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11 **UNITED STATES DISTRICT COURT**
12 **FOR THE CENTRAL DISTRICT OF CALIFORNIA**
13 **SOUTHERN DIVISION**

14
15 MICROPAIRING TECHNOLOGIES
16 LLC,
17 Plaintiff,
18 v.
19 MAZDA MOTOR OF AMERICA, INC.,
20 Defendant.

Case No.8:21-cv-00885 JVS(KESx)

**PLAINTIFF MICROPAIRING
TECHNOLOGIES LLC'S SECOND
AMENDED COMPLAINT FOR
PATENT INFRINGEMENT**

JURY TRIAL DEMANDED

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1 Plaintiff MicroPairing Technologies LLC (“MicroPairing”) files this Second
2 Amended Complaint (“SAC”) for patent infringement against Defendant Mazda
3 Motor of America, Inc. (“Mazda”) for infringement of U.S. Patent Nos. 6,778,073
4 (“the ’073 patent”), 7,793,136 (“the ’136 patent,”) 7,178,049 (the ’049 patent”),
5 8,020,028 (“the ’028 patent), and 8,006,117 (“the ’117 patent”), alleging as follows:

6 **THE PARTIES**

7 1. Plaintiff MicroPairing Technologies LLC is a Texas limited liability
8 company located in Plano, Texas.

9 2. Defendant Mazda Motor of America, Inc. is a California Corporation
10 with its principal place of business located at 200 Spectrum Center Drive, Suite 100,
11 Irvine, California 92618.

12 **JURISDICTION AND VENUE**

13 3. This action arises under the patent laws of the United States, 35 U.S.C. §
14 101, *et seq.* This Court’s jurisdiction over this action is proper under the above
15 statutes, including 35 U.S.C. § 271, *et seq.*, 28 U.S.C. § 1331 (federal question
16 jurisdiction), and 28 U.S.C. § 1338 (jurisdiction over patent actions).

17 4. This Court has personal jurisdiction over Mazda in accordance with due
18 process and/or the California Long Arm Statute because, among other things, Mazda
19 is a California corporation with its principal place of business in this District.

20 5. Further, this Court has personal jurisdiction over Mazda because it has
21 engaged, and continues to engage, in continuous, systematic, and substantial activities
22 within this state, including the substantial marketing and sale of products and services
23 within this state and this District. Indeed, this Court has personal jurisdiction over
24 Mazda because it has committed acts giving rise to MicroPairing’s claims for patent
25 infringement within and directed to this District, has derived substantial revenue from
26 its goods and services provided to individuals in this state and this District, and
27 maintains a regular and established place of business in this District, including its
28 principal place of business in Irvine.

1 10. The '049 patent is entitled, "Method for Multi-Tasking Multiple Java
2 Virtual Machines in a Secure Environment." The '049 patent lawfully issued on
3 February 13, 2007 and stems from U.S. Patent Application No. 10/132,886, which
4 was filed on April 24, 2002. A copy of the '049 patent is attached hereto as Ex. 3.

5 11. The '028 patent is entitled, "Application Management System for Mobile
6 Devices." The '028 patent lawfully issued on September 13, 2011 and stems from
7 U.S. Patent Application No. 10/132,886, which was filed on April 24, 2002. A copy of
8 the '028 patent is attached hereto as Ex. 4.

9 12. The '117 patent is entitled, "Method for Multi-Tasking Multiple Java
10 Virtual Machines in a Secure Environment." The '117 patent lawfully issued on
11 August 23, 2011 and stems from U.S. Patent Application No. 10/132,886, which was
12 filed on April 24, 2002. A copy of the '117 patent is attached hereto as Ex. 5.

13 13. MicroPairing is the owner of the patents-in-suit with all substantial
14 rights, including the exclusive right to enforce, sue, and recover damages for past and
15 future infringements.

16 14. MicroPairing's claims do not have damages limited by 35 U.S.C. 287.
17 MicroPairing is only seeking damages for: (1) infringements of claims of the '073 and
18 '136 patents accruing upon and after notice to Mazda; (2) infringement of method
19 claims of the '049 and '028 patents; and (3) infringement of claims of the '117 patent
20 accruing upon and after service via ECF of the First Amended Complaint (ECF 39).

21 15. The claims of the patents-in-suit are directed to patent eligible subject
22 matter under 35 U.S.C. § 101. They are not directed to any abstract idea, and the
23 technologies covered by the claims comprise vehicle systems and/or consist of
24 ordered combinations of features and functions that, at the time of invention, were not,
25 alone or in combination, well-understood, routine, or conventional.

