

1 Todd C. Atkins (SBN 208879)
tatkins@atkinsdavidson.com
2 ATKINS & DAVIDSON, APC
2261 Rutherford Road
3 Carlsbad, CA 92008
Tel: 619.665.3476

4 Matthew M. Wawrzyn (*pro hac vice* pending)
5 matt@wawrzynlaw.com
WAWRZYN LLC
6 2700 Patriot Blvd, Suite 250
Glenview, IL 60026
7 Telephone: 847.656.5848

8 *Attorneys for Aftecmobile Inc.*

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10 **UNITED STATES DISTRICT COURT**
11 **NORTHERN DISTRICT OF CALIFORNIA**

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13 AFTECHMOBILE INC.,

14 Plaintiff,

15 v.

16 APPLE INC.,

17 Defendant.
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Case No. 4:19-cv-05902-JST

**AMENDED COMPLAINT FOR PATENT
INFRINGEMENT**

JURY TRIAL DEMANDED

Parties

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2 1. Plaintiff Aftechmobile Inc. (“Aftechmobile”), is a corporation organized under the
3 laws of Virginia with a principal place of business located in Ashburn, Virginia.

4 2. Defendant Apple Inc. is a corporation organized under the laws of California with
5 a principal place of business located in Cupertino, California.

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7 **Jurisdiction and Venue**

8 3. This action arises under the patent laws of the United States, 35 U.S.C. §§ 101 *et*
9 *seq.*

10 4. This Court has subject matter jurisdiction over this action under 28 U.S.C. §§ 1331
11 and 1338(a).

12 5. This Court may exercise personal jurisdiction over Apple. Apple conducts
13 continuous and systematic business in California and in this District. Apple’s principal place of
14 business is located in this District. These patent infringement claims arise directly from Apple’s
15 continuous and systematic activity in this District. In short, this Court’s exercise of jurisdiction
16 over Apple would be consistent with the California long-arm statute and traditional notions of fair
17 play and substantial justice.

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19 6. Venue is proper in this District pursuant to 28 U.S.C. § 1400(b).

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21 7. The patents-in-suit, U.S. Patent Nos. 10,133,558 (the “‘558 patent”) and 8,813,028
22 the “‘028 patent), claim patent-eligible subject matter. To begin with, the claims of the ‘558
23 patent and the ‘028 patent are directed to a computer product that allows a non-technical user to
24 create mobile software applications that are adaptable based on the user’s behavior and are
25 dynamically linked to a backend. The patents-in-suit identify five problems in the prior art and
26 the patent claims are directed to solving these five problems. First, mobile computer programs
27 taught in the prior art were inflexible, meaning that these programs and applications failed to
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1 efficiently work across a plurality of devices. (Declaration of Arshad Farooqi ¶ 3, Ex. A (“We
2 need a platform (mPass) to develop enterprise mobile apps that can be deployed across different
3 mobile platforms and also integrated with backend applications and third party APIs.”).)¹

4 8. Second, prior art applications were too expensive because the prior art could only
5 be developed and distributed by a limited number of individuals and businesses, who had
6 technical expertise in programing languages and other applicable areas of computer science. (*Id.* ¶
7 3, Ex. A (“In light of the complexity involved in building enterprise apps, we see a need for a
8 development framework to accelerate the overall time to development and deployment of these
9 apps.”) Third, the prior art was static: “Conventional mobile development platforms typically
10 allow users to develop mobile applications of a particular type that cannot be configured or
11 changed and therefore limit the development and utilization of various features and specific
12 functions included in mobile devices and their respective mobile operating systems.” (‘028, col.
13 1:55-60.) Fourth, the prior art was single-layer rather than hierarchical, lacking backend
14 integration that could be leveraged by the non-technical user. (Declaration of Arshad Farooqi ¶ 3,
15 Ex. A (“When writing apps for modern smartphones to connect to enterprise backend
16 applications, there are several areas of effort in building the full app. You need to connect to the
17 backend application, generally through some web service protocol. You need to retrieve the
18 payload data from that backend. The data needs to be parsed into a consumable form.”).)

