09 different kinds of purchases made in the app. Correct?
10 A.   Correct.
11 Q.   And some of those then needed to switch over to
12 IAP once IAP was released. Correct?
13 A.   At some time frame.

11. PAGE 252:16 TO 254:10 (RUNNING 00:03:25.791)

16   Do you recall, without divulging any legal advice,
17 all the reasons why Apple decided to require that all
18 digital sales must use API [sic]?
19   MS. MOYE: Do you mean to say "IAP"?
20   MR. EVEN: IAP. Sorry.
21   THE WITNESS: I mean, there are a number of
22 reasons we added IAP. It was to make it easier for
23 developers to sell digital goods.
24   If you're a game developer and you have an extra
25 level that you'd like to sell, but the customer has to
00253:01 enter a credit card, that could be a huge impediment to
02 the customer buying that extra level; whereas if it
03 just says, "Hey, click this button, and, for 99 cents,
04 you get another level," the user is much more likely to
05 click it. And Apple already has your credit card on
06 file, so it -- it really streamlines it. And it's a
07 huge win for the developer to have an easy mechanism
08 built in to -- to sell goods inside the app. So that
09 was -- that was the main reason we did it: To make it
10 much, much easier for developers to have another
11 revenue stream.
12   And, as the App Store -- as apps matured, we
13 just learned a lot more about different mechanisms for
14 how to help developers make money.
15 BY MR. EVEN:
16 Q.   Any other reasons that you recall, without
17 divulging any legal advice?
18 A.   Any other reasons for what?
19 Q.   For requiring the use of IAP for in-app sales of
20 digital goods.
21 A.   Well, another reason was to make it consistent
22 everywhere. So if users were to see a consistent
23 panel, they'd be more likely to accept that.
24   If, again, everything's different every time,
25 users might be afraid to click, you know, one -- one
00254:01 place and not another place, because they might think
02 they're going to get a credit-card form added. And so
03 if you had a standard panel across everything, that was
04 another.
05   Another we did have this 70:30 revenue split
06 in the store for sales. And it was to avoid apps from
07 trying to basically circumvent that by having a free
08 download that wasn't actually free. It was -- Apple
09 would pay for everything for the download, and then
10 they would charge the customer.

12. PAGE 254:11 TO 254:13 (RUNNING 00:00:06.133)

11 Q.   Any other reason?
12 A.   I'm sure there are more that I'm not thinking of
13 right now.

13. **PAGE 255:18 TO 256:02 (RUNNING 00:00:38.050)**

```
          18          Do you recall the year that the App Store was
          19   launched?
          20   A.     2008.
          21   Q.     And in 2008 what were your -- from a high level,
          22   what were your general duties and responsibilities at
          23   Apple?
          24   A.     I ran all software for the iPhone OS, so iOS,
          25   plus I was responsible for macOS 10 releases, and all
00256:01   design of software user interface design, and a set of
          02   other things.
```

Epic Games, Inc. v. Apple Inc., **No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)**

Deposition Designation of C.K. Haun (Vol. 1 & 2)
(January 13, 2021)
(January 14, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
21 minutes 46 seconds	1 minute 49 seconds

---

32 SEGMENTS (RUNNING 00:21:43.256)

---

1. PAGE 6:17 TO 6:19 (RUNNING 00:00:07.775)

```
17                           C.K. Haun
18                 having been first duly sworn, was
19                 examined and testified as follows:
```

2. PAGE 11:01 TO 11:05 (RUNNING 00:00:15.464)

```
00011:01          So now I want to go to your starting to
    02  work at Apple.  You gave me the exact date although
    03  I think I forgot to write it down, but January 15,
    04  and that was 1980?
    05     A.    1990.
```

3. PAGE 13:01 TO 14:05 (RUNNING 00:02:43.333)

```
00013:01     Q.    Tell me about your career from then until
    02  around the period when Apple launched its App Store.
    03  Take me through the roles you played between that
    04  period and the time when Apple launched App Store.
    05     A.    I was a developer technical support engineer
    06  until 1994.  At that point I moved into the Macintosh
    07  system software engineering team and wrote and
    08  applied software fixes to various portions of the Mac
    09  operating system.
    10          In late 1995, I briefly left the company to
    11  join a startup; Be Incorporated.  It is B as in
    12  baker, E as in echo, incorporated.
    13          I worked there for roughly six months, left
    14  that company, returned to Apple.  At that point I was
    15  given responsibility for the engineering side of the
    16  Mac OS 8 system software release, so I managed the
    17  software engineering team for that operating system
    18  release.
    19          When that operating system release was
    20  completed, I worked on some of the design and
    21  foundational pieces of what would become Mac OS X,
    22  and in 1998 I was approached by the management of the
    23  Apple developer organization to take the director's
    24  job of developer technical support.  I accepted and I
    25  have had that role since then.
00014:01     Q.    What did that role entail?
    02     A.    My responsibilities at that point were to
    03  direct the team of developer technical support
    04  engineers in the appropriate areas to focus to assist
    05  our third-party developer community.
```

4. PAGE 16:10 TO 16:19 (RUNNING 00:00:37.630)

```
    10     Q.    In your work and in Apple's work to support
    11  developers, it supports both iOS developers and Mac
    12  developers; is that correct?
    13     A.    Yes.
    14     Q.    Your team in particular provides support
    15  both for Mac OS developers and iOS developers; is
    16  that correct?
    17     A.    Yes.
    18     Q.    Has your team grown since App Store opened?
    19     A.    No.
```

5. PAGE 17:13 TO 17:24 (RUNNING 00:00:41.803)

```
13      Q.   I'll move on.  So you're saying the work --
14  so the work to support an iOS developer is similar
15  to the work to support a Mac OS developer?
16      A.   Yes.
17      Q.   So over the time since App Store has
18  opened, the number of apps and the revenue Apple has
19  generated from the App Store has grown
20  substantially; is that correct?
21      A.   Yes.
22      Q.   But over that time, your team didn't grow
23  in size, correct?
24      A.   Yes.
```

6. PAGE 18:08 TO 18:11 (RUNNING 00:00:14.671)

```
08      Q.   Your team provides the same level of
09  support for a Mac OS developer that it provides for
10  an iOS developer?
11      A.   They are substantially identical efforts.
```

7. PAGE 25:01 TO 25:12 (RUNNING 00:01:05.810)

```
00025:01      Q.   Is there a process of signing Mac OS
02  applications?
03      A.   Yes.
04      Q.   How does that work?
05      A.   The process is again substantially similar
06  to the iOS process.  When a developer determines it's
07  in their desire to produce a Mac application, they
08  request a Mac developer identification certificate.
09  It is issued to them from our developer portal.  Then
10  during the process of building their Mac application,
11  that application is signed by our development tools
12  with that developer I.D. certificate.
```

8. PAGE 25:23 TO 26:05 (RUNNING 00:00:42.372)

```
23      Q.   What is the something I've heard referred
24  to as Mac OS notarization; how does that work?
25      A.   Notarization is a process where a Mac
00026:01  developer creates his or her application, signs it
02  with their developer I.D. certificate, and then
03  chooses to take an additional step of having Apple
04  software analyze and sign the application for
05  distribution outside of the Mac App Store.
```

9. PAGE 27:09 TO 27:13 (RUNNING 00:00:25.497)

```
09  by an app reviewer.  How long does an app reviewer
10  review an application?
11      A.   A typical review of a typical application
12  provided for consideration for distribution in our
13  online collection of apps takes minutes.
```

10. PAGE 28:21 TO 29:01 (RUNNING 00:00:21.126)

```
21      Q.   Is there a fee to be a member of the app
22  developer program?
23      A.   There is a fee to be a member of the Apple
24  Developer Program.
25      Q.   What's that fee?
00029:01      A.   Currently it is $99 in U.S. dollars.
```

11. PAGE 29:18 TO 30:03 (RUNNING 00:00:48.139)

```
18      Q.   In terms of technical support, there is
19  certain technical support benefits they receive as a
20  result of being a member?
21      A.   Yes.
```

```
22      Q.    And what are those benefits?
23      A.    The specific technical benefits are provided
24  by my organization.  A developer, as part of their
25  annual membership, receives the opportunity for no
00030:01  additional fee to consult with my engineers on two
02  specific technical areas that they would like
03  assistance, guidance or otherwise.
```

12. PAGE 31:12 TO 31:15 (RUNNING 00:00:12.314)

```
12      Q.    There is an opportunity to get additional
13  support, there is a payment they can make to get
14  additional support; is that correct?
15      A.    Yes.
```

13. PAGE 32:06 TO 32:07 (RUNNING 00:00:07.675)

```
06      Q.    What is the charge for those additional --
07      A.    $99 per incident.
```

14. PAGE 32:16 TO 32:24 (RUNNING 00:00:26.998)

```
16      Q.    But all this support provided to members
17  that develop native iOS apps are also provided to
18  Mac OS developers, correct?
19      A.    Substantially similar.  The technologies may
20  be different.
21      Q.    And it's provided even if the Mac OS
22  developer distributes predominantly or even
23  exclusively outside of the Mac App Store?
24      A.    Correct.
```