26 16. The specification of the '073 patent discloses shortcomings in the prior
27 art and then explains, in detail, the technical way the claimed inventions resolve or
28 overcome those shortcomings. For example, the '073 patent explains that car audio

1 systems had a number of issues, including that: (1) “[a]ny other portable audio sources
2 brought into the car cannot use the car speakers or amplifier system;” (2) “in-dash
3 audio devices or portable audio devices brought into the car [] can disrupt the attention
4 of the car driver;” and (3) “[o]ther types of audio devices, such as cellular telephones,
5 are difficult to operate and hear while driving in a car.” Ex. 1 at 1:5-28. To solve
6 these problems, the ’073 patent discloses the following invention:

7 A vehicle audio system includes a wireless audio sensor configured to
8 wirelessly detect different portable audio sources brought into the vehicle.
9 Audio output devices are located in the vehicle for outputting audio signals
from the different audio sources. A processor selectively connects the
different audio sources to the different audio output devices.

10 *Id.* at 2:31-36.

11 17. The ’073 patent specification goes on to describe an “audio manager 14
12 [that] detects and communicates with the different wireless audio sources using any
13 one of a variety of wireless communication protocols, such as Bluetooth or IEEE
14 802.11.” *Id.* at 2:39-42. This audio manager also “detect[s] different portable audio
15 output devices and any audio output devices contained in the audio output device.”
16 *Id.* at 2:53-60. The audio manager further “displays the different audio output devices
17 on GUI 30.” *Id.* at 2:61-62. “[T]he audio manager 14 in block 42 monitors the area
18 around and inside the vehicle 12 for any audio sources or audio output devices that
19 may be transmitting a wireless signal. Any detected audio sources or audio output
20 devices are displayed on the GUI 30 in block 44. The data manager in block 46 then
21 determines what applications are associated with the different audio sources.” *Id.* at
22 3:25-32. To decide which applications to output to audio,

23
24 The data manager 14 in block 50 identifies any priorities and security
25 values associated with the identified audio applications. In block 52, the
26 data manager 14 identifies requests to output different ones of the audio
27 sources to different ones of the audio output devices. The selected audio
28 application may have a higher priority than the audio application that is
currently connected to the selected audio output device. If the priority of
the requesting audio application is the same or higher than the currently
connected audio application, then the audio manager 14 in block 56
replaces the audio application currently coupled to the audio output device
with the selected audio application. If the requesting audio application has

1 a lower priority than the audio application currently coupled to the audio
2 output device, then the audio manager in block 54 will not connect the new
3 audio application.

4 *Id.* at 3:36-53.

5 18. Solutions to the problems outlined in the '073 patent are, for example,
6 embodied in claim 10:

7 A vehicle audio system, comprising:

8 a wireless audio sensor configured to wirelessly detect different audio
9 sources brought into or next to a vehicle;

10 wireless audio output devices for outputting audio data having assigned
11 priority values; and

12 a processor for selectively connecting the different audio sources to the
13 audio output devices according to the assigned priority values for the audio
14 data.

15 *Id.* at claim 10. The wireless audio sources are connected selectively to differing
16 audio output devices according to the ***assigned priority values*** for the audio data. A
17 wireless audio sensor detects the different sources brought into the vehicle, and a
18 processor connects these sources to the output devices. This claim solves the issues
19 of: (1) other portable audio sources not being able to use the car speakers; (2) audio
20 devices potentially distracting the driver; and (3) other types of audio devices being
21 difficult to hear and operate while driving a car.

22 19. Mr. Steven Loudon has been retained on behalf of MicroPairing to
23 provide a declaration in connection with the instant litigation. *See* Declaration of
24 Steven Loudon in Support of Plaintiff's Second Amended Complaint for Patent
25 Infringement, ¶ 1 (hereinafter "Loudon Decl." attached as Exhibit 11). Mr. Loudon
26 has conducted a review of the '073 patent and provided opinions on the nature of the
27 claimed invention, the state of the prior art as of the filing date of the '073 patent,
28 improvements to the prior art provided by the claimed invention of the '073 patent and
disclosed in the specification, and benefits associated with the claimed invention.

Loudon Decl., ¶ 1.

