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26 UNITED STATES DISTRICT COURT
 27 NORTHERN DISTRICT OF CALIFORNIA
 28 SAN JOSE DIVISION

29 CHRISTINA GRACE, Individually and on
 30 Behalf of All Others Similarly Situated,
 31 Plaintiff,
 32 v.
 33 APPLE, INC.,
 34 Defendant.

35 Case No.

36 CLASS ACTION

- 37 1. Trespass to Chattels
- 38 2. Violations of the Unfair Competition
 39 Law, California Business and Professions
 40 Code §17200 *et seq.*

41 DEMAND FOR JURY TRIAL

1 Plaintiff Christina Grace (“Plaintiff”), individually and on behalf of all others
2 similarly situated, brings this Class Action Complaint against defendant Apple Inc. (“Apple” or
3 “Defendant”), and alleges as follows:

4 **NATURE OF THE ACTION**

5 1. This is a consumer class action brought by Plaintiff on behalf of herself and all
6 others similarly situated who owned an Apple iPhone 4 or iPhone 4S that was operating on iOS
7 6 or an earlier operating system, and therefore lost the ability to use Apple’s “FaceTime” video
8 conferencing feature when Apple intentionally broke FaceTime for iOS 6 and earlier operating
9 systems on April 16, 2014.

10 2. Apple Chief Executive Officer (“CEO”) Tim Cook (“Cook”) has described the
11 iPhone as “one of the most important, world-changing and successful products in history.” Since
12 introducing the iPhone in 2007, Apple has sold more than one billion units.

13 3. All iPhones operate through Apple’s proprietary “iOS” operating system, which
14 is the software that controls the device’s functions and operations.

15 4. FaceTime is Apple’s immensely popular real-time video messaging and chat
16 feature that enables FaceTime users to engage in real-time video (and audio) communications.
17 FaceTime is proprietary to Apple products and therefore users can only communicate via
18 FaceTime with Apple products. Since first releasing FaceTime in 2010, Apple has heavily
19 marketed the feature’s ability to close the gap between friends and loved ones separated by great
20 distances, particularly at life’s most meaningful milestones. Apple heavily touted FaceTime as a
21 centerpiece in the company’s advertisements for the iPhone 4 and iPhone 4S. In the years
22 following its release, FaceTime became one of the most popular and valued iPhone features.
23 Indeed, at Apple’s 2013 annual stockholders’ meeting, CEO Cook revealed that fifteen to twenty
24 million FaceTime calls were made on a *daily* basis.

25 5. There are two types of ways that participants in a FaceTime call can exchange
26 audio/video media: (1) the so-called “peer-to-peer method,” where a direct connection is formed
27 between the caller and the callee; and (2) the so-called “relay method,” where the caller and the

1 callee connect to a relay server that relays the data on behalf of the devices. During the period
2 relevant to this action, the servers used by Apple for relaying FaceTime calls were owned by a
3 company called Akamai Technologies, Inc. (“Akamai”). Unlike peer-to-peer FaceTime calls,
4 Apple made significant payments to Akamai for “relay usage” (i.e., bandwidth) on Akamai’s
5 servers.

6 6. Prior to November 7, 2012, approximately 90-95% of FaceTime calls were
7 connected through the peer-to-peer method, and only 5-10% through the relay method. Thus,
8 Apple’s relay usage—and the expense to Apple arising therefrom—were relatively low.

9 7. On November 7, 2012, however, a jury found that Apple’s peer-to-peer method of
10 connecting FaceTime calls infringed on patents held by VirnetX, Inc. (“VirnetX”). The only way
11 for Apple to avoid knowingly and intentionally continuing its infringement on VirnetX’s patents
12 was to shift 100% of FaceTime call volume to the relay method.

13 8. Upon shifting 100% of FaceTime call volume to the relay method, Apple’s relay
14 usage soared. As a result, Apple began to incur multi-million dollar *monthly* charges for its use
15 of Akamai’s servers. Therefore, as internal Apple emails reveal, Apple undertook a concerted
16 effort to find a way to reduce its relay usage by reducing the volume of FaceTime calls connected
17 through the relay method. Indeed, an internal Apple email chain circulated during this time period
18 bore the subject “Ways to Reduce Relay Usage,” and explored potential strategies for doing so.

19 9. On September 13, 2013, potential relief from Apple’s high relay usage fees
20 arrived. On that day, Apple introduced iOS 7, a next generation operating system that could
21 connect FaceTime calls through the peer-to-peer connection method in a way that had not yet
22 been found to infringe on VirnetX’s patents. The introduction of iOS 7 therefore helped Apple
23 reduce its relay usage and the resultant payments from Apple to Akamai.

24 10. More than seven months after the introduction of iOS 7, however, millions of
25 Apple users’ devices still operated on iOS 6 or earlier operating systems and thus could only be
26 connected via FaceTime through the relay method. Because of this, Apple was still amassing
27 significant relay usage and, therefore, facing substantial payment obligations to Akamai.

1 11. Consequently, to further reduce its relay usage costs, Apple devised a scheme to
2 *force* millions of its users—*i.e.*, users running iOS version 6 and earlier—to stop using FaceTime
3 on their devices. As Apple’s internal emails and sworn testimony at the VirnetX trial revealed,
4 Apple formulated a plan by which its engineers caused a digital certificate necessary to the
5 operation of FaceTime on iOS 6 or an earlier operating system to prematurely expire. Upon the
6 expiration of that certificate, and as a direct result of Apple’s actions, the valuable FaceTime
7 feature immediately and abruptly stopped working for millions of users running iOS 6 or an
8 earlier operating system (the “FaceTime Break”). To regain FaceTime capability, those users had
9 to either transition to iOS 7, or buy an entirely new Apple device with iOS 7 preinstalled.

10 12. Apple did this knowing that for millions of users, moving to iOS 7 was highly
11 problematic because it was essentially incompatible with certain Apple devices. For iPhone 4
12 and iPhone 4S users, for example, the coerced move to iOS 7 subjected their devices to slowness,
13 system crashes, erratic behavior and/or the elimination of their ability to use critical functions on
14 their phone. As succinctly stated in one of the media reports that discussed these widespread
15 functionality problems, “[t]he older handsets buckle under the weight of the new software.” Thus,
16 for millions of Apple’s customers, a move to iOS 7 would significantly harm the functionality of
17 their device.

18 13. In addition to recognizing these perils of moving certain Apple devices to iOS 7,
19 Apple more generally recognized the gravity of its decision to implement the FaceTime Break.
20 Indeed, in the days leading up to the FaceTime Break, then-Apple Manager of Operating System
21 Security Jacques Vidrine (“Vidrine”) sent an email to other Apple personnel in which he
22 highlighted the significance of what the company planned to do, stating: “[L]et me just voice my
23 concern here. Maybe someone can talk me off the ledge by convincing me this is not as big a
24 deal as I think.”

25 14. Unfortunately, Vidrine’s appeal fell on deaf ears. In a disturbing juxtaposition to
26 Apple’s marketing campaigns that highlighted the life-changing importance of FaceTime to
27 separated families, deployed soldiers, hearing-impaired individuals and countless others, Apple

1 advanced its financial interests by intentionally breaking FaceTime for millions of its users.
2 Indeed, Apple employees mocked the situation—and the millions of users unwittingly marching
3 toward the FaceTime Break—with a cartoon that was circulated within Apple via email.

4 15. Apple selected April 16, 2014 as the day on which the FaceTime Break would
5 strike its customers. At the appointed time on that day and without warning, millions of Apple
6 users—every user who had not installed iOS 7—suddenly lost the ability to use FaceTime.

7 16. The public response to the unexpected and unexplained FaceTime Break was swift
8 and substantial, including numerous media reports and vast customer outcry. Rather than
9 revealing the truth about the cause and impetus of the FaceTime Break, Apple claimed that
10 FaceTime had suffered a “bug,” and that to regain the ability to use FaceTime, users needed to
11 transition their device to iOS 7.

12 17. Internal Apple emails eliminate any doubt that Apple intentionally broke
13 FaceTime, and did so in order to reduce relay usage and the high costs related thereto. For
14 example, weeks or months after the FaceTime break, Apple engineering manager Patrick Gates
15 (“Gates”) sent the following email to various Apple personnel: “Hey, guys. I’m looking at the
16 Akamai contract for next year. I understand we did something in April around iOS 6 to reduce
17 relay utilization.” Apple engineer Gokul Thirumalai responded to Gates, stating the following:
18 “It was a big user of relay bandwidth. *We broke iOS 6, and the only way to get FaceTime*
19 *working again is to upgrade to iOS 7.*” (Emphasis added.)