15. PAGE 32:25 TO 33:17 (RUNNING 00:01:31.167)

```
25      Q.    Why does Apple support developers who are
00033:01  developing apps that aren't distributed through the
02  App Store?
03      A.    Earlier in our conversation I described my
04  understanding of the benefits of a third-party
05  developer community to Apple.  The answer to your
06  current question is similar to the answer I provided
07  then.
08            Distribution of Mac applications on other
09  platforms, other distribution mechanisms, provides
10  goods and services that consumers or businesses may
11  choose to use.
12      Q.    What's the benefit to Apple of that again?
13      A.    The benefit to Apple is to have goods and
14  services that a customer would like to use which
15  encourages a customer to consider Apple products as
16  products that they would choose to use in their
17  business or personal lives.
```

16. PAGE 36:09 TO 36:19 (RUNNING 00:01:10.465)

```
09      Q.    And what's the -- why does Apple provide
10  for notarization of Mac iOS apps?  What's it trying
11  to address?
12      A.    One of the primary goals of application
13  notarization is to provide our customers with
14  information that Apple has done some level of
15  inspection of a Mac application and we are
16  communicating to that customer that we did not detect
17  any flaws or potential privacy or security-related
18  issues in that application, to the best of our
19  ability at the time.
```

17. PAGE 37:05 TO 37:13 (RUNNING 00:00:51.979)

```
05      Q.    Could Apple use a notarization system in
```

```
06  iOS?
07      A.    The technologies associated with a
08  notarization system -- I'm sorry, it's difficult to
09  answer that question because I'm not -- are you
10  asking if the software technology that we apply can
11  be applied to an iOS application?
12      Q.    Yes.
13      A.    Yes.   The answer is yes.
```

18. PAGE 142:20 TO 142:23 (RUNNING 00:00:10.156)

```
20              Exhibit 131 is an e-mail, and you're copied
21  on one of the e-mails in the chain and it addresses
22  the presence of a school shooting game on the App
23  Store.
```

19. PAGE 143:07 TO 143:13 (RUNNING 00:00:34.177)

```
07      Q.    Exhibit 131 describes the internal reaction
08  after certain individuals at Apple learned that
09  there was a school shooting game on the App Store
10  that had been posted soon after the Parkland
11  shooting, correct?
12      A.    I don't know if it was soon after Parkland
13  or not, but I agree with your other characterization.
```

20. PAGE 145:10 TO 145:16 (RUNNING 00:00:15.800)

```
10      Q.    The second sentence says:   "So far all the
11  evidence points to Armin was going too fast and
12  missed all the signs to reject these apps for 1.1 or
13  at least escalate."
14              Do you see that?
15      A.    It says "signals," not "signs," and I do see
16  that.
```

21. PAGE 146:03 TO 146:05 (RUNNING 00:00:07.576)

```
03      Q.    And it states it took a total of 32 seconds
04  to approve both apps.   Do you see that?
05      A.    I do see that.
```

22. PAGE 147:21 TO 147:25 (RUNNING 00:00:13.689)

```
21      Q.    Do you remember this incident involving
22  this school shooting app on the App Store?
23      A.    As I mentioned when you first brought it up,
24  I have a vague memory of it but not an in-depth
25  understanding.
```

23. PAGE 168:22 TO 169:14 (RUNNING 00:00:45.217)

```
22          Q.    What other devices other than the Mac do
23  you play games on, if any?
24          A.    A PlayStation 4 and an Xbox, whatever the
25  generation right before the one they just put out.   I
00169:01  can never remember Xbox's naming them schemes.
02          Q.    What about mobile devices; do you play
03  games on mobile devices?
04          A.    On my iPad.   Sorry, I forgot to mention
05  that.
06          Q.    Sounds like you have multiple game
07  consoles; is that right?
08          A.    Yes.
09          Q.    You also have a Mac on which you can play
10  games?
11          A.    Yes.
12          Q.    Why do you have multiple devices on which
13  to play games?
14          A.    Each device has different capabilities.
```

24. PAGE 170:13 TO 170:20 (RUNNING 00:00:24.903)

```
13      Q.    What about mobile devices; do they have any
14  capabilities compared with the other platforms?
15      A.    The definition of the platform, as you just
16  made, introduces the primary benefit, which is the
17  mobility.
18      Q.    So you view mobility as a reason why you
19  would have a mobile device to play games?
20      A.    Yes.
```

25. PAGE 170:23 TO 172:08 (RUNNING 00:01:45.229)

```
23            Is it important to you to have a device in
24  which you can play games that are mobile?
25      A.    Yes.
00171:01    Q.    Why is that important to you?
02      A.    There are times in my day-to-day life when I
03  would like to either clear my mind or enjoy myself by
04  playing a game, and I may not have access to my Mac
05  PlayStation, Xbox.  I may only have a mobile device
06  with me and that allows me to satisfy that desire.
07      Q.    And so that would include circumstances in
08  which you are away from home and therefore away from
09  those gaming consoles?
10      A.    Yes.
11      Q.    You keep the gaming consoles at home,
12  right?
13      A.    Yes.
14      Q.    They've got to be hooked up to your TV in
15  your living room or some other room in your home,
16  right?
17      A.    They have to be hooked up to a monitor, yes.
18      Q.    What about your Mac; do you have a desktop
19  or laptop?
20      A.    I have a laptop.
21      Q.    What about a laptop; do you bring that with
22  you when you're going about your daily business away
23  from home?
24      A.    Sometimes, yes.
25      Q.    Do you ever pull out your laptop and play
00172:01  games while you're away from home?
02      A.    No.
03      Q.    Why don't do you that if you have it with
04  you?
05      A.    In my opinion, the experience of playing
06  games away from a desk and a surface where I am able
07  to manipulate a mouse correctly, in my opinion, for
08  gaming, does not exist.
```

26. PAGE 185:12 TO 185:15 (RUNNING 00:00:07.352)

```
12      Q.    So sandboxing, there are more aspects
13  implemented on iOS than Mac OS?
14      A.    Yes.
15      Q.    Why is that?
```

27. PAGE 185:18 TO 186:09 (RUNNING 00:01:28.919)

```
18            There been behaviors that have become
19  part of Mac OS from '82 to now that in some cases are
20  difficult to change without understanding all the
21  ramifications, and the ramifications can be rather
22  broad, not from necessarily from the operating
23  system's perspective, but from the perspective of Mac
24  developers who have 30-some-odd years of history of
25  knowing how certain things work, whether that
00186:01  knowledge is accurate or not.
02            When we developed iPhone OS, we did not have
```

```
03  an established base of either developer knowledge or
04  existing software applications that this intimate
05  knowledge of what iOS or iPhone OS did, so we could
06  begin a new platform with some enhanced goals and in
07  this case enhanced security in sandboxing
08  infrastructure without disrupting anything that had
09  happened in the past.
```

28. PAGE 187:01 TO 187:13 (RUNNING 00:00:36.056)

```
00187:01      Q.    Are there other benefits to sandboxing on
02  iOS?
03      A.    Obviously from a consumer focus, the
04  inability of application A to read the data created
05  by application B is a huge benefit to our customers.
06      Q.    So for example, my messenger app cannot
07  obtain data that my banking app may have; is that
08  right?
09      A.    That's correct.
10      Q.    That would be a problem because that might
11  compromise the safety of my personal information
12  that is stored by another app?
13      A.    Correct.
```

29. PAGE 188:09 TO 188:12 (RUNNING 00:00:18.836)

```
09      Q.    Are there important aspects of sandboxing
10  that have been implemented on iOS and not on Mac OS?
11      A.    With the release of our latest version of
12  Mac OS, I don't believe that is the case.
```

30. PAGE 238:07 TO 238:10 (RUNNING 00:00:01.621)

```
07            MS. COSCIA:  This is 140.
08            (The document referred to was marked as
09  Exhibit 140 for identification and is attached
10  hereto.)
```

31. PAGE 239:05 TO 239:08 (RUNNING 00:00:09.372)

```
05      Q.    I want to start at the top of this e-mail.
06  You wrote:  "We review, we do not test.  That's been
07  a guiding principal in App Review since we conceived
08  of it.
```

32. PAGE 239:17 TO 240:18 (RUNNING 00:02:20.135)

```
17      Q.    Thank you, understood:  "We review, we do
18  not test."   What's the difference between those?
19      A.    This is a particular -- as you can tell from
20  my emphasis in the first line of this e-mail, in the
21  software business, the word "test" has certain
22  implications to both software engineers, quality
23  assurance personnel and customers.
24            "Test" implies or outright infers that the
25  individual providing test has done a comprehensive
00240:01  use of the application, exercising most it not all of
02  the functionality of an application, and not only
03  testing all the functionality of the application, but
04  testing certainly much of the application under
05  different conditions with a different data and by
06  attempting to induce failure modes by, for example,
07  trying to run an application on a Windows PC that
08  does not have enough memory to do everything the
09  application wants and see how the application fares
10  under a test like that.  That's the commonly accepted
11  perception of what a test is.
12            Review as started by the iOS App Review team
13  is not testing.  As I've described earlier, we run
14  some automated tools on applications, and then a
```

15 reviewer will in general launch an app and do some
16 things with the app; not a comprehensive test.
17 That's why I made the emphasis here on that
18 differentiation.