1 20. In Mr. Loudon’s opinion, “the invention recited in claim 10 of the ’073
2 patent brings together numerous unconventional elements and steps previously
3 unknown in the field of audio output systems in automobiles.” Loudon Decl., ¶ 24.
4 According to Mr. Loudon, claim 10 of the ’073 patent “recites an unconventional
5 combination that was previously unheard of and that improves automotive audio
6 output systems, for example by overcoming several problems with prior technology
7 by reducing or eliminating the potential for driver distraction in switching audio
8 output sources and/or the potential for drivers to overlook or fail to perceive signals
9 from vehicular safety systems.” *Id.*

10 21. In Mr. Loudon’s opinion, claim 10 “relates to improved automotive audio
11 systems, and not to the abstract idea of selecting an audio source based on a priority of
12 the audio data, as Mazda suggests.” *Id.*, ¶ 26. According to Mr. Loudon, claim 10
13 “describes improved aspects of automotive audio systems that were unconventional at
14 the time of the filing of the application leading to the ’073 patent (*i.e.*, June 26,
15 2001).” *Id.* According to Mr. Loudon, as one example, “claim 10 includes ‘a wireless
16 audio sensor configured to wirelessly detect different audio source brought into or
17 next to a vehicle,’” and “[t]he specification of the ’073 patent further describes such
18 wireless audio sensors, indicating that ‘[a] processor in the audio manager 14 receives
19 communication data and audio data detected by the [wireless audio] sensor 28 and
20 then selectively connects different audio sources detected in the vehicle 12 to the
21 different audio output devices.’” *Id.* (citing ’073 patent, 2:18-22). As Mr. Loudon
22 indicates, “[i]n addition, the specification describes that ‘[t]he audio manager detects
23 and communicates with the different wireless audio sources using any one of a variety
24 of wireless communication protocols, such as Bluetooth or IEEE 802.11.’” *Id.* (citing
25 ’073 patent, 2:39-42). In Mr. Loudon’s opinion, “while such wireless audio sensors
26 are very prevalent in vehicles today, they were unconventional in vehicles in June
27 2001, either alone or in combination with the other features of claim 10 of the ’073
28

1 patent,” and “Mazda’s abstract idea assertion grossly oversimplifies the invention of
2 claim 10 by overlooking this unconventional element.” *Id.*

3 22. According to Mr. Loudon, as another example, “claim 10 recites
4 ‘wireless audio output devices for outputting audio data having assigned priority
5 values,’ as well as ‘a processor for selectively connecting the different audio sources
6 to the audio output devices according to the assigned priority values for the audio
7 data.’” *Id.*, ¶ 27. In Mr. Loudon’s opinion, “the use of assigned priority values in
8 wireless audio output devices in vehicle audio systems was also unconventional in
9 June 2001, either alone or in combination with the other features of claim 10 of the
10 ’073 patent.” *Id.* Similarly, according to Mr. Loudon, “the use of processors for
11 selectively connecting the different audio sources to the audio output devices
12 according to such assigned priority values was also unconventional in June 2001.” *Id.*
13 According to Mr. Loudon, “[w]hile Mazda’s characterization of claim 10
14 acknowledges that the claim recites using ‘assigned priority values,’ Mazda’s
15 characterization of claim 10 grossly oversimplifies the invention of the claim.” *Id.*
16 According to Mr. Loudon, under Mazda’s characterization, “such priority values are
17 merely subjective user preferences, and Mazda’s characterization ignores the
18 inventors’ description in claim 10 itself and in the specification.” *Id.*

19 23. In Mr. Loudon’s opinion, the language of claim 10 itself contradicts
20 Mazda’s characterization. *Id.*, ¶ 28. According to Mr. Loudon, claim 10 of the ’073
21 patent “expressly indicates that the ‘wireless audio output devices’ in the claimed
22 vehicle audio system have ‘assigned priority values.’” *Id.* According to Mr. Loudon,
23 “[s]uch assigned values differ significantly from the subjective user preferences to
24 which Mazda attempts to compare the claim.” *Id.* According to Mr. Loudon, “[t]hat
25 difference is further shown by the inventors’ description of the ‘assigned priority
26 values’ in the ’073 patent specification.” *Id.* According to Mr. Loudon, as one
27 example, “the specification describes that the audio manager in the vehicle audio
28 system ‘identifies any priorities and security values associated with the identified

1 audio applications’ and ‘identifies requests to output different ones of the audio
2 sources to different ones of the audio output devices.’” *Id.* (citing ’073 patent, 3:38-
3 42). According to Mr. Loudon, “[i]f the priority of the requesting audio application
4 is the same or higher than the currently connected audio application, then the audio
5 manager . . . replaces the audio application currently coupled to the audio output
6 device with the selected audio application.” *Id.* (citing ’073 patent, 3:45-49).
7 Conversely, according to Mr. Loudon, “[i]f the requesting audio application has a
8 lower priority than the audio application currently coupled to the audio output device,
9 then the audio manager . . . will not connect the new audio application.” *Id.* (citing
10 ’073 patent, 3:49:53).