20 18. Following the FaceTime Break, millions of iPhone 4 and iPhone 4S users whose
21 devices were operating on iOS 6 or an earlier operating system faced two options for continuing
22 to use their device: (1) remain on a pre-iOS 7 operating system, but without the ability to use
23 FaceTime; or (2) transition to iOS 7, and accept the significant reduction in functionality that their
24 iPhone would suffer as a result. To quote the colorful language used by an Apple employee in an
25 internal Apple email sent within hours of the FaceTime Break, as a result of the break “*our users*
26 *on [iOS 6] and before are basically screwed[.]*” (Emphasis added.)

1 19. Plaintiff brings this action on behalf of herself and all other similarly situated
2 consumers who, at the time of the April 16, 2014 FaceTime Break, owned an iPhone 4 or iPhone
3 4S that was running on iOS 6 or an earlier operating system, and who therefore lost the ability to
4 use FaceTime on their device. Plaintiff alleges trespass to chattels and violations of the Unfair
5 Competition Law, California Business and Professions Code §17200, *et seq.* (the “UCL”).

6 **JURISDICTION AND VENUE**

7 20. This Court has jurisdiction over this matter pursuant to 28 U.S.C. §1332(a)(1) as
8 modified by the Class Action Fairness Act of 2005, because at least one member of the Class is a
9 citizen of a different state than Defendant, there are more than 100 members of the Class, and the
10 aggregate amount in controversy exceeds \$5,000,000.00, exclusive of interest and costs.

11 21. Pursuant to 28 U.S.C. §1391(b), venue is proper in this district because a
12 substantial part of the events giving rise to the claims occurred in this District.

13 **INTRADISTRICT ASSIGNMENT**

14 22. Assignment to the San Jose division of this district is appropriate under Civil Local
15 Rule 3-2 because a substantial part of the events or omissions which give rise to the claims
16 occurred in the San Jose division.

17 **THE PARTIES**

18 23. Plaintiff Christina Grace is a citizen of California who resides in Marin County,
19 California. She owned an iPhone 4 that was running on iOS 6 on April 16, 2014 and incurred
20 damages as the result of Apple’s conduct.

21 24. Defendant Apple is a California corporation with its headquarters and principal
22 place of business in Cupertino, California, which lies within this District. Apple designs,
23 manufactures and sells various consumer electronics, computer software and online services.
24 Apple’s consumer electronics products include the iPhone 4 and iPhone 4S. In addition to being
25 headquartered and having its principal place of business in Cupertino, California, Apple transacts
26 substantial business throughout the State of California, through advertising, marketing and
27 ownership of numerous Apple retail stores throughout California, including several in this

1 District. Further, substantially all of the misconduct alleged in this Complaint occurred in and/or
2 emanated from California.

3 SUBSTANTIVE ALLEGATIONS

4 Background

5 25. Widely recognized as Apple's premier product line, iPhone is a line of industry-
6 leading smartphones¹ that debuted on June 29, 2007. In the years that followed, Apple released
7 several successive versions of the iPhone on an approximately yearly basis.

8 26. On June 7, 2010, Apple's then-CEO Steve Jobs introduced the iPhone 4, which he
9 described as "the biggest leap since the original iPhone."² Within three days of the June 24, 2010
10 launch of the iPhone 4, Apple announced that it had sold roughly 1.7 million units.³

11 27. Apple launched its next generation iPhone—the iPhone 4S—on October 14, 2011.
12 Over four million iPhone 4S's were sold within the first three days of the device's launch. Apple
13 Senior Vice President of Worldwide Product Marketing Philip Schiller commented that these
14 sales were "the most ever for a phone and more than double the iPhone 4 launch during its first
15 three days."⁴

16 28. In July of 2016, Apple celebrated the sale of its billionth iPhone.⁵ Apple included
17 within the press release announcing that milestone sale the following quote from its CEO Tim
18 Cook:

19
20 ¹ PC Magazine defines the term "smartphone" as "[a] cellphone and handheld computer that
21 created the greatest tech revolution since the Internet. A smartphone can do everything a
22 personal computer can do, and because of its mobility, much more . . . A smartphone combines
23 a cellphone with e-mail and Web, music and movie player, camera and camcorder, GPS
24 navigation, voice dictation for messaging and a voice search for asking questions about
25 anything . . ." See <http://www.pcmag.com/encyclopedia/term/51537/smartphone> (last visited
26 January 31, 2017).

² See <http://www.apple.com/pr/library/2010/06/07Apple-Presents-iPhone-4.html> (last visited
27 January 31, 2017).

³ See <http://www.apple.com/pr/library/2010/06/28iPhone-4-Sales-Top-1-7-Million.html> (last
28 visited January 31, 2017).

⁴ See [http://www.apple.com/pr/library/2011/10/17iPhone-4S-First-Weekend-Sales-Top-Four-
Million.html](http://www.apple.com/pr/library/2011/10/17iPhone-4S-First-Weekend-Sales-Top-Four-Million.html) (last visited January 31, 2017).

⁵ See <http://www.apple.com/newsroom/2016/07/apple-celebrates-one-billion-iphones.html> (last
visited January 31, 2017).

1 iPhone has become one of the most important, world-changing and successful
2 products in history. It's become more than a constant companion. iPhone is
3 truly an essential part of our daily life and enables much of what we do
4 throughout the day.

5 29. All Apple iPhones, including the iPhone 4 and the iPhone 4S, operate through a
6 proprietary Apple mobile operating system called iOS. iOS is an acronym that stands for "iPhone
7 operating system." iOS has been described as "the software that controls all the basics of your
8 gadget, including the look, feel, settings and hardware."⁶ Apple itself describes iOS as what
9 brings iPhone "to life."⁷ Among other things, iOS runs the features and applications on the
10 iPhone.

11 30. One of the most popular iPhone features is a real-time video conferencing feature
12 called FaceTime. Released in 2010 in conjunction with the release of the iPhone 4, FaceTime
13 allows users to place audio/video calls to other FaceTime users. During Apple's 2013 annual
14 stockholders' meeting, Apple CEO Tim Cook revealed that *fifteen to twenty million* FaceTime
15 calls were made on a *daily* basis.⁸

16 **In Marketing and Selling The iPhone 4, Apple Highlights FaceTime as a Breakthrough,
17 Life-Changing Technology**

18 31. Prior to the introduction of FaceTime, video conferencing was a coveted but as-
19 yet largely undelivered feature of mobile technology. As described by Frank Casanova, Apple's
20 Senior Director of Partner Marketing, during sworn testimony at the VirnetX trial given January
21 28, 2016:

22 [V]ideo conferencing has long been held as something everyone's wanted to do,
23 but it's been very difficult for many years . . . [I]t wasn't until we brought our
24 FaceTime product that it was actually usable across a wide range of products and
25 across great distance, whether through Wi-Fi or cellular connections.

26 ⁶ See <http://www.cnn.com/2013/09/18/tech/mobile/ios-7-upgrade-faq> (last visited January 31,
27 2017).

28 ⁷ See <http://www.apple.com/iphone-7/ios/> (last visited January 31, 2017).

⁸ See <http://www.macrumors.com/2014/02/28/apple-40-billion-imessages/> (last visited January
31, 2017).

1 32. The iPhone 4 was the first iPhone that offered FaceTime as a feature. In marketing
2 the iPhone 4, Apple heavily emphasized this new and groundbreaking video conferencing
3 capability. For example, Apple press releases regarding the iPhone 4 described the device as “the
4 new iPhone 4 featuring FaceTime.” Further, at Apple’s 2010 Worldwide Developer’s
5 Conference, then-CEO of Apple Steve Jobs heralded the release of FaceTime and its inclusion
6 within the iPhone 4, noting that for the first time in history, video calling from mobile devices
7 had been made easy. The following image depicts Steve Jobs delivering this message at this
8 pivotal point in Apple’s history:



19 33. FaceTime was featured prominently in the advertising campaign launched by
20 Apple to promote the iPhone 4. In fact, several of Apple’s television advertisements for the
21 iPhone 4 focused exclusively on FaceTime and its life-changing capabilities, emphasizing the
22 feature’s ability to bridge the gap between friends and loved ones no matter the geographic
23 distance between them, particularly at life’s most meaningful milestones.