4 SEGMENTS (RUNNING 00:01:52.196)

1. PAGE 276:22 TO 276:25 (RUNNING 00:00:14.632)

```
22        Q.    Okay.   When you were running the App Store,
23   on average how long did it take a reviewer to do the
24   human review for an app coming into the App Store?
25        A.    Typically three to seven minutes.
```

2. PAGE 289:21 TO 289:22 (RUNNING 00:00:00.540)

```
21              (Exhibit 144 was marked for identification
22        and is attached hereto.)
```

3. PAGE 290:11 TO 291:07 (RUNNING 00:01:10.533)

```
11              And you are shown as a recipient of at least
12   one of the e-mails in the thread?
13        A.    Yes.
14        Q.    Okay.   Does this refresh your recollection
15   that XcodeGhost became a problem sometime around
16   September 17th, 2015?
17        A.    Yes.
18        Q.    Okay.   And in it, in this thread, you are
19   asked by Craig Bradley (as read):
20              This all seems very technical to
21           me, but the comment that "infected
22           apps successfully passed app review
23           concerns me, is this something we
24           should worry about or actively scan
25           for during app review."
00291:01           Do you see where I'm reading?
02        A.    Yes.
03        Q.    Okay.   So first question:  Who is Mr.
04   Bradley?
05        A.    Craig Bradley manages our worldwide
06   developer relations activities in -- at that point,
07   the southeast Asia and China markets.
```

4. PAGE 291:16 TO 291:20 (RUNNING 00:00:26.491)

```
16        Q.    Well, both:  What is XcodeGhost?
17        A.    XcodeGhost was a exploit which fooled our
18   tool chain into including an inaccurate modified
19   version of some SDK, software development kit,
20   libraries.
```

Epic Games, Inc. v. Apple Inc., No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)

Deposition Designation of Eric Friedman (Vol. 1 & 2)
(February 1, 2021)
(February 2, 2021)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
21 minutes 8 seconds	15 minutes 22 seconds

62 SEGMENTS (RUNNING 00:35:36.320)

1. PAGE 12:14 TO 12:16 (RUNNING 00:00:06.525)

```
14                    ERIC FRIEDMAN,
15     having been first duly sworn, was examined and
16                  testified as follows:
```

2. PAGE 38:21 TO 38:22 (RUNNING 00:00:07.005)

```
21     Q    When did you join Apple?
22     A    July of 2012.
```

3. PAGE 39:05 TO 39:19 (RUNNING 00:00:39.430)

```
05     Q    Okay.  And what role did you have at Apple
06  when you joined?
07     A    Very briefly, software developer.
08     Q    And what were you very briefly developing?
09     A    commerce systems for at the time what was
10  called the iTunes Store.
11     Q    Okay.  At that time, the iTunes Store sold
12  apps as well as movies and music; is that right?
13     A    That's right.
14     Q    Okay.  And you say you developed e-commerce
15  systems.
16          What would those systems do within the iTunes
17  Store?
18     A    Well, I was specifically responsible for the
19  fraud engineering systems.
```

4. PAGE 49:13 TO 49:17 (RUNNING 00:00:09.651)

```
13     Q    Okay.  Has your role changed since then?
14     A    Yes.
15     Q    How has it changed?
16     A    We took on responsibility for other kinds of
17  abuse.
```

5. PAGE 50:01 TO 50:15 (RUNNING 00:01:12.569)

```
00050:01     Q    Okay.  What kind of -- what other kinds of
      02  abuse did you take the responsibility on for?
      03     A    Sure.  And so I'm not -- in my answer, I'm
      04  not going to distinguish between the things that
      05  came from iCloud and the things that came in account
      06  security.
      07          So there was an area of discovery abuse that
      08  we became responsible for.  I mentioned account
      09  security.  And then at a later point, iMessage spam;
      10  at a later point, mail spam, various other kinds of
      11  spam in the iCloud infra-system, you know, phishing
      12  virus, phishing in general, I should say.  We did a
      13  number of efforts that were -- it was broadly about
      14  identifying abuse of behavior across services and
      15  developer fraud.
```

6. PAGE 50:16 TO 51:08 (RUNNING 00:01:32.110)

```
16     Q    What is developer fraud?
17     A    Sure.
18     Q    Sorry.
```

```
19    A    That's okay.  I was just about to answer that
20  question, so good timing.  So there are several
21  kinds, but broadly speaking, it comes down to
22  knowing who we're doing business with and making
23  sure that those purposes are -- are not -- the --
24  the privileges are not being misused for illicit
25  distribution and for illegal activity like money
00051:01  laundering.
02          And then -- what was I going to say about
03  developer fraud?  There are compliance elements to
04  it referring to OFAC.  It -- with partners, extends
05  it to the domains of malware and -- I think that's
06  a -- a general view of the landscape.  I'm sure if
07  you have more precise questions, we'll be able to
08  delve into that.
```

7. PAGE 57:20 TO 58:09 (RUNNING 00:00:57.657)

```
20    Q    Let's talk about malware.  How -- what do you
21  consider malware to be?
22    A    I consider malware to be software which
23  deceives an end user as to its function.
24    Q    And how does Apple prevent customers from
25  obtaining malware?
00058:01  A    So in my domain, what we focus on is
02  preventing illicit distribution.
03    Q    Well, what do you mean by illicit
04  distribution?
05    A    Illicit -- sorry, distribution outside of the
06  App Store.
07    Q    So do you perform any other function in order
08  to prevent customers from obtaining malware?
09    A    No.
```

8. PAGE 58:10 TO 58:13 (RUNNING 00:00:06.771)

```
10    Q    Okay.  What about Apple?  Does Apple perform
11  any other function that prevents customers from
12  obtaining malware?
13    A    Yes.
```

9. PAGE 59:10 TO 59:19 (RUNNING 00:00:23.962)

```
10    Q    Okay.  Does your team have a name?
11    A    Fraud engineering, algorithms and results --
12  and risk.  I'm sorry, risk.  We like --
13    Q    Is that sometimes abbreviated FEAR?
14    A    That's right.
15    Q    Do people pronounce it "fear" within Apple?
16    A    They pronounce it "FEAR," uh-huh.
17    Q    Okay.  And you -- are you the leader of that
18  group?
19    A    Yes, I am.
```

10. PAGE 63:06 TO 63:08 (RUNNING 00:00:10.520)

```
06    Q    In performing your role, have you had to
07  interact with App Review within the App Store?
08    A    Yes, I do interact with App Review.
```

11. PAGE 68:05 TO 68:14 (RUNNING 00:00:34.993)

```
05    Q    Okay.  Sorry.  Let's start with iOS first.
06          How does your team prevent the illicit
07  distribution of apps on iOS?
08    A    Sure.  So we run several what we call
09  crawling systems to identify illicit distribution
10  activity.
11    Q    Okay.  What are the systems crawling?
12    A    The internet.
```

```
13    Q    And what are they looking for?
14    A    Distribution outside the App Store.
```

12. PAGE 77:11 TO 77:12 (RUNNING 00:00:00.915)

```
11          (Exhibit 250 was marked for identification
12          and is attached hereto.)
```

13. PAGE 81:18 TO 81:25 (RUNNING 00:00:34.438)

```
18    Q    Are you aware of developers requesting
19 five-star ratings?
20    A    Yes.
21    Q    Okay.  Is that considered abuse?
22    A    Well, again, I am not responsible for -- for
23 defining that exactly, but I refer to
24 Mr. Shoemaker's message above where he says a
25 request for five-star witness causes rejection.
```

14. PAGE 82:01 TO 82:04 (RUNNING 00:00:10.780)

```
00082:01    Q    Okay.  So that's something that, in your
02 understanding, should not have been permitted by App
03 Review?
04    A    Correct.
```

15. PAGE 82:05 TO 83:03 (RUNNING 00:00:56.576)

```
05    Q    And after Mr. Shoemaker emails you providing
06 that information, you write an email starting with
07 (as read):
08          "Pedraum, when can we talk about
09          this?"
10    A    Uh-huh.
11    Q    Who was -- was Pedraum that you're addressing
12 there?
13    A    Pedraum Pardehpoosh at the time was -- I
14 don't remember the precise role, but he was on the
15 business side of App Store and so was someone we
16 conferred with about what the business rules should
17 be for the discovery features we were attempting to
18 protect --
19    Q    Okay.
20    A    -- discovery experiences.  Excuse me,
21 experiences.
22    Q    Understood.  You write (as read):
23          "Pedraum, when can we talk about
24          this?  App Review is bringing a
25          plastic butter knife to a gun
00083:01          fight."
02          Do you see that?
03    A    I do.
```

16. PAGE 89:02 TO 89:05 (RUNNING 00:00:07.746)

```
02    Q    And, Mr. Friedman, if you could access
03 Exhibit 251 and take a minute or two to read that,
04 please, and let me know when you've finished.
05    A    All right.
```