11 24. In Mr. Loudon’s view, “[t]he ’073 patent specification provides several
12 practical examples of how these assigned priority values can be implemented in the
13 improved vehicle audio systems covered by the claims, including by claim 10.” *Id.*, ¶
14 29. According to Mr. Loudon, as one example, “the specification describes an
15 example where ‘an audio source that generates a collision warning signal may have a
16 high priority that can override lower audio applications, such as audio applications
17 that only play music.’” *Id.* (citing ’073 patent, 3:56-59). According to Mr. Loudon,
18 “[s]uch an example provides a crucial safety benefit for users of the improved vehicle
19 audio systems described and claimed in the ’073 patent,” at least because “[b]y having
20 the vehicle audio system use the assigned priority values to allow collision warning
21 signals to override, *e.g.*, music playback, the vehicle audio system enhances the
22 likelihood that a user will more immediately be alerted to the collision warning and
23 more likely be able to react to avoid a collision.” *Id.*

24 25. In addition, according to Mr. Loudon, “such an example of having the
25 vehicle audio system use the assigned priority values to allow collision warnings to
26 override, *e.g.*, music playback, the vehicle audio system eliminates the need for the
27 user to do so manually, as Mazda suggests the user could do in its abstract idea
28 formulation.” *Id.*, ¶ 30. According to Mr. Loudon, “Mazda’s proposed abstraction

1 actually highlights one of the technological problems (*i.e.*, overcoming the need to
2 manually switch audio sources) that the technological solution presented by claim 10
3 of the '073 patent solves.” *Id.* According to Mr. Loudon, “[t]he '073 patent itself
4 separately describes a user’s ability to manually perform such processes, in a manner
5 that does not rely upon the priority values recited in claim 10.” *Id.* (citing '073 patent,
6 3:4-14).

7 26. In Mr. Loudon’s opinion, “these elements of claim 10—not only
8 individually, but especially as a combination—demonstrate that claim 10 is directed to
9 an improved vehicle audio system with unconventional components (and an even
10 more unconventional combination of components), rather than to the abstract idea that
11 Mazda asserts.” *Id.*, ¶ 31.

12 27. Further, in Mr. Loudon’s opinion, “the vehicle audio system of claim 10
13 addresses the technological shortcomings of then-existing vehicle audio systems, in a
14 manner that (as the '073 patent itself describes) makes the claimed vehicle audio
15 systems a significant technological solution to this problem and make those claimed
16 systems an improvement over such existing systems in a variety of ways, including
17 improving the driver and vehicle occupants’ safety and enhancing the occupants’
18 entertainment experience.” *Id.*, ¶ 32. In Mr. Loudon’s opinion, “claim 10 recites a
19 specific technological improvement over prior systems, resulting in an improved
20 vehicle audio system.” *Id.*

21 28. According to Mr. Loudon, “[t]he specification of the '073 patent
22 specifically describes the problems with vehicle audio systems that existed as of June
23 2001, in a way that reinforces how the improved vehicle system recited in claim 10 is
24 unconventional and an improvement over prior art systems and techniques.” *Id.*, ¶ 33.
25 According to Mr. Loudon, “the Background section of the specification describes how
26 ‘[i]n-dash audio devices or portable audio devices brought into the car[] can disrupt
27 the attention of the car driver.’” *Id.* (citing '073 patent, 1:15-16). According to Mr.
28 Loudon, as one example, “the specification indicates that ‘if the audio system is being

1 played too loud, the car driver may not hear a siren or other outside noises,’ which can
2 contribute to possible accidents.” *Id.* (citing ’073 patent, 1:16-19). According to Mr.
3 Loudon, the ’073 patent similarly “describes how ‘audio devices, such as cellular
4 telephones, are difficult to operate and hear while driving a car,’ and how users
5 struggle to press buttons or and hear someone talking on the phone over other audio
6 sources in the car.” *Id.* (citing ’073 patent, 1:20-26).