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22 9. Fifth, the prior art failed to adapt to the context of the software’s use.

23 10. The patents-in-suit teach one of ordinary skill in the art precisely how to solve the
24 five problems present in the prior art. First, the software provided in the patents-in-suit is flexible
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27 ¹ The Farooqi declaration is attached as “Exhibit 1.”

1 and portable across a plurality of devices: “wherein said mobile application creation interface is
2 accessible at the user device via the network to download and deploy mobile apps in any mobile
3 interface, device or wearables” (‘028, col. 32:38-42 (Claim 1); *see also* ‘028, col. 7:29-41;
4 *id.*, col. 9:19-22; *id.*, col. 11:46-12:6; *id.*, col. 23:25-36; *id.*, col. 27-31-40.) The solution’s
5 flexibility is taught throughout the written description and the claims, and the examples quoted
6 and cited in this Amended Complaint are illustrative and non-exhaustive.

8 11. Second, the patents-in-suit teach a more “user friendly” mobile app creation
9 system that is cheaper and easier to deploy: “wherein said pre-coded software components are
10 fully developed applications that can be assembled to build apps in the mobile application
11 creation interface” (‘028, col. 32:35-38 (Claim 1); *see also* ‘028, col. 7:59-8:16; *id.*, col.
12 23:55-24:4; (Declaration of Arshad Farooqi ¶ 4, Ex. B (“Once users drag and drop the leads
13 object, the user should see a list of Leads (already created). Display lead names. On the header,
14 include + (to create) and search buttons.”).) The solution’s ease of use is taught throughout the
15 written description and the claims, and the examples quoted and cited in this Amended Complaint
16 are illustrative and non-exhaustive.

18 12. Third, the patents-in-suit teach a system of mobile app development that is more
19 dynamic and adaptable to the particular needs of an individual or business: “wherein said pre-
20 coded software components dynamically create multiple pages within said pre-coded software
21 components based on data a mapping defined by a user . . . dynamically mapping said data to be
22 rendered in said mobile application with one or more of a plurality of data sources . . . creating
23 one or more composite software components by combining more than one of distinct software
24 components selected from a plurality of component sources” (‘028, col. 32:47-65 (Claim 1);
25 (Declaration of Arshad Farooqi ¶ 5, Ex. C (“The same widget will show different data sets based
26 on the mapping. We can predefine biz rules such as users can select only from an existing
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1 customer types etc.”.) The solution’s dynamism is taught throughout the written description and
2 the claims, and the examples quoted and cited in this Amended Complaint are illustrative and
3 non-exhaustive.

4 13. Fourth, the patents-in-suit disclose a hierarchical array facilitated by integrated
5 backend databases: “adaptively configuring one or more application programming interfaces for a
6 backend integration of said mobile application with said user device” (‘028, col. 32:47-65
7 (Claim 1); *see also* ‘028, col. 23:46-24:4; (Declaration of Arshad Farooqi ¶ 5, *see generally* Ex.
8 C).) The solution’s hierarchical array is taught throughout the written description and the claims,
9 and the examples quoted and cited in this Amended Complaint are illustrative and non-
10 exhaustive.

11 14. Fifth, the claims and specification disclose a system that creates mobile apps that
12 learn based on the contextual behavior of the user: “generating one or more recommendations for
13 addition of one or more characteristic objects associated with said mobile application . . . based
14 on real time analysis and dynamic learning of selective data” (‘028, col. 33:11-16 (Claim 1);
15 (Declaration of Arshad Farooqi ¶ 5, *see generally* Ex. C).) The solution’s machine-learning
16 element is taught throughout the written description and the claims, and the examples quoted and
17 cited in this Amended Complaint are illustrative and non-exhaustive.