17. PAGE 93:13 TO 93:19 (RUNNING 00:00:22.224)

```
13    Q    You start "Regarding review processes,"
14 colon.
15          Do you see that?
16    A    Uh-huh.
17    Q    You're referring to App Review processes,
18 right?
19    A    Looking at the final sentence, yes.
```

18. **PAGE 94:09 TO 94:23 (RUNNING 00:00:32.897)**

```
09      Q    Let me -- let me repeat again (as read):
10           "Please don't ever believe that they
11           accomplish anything that would deter
12           a sophisticated attacker."
13           Do you see that?
14      A    I do.
15      Q    Is that an accurate assessment of App Review
16  by you at the time?
17      A    Well, I think I spoke generally about review
18  processes, but yes, this one is in the context of
19  App Review.
20      Q    Okay.  And you say (as read):
21           "I consider them a wetware rate
22           limiting service and nothing more."
23      A    Uh-huh.
```

19. **PAGE 95:07 TO 95:11 (RUNNING 00:00:09.070)**

```
07           Do you have an understanding of what wetware
08  is and -- and how you used it there?
09      A    Yeah, uh-huh.
10      Q    Okay.  What is it?
11      A    It's what's up here, the human brain.
```

20. **PAGE 97:04 TO 97:16 (RUNNING 00:00:20.159)**

```
04      Q    Okay.  You go on to say (as read):
05           "Yes, they sometimes catch things."
06           Do you see that?
07      A    Uh-huh.
08      Q    Implying sometimes they don't catch things;
09  is that -- isn't that right?
10      A    Yeah, I think that's correct.
11      Q    Okay.  (As read):
12           "But you should regard them as
13           little more than the equivalent of
14           the TSA at the airport."
15           Do you see that?
16      A    I do.
```

21. **PAGE 97:20 TO 97:25 (RUNNING 00:00:16.493)**

```
20           Is it fair to say you didn't have a very high
21  opinion of what the TSA at the airport could
22  accomplish?
23      A    I -- yeah, I think it's been proven that the
24  TSA at the airport is not able to deflect any --
25  deflect sophisticated attackers.
```

22. **PAGE 98:01 TO 98:09 (RUNNING 00:00:14.307)**

```
00098:01    Q    Okay.  You say --
02      A    And they are under pressure to move people
03  through.
04      Q    Understood, understood.  Much like App
05  Review, right?
06      A    (No audible response.)
07      Q    Is that a yes?  You --
08      A    Oh, I'm sorry.  I'm nodding.  Yes, much like
09  App Review, yes.
```

23. **PAGE 99:02 TO 99:24 (RUNNING 00:01:29.525)**

```
02      Q    Okay.  And I -- I asked you -- when I was
03  asking questions, I said we could focus first on
04  January 2016, but I would be interested to know how
05  things have changed since January 2016.
06           Could you describe that for me, please.
```

```
07      A    Well, as I mentioned, there have been a lot
08  of investments in tooling and systems and automation
09  to help them.  So, you know, the -- fundamentally,
10  the App Review is governing its activity according
11  to a set of guidelines and in transparency about
12  those guidelines, and they do catch a lot of abuse.
13  And their ability to catch abuse has been augmented
14  by -- by these investments.
15          And there have been innovations like the one
16  that I described -- App Attest and Device Check.
17  Perhaps those are the ones I'm thinking about right
18  now -- that exist in this instance to defend a
19  legitimate developer against someone who is -- is
20  abusing a customer -- deceiving the customer.
21      Q    Okay.
22      A    So it's a multi -- you know, a lot has
23  changed since -- in the last five years, and six
24  days.
```

24. PAGE 100:07 TO 100:10 (RUNNING 00:00:09.539)

```
07      Q    And, Mr. Friedman, if you could open what
08  we've marked as Exhibit 252, take a couple minutes
09  to read it, and then let me know when you've
10  finished.
```

25. PAGE 100:11 TO 100:15 (RUNNING 00:00:13.893)

```
11      A    Okay, Mr. Byars.
12      Q    Okay.  Who is the person you are exchanging
13  emails with in this chain?
14      A    Herve Sibert is on my team, and he runs the
15  FIRE team of which you asked earlier.
```

26. PAGE 105:16 TO 105:25 (RUNNING 00:00:34.130)

```
16      Q    Okay.  Is Mr. Sibert -- is he referring to an
17  app that appears to be a calculator when launched
18  but is actually -- performs some other function?
19      A    Well, I don't -- you know, the -- there's
20  what's said, and then there's what -- the referent
21  of what's said is.  And so I don't -- you know,
22  you'd have to ask Mr. Sibert what the referent was.
23  But since I don't recall it, I'm not -- I'm not able
24  to offer you an opinion about what that specific app
25  was or did.
```

27. PAGE 106:01 TO 106:15 (RUNNING 00:00:46.148)

```
00106:01    Q    Okay.  Sitting -- sitting here now, reading
02  this email, what do you understand him to be saying?
03          What kind of app is he describing?
04      A    Okay.  That's a question I can answer.  So --
05      Q    Okay.
06      A    -- as I understand this, what he's describing
07  is a pattern where an app is submitted to App Review
08  and its behavior changes after it has gone through
09  App Review and is being distributed.  And he is
10  specifically suggesting that such an app might be
11  one that you would not expect to draw a lot of
12  attention, a calculator.  You know, people have
13  calculators have -- on their phones already.  And
14  yet, the app draws tremendous attention, hence,
15  loads of downloads.
```

28. PAGE 111:02 TO 111:12 (RUNNING 00:00:21.862)

```
02      Q    Okay.  Thank you.  And just to finish this --
03  this email that we were just reading, you write or
04  wrote (as read):
```

```
05            "They are more like the pretty lady
06            who greets you with a lei at the
07            Hawaiian airport than the drug
08            sniffing dog who, well, never mind. ;)"
09            Do you see that?
10      A    I do.
11      Q    And by that, you mean App Review, right?
12      A    In this context, yes.
```

29. **PAGE 111:13 TO 111:24 (RUNNING 00:00:42.315)**

```
13      Q    Okay.  Is this consistent with your opinion
14   at the time that App Review was primarily designed
15   to welcome developers and their apps rather than to
16   keep harmful material out?
17      A     They are absolutely enforcing the guidelines
18   of the store to the best of their ability, and the
19   guidelines of the store prohibit the publication of
20   harmful material.  So they're absolutely concerned
21   with that and with investments from, you know, the
22   broad range of talent and expertise.  Around Apple,
23   they have gotten better, and they continue to get
24   better in fulfilling that function.
```

30. **PAGE 112:05 TO 112:09 (RUNNING 00:00:14.610)**

```
05      Q    -- which is, just looking at this sentence,
06   was this consistent with the opinion you held at the
07   time that App Review was more about welcoming
08   developers and their apps into the App Store than
09   about keeping out harmful material?
```

31. **PAGE 112:14 TO 112:16 (RUNNING 00:00:05.756)**

```
14            THE WITNESS:  Mr. Byars, there's a premise in
15   your statement that those two things are mutually
16   exclusive.  And they are not.
```

32. **PAGE 113:08 TO 114:19 (RUNNING 00:01:48.720)**

```
08      Q    Okay.  Well, if -- if App Review is enforcing
09   guidelines, is that more like a pretty lady who
10   greets you with a lei at the Hawaiian airport, or is
11   that more like a drug sniffing dog?
12      A    I think that that statement was glib and
13   unfair and not sufficiently nuanced to describe all
14   the functions that they perform.
15      Q    Okay.  So you've changed your opinion since
16   this email about -- about App Review?
17      A    Yes.
18      Q    Okay.
19      A    Certainly -- well, let me say this another
20   way.  Certainly that -- that analogy is not what I
21   consider to be the case about App Review.
22      Q    Sitting here today, this analogy you -- you
23   believe is no longer accurate, whether or not you
24   believed it was accurate at the time; is that
25   your --
00114:01   A    Correct.
02      Q    -- testimony?
03      A    That's correct.
04      Q    Okay.  When did you change your opinion?
05      A    I can't point you to a specific date but, you
06   know, as I've discussed more the investments that
07   have been made in supporting App Review, I think
08   that, you know, it's been a -- a journey for me and
09   reflects investments from Apple that, you know,
10   we've been able to participate in and support.
11      Q    And those investments have been made after
```

```
12  this email and after this chain of emails, which
13  means it would be in the last couple years, right?
14     A   Well, there are investments along the way at
15  every point.  So I don't know -- again, as I -- as I
16  said, it was a journey for me.  So at this time, I
17  may not have had full understanding of everything
18  that they're doing.  Even as of today, I don't have
19  full understanding of everything that they're doing.
```

33. PAGE 115:05 TO 115:06 (RUNNING 00:00:05.950)

```
05     Q   Mr. Friedman, I'm going to ask you to take a
06  look at what we've now marked as Exhibit 253.
```

34. PAGE 115:15 TO 115:18 (RUNNING 00:00:22.994)

```
15     Q   Okay.  Do you recall the purpose of creating
16  this attached document?
17     A   It appears to be to enable informed
18  decision-making on an identified abuse.
```