7 29. According to Mr. Loudon, “[t]o address these shortcomings of existing
8 systems, the inventors of the ’073 patent invented improved vehicle audio systems,
9 including the system claimed in claim 10.” *Id.*, ¶ 34. According to Mr. Loudon,
10 “claim 10 recites elements (*i.e.*, ‘a wireless audio sensor configured to wirelessly
11 detect different audio sources brought into or next to a vehicle,’ ‘wireless audio output
12 devices for outputting audio data having assigned priority values,’ and ‘a processor for
13 selectively connecting the different audio sources to the audio output devices
14 according to the assigned priority values for the audio data’) that were not only
15 individually unconventional, but were even more unconventional as a combination.”
16 *Id.* According to Mr. Loudon, “[b]y utilizing wireless audio sensors to detect different
17 audio sources and allowing the vehicle’s audio system to communicate with such
18 devices wirelessly, the user (whether the driver or a passenger) is not constrained by
19 the audio output options provided by the car’s built-in equipment (*e.g.*, in-dash radio,
20 CD player, etc.) or hard-wired connections to external devices.” *Id.*

21 30. In addition, according to Mr. Loudon, “by including in the vehicle audio
22 system wireless audio output devices having assigned priority values, and in turn
23 having a processor use such assigned priority values to selectively connect audio
24 sources to the output devices according to such assigned priority, the driver is not
25 distracted by the process of manually changing audio sources, such as by tuning to
26 weather or traffic reports as contemplated by Mazda’s (oversimplifying) abstract idea
27 formulation.” *Id.*, ¶ 35.

28

1 31. According to Mr. Loudon, “one manner in which the ’073 patent
2 describes using the assigned priority values to replace the audio output source coupled
3 to the audio output device is when a collision warning system detects a collision
4 condition and requests to output a collision warning.” *Id.*, ¶ 36 (citing ’073 patent,
5 3:38-48, 4:51-58). According to Mr. Loudon, “[i]n that scenario, by replacing the
6 prior audio output (*e.g.*, music playback) with the collision warning audio greatly
7 enhances the user’s ability to promptly hear the warning and avoid the collision.” *Id.*
8 In contrast, as Mr. Loudon indicates, “in systems where there was no such override
9 (and the collision warning was either output simultaneously with the music playback,
10 or through a separate audio output device), the user may not hear the collision warning
11 (either as quickly, or at all) and may be more likely to have a collision.” *Id.*

12 32. In Mr. Loudon’s opinion, “each of the elements of claim 10 indicate[s]
13 how they accomplish their intended result, particularly when those claim elements are
14 properly understood in light of the ’073 patent specification.” *Id.*, ¶ 37. According to
15 Mr. Loudon, as one example, “claim 10’s wireless audio sensor ‘wirelessly detects
16 different portable audio sources brought into, or next to, the vehicle’ . . . , and then
17 ‘[a] processor in the audio manager 14 receives communication data and audio data
18 detected by the sensor 28 and then selectively connects different audio sources in the
19 vehicle 12 to the different audio output devices.’” *Id.* (citing ’073 patent, 2:11-12,
20 2:18-22).

21 33. According to Mr. Loudon, “the language of claim 10 (when properly
22 understood in light of the ’073 patent specification) describes how the claimed vehicle
23 audio system uses the assigned priority values of the wireless audio output devices to
24 allow a processor in the system to selectively connect audio sources to the audio
25 output devices in the system.” *Id.*, ¶ 38. According to Mr. Loudon, “[i]n one example
26 described in the ’073 patent, the audio output source is a collision warning system,
27 and when that collision warning system determines that a collision is possible and
28 requests to output a collision warning sound to the audio output devices, the processor

1 determines that the collision warning system has a higher priority value than the
2 existing music playback audio source and instead couples the collision warning
3 system to the audio output devices.” *Id.* (citing ’073 patent, 3:38-48; 4:51-58).

4 34. According to Mr. Loudon, “[i]n another example described in the
5 specification, ‘a car radio may be playing a new weather report from the car speakers,’
6 and ‘[a] user . . . may move a CD audio source over the vehicle speaker icons.’” *Id.*, ¶
7 39 (citing ’073 patent, 3:63-66). According to Mr. Loudon, “[i]n that scenario, the
8 system can determine that ‘the radio weather report contains a higher priority value
9 than a priority value associated with the music played over the portable CD player,’
10 and that the vehicle audio system can wait until after the weather report finishes to
11 play the CD player music over the vehicle’s speakers.” *Id.* (citing ’073 patent, 3:66-
12 4:10).

13 35. In Mr. Loudon’s opinion, “claim 10 therefore recites a specific
14 improvement over prior systems, resulting in an improved vehicle audio system and
15 its therefore patent-eligible.” *Id.*, ¶ 40.