18 15. On June 19, 2014, the Supreme Court of the United States decided its seminal case
19 construing section 101 of the Patent Act, *Alice Corp. v. CLS Bank International*. Subsequently,
20 on August 19, 2014, the ‘028 patent issued. Later still, on November 20, 2018, the ‘558 patent
21 issued. The United States Patent Office did *not* reject any claims based on section 101 during the
22 prosecution of the ‘028 patent and the ‘558 patent.

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26 **Count 1 – Infringement of U.S. Patent No. 8,813,028**

27 16. Aftechmobile is the exclusive owner of United States Patent No. 8,813,028 (the
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1 “‘028 patent”).

2 17. The ‘028 patent is valid and enforceable.

3 18. Apple has and is directly infringing at least one of the 25 claims of the ‘028 patent.
4 Apple has made and sold and is making and selling the Shortcuts application, which, among other
5 things, practices claims of the ‘028 patent. Without limiting the claims that will be asserted or the
6 products that will be accused of infringement in this action, Apple infringes Claim 16 of the ‘028
7 patent by making and selling the Shortcuts application. Apple delivers the accused “Shortcuts”
8 service through software within the possession, custody, and control of Apple. To deliver the
9 “Shortcuts” service, Apple does *not* rely on hardware, software, or firmware within the
10 possession, custody, or control of Apple product users. As demonstrated below, the “Shortcuts”
11 software practices each step of the methods claimed in the ‘028 patent. As demonstrated below,
12 the “Shortcuts” software, hardware, firmware, all within the possession, custody, or control of
13 Apple, embodies each component of apparatuses and systems claimed in the ‘028 patent.
14 According to the End User License Agreement, Apple owns and controls the “Shortcuts” service
15 and application and associated software, granting a license to the software to the Apple device
16 user.
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19 19. Claim 16 provides, “A computer program product comprising a non-transitory
20 computer readable storage medium, said non-transitory computer readable storage medium
21 storing computer program codes that comprise instructions executable by at least one processor,
22 said computer program codes comprising: a first computer program code for dynamically
23 mapping data to be rendered in a mobile application with one or more of a plurality of data
24 sources” (‘028, col. 35:58-65.) The Shortcuts application is a computer program product
25 comprising a non-transitory computer readable storage medium. Shortcuts contains the “first
26 computer program code” of Claim 16, which maps data to be rendered in a mobile application
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1 with numerous data sources. For example, the “first computer program code” in Shortcuts
2 dynamically maps data to be rendered in the iPhone’s Calendar, Text, and Mail applications. The
3 mobile application illustrated here is called “Email Schedule to Yourself.” The data sources for
4 this application include the Calendar, Text, and Mail applications.

5
6 20. Claim 16 further provides, “a second computer program code for receiving a
7 selection of one of preconfigured user interfaces and a list of predefined user interfaces from a
8 user device via a network for launching a mobile application creation interface” (‘028, cols.
9 35:66-36:3.) The Shortcuts application includes a “Gallery,” which includes lists of preconfigured
10 user interfaces. From this list, a user may select an application called, “Email Schedule to
11 Yourself.”

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13 21. Claim 16 further provides, “a third computer program code for receiving an
14 indication of each of one or more of a plurality of pre-coded software components from said user
15 device via said network, wherein said pre-coded software components are fully developed
16 applications that can be assembled to build apps in the mobile application creation interface,
17 wherein said mobile application creation interface is accessible at the user device via the network
18 to download and deploy mobile apps in any mobile interface, device or wearables, wherein said
19 pre-coded software components are adaptable based on context and behavioral elements, wherein
20 said pre-coded software components comprise hierarchical layers of data, interactive elements
21 configured to enable interactions with said data, and predetermined criteria, and wherein said pre-
22 coded software components dynamically create multiple pages within said pre-coded software
23 components based on data and mapping defined by a user” (‘028, col. 36:4-22.) Shortcuts
24 includes pre-coded software components, including Calendar, Text, and Mail applications, all of
25 which are adaptive based on use and context and comprise hierarchical layers of data and are built
26 for user interaction with pre-determined criteria. For example, Calendar allows a user to schedule
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1 meetings, inviting attendees and setting agendas. Mail allows a user to send and receive messages
2 between and among individuals and organizations. In this way, Calendar and Mail dynamically
3 create multiple pages based on hierarchical layers of data and data mapping defined by the user.