35. PAGE 115:23 TO 116:12 (RUNNING 00:00:58.148)

```
23     Q   Okay.  Great.  Do you recall what that abuse
24  was?
25     A   Yeah.  So there was a problem at the time --
00116:01  I guess the time frame is not one I have a lot of
02  precision about -- where there were ads showing up
03  in the store that were promoting virus detection
04  software on the iPhone, which is nonsensical.
05  There's no such -- you know, there's no need for
06  that.  There's no such thing as that.
07        And so I recall being asked about this by the
08  head of SEAR and -- and so, you know, we took a look
09  at that and, apparently, drafted some -- some
10  proposed mitigations so that an informed decision
11  can be made about that kind of deceptive user
12  visible information.
```

36. PAGE 118:06 TO 119:09 (RUNNING 00:01:38.277)

```
06        So I need to revise my earlier remarks.
07     Q   Okay.
08     A   So earlier, I spoke about the -- about the
09  virus -- a virus scanner issue, but the median
10  article actually covers a number of other abuses
11  that were -- that are described here.
12        And as I recall the specific -- I mean, the
13  virus is certainly covered in here, but the specific
14  thing that was associated with that was the -- on --
15  where did you say the pages are numbered?
16     Q   At the bottom.  You can use --
17     A   Oh, I see.
18     Q   -- what we call a Bates number.
19     A   Is that in the lower right-hand corner?
20     Q   That's right.
21     A   Okay.  So if I look at the page ending in
22  7762 --
23     Q   Uh-huh.
24     A   -- there's an "Article highlights."
25     Q   Uh-huh.
00119:01  A   So the thing that was specifically behind the
02  $80,000 business was in the second-from-right column
03  where you see the "Touch ID High value in-app
04  purchase."
05        So that -- that aspect caught attention, and
06  then these other items emerged, so...
07     Q   So that developer was offering a subscription
08  to something for 99.99, right?
```

```
        09      A    Every seven days.
```

37. PAGE 120:02 TO 120:03 (RUNNING 00:00:04.649)

```
        02      Q    And if I could please direct your attention
        03  to the page ending in 763.
```

38. PAGE 120:11 TO 120:14 (RUNNING 00:00:09.056)

```
        11      Q    Okay.  So -- and -- and is this your -- in
        12  your understanding, is this sort of a summary of
        13  what happened with this app that this presentation
        14  is discussing?
```

39. PAGE 120:15 TO 120:21 (RUNNING 00:00:27.603)

```
        15      A    I don't know if this is what this specific
        16  app did.
        17      Q    Okay.  What is the timeline laid out here if
        18  not about a specific app?
        19      A    It may be an overlay of the things that one
        20  could do to achieve this kind of abuse without
        21  necessarily having to do all of them.
```

40. PAGE 120:22 TO 121:23 (RUNNING 00:00:48.907)

```
        22      Q    Okay.  So, for example, number 1 says (as
        23  read):
        24              "Developer submits app with
        25              prohibited terms, rejected twice."
  00121:01            Do you see that?
        02      A    Uh-huh.
        03      Q    Are you aware of apps having been submitted
        04  more than once for App Review and having been
        05  rejected repeatedly?
        06      A    Yes.
        07      Q    Okay.  Then it says (as read):
        08              "Developer removes" -- I'm looking
        09              at number 2 now.
        10              (As read):
        11              "Developer removes problem terms,
        12              passes review but with problematic
        13              content."
        14              Are you aware of examples of a developer
        15  resubmitting a previously rejected app including
        16  remaining problematic content?  Are you aware of
        17  that happening before?
        18      A    Yes.
        19      Q    And there have been circumstances under which
        20  the app has, in fact, passed review after having
        21  been previously rejected for having problematic
        22  content?
        23      A    Yes.
```

41. PAGE 121:24 TO 122:06 (RUNNING 00:00:13.714)

```
        24      Q    Okay.  Is that a big problem in your view?
        25      A    I don't have any metrics about that.
  00122:01      Q    I'm sorry.  You cut -- you cut out very
        02  briefly.
        03      A    Oh.
        04      Q    If you wouldn't mind repeating the answer.
        05      A    Sure.  I don't have any metrics about that
        06  with which to tell you whether it's a big problem.
```

42. PAGE 122:21 TO 123:23 (RUNNING 00:01:03.522)

```
        21              Number 4 says (as read):
        22              "Users gulled into subscribing with
        23              aggressive call to action."
```

```
        24          Do you see that?
        25      A   Uh-huh.
00123:01        Q   That's what we were just referring to.  I
        02  think you said -- I'm sorry.  Remind me of the term
        03  you used.
        04      A   Misleading subscriptions or misleading subs.
        05      Q   Okay.  That's -- that's referring to -- to
        06  that number 4, right?
        07      A   Yes.
        08      Q   Okay.  And then it says, number 5 (as read):
        09          "Conversion rate sufficient to enter
        10          Top Grossing chart."
        11          Do you see that?
        12      A   I do.
        13      Q   What does this mean by conversion rate?
        14      A   So from discovery to -- through to purchase.
        15      Q   So this refers to the rate of people who
        16  actually subscribed to that subscription?
        17      A   Download and subscribe.
        18      Q   Okay.  And then number 5 is saying the rate
        19  was so high, this app was one of the top grossing
        20  apps in the store, right?
        21      A    The terminology in there is a little -- is a
        22  little confusing, but the app generated enough
        23  revenue that it became top grossing.
```

43. PAGE 123:24 TO 124:16 (RUNNING 00:00:48.460)

```
        24      Q   Okay.  It made so much money that it was one
        25  of the top grossing apps in the store, right?
00124:01        A   So as I said earlier, I don't know if this
        02  is -- is true of that specific app, whether it
        03  actually showed up in top grossing or not.  But as
        04  the article says, it's $80,000 in some -- some time
        05  period.  It definitely made, you know, significant
        06  revenue.  I can't tell you --
        07      Q   Okay.
        08      A   Oh, yeah, it was position X in the top
        09  grossing chart.  I -- I don't have that information.
        10      Q   Are you aware of there being -- putting this
        11  one -- this example aside, other fraudulent subs
        12  that generated a lot of money?
        13      A   Define a lot of.
        14      Q   Well, significant amounts.
        15      A   You and I may have different opinions about
        16  what a significant amount is.
```

44. PAGE 134:25 TO 135:01 (RUNNING 00:00:03.595)

```
        25          MR. BYARS:  Thank you.  And for the record,
00135:01  this is marked as Exhibit 254.
```

45. PAGE 136:02 TO 136:18 (RUNNING 00:00:36.097)

```
        02      Q   Okay.  Let's look at the email that's next
        03  up, the -- the most immediate email, that starts
        04  with --
        05      A   8:44 a.m.?
        06      Q   That's right.
        07      A   Okay.
        08      Q   So you say (as read):
        09          "Yes, the ability to pay for
        10          promotion would be awesome."
        11          So are you referring there to developers
        12  paying Apple for promotion within the App Store?
        13      A   Yes.
        14      Q   You say (as read):
        15          "We've floated it several times as
```

```
16          the way to end chart gaming."
17          Do you see that?
18     A    Uh-huh.
```

46. PAGE 136:19 TO 137:07 (RUNNING 00:00:34.410)

```
19     Q    To whom had you floated this proposal several
20  times?
21     A    I definitely don't remember that.
22     Q    Okay.  You don't recall ever floating
23  developer's ability to pay for promotion in the App
24  Store?
25     A    That's not what I said.  I don't remember to
00137:01  whom or --
02     Q    Okay.  Do you --
03     A    -- if I floated it.
04     Q    Okay.  But do you remember floating that
05  proposal?
06     A    Well, clearly, I said that -- that we've done
07  it, but I don't remember doing it.
```

47. PAGE 137:11 TO 137:17 (RUNNING 00:00:21.312)

```
11          Chart gaming, what does that mean?
12     A    Manipulation of inputs to the charting level
13  for them to appear more popular.
14     Q    Okay.  And that was that kind of abuse that
15  you said that your team was tasked with identifying
16  and -- and preventing, right?
17     A    That's right.
```

48. PAGE 138:18 TO 138:24 (RUNNING 00:00:07.935)

```
18     Q    Okay.  You say (as read):
19          "If people are willing to pay
20          'marketing companies' (bot nets) to
21          gain position, why don't we just let
22          them pay us to gain position?"
23          Do you see that?
24     A    Uh-huh.
```

49. PAGE 138:25 TO 139:09 (RUNNING 00:00:34.460)

```
25     Q    So are you proposing that instead of
00139:01  developers paying bot nets to engage in chart abuse,
02  they instead just give that money to Apple to gain
03  position on the charts?
04     A    No.  I'm suggesting that we make a -- a
05  clearer distinction between incentivized placement
06  and -- and organic placement, which, you know,
07  there's a fairly common -- fairly commonly
08  distinction made in search.  If you've used major
09  search engines, I'm sure you're aware of them.
```