24 34. As shown in the following screenshot, one such advertisement depicted a deployed
25 soldier in the United States military who, despite being separated from his pregnant wife, was
26 able to be “present” as a medical professional administered a sonogram to the expectant mother,
27 providing the couple perhaps their first glimpse of their unborn child:

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35. The same advertisement also depicts what appears to be a hearing-impaired couple, who are able to see and communicate with one another in sign language in real time thanks to FaceTime:



36. A second advertisement depicts a grandfather who sees his newly-born granddaughter for the first time, and engages in an emotionally charged conversation with his son in which they discuss what it feels like to be a first-time father and grandfather:

⁹ See https://www.youtube.com/watch?v=cKoLp_lGo14 (last visited January 31, 2017).



37. Another such advertisement shows various people communicating through FaceTime, and includes a narrated voiceover that underscores that FaceTime is synonymous with—and essentially indivisible from—the iPhone. The voiceover states the following:

If you don't have an iPhone, you don't have FaceTime on your phone. Which makes it this easy to talk face to face with another iPhone. This easy to talk with a Mac. And this easy to talk with an iPad. FaceTime – just one more thing that makes an iPhone an iPhone.

38. These and other iPhone 4 and iPhone 4S advertisements demonstrate that Apple fully appreciated FaceTime's critically important role in the lives of iPhone users, particularly those separated by great distances and even war.

Apple Appropriates VirnetX's Patented Technology For Use in FaceTime

39. VirnetX is an internet security software and technology company that holds a portfolio of patented technology for securing real-time communications over the internet, including 4G LTE security. VirnetX offers software and technology solutions designed to facilitate secure communications and create a secure environment for real-time communication applications such as instant messaging, voice-over-internet protocol, smart phones, eReaders, and video conferencing.

¹⁰ See <https://www.youtube.com/watch?v=KMRz1GjMvL4> (last visited January 31, 2017).

1 40. VirnetX was founded in part by former employees of Science Applications
2 International Corporation (“SAIC,” which is now Leidos, Inc.), a Fortune 500 scientific,
3 engineering and technology applications company that uses its deep domain knowledge to solve
4 problems of vital importance to the nation and the world, in national security, energy and the
5 environment, critical infrastructure and health.

6 41. The story of VirnetX’s founding begins in 1999, when the Central Intelligence
7 Agency (the “CIA”) launched a joint program with SAIC¹¹ to develop technology that would
8 allow agents in the field to communicate with CIA headquarters safely.¹²

9 42. While developing this technology for the CIA, the VirnetX inventors also invented
10 ways to facilitate secure communications that would greatly improve ease of use for the end users,
11 and they recognized that this technology had a potentially massive commercial value. SAIC
12 therefore spun its groundbreaking technology out into a separate startup venture named VirnetX,
13 which was populated by highly-qualified and experienced scientists and engineers who had
14 occupied prominent positions at SAIC.

15 43. After its founding, VirnetX took the secure encrypted communications technology
16 that its scientists and engineers had invented and developed, and commercialized that technology
17 into a marketable product that enables secure messaging, secure voice and video calling, and
18 secure mail and secure file sharing between any device.

19 44. Unfortunately, in the years following its founding, VirnetX became a victim of
20 patent infringement. As three separate juries determined, Apple appropriated VirnetX’s patented
21 technology and used it to set up the secure communications for various features offered on
22 iPhones and other Apple devices. One such feature—and the one at the center of this action—is
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24 _____
25 ¹¹ Prior to changing its name in September of 2013, Leidos, Inc. was called Science Applications
26 International Corporation. For the sake of clarity and efficiency, the term “Leidos” as used
27 herein encompasses both Leidos and SAIC.

28 ¹² See <http://www.forbes.com/sites/marshallphelps/2016/05/09/an-innovation-jason-bourne-would-love/#21962ec9435e> (last visited January 31, 3017).

1 FaceTime.

2 45. To stop Apple’s unauthorized patent infringement and “to protect their patented
3 innovations, the [VirnetX] scientists were forced to litigate.”¹³

4 **Apple Is Ordered To Pay VirnetX \$368.2 Million For Infringing On Patented Technology**
5 **Used In FaceTime**

6 46. On August 11, 2010, VirnetX filed a lawsuit against Apple in the United States
7 District Court of the Eastern District of Texas. The lawsuit, captioned *VirnetX Inc., et al v. Apple,*
8 *Inc.*, 6:10-cv-00417 (the “VirnetX Action”), alleged that Apple had infringed on four of VirnetX’s
9 patents, specifically US Patent Nos. 6502135, 7418504, 7490151, and US 7921211.

10 47. As of November 2012 and continuing through April 16, 2014, devices running iOS
11 6 or earlier operating systems that were communicating in a FaceTime call could exchange
12 audio/video media between each other in two ways: (1) the peer-to-peer method, and (2) the relay
13 method.

14 48. When audio/video data was communicated using the peer-to-peer method, the
15 caller and the callee would exchange that data directly between each other through the internet.

16 49. Sometimes, however, it was not possible to connect a FaceTime call through the
17 peer-to-peer method. Thus, in those instances, the devices would connect to a relay server, and
18 the relay server would relay the audio/video data on behalf of the devices.

19 50. At the same time that a calling iPhone would try to establish a peer-to-peer
20 connection, it would concurrently try to establish a relay connection. Thus, the two connection
21 methods would occur in parallel, and the call would be connected through whichever method
22 achieved a connection first. 90-95% of the time, the first connection would be achieved through
23 the peer-to-peer method.

24 51. In the VirnetX Action, VirnetX alleged, *inter alia*, that Apple devices infringed on
25 the ’504 and ’211 patents by establishing peer-to-peer FaceTime calls. Following extensive and

26 _____
27 ¹³ See <http://www.forbes.com/sites/marshallphelps/2016/05/09/an-innovation-jason-bourne-would-love/#21962ec9435e> (last visited January 31, 2017).

1 contentious litigation activity, along with a refusal by Apple to compensate VirnetX for its use of
2 VirnetX's patented technology, the case went to trial.

3 52. On November 7, 2012, a jury awarded VirnetX \$368.2 million in damages based
4 upon Apple's infringement on VirnetX's patents.¹⁴ Among the jury's findings was a
5 determination that Apple devices infringed on VirnetX's '504 and '211 patents. Specifically, the
6 jury found that when FaceTime calls on iOS 6 (or earlier operating systems) were connected
7 through the peer-to-peer connection method, they unlawfully infringed on VirnetX's patented
8 secure encryption technology.¹⁵

9
10 **Apple's Patent Infringement Subjects The Company To Substantial Expense In Connection
With FaceTime Calls Placed On iOS 6 and Earlier Operating Systems**

11 53. The November 7, 2012 judicial finding that FaceTime on iOS 6 and earlier
12 operating systems infringed on VirnetX's patents created a serious and costly problem for Apple.

13 54. As noted above, FaceTime calls can be connected in either of two ways: the peer-
14 to-peer method, or the relay method. Importantly, as of 2012 and continuing at least until April
15 16, 2014, the relay servers through which relay method FaceTime calls were connected were
16 owned and operated by a company called Akamai. In exchange for allowing Apple to route
17 FaceTime calls through its relay servers, Akamai charged Apple fees that were calculated based
18 on Apple's usage of those servers. Thus, low usage of Akamai's relay servers by Apple translated
19

20 ¹⁴ On September 16, 2014, the United States Federal Circuit Court of Appeals affirmed the
21 finding that Apple had infringed on VirnetX's '135 and '151 patents, reversed the district
22 court's construction of a claim term of the '504 and '211 patents, reversed the damages award,
23 and remanded for further proceedings. In subsequent proceedings in the VirnetX Action, a
24 jury found that Apple *willfully* infringed on VirnetX's '504 and '211 patents under the Federal
Circuit's claim constructions of those patents and awarded \$302 million for Apple's violation of
VirnetX's patents. *See, e.g.*, <https://www.virnetx.com/virnetx-awarded-302-4-million-verdict-apple/> (last visited January 31, 2017).

25 ¹⁵ To be clear, this complaint does not assert any patent or patent-based claims against Apple
26 (or anyone else), nor does this action require any review, reconsideration or re-litigation of the
27 patent claims at issue in the VirnetX Action. Further, the findings in the VirnetX Action with
respect to Apple's patent infringement in no way dictate the outcome of this action. Rather,
the findings of patent infringement referred to herein merely constitute background facts
comprising part of the sequence of events that caused Apple to break FaceTime for users
running iOS 6 and earlier operating systems.