4 22. Claim 16 further provides, “a fourth computer program code for creating one or
5 more composite software components by combining more than one of distinct software
6 components selected from a plurality of component sources and/or said pre-coded software
7 components” (‘028, col. 36:23-27.) Shortcuts includes this program code for creating
8 composite software components, such as “Email Schedule to Yourself.”
9

10 23. Claim 16 further provides, “a fifth computer program code for inserting one or
11 more of said each of said one or more of said pre-coded software components and said created
12 one or more composite software components into said launched mobile application creation
13 interface, wherein said inserting said one or more of said each of said one or more of said pre-
14 coded software components and said created one or more composite software components
15 comprises dragging and dropping said one or more of said each of said one or more of said pre-
16 coded software components and said created one or more composite software components into
17 said launched mobile application creation interface” (‘028, col. 36:28-41.) Shortcuts includes
18 an interface called, “Create Shortcut.” With this interface, a user drags and drops both pre-coded
19 software components and composite software components into the launched mobile application
20 creation interface.
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23 24. Claim 16 further provides, “a sixth computer program code for generating one or
24 more recommendations for addition of one or more characteristic objects associated with said
25 mobile application based on a real time analysis and dynamic learning of selective data of similar
26 mobile applications developed based on one or more of functionality, an industry, and a category
27 related to said mobile application” (‘028, col. 36:42-48.) Shortcuts includes this sixth
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1 on hardware, software, or firmware within the possession, custody, or control of Apple product
2 users. As demonstrated below, the “Shortcuts” software practices each step of the methods
3 claimed in the ‘558 patent. As demonstrated below, the “Shortcuts” software, hardware,
4 firmware, all within the possession, custody, or control of Apple, embodies each component of
5 apparatuses and systems claimed in the ‘558 patent. According to the End User License
6 Agreement, Apple owns and controls the “Shortcuts” service and application and associated
7 software, granting a license to the software to the Apple device user.
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9 28. Aftechmobile offered to sell the ‘558 patent to Apple. As part of this offer,
10 Aftechmobile shared with Apple both the ‘558 patent and the market that the ‘558 patent covers.
11 Based on this offer and the materials Aftechmobile shared with Apple, Apple gained knowledge
12 of the ‘558 patent, specific knowledge that the Shortcuts service is especially adapted to infringe
13 claims of the ‘558 patent, and a specific intent that sale of the Shortcuts service to Apple
14 customers would cause these Apple customers to infringe claims of the ‘558 patent.
15

16 29. Claim 5 of the ‘558 patent covers a method, which starts, “receiving a selection of
17 a plurality of pre-coded software components, wherein said pre-coded software components are
18 provided by a mobile application development software accessible from a user device via a
19 network, and wherein said pre-coded software components are fully developed mobile
20 applications executable by at least one processor” Apple states the following about
21 Shortcuts: “A search using the keyword *Convert* displays actions that perform conversion tasks.”
22 The “actions” displayed are “pre-coded software components” within the meaning of Claim 5.
23 (See Claim Chart attached as “Exhibit 2.”)
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25 30. Claim 5 continues, “creating a new mobile application by launching a mobile
26 application creation interface in said user device, wherein said creation of said new mobile
27 application comprises” This reference by Apple describes creating a new mobile application
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1 by launching a mobile application creation interface in said user device: “create a new, custom
2 shortcut using the Shortcuts app. . . .” Each function that the Shortcuts app supports is called an
3 “action” that Shortcuts uses to perform a task. (*Id.*)

4 31. Claim 5 includes, “inserting one or more of said pre-coded software components
5 into said launched mobile application creation interface; assembling said inserted one or more of
6 said pre-coded software components” Apple describes *inserting one or more of said pre-*
7 *coded software components into said launched mobile application creation interface* as “to add
8 an action to your shortcut, touch and hold an action in the list, then drag it to the position you
9 want in the shortcut editor.” Apple describes *assembling said inserted one or more of said pre-*
10 *coded software components* as “Repeat [drag and drop] for each action you want to add to your
11 custom shortcut.” (*Id.*)