50. PAGE 140:01 TO 140:11 (RUNNING 00:00:38.304)

```
00140:01     Q    Okay.  At this time, users of the App Store
02  couldn't rely on organic placement to determine
03  which apps were popular, right?
04     A    That's a very sweeping statement.  I -- I
05  don't think I can answer yes or no to that.  I think
06  that in some context where we had a -- where we
07  missed a signal, where we were behind on adaptation,
08  then -- then there might have been -- there -- there
09  can be periods of unreliability, but, you know, it's
10  something that we actively fought and continue to
11  fight.
```

51. PAGE 140:15 TO 141:10 (RUNNING 00:01:08.011)

```
15          Were you at a period of unreliability around
16   the time of this email?
17     A    I don't think I used the word
18   "unreliability."
19     Q    You said there can be periods of
20   unreliability.
21          Were you in such a period at this time?
22     A    I don't -- I wouldn't describe it as a period
23   so much as, you know, particular attacks.  A new
24   attack vector or an adaptation comes up, and then
25   we -- we adjust that.  But, you know, it's a fast
00141:01   ecosystem, so it's not that the entire thing becomes
02   tainted all at once.  You know, there might be an
03   outbreak in a particular area --
04     Q    Okay.  So --
05     A    -- but in this conversation -- in this
06   conversation, we're dialoguing about news from --
07   from something in Google Play, which is not the same
08   thing as -- which doesn't tell me that there was a
09   moment right then where the chart problem was -- was
10   flaring up anymore.
```

52. PAGE 141:12 TO 142:03 (RUNNING 00:00:33.438)

```
12          The third paragraph of the email on the
13   bottom of the page starts (as read):
14          "I've actually" --
15     A    On the penultimate page?  Oh, yeah, "I've
16   actually."  Okay.
17     Q    On the first page (as read):
18          "I've actually managed to convince
19          myself that our App Store charts
20          aren't really a discovery tool at
21          all.  Yes, they do drive some
22          conversions, but that is (I suspect
23          and haven't verified) mostly the
24          bots and/or humans responding to
25          incentivize" -- sorry, "incentives
00142:01          from promotional companies."
02          Do you see that?
03     A    Uh-huh.
```

53. PAGE 142:04 TO 142:10 (RUNNING 00:00:28.040)

```
04     Q    So was it your view that the charts in App
05   Store were not performing a discovery function
06   around the time of this email?
07     A    So my remarks here are actually not about
08   whether there was a flog problem or not.  It's about
09   whether in an app economy, a popularity chart is --
10   is a really great way to discover content.
```

54. PAGE 143:11 TO 144:22 (RUNNING 00:01:44.380)

```
11     Q    Okay.  So your testimony is that you did not
12   think there was a problem of bots and/or humans
13   responding to incentives that were influencing the
14   app charts?
15     A    That is not what I said.
16     Q    Okay.
17     A    You asked me --
18     Q    Now what --
19     A    You asked me to explain why I thought app
20   charts aren't a -- aren't really a discovery tool at
21   all.  And as I explained in the third and fourth
22   sentence, I go on to say that a chart -- and this is
23   independent of -- of whether there's fraud or not
```

```
        24  that puts YouTube and Flight Pilot Simulator 3D in
        25  the same list isn't useful to a human shopper.
00144:01  Sure, you might buy both, but that decision won't be
        02  motivated by their popularity relative to one
        03  another.
        04        So if I'm going in and I'm looking at a chart
        05  and it shows me YouTube and, oh, yeah cool, I can --
        06  I can, you know, watch videos, I'm not going to look
        07  at the fact that it's above or below a flight
        08  simulator in making my decision on whether to pick
        09  YouTube.  I want YouTube.
        10        So unlike a search where I'm interested in a
        11  category and I go in and I say, oh, I'm interested
        12  in photo editing apps and the -- and the recall of
        13  the algorithm comes back with all -- all of the
        14  photo editing apps.  And then I might be -- I might
        15  be influenced by what's more popular than another.
        16        But a chart which is primarily based off of
        17  purchases, sales activity makes a lot more sense in
        18  music where people are interested in what's the hot
        19  song of the summer.  But in my opinion, it doesn't
        20  make sense -- my opinion at the time, certainly, it
        21  doesn't make sense where people are being driven by
        22  function.
```

55. PAGE 144:24 TO 145:11 (RUNNING 00:00:16.557)

```
        24           I want to go to the -- the top email on the
        25  page.
00145:01   A   Okay.
        02   Q   It -- it starts (as read):
        03           "The devs would love it."
        04   A   Uh-huh.
        05   Q   (As read):
        06           "The problem is Tim" -- "the problem
        07           is that Tim is telling the world
        08           that we make great products without
        09           monetizing users."
        10           Who is the Tim there?
        11   A   Tim Cook.
```

56. PAGE 145:12 TO 147:01 (RUNNING 00:02:01.282)

```
        12   Q   Okay.  So in -- in your recollection, he had
        13  been conveying that message to people?
        14   A   I don't think he would use those words.  I
        15  don't think I recall him using those words.  That's
        16  my -- that's, apparently, how I summarized it.
        17   Q   Okay.  Fair enough.
        18   A   So --
        19   Q   Yep.  Then you say (as read):
        20           "Ads would be weirdly at odds with
        21           that."
        22           Why would ads be weirdly at odds with that?
        23   A   Well, I think we need to unpack what "that"
        24  is.
        25   Q   Are you -- are you not referring to the
00146:01  message that Mr. Cook was telling the world when you
        02  said (as read):
        03           "Ads would be weirdly at odds with
        04           that"?
        05   A   Well, again, this is -- this was my -- my
        06  opinion at the time, but as I read this, we -- you
        07  know, Apple absolutely and unequivocally has taken
        08  the stance that -- that we are -- you know, that we
        09  do not generate revenue off of -- off of our users.
        10           Our users are not the product, right?  The
        11  devices and software that we make is the product.
```

```
12  And so -- hmmm, I'm thinking about this.
13      I don't think I would -- I would view this in
14  the same way today as the statement looks -- looks
15  now, because if I look at this today, the question
16  is, to me, does ad platforms enable developers and
17  users to find one another?
18      And I think that it does, because there's
19  transparency that this appears to be relevant to
20  what you're seeking and was paid for.  So it's
21  transparent that -- that it was done in exchange
22  for -- for compensation.  So, in other words, I
23  would --
24      Q   Okay.
25      A   Not write this.  I -- I consider what I wrote
00147:01  here to be incorrect.
```

57. PAGE 148:01 TO 148:11 (RUNNING 00:00:26.216)

```
00148:01    Q   I want to talk about a concept and see if you
02  understand what I'm saying, black market app stores.
03      A   Uh-huh.
04      Q   Is that a concept you're familiar with?
05      A   It is.
06      Q   Okay.  What are those?  Could you describe
07  them.
08      A   Yeah, it's a -- a center for illicit
09  distribution.  We have several different names that
10  we use for them, but it's a vehicle for achieving
11  illicit distribution.
```

58. PAGE 148:12 TO 148:23 (RUNNING 00:00:56.470)

```
12      Q   Okay.  And how are you aware of these black
13  market app stores?
14      A   How am I aware of them?  Well, we see them in
15  our -- in our program to curtail illicit
16  distribution.  They, at various times, have been --
17  well, they're -- they're readily visible on the
18  internet when -- when our crawlers find them.
19      Some of them have very public profiles.
20  In -- in China, for example, I've heard about them
21  in the news.  Some of them have -- I lost my train
22  of thought -- yeah, anyway, let's stop there.
23  They're -- you know, they're not hiding.
```

59. PAGE 148:24 TO 149:15 (RUNNING 00:01:05.829)

```
24      Q   Okay.  Fair enough.  Do you know why a user
25  might choose to use a black market app store rather
00149:01  than the legitimate Apple App Store?
02      A   Sure, to obtain illicit -- illicit content.
03      Q   Is that the only reason somebody might use a
04  black market app store?
05      A   Well, I can tell you that at least one of
06  the -- oh, yeah, sorry.  Another reason would be
07  historically -- not really the case anymore -- that
08  in China, when we first started looking at this
09  problem, the black market app stores had a couple of
10  things going wrong.
11      One had to do with performance that appeared
12  to be advantageous, and the other had to do with
13  that they had better -- better penetration of -- of
14  payment instruments that were popular with Chinese
15  customers at that time.
```

60. PAGE 155:05 TO 155:06 (RUNNING 00:00:02.560)

```
05      MR. BYARS:  And for the record, this is
06  Exhibit 255.
```

61. PAGE 155:25 TO 156:09 (RUNNING 00:00:16.918)

```
        25      Q    So you -- you write in your first email (as
  00156:01    read):
        02           "Hi Ben, I'm kicking up a lot of
        03           dust over here about the black
        04           market app stores, having plotted
        05           the amount of usage data for them
        06           versus the usage of the real app
        07           store.  It's not a pretty picture."
        08           Do you see that?
        09      A    I do see that.
```