1 to low fees owed by Apple to Akamai, and high relay usage required Apple to pay Akamai
2 substantially higher fees.

3 55. Prior to November 7, 2012, roughly 90 to 95% of FaceTime calls were connected
4 through the peer-to-peer method rather than the relay method. Because FaceTime calls connected
5 through the peer-to-peer method did not utilize Akamai's servers, calls connected in that manner
6 did not increase Apple's relay usage or the fees arising therefrom. Thus, when the peer-to-peer
7 method of FaceTime call connection was available to Apple, the relay usage fees that Apple was
8 paying to Akamai were very modest. This dynamic underwent a seismic change, however, due
9 to the November 7, 2012 judicial finding that peer-to-peer FaceTime calls placed on iOS 6 or
10 earlier operating systems infringed on VirnetX's patents.

11 56. Following the November 7, 2012, jury verdict in the VirnetX Action, Apple could
12 no longer connect FaceTime calls through the peer-to-peer method without knowingly and
13 intentionally infringing on VirnetX's patents. Indeed, the district court in the VirnetX Action
14 ordered Apple to pay VirnetX an ongoing royalty that was higher than the jury's effective royalty
15 rate in its damages award to account for the willful nature of Apple's future infringement.
16 Attempting to avoid this liability, Apple eliminated the peer-to-peer method of connecting
17 FaceTime calls on iOS 6 and earlier operating systems, and shifted to a system whereby 100
18 percent of FaceTime calls placed on iOS 6 and earlier operating systems were connected using
19 the relay method ("100% Relay Mode").

20 57. Because the fees that Apple paid to Akamai for use of Akamai's servers were
21 predicated on Apple's relay usage, the shift from an approximately 5-10% relayed FaceTime calls
22 to 100% Relay Mode significantly increased the fees that Apple had to pay Akamai.

23 58. Internal Apple documents reveal that when Apple switched to 100% Relay Mode,
24 Akamai promptly alerted Apple that Apple's usage of Akamai's servers had substantially
25 increased and that this increase in relay usage would trigger a correspondingly large increase in
26 Apple's payments to Akamai. Emails sent to Apple by Akamai in 2013 indicate that Apple had
27 been paying Akamai roughly \$2 million per month for use of Akamai's relay servers, and that the

1 increased relay usage would trigger an increase of an additional \$3.2 million *per month*. Further,
2 projections developed during this time period indicated that for the following year (*i.e.*, 2014),
3 relay usage would increase to possibly a terabit of data on a monthly basis, which could mean
4 monthly relay usage costs in excess of \$10 million, if not substantially higher.

5 59. Testimony from the 2016 retrial of the VirnetX Action indicates that between April
6 2013 and September 2013 alone, Apple expended approximately \$50 million on relay usage as a
7 result of entering into 100% Relay Mode.

8 **Apple Searches For Ways To Reduce Relay Usage, And Introduces The iOS 7 Operating**
9 **System**

10 60. Internal Apple emails demonstrate that, faced with mounting and potentially
11 massive costs arising from its rapidly increasing usage of Akamai's relay servers, Apple sought
12 ways to mitigate those costs by reducing its relay usage. For example, on February 15, 2013,
13 roughly three months after the November 7, 2012 jury verdict in the VirnetX Action, an Apple
14 employee sent an email to Apple Senior Software Engineer Dr. Thomas Jansen, Apple
15 engineering manager Patrick Gates and Apple engineer Gokul Thirumalai, among others,
16 discussing ways to potentially reduce Apple's relay usage. The revealing and transparent subject
17 of that email was "Ways to Reduce Relay Usage."

18 61. Other internal Apple emails confirm the company's devotion to finding ways to
19 reduce its relay usage. For example, another internal Apple email shown in open court during the
20 2016 trial of the VirnetX Action confirms that Apple urgently desired to reduce its relay usage,
21 and identified potential strategies intended to "get us [*i.e.*, Apple] back to 2012 relay levels."
22 Apple's identification of 2012 as the turning point with respect to relay usage is logical, because
23 it was the November 7, 2012 judicial determination in the VirnetX Action that prompted the
24 seismic shift from 90 to 95% of FaceTime calls being connected through the peer-to-peer method
25 to 100% of FaceTime calls being connected through the relay method (*i.e.*, 100% Relay Mode).

26 62. Potential relief from the substantial expense that Apple was accruing through its
27 heavy relay usage arrived on September 13, 2013, when Apple released iOS 7. In contrast to iOS

1 6 and earlier operating systems, iOS 7 allowed Apple to connect iOS 7 FaceTime calls through
2 the peer-to-peer method in a way that had not yet been found to infringe VirnetX's patents. By
3 reverting back to establishing peer-to-peer connections, iOS 7 presented an alternative that would
4 allow Apple to avoid amassing enormous relay usage that would translate to correspondingly
5 large payments to Akamai.

6 63. And yet, iOS 7's method of peer-to-peer FaceTime connection could only reduce
7 Apple's relay usage to the extent that the millions of Apple customers then using iOS 6 or earlier
8 operating systems *voluntarily* transitioned to iOS 7.

9 64. Although concerns and risks can arise with respect to any transition to a newer iOS
10 version, they were particularly acute with respect to a potential shift to iOS 7. This is because, as
11 recognized by Apple itself, iOS 7 was "the most significant iOS update since the original
12 iPhone[.]"¹⁶

13 **iOS 7 Subjects iPhone 4 and iPhone 4S Devices to Substantially Reduced Functionality**

14 65. As described in a September 19, 2013 TechRadar article titled "iOS 7 and iOS 6:
15 how different are they?", "iOS 7 [wa]s the biggest change to Apple's iOS since the arrival of apps
16 in 2008."¹⁷

17 66. Compared to iOS 6, iOS 7 was a more robust and powerful operating system that
18 acted as a significant drain on the processing capability of any device on which it ran. Newer
19 iPhones were designed to include a more powerful processor in order to function properly with
20 iOS 7. Indeed, Apple designed iOS 7 specifically for its most powerful processing chip to date:
21 the 64-bit A7, which featured both a computer processing unit and an upgraded graphic processor.
22 Cutting-edge devices as of that time such as the iPhone 5S and 5C possessed the 64-bit A7
23 processing chip, and therefore possessed sufficient processing power to run iOS 7 without
24 reducing the functionality of the iPhone.

25 _____
26 ¹⁶ See <http://www.apple.com/pr/library/2013/06/10Apple-Unveils-iOS-7.html> (last visited
January 31, 2017).

27 ¹⁷ See [http://www.techradar.com/news/phone-and-communications/mobile-phones/ios-7-vs-
ios-6-what-s-different-1179663](http://www.techradar.com/news/phone-and-communications/mobile-phones/ios-7-vs-ios-6-what-s-different-1179663) (last visited January 31, 2017).

1 67. By contrast, iOS 7 was simply too demanding from a processing standpoint to run
 2 without causing severe problems on the older and weaker processing chips in the iPhone 4 and
 3 the iPhone 4S. The problem was exacerbated by the fact that the iPhone 4 and the iPhone 4S only
 4 possessed approximately half of the onboard random access memory (or “RAM”) of the later-
 5 generation iPhones for which iOS 7 was designed. Whereas the iPhone 5S and iPhone 5C boasted
 6 a full gigabyte of RAM, the iPhone 4 and iPhone 4S were each limited to only 512 megabytes.
 7 For all of these reasons, transitioning to iOS 7 on an iPhone 4 or iPhone 4S significantly impaired
 8 device functionality in a manner that manifested in myriad ways, including non-responsiveness,
 9 keyboard sluggishness, extremely slow app launching and device crashes.