16 36. In Mr. Loudon’s opinion, “other United States patent applications and
17 publications, that were filed years after the ’073 patent, further support [his] opinion
18 that the inventions claimed in the ’073 patent are not directed to ineligible subject
19 matter.” *Id.*, ¶ 41. For example, according to Mr. Loudon, U.S. Patent No. 8,275,307
20 (“the ’307 Qualcomm Patent”), attached as Exhibit B to Mr. Loudon’s declaration,
21 “recognized that in July 2006, five years after the ’073 patent was originally filed,
22 there still existed a need for an in-vehicle audio environment that would prioritize
23 communication channels and audio sources.” *Id.*, ¶ 42 (citing ’307 Qualcomm Patent,
24 1:5-2:40). According to Mr. Loudon, “the ’307 Qualcomm Patent recognized that
25 there may be multiple audio sources in a given vehicle and that this “cluttered audio
26 environment” presents numerous problems.” *Id.* (citing ’307 Qualcomm Patent, 2:3-
27 20).

1 37. According to Mr. Loudon, the '307 Qualcomm Patent indicates that “a
2 drive engaged in a cell phone conversation or listening to music may miss a
3 directional instruction from the vehicle navigation system,” and that “[i]n response,
4 the trucker can pause the conversation or reduce the volume of the radio, and request
5 that the directional instruction be repeated,” but that as a result “a real-time message
6 coming over the CB radio is simply lost.” *Id.*, ¶ 43 (citing '307 Qualcomm Patent,
7 2:4-11).

8 38. According to Mr. Loudon, “[t]he '307 Qualcomm Patent goes on to
9 indicate that at least one solution to this problem is to prioritize the audio sources.”
10 *Id.*, ¶ 44 (citing '307 Qualcomm Patent, 2:44-50, 2:60-3:2, 3:41-52).

11 39. According to Mr. Loudon, “[d]uring prosecution of the '307 Qualcomm
12 Patent, the United States Patent and Trademark Office (“PTO”) rejected the
13 Qualcomm patent claims at least three times based, at least in part, on the '073
14 patent’s prior publication U.S. Publication No. 2002/0196134 to Lutter, et al.” *Id.*, ¶
15 45.

16 40. According to Mr. Loudon, U.S. Patent No. 8,654,995 (“the '995 Patent”),
17 which is attached as Exhibit C to Mr. Loudon’s declaration, “recognized that in April
18 2007, nearly six years after the '073 patent was originally filed, there still existed a
19 need for an in-vehicle ‘audio control system that can manage and control multiple
20 audio sources.” *Id.*, ¶ 47 (citing '995 Patent, 1:32-35). According to Mr. Loudon,
21 “[a]s a technological solution to this technological problem, the '995 Patent indicates
22 that the audio sources may be prioritized.” *Id.* (citing '995 Patent, 3:50-65, 4:17-23).

23 41. As Mr. Loudon notes, “[d]uring prosecution of the '995 Patent, the PTO
24 rejected the '995 Patent claims at least five times based, at least in part, on the '073
25 patent.” *Id.*, ¶ 48.

26 42. In Mr. Loudon’s opinion, “years after the '073 patent was filed, others in
27 the art recognized that the technological problem of how to deal with multiple audio
28 sources in a vehicle still existed and that a technological solution (*e.g.*, using priorities

1 to determine which source to connect to an output at a given time) was needed.” *Id.*, ¶
2 49. According to Mr. Loudon, “[t]his further supports [his] opinion that the
3 inventions claimed in the ’073 patent are directed to patent eligible subject matter and
4 were not well-understood, routine, and conventional as of June 26, 2001, the date the
5 application that issued as the ’073 patent was filed.” *Id.*

6 43. The specification of the ’136 patent also discloses shortcomings in the
7 prior art and then explains, in detail, the technical way the claimed inventions resolve
8 or overcome those shortcomings. The specification of the ’136 patent discusses Java
9 virtual machines (JVMs), which make “it possible for Java application programs to be
10 built that can run on any platform without having to be rewritten or recompiled by the
11 programmer for each separate platform.” Ex. 2 at 1:27-34. The specification also
12 describes the Jini system, which “extends the Java application environment from a
13 single virtual machine to a network of machines. . . . The Jini infrastructure provides
14 mechanisms for devices, services, and users to join and detach from a network. Jini
15 systems are more dynamic than is currently possible in networked groups where
16 configuring a network is a centralized function done by hand.” *Id.* at 1:34-47.