62. PAGE 157:04 TO 158:08 (RUNNING 00:00:45.930)

```
        04      Q    And the -- the penultimate paragraph, not the
        05    little tiny short paragraph but the one before that,
        06    it says, "I took" --
        07      A    "I took four days," uh-huh.
        08      Q    Yes, that's right.
        09      A    Yep.
        10      Q    (As read):
        11           "I took four days of data and
        12           measured the difference between the
        13           real AppStore and 'some' of the
        14           confirmed pirate app stores."
        15      A    Uh-huh.
        16      Q    And then there's a list in parenthesis.
        17           Are those some of the -- what I was calling
        18    black market app stores?
        19      A    That's right.
        20      Q    Okay.  (As read):
        21           "At this point, in China," you
        22           write, "it appears that the Black
        23           Market is the market."
        24      A    Uh-huh.
        25      Q    (As read):
  00158:01           "The legit business is a rounding
        02           error."
        03           Do you see that?
        04      A    Uh-huh.
        05      Q    Rounding error, of course, means that it was
        06    a very small amount, right?
        07      A    Yeah.  Probably hyperbole in this context,
        08    but I don't have the data in front of me, so...
```

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Friedman, Eric (Vol. 02) - February 2, 2021   1 CLIP (RUNNING 00:02:00.417)

---

4 SEGMENTS (RUNNING 00:02:00.417)

---

1. PAGE 346:19 TO 346:24 (RUNNING 00:00:14.142)

```
19        Q   Okay.  Exhibit 276 is a chat between you and
20    Herve Sibert, correct?
21        A   Yes.
22        Q   And it was a chat on February 14th, 2020,
23    correct?
24        A   Yes.
```

2. PAGE 347:06 TO 347:11 (RUNNING 00:00:11.686)

```
06        Q   You state (as read):
07            "Which is why we," meaning Apple,
08            "are the greatest platform for
09            distributing child porn, et cetera,"
10            correct?
11        A   I see that statement.
```

3. PAGE 347:15 TO 348:07 (RUNNING 00:00:43.043)

```
15        Q   Okay.  Herve responds at 15:25 (as read):
16            "Really?  I mean, there's a lot of
17            this in our ecosystem?  I thought
18            there were even more opportunities
19            for bad actors on other filing" --
20            "file sharing systems," right?
21        A   Yes.
22        Q   And you respond (as read):
23            "Yes," correct?
24        A   Yes.
25        Q   And then you're continuing on the next page
00348:01   within Exhibit 276, the Bates at -- 15:25 GMT (as
02    read):
03            "But -- and here's the key -- we
04            have chosen not to know in enough
05            places where we really cannot say."
06            correct?
07        A   Yes.
```

4. PAGE 348:15 TO 349:14 (RUNNING 00:00:51.546)

```
15            "The NY Times published a bar graph
16            showing how companies are doing in
17            this area.  We are on it, but I
18            think it's an underreport," correct?
19        A   Yes.
20        Q   You wrote at 15:27 (as read):
21            "Also, we KNOW that developers on
22            our platform are running social
23            media integrations that are
24            inherently unsafe.  We can do things
25            in our ecosystem to help that.  For
00349:01       example 'ask to chat' is a feature
02            we could require developers to adopt
03            and use for U13 accounts."
04            Do you see that?
05        A   Yes.
06        Q   Herve responded (as read):
07            "There are also lots of rapidly
```

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```
08          changing trends in public focus,"
09          correct?
10     A    Yes.
11     Q    And you responded (as read):
12          "Let the parents make a decision,"
13          correct?
14     A    Yes.
```

Epic Games, Inc. v. Apple Inc., **No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)**

Deposition Designation of Ron Okamoto (Vol. 1 & 2)
(December 16, 2020)
(December 17, 2020)

Time

Epic Games, Inc.'s Designations (Blue Highlight)	Apple Inc.'s Designations (Yellow Highlight)
11 minutes 19 seconds	N/A

Okamoto, Ron (Vol. 01) - December 16, 2020   1 CLIP (RUNNING 00:00:28.367)

4 SEGMENTS (RUNNING 00:00:28.367)

1. PAGE 16:05 TO 16:07 (RUNNING 00:00:06.374)

```
05              Would you please state just for the record
06  your name and address?
07       A.   Ron Okamoto.
```

2. PAGE 44:12 TO 44:15 (RUNNING 00:00:13.648)

```
12       Q.   Okay.  So from 2001 to date, your title
13  would be vice-president developer relations, correct?
14       A.   I believe the formal title is vice president
15  worldwide developer relations.
```

3. PAGE 64:03 TO 64:05 (RUNNING 00:00:06.812)

```
03       Q.   And is it correct that the app reviewers
04  typically review in each review, 15 to 100 apps per
05  day?
```

4. PAGE 64:07 TO 64:07 (RUNNING 00:00:01.533)

```
07              THE WITNESS:  In general, yes.
```

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<u>Okamoto, Ron (Vol. 02) - December 17, 2020</u>   1 CLIP (RUNNING 00:10:57.740)

<hr>

34 SEGMENTS (RUNNING 00:10:57.740)

1. PAGE 273:15 TO 273:18 (RUNNING 00:00:11.834)

```
15      Q.   Okay.  And Apple doesn't think its unsafe to
16  use a Mac, does it?
17      A.   No.  We don't think it's unsafe to use a
18  Mac.
```

2. PAGE 274:02 TO 274:04 (RUNNING 00:00:08.139)

```
02      Q.   Okay.  So it's fair to say that using a Mac
03  is not insecure, right?
04      A.   Yes, I believe so.
```

3. PAGE 277:19 TO 277:22 (RUNNING 00:00:13.416)

```
19          Have you ever heard of a developer
20  withdrawing their app from the App Store because they
21  can create a web app?
22      A.   No, I can't name anything in specific.
```

4. PAGE 279:07 TO 279:09 (RUNNING 00:00:13.918)

```
07      Q.   Have you ever heard anybody at Apple say
08  that the macOS is a less secure platform than iOS?
09      A.   No, I haven't.
```

5. PAGE 289:19 TO 289:21 (RUNNING 00:00:07.908)

```
19      Q.   So I'd like actually to mark an exhibit
20  which I believe will be 41.  I'll tell you when I've
21  done so.
```

6. PAGE 291:12 TO 291:14 (RUNNING 00:00:07.149)

```
12      Q.   Okay.  Do you have any reason to doubt that
13  you received this e-mail?
14      A.   No, I do not.
```

7. PAGE 291:15 TO 291:19 (RUNNING 00:00:11.498)

```
15      Q.   Okay.  You see the first paragraph of this
16  e-mail says (as read):
17          Attached is a study we conducted
18          on App Store developers?
19      A.   Yes.
```

8. PAGE 295:01 TO 295:06 (RUNNING 00:00:13.352)

```
00295:01          Developers were randomly selected
02          from the App Store Analytics team's
03          database and invited to participate
04          in a 15-minute web survey.
05          Do you see that?
06      A.   Yes.
```

9. PAGE 305:21 TO 305:22 (RUNNING 00:00:07.759)

```
21      Q.   If you would please navigate with me to page
22  Bates ending in -- sorry, Bates ending in 55.
```

10. PAGE 306:12 TO 306:23 (RUNNING 00:00:24.163)

```
12      Q.    And do you see the bottom left there's a
13  small gray text that says (as read):
14              Base:   Develops apps for
15          non-Apple OS and platforms?
16          Do you see that?
17      A.    Yes.
18      Q.    And the question is (as read):
19              What other operating systems and
20          platforms does your company develop
21          apps for?
22          Do you see that?
23      A.    Yes, I do.
```

11. PAGE 307:21 TO 308:02 (RUNNING 00:00:28.903)

```
21              And in the U.S. column it says:   86 percent.
22  Is it consistent with your understanding that a lot
23  of iOS developers also program apps for Android?
24      A.    I would say it's consistent with my
25  understanding that many do.
00308:01      Q.    Okay.   And why do many developers program
02  for both iOS and Android?
```

12. PAGE 308:04 TO 308:21 (RUNNING 00:00:54.997)

```
04              THE WITNESS:   Because by being on both iOS
05  and Android a developer can get to the broadest
06  customer set possible.
07  BY MR. BYARS:
08      Q.    And when you say "customer set," are you
09  referring to the users of devices running those
10  operating systems?
11      A.    Yes.
12      Q.    If you would look at the row near the
13  bottom, it says:   Game consoles.
14          Do you see that?
15      A.    Yes.
16      Q.    And it says:   3 percent.   Do you see that
17  under the U.S. column?
18      A.    Yes.
19      Q.    Is it consistent with your understanding to
20  say that most Apple developers do not program for
21  game consoles?
```

13. PAGE 308:23 TO 308:24 (RUNNING 00:00:04.744)

```
23              THE WITNESS:   In my dealings with developers
24  I've run across very few that do.
```

14. PAGE 309:15 TO 310:03 (RUNNING 00:00:43.148)

```
15      Q.    So, Mr. Okamoto, I'd like you to navigate to
16  Exhibit 42, which I've marked.   It's a document, the
17  Bates stamp on the first page is -- ends in 320915.
18          Let me know when you have that exhibit
19  pulled up.
20      A.    Yes, I have it.
21      Q.    AND there's an e-mail starting in the middle
22  of the page, says (as read):
23              Eshwar Vangala wrote.
24          Do you see that?
25      A.    Yes.
00310:01      Q.    Mr. Vangala is one of the direct reports
02  that we were talking about earlier, right?
03      A.    That's correct.
```

15. PAGE 311:23 TO 312:09 (RUNNING 00:00:32.112)