10 68. This generalized reduction in functionality suffered by the iPhone 4 and iPhone
 11 4S devices upon transitioning to iOS 7 was thoroughly documented in media reports dedicated to
 12 these problems. For example, an October 15, 2013 article titled “When iOS 7 Attacks: Help for
 13 iPhone 4 And 4s Owners” reported the following:

14 According to users Web-wide, *iOS 7 seems to have made legacy Apple*
 15 *smartphones a bit dumber. Reports continue to pour in describing crashes,*
 16 *slowness and erratic behavior overtaking iPhone 4s and 4Ses that have*
 17 *upgraded to the newest version of iOS . . . Perhaps it should come as no*
 18 *surprise; iOS 7 was designed with the more powerful iPhone 5S and 5C in*
 19 *mind. Yet many users are surprised, to say nothing of annoyed and frustrated*
 20 *. . . The older handsets buckle under the weight of the new software.*

21 (Emphasis added.)¹⁸

22 69. Similarly, an article in *Lifewire* titled “Should You Upgrade Your iPhone 4 to iOS
 23 7?” discussed the perils of upgrading to iOS 7 on an iPhone 4, and stated the following as “The
 24 Bottom Line”:

25 Whether you upgrade your iPhone 4 to iOS 7 is up to you, of course, but I’d be
 26 cautious. If you upgrade, you’ll be putting the latest OS, which requires a lot
 27 of processing horsepower and memory, onto a device that’s coming close to
 28 the end of its usable life. The combination will work, but it may be slower or
 more problematic than you’d like.

 If you’re willing to live with some bugs or slowness and just have to have the
 latest OS, go for it. Otherwise, I’d consider holding off.¹⁹

¹⁸ See <http://readwrite.com/2013/10/15/ios-7-fixes-iphone-4-4s/> (last visited January 31, 2017).

¹⁹ See <https://www.lifewire.com/upgrade-iphone-4-ios-7-1999204> (last visited January 31, 2017).

1 70. The precise impact of the sluggishness caused by transitioning to iOS 7 on an
 2 iPhone 4 was analyzed and then reported by *ARS Technica* in a September 18, 2013 article titled
 3 “New lease on life or death sentence? iOS 7 on the iPhone 4.”²⁰ The article explained that the
 4 iPhone’s A4 processor “simply isn’t up to the task of rendering iOS 7 as Apple intended,” and
 5 that “[w]hen it comes to launching apps, the iPhone 4’s general slowness is only exacerbated by
 6 the too-long animation durations in iOS7.”

7 71. To measure the precise harm to responsiveness imposed by iOS 7 on the iPhone 4,
 8 *ARS Technica* conducted a series of experiments in which it “launched a number of the built-in
 9 apps on both iOS 6 and iOS 7 and timed them to see whether there were any regressions.” *ARS*
 10 *Technica* then compiled a chart of data that “measure the time between when the app icon is
 11 tapped and when the app becomes ready for user input, and each app’s launch time was measured
 12 three times and averaged . . . We also measured the time it took for the phone to cold boot to the
 13 lock screen.” The chart published within the *ARS Technica* article and reproduced here reveals a
 14 uniformly striking regression in load times for apps running on iOS 7:

APPLICATION	IOS 6.1.3	IOS 7.0 GM
Safari	1.13 seconds	2.05 seconds
Camera	1.9 seconds	2.63 seconds
Settings	1.31 seconds	1.88 seconds
Mail	1.0 seconds	1.50 seconds
Messages	1.57 seconds	2.80 seconds
Calendar	1.23 seconds	1.78 seconds
Phone	0.67 seconds	2.37 seconds
Cold boot to lock screen	31.14 seconds	45.13 seconds

22
 23 72. *ARS Technica* summarized and analyzed these troubling findings as follows:

24 ***Everything is slower in iOS 7***, usually by one to one-half second or so but
 25 sometimes by more. These tiny delays can add up—if you unlock your phone,
 check your mail or messages quickly, and then put your phone away in the

26 ²⁰ See <http://arstechnica.com/apple/2013/09/new-lease-on-life-or-death-sentence-ios-7-on-the-iphone-4/> (last visited January 31, 2017).
 27

1 course of 10 or 15 seconds, that lag can become a significant percentage of the
2 time you spend.

3 (Emphasis added.)

4 73. The consequences of transitioning to iOS 7 on an iPhone 4 or iPhone 4S are further
5 documented in an Apple customer complaint that Apple received on April 25, 2014, which is
6 discussed *infra* at ¶ 104. That customer complaint further confirms that “iOS 7 does not function
7 well on iPhone 4 and iPhone 4s.”

8 74. Compounding the problem for iPhone 4 and iPhone 4S users was the fact that, in
9 a reversal of previous protocol and in connection with its release of iOS 7, Apple made it
10 impossible for users who had transitioned to iOS 7 to revert back to an earlier version of iOS.
11 Prior to the release of iOS 7, Apple had created encrypted digital “signatures” that would allow a
12 user to install older operating systems. In conjunction with releasing iOS 7, however, Apple
13 stopped “signing” older versions of iOS.

14 75. The generalized “crashes, slowness and erratic behavior overtaking iPhone 4s and
15 4Ses” upon transitioning to iOS 7 were also accompanied by more acute defects that plagued
16 these devices upon downloading iOS 7. For a sizeable portion of the iPhone 4S population, a
17 defect in iOS 7 meant that transitioning to iOS 7 would prevent them from accessing Wi-Fi and/or
18 Bluetooth.

19 76. iPhones can connect to the internet via a cellular connection or a Wi-Fi connection.
20 Typically, iPhone users have entered into an agreement with a cellular telephone service provider
21 (such as AT&T) through which the user receives a limited amount of data on a periodic basis in
22 exchange for an agreed upon payment. Provided that an iPhone is geographically located within
23 the service provider’s coverage network, the iPhone will be able to connect to the internet using
24 the cellular service provided by the applicable service provider. This is called a cellular
25 connection. An active cellular connection requires the iPhone to incur data usage, which in turn
26 depletes the data contractually allotted to the user by the service provider. If the iPhone user
27 exceeds his or her data allotment for the relevant time period, the user will incur a data overage

1 charge that can be significant, particularly when compared to the standard monthly data charge
2 paid by the user.

3 77. When compared to cellular connections, Wi-Fi connections have a number of
4 advantages.²¹ First, a Wi-Fi connection can allow for a faster internet connection speed than a
5 cellular connection, particularly when the user is in a location with a weak cellular connection.
6 That faster internet connection is valuable to the user, because it allows the user to download and
7 upload information more quickly. Additionally, in locations where a total lack of cellular
8 coverage makes a network connection impossible, a Wi-Fi connection represents the *only*
9 practical vehicle through which the iPhone can connect to the internet. A Wi-Fi connection is
10 also superior to a cellular connection because it can impose less of a drain on the battery of the
11 iPhone, thereby preserving the iPhone's battery life and extending the device's availability for
12 use and overall shelf life.²²

13 78. The loss of Wi-Fi capability also harmed iPhone 4S users because several
14 important, valuable and/or popular iPhone functions and capabilities require Wi-Fi. For example,
15 system updates—including iOS updates—cannot be downloaded over a cellular connection.
16 Rather, they must be downloaded using a Wi-Fi connection. In addition to presenting new
17 features, changing interfaces and making other purportedly positive changes, iOS updates can
18 also serve the critical function of providing security updates and fixes (or “patches”) for bugs and
19 other defects. Indeed, Apple's website shows that no fewer than fourteen security updates were
20

21 ²¹ See, e.g., <http://smallbusiness.chron.com/advantages-using-wifi-smartphone-71651.html> (last
visited January 31, 2017).

22 ²² Further, when an iPhone has established an active Wi-Fi connection, the iPhone can avoid
23 using any cellular data whatsoever. As such, Wi-Fi capability is a vital tool with respect to
24 avoiding data overage charges, and the ability to create a Wi-Fi connection can result in
25 substantial cost savings for iPhone users, particularly those who use data that would otherwise
26 exceed their data plan. Without the ability to connect through Wi-Fi, iPhone users may be
27 forced to decide between (1) restricting their use of the device, (2) upgrading to a more
expensive—and therefore more expensive—data plan, or (3) incurring sizeable data overage
charges. Simply put, because an iPhone with an active Wi-Fi connection can avoid consuming
cellular data under a subscriber's data plan, the inability to use Wi-Fi caused iPhone 4S users to
unnecessarily consume greater amounts of cellular data, resulting in data overage charges that
could have been avoided had their Wi-Fi connection not stopped working upon transitioning to
iOS 7.

1 issued for iOS in 2016 alone.²³

2 79. Downloading system updates was not the only function that required a Wi-Fi
3 connection. One of the key benefits of an iPhone is the ability to download any of the thousands
4 of applications (or “apps”) that are made available for the device. Although some iPhone apps
5 can be downloaded using a cellular connection, certain large apps could only be downloaded
6 through a Wi-Fi connection. Similarly, various video streaming applications that allow iPhone
7 users to watch movies and other programming from their device offer content that can only be
8 streamed through a Wi-Fi connection. The loss of Wi-Fi capability also prevented users from
9 accessing certain features of iCloud.²⁴ When users lost the ability to access Wi-Fi, they
10 simultaneously lost the ability to take full advantage of all these valuable functions.