17 44. “However, the Java/Jini approach is not without its disadvantages. Both
18 Java and Jini are free, open source applications. The Java application environment is
19 not designed for controlling messaging between different machines.” *Id.* at 1:48-51.
20 “For example, the Java application is not concerned about the protocols between
21 different hardware platforms. Jini has some built-in security that allows code to be
22 downloaded and run from different machines in confidence. However, this limited
23 security is insufficient for environments where it is necessary to further restrict code
24 sharing or operation sharing among selected devices in a secure embedded system.”
25 *Id.* at 1:51-58.

26 45. To solve these problems, the ’136 patent proposes a “Secure Real-time
27 Executive (SRE) 14 [which] provides an extension to the JVM 16 and allows Java to
28 run on different processors for real-time applications. The SRE 20 manages

1 messaging, security, critical data, file I/O multiprocessor task control and watchdog
2 tasks in the Java environment as described below.” *Id.* at 2:35-40. “For example, the
3 SRE 14 may prevent noncritical vehicle applications, such as audio control, from
4 being loaded onto processor 16.” *Id.* at 2:66-3:1.

5 46. The advantages of the invention of the ’136 patent are taught as follows:

6 The SRE 14 allows any variety of real-time, mission critical, nonreal-time
7 and nonmission critical Java applications to be loaded onto the
8 multiprocessor system 15. The SRE 14 then automatically manages the
9 different types of applications and messages to ensure that the critical
10 vehicle applications are not corrupted and processed with the necessary
11 priority. The SRE 14 is secure software that cannot be manipulated by
12 other Java applications.

13 The SRE 14 provides priority preemption on a message scale across the
14 entire system 15 and priority preemption on a task scale across the entire
15 system 15. So the SRE 14 controls how the JVMs 10 talk to each other and
16 controls how the JVMs 10 are started or initiated to perform tasks. The
17 SRE 14 allows programmers to write applications using Java in a safe and
18 secure real time environment. Thus, viruses can be prevented by SRE 14
19 from infiltrating the system 15.

20 *Id.* at 3:7-22.

21 47. An important aspect of the invention of the ’136 patent is the message
22 manager:

23 The message manager 50 determines the priority of sent and received
24 messages. If the data transmitted and received by the sensor fusion thread
25 76 is higher priority than other data transmitted and received on the
26 processor 84, then the sensor fusion data will be given priority over the
27 other data. The task manager 58 controls the priority that the sensor fusion
28 thread 76 is giving by processor 84. If the sensor fusion thread 76 has
higher priority than, for example, an audio application that is also being
run by processor 84, then the sensor fusion thread 76 will be performed
before the audio application.

Id. at 4:60-5:3.

48. Solutions to the problems outlined by the ’136 patent are embodied in,
for example, claim 31:

An apparatus, comprising:

a multiprocessor system configured to:

identify a new device that is not currently coupled to the multiprocessor
system;

- 1 detect a communication protocol used by the new device and connect the
- 2 new device to the multiprocessor system when signaling from the new
- 3 device conforms to a communication protocol used in the multiprocessor
- 4 system;
- 5 configure the new device into the multiprocessor system when a data
- 6 protocol operated by the new device conforms with a data protocol used in
- 7 the multiprocessor system;
- 8 display an image representing the new device on a graphical interface;
- 9 identify data codes in the signaling from the new device identifying an
- 10 application running on the new device, a data type used on the new device,
- 11 and a security level associated with data stored in the new device;
- 12 use the identified security level to prevent unauthorized data from being
- 13 loaded into the multiprocessor system;
- 14 identify a stored application in memory in the multiprocessor system that
- 15 uses the same data type used on the new device and download the stored
- 16 application from memory into a processor in the multiprocessor system;
- 17 display an image on the graphical user interface representing the stored
- 18 application loaded into the processor in the multiprocessor system; and
- 19 use the stored application to direct data exchanged with the portable device
- 20 to a selectable output or a selectable input identified on the graphical
- 21 interface.

22 *Id.* at claim 31.

23 49. The specification of the '049 patent also discloses shortcomings in the

24 prior art and then explains, in detail, the technical way the claimed inventions resolve

25 or overcome those shortcomings. For example, the specification of the '049 patent

26 discusses that:

27 A java application stack includes a Java layer 5 for running any one of

28 multiple different applications. In one example, the applications are related

to different vehicle operations such as Infrared (IR) and radar sensor

control and monitoring, vehicle brake control, vehicle audio and video

control, environmental control, driver assistance control, etc. A Java

Virtual Machine (JVM) layer 16 provides the hardware independent

platform for running the Java applications 5. A Jini layer 12 provides some

limited security for the Java applications that run on different machines.