```
23      Q.   And he says (as read):
24              Many developers claim to "test
25           market" on Android as they feel they
00312:01        can build a buzz for their app on
02              Android and then monetize on iOS.
03              Do you see that?
04      A.   Yes, I do.
05      Q.   Have you heard developers indicate that they
06   would publish on Android first before publishing on
07   iOS?
08      A.   There's been occasions where developers have
09   mentioned that to me.
```

16. PAGE 312:16 TO 312:18 (RUNNING 00:00:05.355)

```
16      Q.   Why would they choose to prototype on
17   Android rather than another operating system such as
18   iOS?
```

17. PAGE 312:20 TO 312:25 (RUNNING 00:00:19.888)

```
20           THE WITNESS:  It depended on the developer.
21   I think in some cases, you know, they had said that
22   it was easier and quicker for them to do it.  And
23   other cases they wanted to try things out on the
24   Android platform with respect to the technology and
25   then see if that works and then put it into iOS.
```

18. PAGE 320:04 TO 320:10 (RUNNING 00:00:22.552)

```
04           Let's look at the next to last bullet.  The
05   penultimate bullet, it says (as read):
06              iOS consistently is the
07           monetization platform of choice.
08           Have you heard from developers that iOS is
09   the monetization platform of choice?
10      A.   Yes, I have.
```

19. PAGE 320:14 TO 320:22 (RUNNING 00:00:28.508)

```
14      Q.   Did they explain why they viewed iOS that
15   way?
16      A.   Yes, they did.
17      Q.   What did they explain?
18      A.   They explained when they took a look at a
19   title, the similar title that was on Android and that
20   was on iOS in general, users spent more money on the
21   iOS application than they did on the Android
22   application.
```

20. PAGE 324:04 TO 324:13 (RUNNING 00:00:45.186)

```
04      Q.   Has Apple ever wanted Epic to create
05   products for the iOS platform?
06      A.   Yes.
07      Q.   Why did Apple want Epic Games to do that?
08      A.   Because when the iOS platform first came
09   out, one of the things that we highlighted was what a
10   great gaming device the iPhone with iOS was.  Epic is
11   a very well-known developer that had some very strong
12   titles on it and we thought it would be great if they
13   would offer them on the iOS platform.
```

21. PAGE 324:20 TO 325:01 (RUNNING 00:00:23.884)

```
20      Q.   And is that because doing so would attract
21   users to the iOS platform?
22      A.   Yes.  If the popular games they're playing
23   from developers and titles that they love were on
```

118

```
24  iOS, we think it would be attractive for our users.
25      Q.   And if you made it attractive for users, you
00325:01  would sell more iOS devices, right?
```

22. PAGE 325:03 TO 325:06 (RUNNING 00:00:08.807)

```
03          THE WITNESS:  If we made it attractive to
04  users, we would definitely make the platform more
05  attractive to everybody, and therefore, hope that
06  they would come to it.
```

23. PAGE 325:08 TO 325:10 (RUNNING 00:00:06.326)

```
08      Q.   By "come to it," you mean buy devices, buy
09  iOS devices?
10      A.   Yes.
```

24. PAGE 349:02 TO 349:03 (RUNNING 00:00:03.712)

```
02      Q.   Okay.  So I'm looking at Exhibit 46.  Can
03  you pull that up for me.
```

25. PAGE 349:08 TO 349:10 (RUNNING 00:00:13.088)

```
08      Q.   Is this an e-mail chain between you and
09  Phillip Schiller and Eddie Cue?
10      A.   Yes.
```

26. PAGE 349:14 TO 349:23 (RUNNING 00:00:26.956)

```
14      Q.   It begins (as read):
15              Phil and Eddy,
16              I spoke to Eric Wilfred today
17          about this week's internal meeting
18          for the next office launch.
19          Do you see that?
20      A.   Yes.
21      Q.   Who is Eric Wilfred?
22      A.   At the time Eric Wilfred was one of our
23  contacts at Microsoft.
```

27. PAGE 350:16 TO 351:04 (RUNNING 00:00:48.839)

```
16      Q.   All right.  If you would look at the third
17  bullet or the third dash, there's a paragraph that
18  says (as read):
19              They want us to think about an
20          idea they have to handle signing up
21          for subscriptions for Office from
22          within their iOS app.
23          Do you see that?
24      A.   I'm sorry, you said the third bullet or the
25  third --
00351:01  Q.   It's the third large paragraph, the third
02  bullet, the third hyphen, they want us to think
03  about.
04      A.   Okay, I see it.
```

28. PAGE 351:12 TO 351:20 (RUNNING 00:00:15.449)

```
12      Q.   Okay.  The paragraph says (as read):
13              Instead of using IAP --
14          I'm reading the second sentence now
15  (as read):
16              Instead of using IAP, they would
17          like to send users out to their
18          "sign-up for Office website."
19          Do you see that?
20      A.   Yes.
```

29. **PAGE 352:02 TO 352:08 (RUNNING 00:00:12.195)**

```
02     Q.    It continues (as read):
03                 They would then give us
04           percentage of the revenue for each
05           user that signs up for an account
06           that comes from our devices.
07           Do you see that?
08     A.    Yes, I do.
```

30. **PAGE 352:18 TO 352:24 (RUNNING 00:00:16.334)**

```
18     Q.    (As read):
19                 The rationale is that they want
20           to be able to have a consistent
21           experience for signing up users.
22           I'm in the next paragraph.
23           Do you see that?
24     A.    Yes, I do.
```

31. **PAGE 353:07 TO 353:15 (RUNNING 00:00:31.153)**

```
07       Q.    Okay.  Have you ever heard any developer say
08   they wanted to have a consistent experience for
09   signing up users?
10       A.    Yes, I have.
11       Q.    Why -- had the developers explained why they
12   want that?
13       A.    The developers that I have spoken to said
14   that they have existing what they call sign up flows,
15   and they wanted to maintain those sign up flows.
```

32. **PAGE 358:18 TO 358:19 (RUNNING 00:00:04.503)**

```
18     A.    Mr. Byars, are we opening Exhibit 47?
19     Q.    Yes, that's right.
```

33. **PAGE 358:24 TO 359:01 (RUNNING 00:00:09.381)**

```
24             The first e-mail at the top of the document
25   is from you; is that right?
00359:01    A.    Yes, it is.
```

34. **PAGE 359:21 TO 360:09 (RUNNING 00:00:32.584)**

```
21       Q.    In that third paragraph Mr. Schiller says
22   (as read):
23             If PayPal were to announce a
24             mechanism for iPhone developers that
25             helps them to enable features or
00360:01       functionality of iPhone applications
02             with payments handled by PayPal, we
03             would need to communicate with our
04             developers, telling them that such
05             use would be a violation of the
06             iPhone developer agreement terms.  I
07             hope that does not become the case.
08             You see that?
09       A.    Yes, I do.
```

Epic Games, Inc. v. Apple Inc., No. 4:20-cv-05640-YGR-TSH (N.D. Cal.)
Transcription Errors

DATE OF DEPOSITION: February 24, 2021
NAME OF DEPONENT: Ong, Adrian

Page	Line(s)	Original	Correction	Comment
74	9	"internet"	"in-app"	Transcription Error

DATE OF DEPOSITION: January 12, 2021
NAME OF DEPONENT: Shoemaker, Phillip (Vol. 1)

Page	Line(s)	Original	Correction	Comment
73	24	"impromptu"	"imprimatur"	Transcription Error
74	3	"impromptu"	"imprimatur"	Transcription Error
134	17	"2006"	"2016"	Transcription Error

DATE OF DEPOSITION: January 14, 2021
NAME OF DEPONENT: Shoemaker, Phillip (Vol. 2)

Page	Line(s)	Original	Correction	Comment
488	6	"siloing"	"sideloading"	Transcription Error
488	10	"siloing"	"sideloading"	Transcription Error

DATE OF DEPOSITION: March 8, 2021
NAME OF DEPONENT: Forstall, Scott (Vol. 1)

Page	Line(s)	Original	Correction	Comment
41	7	"nominal"	"phenomenal"	Transcription Error

DATE OF DEPOSITION: January 13, 2021
NAME OF DEPONENT: Haun, CK (Vol. 1)

Page	Line(s)	Original	Correction	Comment
185	1	"Max"	"Mac"	Transcription Error

DATE OF DEPOSITION: February 1, 2021
NAME OF DEPONENT: Friedman, Eric (Vol. 1)

Page	Line(s)	Original	Correction	Comment
50	11	"Infra-system"	"Eco-system"	Transcription Error

DATE OF DEPOSITION: December 16, 2020
NAME OF DEPONENT: Okamoto, Ron (Vol. 1)

Page	Line(s)	Original	Correction	Comment
64	4	"15"	"50"	Transcription Error