11 80. For many iPhone 4S users, upgrading to iOS 7 also triggered another serious
12 problem: the loss of Bluetooth capability. Bluetooth allows users to connect their iPhones with
13 their computer or automobile, or to share an internet connection with other devices. The iPhone
14 4S was the first generation of iPhone to feature a new version of Bluetooth called Bluetooth 4.0,
15 which was described by the executive director of the Bluetooth Special Interest Group as
16 “enabl[ing] an entirely new class of product into the Bluetooth world.”²⁵ Thus, the many iPhone
17 4S users who lost Bluetooth capability upon upgrading to iOS 7 suffered significantly reduced
18 functionality of their device.

19 81. The inability to access Wi-Fi and Bluetooth has been referred to as the “grayed
20 out” issue because when the problem manifests, the Wi-Fi and Bluetooth options turn gray on the
21 device and cannot be activated (the “Grayed-Out Issue”).

22
23 ²³ See <https://support.apple.com/en-us/HT201222> (last visited January 31, 2017).

24 ²⁴ As described on Apple’s website, “iCloud connects you and your Apple devices in amazing
25 ways. It makes sure you always have the latest versions of your important information—like
26 documents, photos, notes, and contacts—on whatever device you’re using. It lets you easily
share photos, calendars, locations, and more with friends and family. It even helps you find
your device if you lose it.” See https://support.apple.com/kb/PH2608?locale=en_US (last
visited January 31, 2017).

27 ²⁵ See http://reviews.cnet.com/8301-19512_7-20116316-233/bluetooth-4.0-what-is-it-and-does-it-matter/ (last visited January 31, 2017).

1 82. Like the more generalized reduced functionality problems that afflicted iPhone 4
2 and iPhone 4S devices after transitioning to iOS 7, the Grayed-Out Issue was widespread and
3 well-publicized.

4 **To Force Consumers To Stop Using FaceTime On iOS 6 and Earlier Operating Systems,**
5 **Apple Breaks FaceTime For iOS 6**

6 83. Even six months after the September 13, 2013 introduction of iOS 7, a sizeable
7 percentage of Apple’s user base was still using iOS 6 or earlier operating systems. According to
8 statistics posted by Apple on its App Store developer support page, during a seven-day period
9 ending April 6, 2014, a substantial portion of Apple iOS-based devices were still operating on
10 iOS 6 or earlier.

11 84. As described above, with millions of users still using iOS 6 or earlier operating
12 systems and with each FaceTime call placed on iOS 6 or earlier operating systems increasing
13 Apple’s relay usage and Apple’s payment obligations arising therefrom, Apple’s financial
14 interests would substantially benefit from preventing users from using FaceTime on iOS 6 or
15 earlier operating systems.

16 85. Thus, Apple decided to exploit the enormous popularity and importance of
17 FaceTime by breaking FaceTime on iOS 6 and earlier operating systems, making it impossible
18 for those users to regain FaceTime capability on their devices unless they transitioned to iOS 7.
19 When Apple made this shocking and disturbing decision, it was fully cognizant of the substantial
20 reduction in functionality that would accompany the transition of an iPhone 4 or iPhone 4S to
21 iOS 7.

22 86. In order to break FaceTime for iOS 6 and earlier operating systems, Apple
23 arranged for its engineers to cause a digital certificate necessary to the operation of FaceTime on
24 iOS 6 and earlier operating systems to prematurely expire on a specific date predetermined by
25 Apple: April 16, 2014.

26 87. Thus, on the FaceTime Break date selected by Apple, FaceTime would simply
27 stop working for Apple users whose devices were operating on iOS 6 and earlier operating

1 systems. Pursuant to Apple's plan, its user base would have no clue that their sudden inability to
2 use FaceTime was the result of a calculated, intentional consequence of actions taken by Apple
3 to increase its profits by reducing its payments to Akamai. Rather, users of iOS 6 and earlier
4 operating systems would know only that they could no longer use FaceTime on their device, and
5 Apple would exploit that informational vacuum by publicly stating that in order to regain
6 FaceTime capability, they needed to transition to iOS 7.

7 88. Of course, for the reasons set forth above, transitioning to iOS 7 was extremely
8 problematic for iPhone 4 and iPhone 4S users, as the defects and flaws that iOS 7 posed to those
9 iPhone models would irreversibly and significantly reduce the functionality and value of the device.

10 89. The harmful impact of iOS 7 on iPhone 4 and iPhone 4S devices was well known
11 to Apple as it planned and then implemented the FaceTime Break. Yet Apple simply disregarded
12 those consequences to its customers using iPhone 4 and iPhone 4S devices, choosing instead to
13 further its own financial interests despite the collateral damage.

14 90. Nor did the human cost of Apple's decision to break FaceTime prevent it from
15 doing so. As Apple's iPhone 4 marketing campaign demonstrates, Apple fully recognized that
16 FaceTime was a very important tool that allowed loved ones separated by geographic distance to
17 remain connected in a meaningful way, and to share once-in-a-lifetime experiences that they
18 otherwise would have missed. By intentionally breaking FaceTime, Apple elevated its own
19 financial interest over the interests of the millions of deployed soldiers, military spouses,
20 grandparents, grandchildren, parents, children and others who were placing millions of FaceTime
21 calls on a daily basis.

22 91. Internal Apple documents from the period leading up to the FaceTime break
23 establish the company's recognition that, due its own affirmative actions, the digital certificate
24 for FaceTime on iOS 6 and earlier operating systems would expire on April 16, 2014. For
25 example, clearly concerned about Apple's decision to break FaceTime for iOS 6 and earlier
26 operating systems and the consequences that would flow from that decision, then-Apple Manager
27 of OS Security Jacques Vidrine sent an email to other Apple personnel stating as follows: "[L]et

1 me just voice my concern here. Maybe someone can talk me off the ledge by convincing me this
2 is not as big a deal as I think.”

3 92. Unfortunately, the concerns expressed by Mr. Vidrine were ignored by fellow
4 Apple personnel and ultimately superseded by Apple’s desire to advance its financial interests.
5 In fact, the same email chain containing Mr. Vidrine’s appeal for Apple to reconsider its decision
6 to break FaceTime contains another email in which an Apple employee suggests taking the
7 conversation about the propriety of the FaceTime Break offline so that it would not be
8 documented in writing.

9 93. Internal Apple documents demonstrate that a perverse excitement and jocularity
10 developed within Apple in anticipation of the FaceTime Break. An April 16, 2014 email from
11 then Apple Senior Security Engineering Manager Andrew Whalley to other Apple personnel
12 states “Today’s the day,” a reference to the fact that the certificate would expire that day,
13 foreclosing the ability of millions of Apple users to communicate through a life-changing
14 technology that had become an important part of their lives. That same email chain states in plain
15 terms the impact of the FaceTime Break: “All users with [iOS] 6.0 and older can’t make FaceTime
16 [calls] any longer.”

17 94. More disturbing still, Apple personnel circulated over email a cartoon mocking
18 the situation and the millions of individuals who would suddenly and unexpectedly lose the ability
19 to communicate with their loved ones through the very technology that Apple had leveraged to
20 encourage those individuals to buy their Apple devices.

21 95. Internal Apple documents also eliminate any doubt that Apple intentionally broke
22 FaceTime for iOS 6 and earlier operating systems for the express purpose of lowering its relay
23 usage, and therefore the relay usage-based costs that it would have to pay Akamai. For example,
24 weeks or months after Apple broke FaceTime, Apple engineering manager Patrick Gates sent an
25 email to various Apple personnel seeking a reminder regarding the details of Apple’s April 16,
26 2014 break of FaceTime. In that email, Gates states the following: “Hey, guys. I’m looking at
27 the Akamai contract for next year. I understand we did something in April around iOS 6 to reduce

1 relay utilization.” Apple engineer Gokul Thirumalai responds to Gates, stating the following: “It
2 was a big user of relay bandwidth. ***We broke iOS 6, and the only way to get FaceTime working***
3 ***again is to upgrade to iOS 7.***” (Emphasis added.)

4 96. In sworn trial testimony given years after the FaceTime Break, Apple further
5 recognized that it intentionally broke FaceTime and that it did so to reduce its relay usage. On
6 January 29, 2016, for example, Apple’s Senior Software Engineer Dr. Thomas Jansen explicitly
7 acknowledged that Apple “broke” FaceTime for iOS 6, and that “Apple did something [in April
8 2014]; and as a result, relay usage went down[.]”