12 32. Claim 5 continues, “using, by said mobile application development software, one
13 or more adaptively configured application programming interfaces for a backend integration of
14 said new mobile application with said user device for operating said new mobile application on
15 said user device” Apple describes “Share actions for launching content in another app . . .
16 For example . . . Open URLs also supports URL schemes provided by other apps you’ve
17 installed.” (*Id.*)

18 33. Claim 5 includes the step of “connecting, by said mobile application development
19 software, to a plurality of backend databases via said network for creating one or more enhanced
20 applications” Apple describes *connecting, by said mobile application development software,*
21 *to a plurality of backend databases via said network for creating one or more enhanced*
22 *applications* when Apple describes how the accused service includes the following functionality:
23 “You can use URL schemes in Shortcuts.” (*Id.*)

24 34. Claim 5: “providing, by said mobile application development software, direct
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1 access to one or more of web services or said one or more adaptively configured application
2 programming interfaces from a web address” Apple states, “You can take your shortcuts to a
3 whole new level by taking advantage of the power of web APIs (application programming
4 interfaces).” (*Id.*)

5
6 35. Claim 5 requires, “providing said new mobile application from said user device to
7 an application store for publishing and distribution, wherein other users can download said new
8 mobile application by accessing said application store directly from their user devices.” When
9 Apple states, “Open and browse the Gallery,” Apple describes *providing said new mobile*
10 *application from said user device to an application store for publishing and distribution, wherein*
11 *other users can download said new mobile application by accessing said application store*
12 *directly from their user devices.* (*Id.*)

13
14 36. Based on the allegations of paragraphs 28 through 35, Apple directly infringes
15 Claim 5 of the ‘558 patent. The Apple customer of the Shortcuts service also performs each step
16 of the Claim 5 method. Aftechmobile offered to sell the ‘558 patent to Apple. As part of this
17 offer, Aftechmobile shared with Apple both the ‘558 patent and the market that the ‘558 patent
18 covers. Based on this offer and the materials Aftechmobile shared with Apple, Apple gained
19 knowledge of the ‘558 patent, specific knowledge that the Shortcuts service is especially adapted
20 to infringe claims of the ‘558 patent, and a specific intent that sale of the Shortcuts service to
21 Apple customers would cause these Apple customers to infringe claims of the ‘558 patent. As
22 such, Apple contributorily infringes Claim 5 of the 558 patent, and Apple induces its customers to
23 infringe Claim 5 of the ‘558 patent.

24
25 **Prayer for Relief**

26 WHEREFORE, Aftechmobile prays for the following relief against Apple:

27 (a) Judgment that Apple has directly infringed the ‘028 patent and the ‘558 patent;
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- 1 (b) Judgment that Apple has indirectly infringed the '558 patent;
- 2 (c) A fair and reasonable royalty;
- 3 (d) Pre-judgment interest and post-judgment interest at the maximum rate allowed by
- 4 law;
- 5 (e) A post-judgment injunction; and
- 6 (f) Such other and further relief as the Court may deem just and proper.
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8 **Demand for Jury Trial**

9 Aftechmobile demands a trial by jury on all matters and issues triable by jury.

10
11 Date: January 29, 2020

/s/ Todd Atkins

Todd C. Atkins (SBN 208879)
tatkins@atkinsdavidson.com
ATKINS & DAVIDSON, APC
2261 Rutherford Road
Carlsbad, CA 92008
Tel: 619.665.3476

Matthew M. Wawrzyn (*pro hac vice* pending)
matt@wawrzynlaw.com
WAWRZYN LLC
2700 Patriot Blvd, Suite 250
Glenview, IL 60026
Telephone: 847.656.5848

Attorneys for Aftechmobile Inc.