9 97. Nor is there any question that the FaceTime Break imposed an immediate and
10 significant detriment upon iPhone 4 and iPhone 4S users operating on iOS 6 and earlier operating
11 systems. As confirmed by Dr. Jansen during his sworn trial testimony given on January 29, 2016,
12 as a result of the FaceTime Break, all users of iOS 6 and earlier operating systems—including
13 those with an iPhone 4 or an iPhone 4S—lost the ability to use FaceTime on their device, and if
14 they wanted to regain FaceTime capability they had no choice but to move to iOS 7, regardless
15 of the detrimental impact of doing so: “On April 17th, 2014, they had to [move to iOS 7]; that is
16 correct.” Thus, as a direct and proximate result of the FaceTime Break, every Apple iPhone 4
17 and iPhone 4S user whose device was operating on iOS 6 or an earlier operating system suffered
18 a significant decrease in the value of their device. That reduced value was reflected, *inter alia*,
19 in the market value of iPhone 4 and iPhone 4S devices, which meaningfully decreased as a direct
20 result of the FaceTime Break. As one Apple employee colorfully and succinctly stated in an
21 internal Apple email sent within hours of the FaceTime Break, “***our users*** on Sundance [*i.e.*, iOS
22 6²⁶] and before ***are basically screwed***[.]” (Emphasis added.)

23 98. In addition, sworn trial testimony by Apple representatives confirms that Apple
24 could have fixed the FaceTime Break without forcing the millions of affected users to transition
25

26 ²⁶ It is widely-known that “Sundance” was the code name that Apple internally used to refer to
27 iOS 6. *See, e.g.*, https://en.wikipedia.org/wiki/List_of_Apple_codenames (last visited January
28 31, 2017).

1 to iOS 7, thereby subjecting their devices to significantly reduced functionality. Dr. Thomas
2 Jansen conceded under oath that Apple could have fixed Apple's older phones without forcing
3 them to transition to iOS 7 by "removing . . . the check for the expiration date." Instead, Apple
4 elected to intentionally break FaceTime for all users of iOS 6 and earlier operating systems,
5 refused to fix the break, and then lied about what it had done.

6
7 **Concealing The Truth From Consumers, Apple Insists That The Only Way iOS 6 and Earlier
Users Can Regain FaceTime Is To Transition To iOS 7, Regardless Of The Consequences**

8 99. Given FaceTime's prominent role in the lives of Apple users and the enormous
9 volume of FaceTime calls placed on a daily basis, the reaction to FaceTime's sudden failure to
10 work on iOS 6 and earlier operating systems was prompt and vociferous. Within hours of the
11 April 16, 2014, FaceTime Break, concerned inquiries flooded online message boards devoted to
12 Apple and its products, and media outlets picked up the story.

13 100. Apple could have resolved the issue and restored FaceTime to users of its iOS 6
14 and earlier operating systems. Instead—prioritizing its financial interests over its customers—
15 Apple proceeded with its strategy to reduce its costs by preventing its customers from using
16 FaceTime on any device running on iOS 6 or an earlier operating system.

17 101. Moreover, Apple refused to disclose the truth behind *why* FaceTime had suddenly
18 stopped working on iOS 6 and earlier operating systems. As set forth above, FaceTime stopped
19 working for iOS 6 and earlier operating systems on April 16, 2014 because, as a result of its
20 infringement on VirnetX's patents, Apple began incurring substantial relay usage charges and
21 therefore intentionally broke FaceTime iOS 6 and earlier operating systems in order to force
22 Apple users to stop accruing relay usage. Apple publicly disclosed *nothing* about any of this
23 (until it was reluctantly forced to do so at the VirnetX retrial in 2016).

24 102. Instead, Apple stated that FaceTime had stopped working on iOS 6 and earlier
25 operating systems due to a "device certificate that expired," and instructed consumers to move
26 from iOS 6 and earlier operating systems to iOS 7 in order to restore the FaceTime feature on
27

1 their device. This was a misleading half-truth in that Apple failed to disclose that it had
2 intentionally caused this device certificate to expire prematurely.

3 103. For example, in a statement issued on or around April 24, 2014, Apple stated as
4 follows:

5 If you started to have issues making or receiving FaceTime calls after April 16,
6 2014, your device or your friend's device may have encountered a bug resulting
7 from a device certificate that expired on that date. Updating both devices to the
latest software will resolve this issue.

8 104. Apple adopted the same approach in response to specific inquiries received from
9 individual Apple users. For example, on April 25, 2014, Apple received a customer complaint
10 that read as follows:

11 Dear Investor Relations,

12 I'm writing to express my extreme dissatisfaction with Apple. A few weeks ago,
13 I noticed that FaceTime was not functioning on my iPhone 4. When I inquired at
14 my local carrier's store, they did not have any answers except that I needed to
upgrade my software to iOS 7. The problem, iOS 7 does not function well on
iPhone 4 and iPhone 4S.

15 According to news reports, FaceTime no longer works with iOS 6, even though
16 no notice to this effect was given by the company. When I tried to contact Apple
17 support, I am informed that I had to pay \$19 just to speak to someone, who will
no doubt tell me that all I need to do to remedy the problem is to upgrade the
operating system on the phone.

18 This is extremely frustrating, as the only reason I and other friends and family
19 purchase an iPhone in the first place is to take advantage of the FaceTime
application.

20 105. An internal Apple document indicates that, in addition to contacting Apple's
21 investor relations department, the customer who sent this letter also expressed her dissatisfaction
22 to Apple. That document indicates that Apple "advised updating to iOS 7 to resolve the issue."

23 106. Thus, rather than acknowledge to its customer base and the public in general that
24 it had intentionally broken FaceTime on iOS 6 and earlier operating systems to lower its costs,
25 Apple exploited the chaos it had created by herding its users to iOS 7 despite knowing that for
26 anybody with an iPhone 4 or an iPhone 4S, a transition to iOS 7 meant significant impairment of
27 the functionality and value of their device.

CLASS ACTION ALLEGATIONS

107. Plaintiff brings this action as a class action pursuant to Federal Rules of Civil Procedure 23(a) and 23(b) on behalf of themselves and all others similarly situated as members of the following class:

THE CLASS: All owners of Apple iPhone 4 or Apple iPhone 4S devices in the United States who on April 16, 2014, had the iOS 6 or earlier operating system on their iPhone 4 or iPhone 4S (the “Class”).

108. Subject to additional information obtained through further investigation, fact collection and discovery, the foregoing definition of the Class may be expanded or narrowed by further amendment. Specifically excluded from the proposed Class is Defendant Apple and any of its past, present or future officers, directors, trustees, agents, representatives, employees, principals, trusts, partners, joint ventures or controlled entities; any successors, assigns, heirs or other persons or entities related to or affiliated with Defendant Apple; the Judge assigned to this action; and any member of the Judge’s immediate family.

109. *Numerosity.* The members of the Class are so numerous as to render their individual joinder impracticable. Although the precise number of Class members is unknown, based upon information and belief Plaintiff alleges that the Class contains millions of members. The true number of Class members is known by Defendant, however, and, thus, may be notified of the pendency of this action through electronic mail, first class mail and/or by published notice.

110. *Existence and Predominance of Common Questions of Law and Fact.* Common questions of law and fact applicable to all members of the Class predominate over any questions affecting only individual Class members. These common legal and factual questions include, but are not limited to, the following:

- (a) Whether Apple caused FaceTime to stop working on Apple devices running on iOS 6 and earlier operating systems;
- (b) The manner in which Apple caused FaceTime to stop working on Apple devices running on iOS 6 and earlier operating systems ;

- 1 (c) Whether the FaceTime Break prevented Apple users with devices operating on
- 2 iOS 6 and earlier operating systems from using FaceTime without first
- 3 transitioning to iOS 7;
- 4 (d) Whether Apple committed trespass to chattels in connection with the
- 5 FaceTime Break;
- 6 (e) Whether Apple violated the UCL in connection with the FaceTime Break;
- 7 (f) Whether Plaintiff and the other members of the Class have sustained financial
- 8 loss, and the proper measure of any such financial loss; and
- 9 (g) Whether Plaintiff and the other members of the Class are entitled to damages,
- 10 and the proper measure of any such damages.

11 111. **Typicality.** Plaintiff’s claims are typical of those held by the other members of the
 12 Class in that through the implementation of the FaceTime Break, Defendant Apple caused
 13 FaceTime to stop working on each Class member’s iPhone 4 or iPhone 4S device.

14 112. **Adequacy of Representation.** Plaintiff will fairly and adequately protect the
 15 interests of the Class. Plaintiff has retained trial counsel highly experienced in complex litigation
 16 including complex consumer class action litigation, and Plaintiff intends to vigorously prosecute
 17 this action. Plaintiff has no interests in this action that are adverse or antagonistic to the interests
 18 of the Class.

19 113. **Superiority.** Class action litigation is superior to all other available means for the
 20 fair and efficient adjudication of this controversy. The damages, harm and financial detriment
 21 suffered by individual members of the Class are relatively minor compared to the burden and
 22 expense that would be entailed by individual prosecution of their claims against Defendant Apple.
 23 It would thus be practically impossible for the members of the Class, on an individualized basis,
 24 to effectively seek and obtain redress for the wrongs committed against them. In addition, even
 25 if the Class members could afford—and realistically would be willing—to pursue such
 26 individualized litigation, this Court likely could not reasonably sustain the imposition on
 27 resources that individualized litigation over this controversy would entail. Further, individualized

1 litigation would create the danger of inconsistent or contradictory judgments arising from the
2 identical factual predicate. Individualized litigation would also result in a substantial increase in
3 the time and expense required of the parties and the Court to address the issues raised by this
4 litigation. By contrast, litigation of the controversy outlined herein as a class action provides the
5 benefits of adjudication of these issues in a single, unitary proceeding, provides substantial
6 economies of scale, allows comprehensive supervision of the legal and factual issues raised herein
7 by a single court, and presents no unusual management difficulties under the circumstances
8 presented here.

9 114. Alternatively, the Class should be certified because:

- 10 (a) the prosecution of separate actions by individual members of the Class
11 would create a risk of inconsistent or varying judgments and adjudications
12 with respect to individual Class members that would establish
13 incompatible standards of conduct for Defendant;
- 14 (b) the prosecution of separate actions by individual members of the Class
15 would create a risk of adjudications with respect to them that would, as a
16 practical matter, be dispositive of the interests of other members of the
17 Class not party to those proceedings, and/or would substantially impair or
18 impede their ability to protect their interests; and/or
- 19 (c) Defendant has acted and/or refused to act on grounds generally applicable
20 to the Class, thereby making appropriate final declaratory and/or injunctive
21 relief with respect to the members of the Class as a whole.

22 115. The claims asserted herein are applicable to all consumers throughout the United
23 States who, as of April 16, 2014, possessed an iPhone 4 or iPhone 4S that was running on Apple's
24 iOS 6 or earlier operating system.

25 116. Adequate notice can be given to Class members directly using information
26 maintained in Defendant's records or, if necessary, through notice by publication.

1 117. Damages may be calculated from the claims data maintained in Defendant's
2 records, so that the cost of administering a recovery for the Class can be minimized. The precise
3 measure of damages available to Plaintiff and the Class, however, is not a barrier to class
4 certification.

5 **FIRST CAUSE OF ACTION**

6 **Trespass to Chattels Under California Law**

7 118. Plaintiff repeats and realleges each and every allegation above as if set forth in full
8 herein.

9 119. Plaintiff and the other Class members maintained actual or constructive possession
10 of their iPhone 4 or iPhone 4S devices during the time period of the FaceTime Break.

11 120. Defendant Apple intentionally interfered with Plaintiff's and the other Class
12 members' use of their iPhone 4 and iPhone 4S devices by implementing the FaceTime Break,
13 which caused FaceTime to cease to function on all such devices.

14 121. Plaintiff and the other Class members did not consent to this interference.

15 122. This interference was the actual and proximate cause of injury to Plaintiff and the
16 other Class members because it actually and substantially harmed the functioning of the devices
17 by preventing Plaintiff and the other Class members from using FaceTime on their devices. This
18 harm to the functioning of the devices significantly impaired the devices' condition, quality and
19 value.

20 123. Apple's interference was malicious and oppressive. Apple knew and intended that
21 its conduct would cause injury to Plaintiff. Apple acted despicably and with conscious disregard
22 of Plaintiff's rights.

23 124. As a result of Defendants' interference with their devices, Plaintiff and the other
24 members of the Class are entitled to recover the actual damages they suffered in an amount to be
25 determined at trial, as well as punitive damages in an amount to be determined at trial.

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SECOND CAUSE OF ACTION

**Violation of California’s Unfair Competition Law
California Business and Professions Code §17200, et seq.**

125. Plaintiff realleges and incorporates by reference each and every allegation above as if set forth in full herein.²⁷

126. The UCL prohibits “any unlawful, unfair or fraudulent business act or practice” Cal. Bus. & Prof. Code §17200. Defendant’s acts and practices were unfair in that (i) they were immoral, unethical, oppressive, unscrupulous, and substantially injurious to consumers; (ii) they harmed consumers in a manner far outweighing any legitimate utility of their conduct; (iii) the injury was not one that consumers reasonably could have avoided; and (iv) they were contrary to legislatively declared and public policy.

127. By intentionally orchestrating and implementing the FaceTime Break that took effect on April 16, 2014, Defendant prevented Plaintiff and other members of the Class from placing FaceTime calls on iOS 6 and earlier operating systems, and did so without any acceptable justification, whether business or otherwise. Defendant’s implementation of the FaceTime Break was unfair in that Defendant refused to take responsibility for intentionally breaking FaceTime for iOS 6 and earlier operating systems and the damages suffered thereby, or to provide any remedy for their injurious conduct other than for Plaintiff and the other members of the Class to take the precise action that the FaceTime Break was intended to coerce: forced migration of each Plaintiff and other Class member’s iPhone 4 or iPhone 4S device to iOS 7, regardless of the significant reduction in functionality that would result from doing so. This conduct by Defendant was substantially injurious to consumers, offended public policy, and was immoral, unethical, oppressive, and unscrupulous, and the gravity of the conduct substantially outweighed any alleged benefits attributable to such conduct.

128. As a direct and proximate result of Defendant’s unfair practices, Plaintiff and the

²⁷ For the avoidance of doubt, Plaintiff and the Class are not asserting any claims based on any alleged misrepresentations by Apple.

1 other members of the Class have suffered substantial injury in fact, money and/or property. The
2 injuries suffered by Plaintiff and the other members of the Class include, but are not limited to
3 diminution in the value of their personal property associated with the loss of FaceTime.

4 129. Defendant has thus engaged in unfair business acts and practices in violation of
5 Cal. Bus. & Prof. Code §17200, entitling Plaintiff and the other members of the Class to judgment
6 and relief against Defendant as set forth in the Prayer for Relief.

7
8 **PRAYER FOR RELIEF**

9 **WHEREFORE**, Plaintiff and the members of the Class pray for relief and
10 judgment against Defendant, as follows:

11 (a) For an order certifying the class and appointing Plaintiff as Class Representative
12 and her counsel as Class Counsel;

13 (b) For a judgment finding Defendant Apple liable for trespass to chattels;

14 (c) For a judgment finding that Defendant Apple violated the UCL by engaging in
15 unfair business acts and practices;

16 (d) For damages suffered by Plaintiff and the Class;

17 (e) For restitution to Plaintiff and the Class of all monies wrongfully obtained by
18 Defendant;

19 (f) For a judgment and order requiring Defendant Apple to pay to Plaintiff and the
20 Class the financial benefit received and unjustly retained by Defendant Apple as a result of the
21 FaceTime Break;

22 (g) For a judgment and order disgorging Apple of the financial benefit received and
23 unjustly retained by Defendant Apple as a result of the FaceTime Break and requiring payment
24 of the same to Plaintiff and the Class;

25 (h) For a ruling ordering Defendant Apple to pay punitive damages to Plaintiff and
26 the Class based upon the misconduct set forth herein;

- 1 (i) For a ruling awarding Plaintiff's reasonable attorneys' fees pursuant to, *inter alia*,
2 Cal. Code Civ. Proc. § 1021.5;
- 3 (j) For a ruling awarding Plaintiff's costs incurred; and
- 4 (k) For such other and further relief that the Court deems just and proper.

5

6 **JURY DEMAND**

7 Plaintiff demands a trial by jury on all claims so triable.

8

9 Dated: February 2, 2017

Respectfully Submitted,

10

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