However, the Jini layer 12 does not provide the necessary reconfiguration

and security management necessary for a distributed real-time

multiprocessor system.

1 Ex. 3 at 2:22-35. To resolve this issue, the '049 patent proposes:

2 A Secure Real-time Executive (SRE) 14 provides an extension to the JVM
3 16 and allows Java to run on different processors for real-time applications.
4 The SRE 20 manages messaging, security, critical data, file I/O
5 multiprocessor task control and watchdog tasks in the Java environment as
6 described below. The JVM 16, Jini 12 and SRE 14 can all be implemented
7 in the same JVM 10.

8 *Id.* at 2:36-42.

9 50. The '049 patent describes how this invention would apply to motor
10 vehicles:

11 The SRE 14 runs below the JVMs 10 in each processor and control tasks,
12 messaging, security, etc. For example, the Java application 26 controls
13 vehicle braking according to the sensor data collected by the sensor fusion
14 Java application 32. The SRE 14 in one example prevents unauthorized
15 data from being loaded into the processor 16 that runs brake control
16 application 26. The SRE 14 also prevents other Java applications that are
17 allowed to be loaded into processor 16 from disrupting critical braking
18 operations, or taking priority over the braking operations, performed by
19 Java application 26.

20 For example, the SRE 14 may prevent noncritical vehicle applications,
21 such as audio control, from being loaded onto processor 16. In another
22 example, noncritical operations, such as security control application 28,
23 are allowed to be loaded onto processor 16. However, the SRE 14 assigns
24 the security messages low priority values that will only be processed when
25 there are no braking tasks in application 26 that require processing by
26 processor 16.

27 *Id.* at 2:57-3:8.

28 51. Solutions to the problems outlined by the '049 patent are embodied, for
example, in claim 29:

A method for configuring real-time vehicle applications in a distributed
multi-processor system operating in a vehicle, comprising:

identifying vehicle applications running on different processors in the
multiprocessor system;

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- operating a task manager that obtains different data and state information associated with the different vehicle applications;
- operating a configuration manager that notifies the task manager upon detecting a failure running one of the identified vehicle applications in the multiprocessor system;
- using the task manager for automatically identifying another processor in the multiprocessor system for running the identified vehicle application and redirecting the vehicle application associated with the detected failure to the other identified processor in the vehicle;
- using the configuration manager to redirect the data and state information to the other identified processor in the vehicle after detecting the failure; and
- initiating the identified application in the identified other processor.

Id. at claim 29.

52. The specifications of the '028 patent and '117 patent also disclose shortcomings in the prior art and then explain, in detail, the technical way the claimed inventions resolve or overcome those shortcomings. For example, the specification of the '028 patent (which closely mirrors the '117 patent specification) discusses that Java and Jini work together to “extend[] the Java application environment from a single virtual machine to a network of machines. The Java application environment provides a good computing platform for distributed computing because both code and data can move from machine to machine. The Jini infrastructure provides mechanisms for devices, services, and users to join and detach from a network. Jini systems are more dynamic than is currently possible in networked groups where configuring a network is a centralized function done by hand.” Ex. 4 at 1:38-50.

53. However,

[T]he Java/Jini approach is not without its disadvantages. Both Java and Jini are free, open source applications. The Java application environment is not designed for controlling messaging between

1 different machines. For example, the Java application is not concerned
2 about the protocols between different hardware platforms. Jini has
3 some built-in security that allows code to be downloaded and run from
4 different machines in confidence. However, this limited security is
5 insufficient for environments where it is necessary to further restrict
code sharing or operation sharing among selected devices in a secure
embedded system.

6 *Id.* at 1:51-61.

7 54. The specifications of the '028 patent and '117 patent thus describe an
8 embodiment of the invention that solves the problem posed by the patents, as follows:
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10 A Secure Real-time Executive (SRE) 14 provides an extension to the JVM
11 16 and allows Java to run on different processors for real-time applications.
12 The SRE 20 manages messaging, security, critical data, file I/O
13 multiprocessor task control and watchdog tasks in the Java environment as
14 described below. The JVM 16, Jini 12 and SRE 14 can all be implemented
in the same JVM 10, However, for explanation purposes, the JVM 10 and
the SRE 14 will be shown as separate elements.

15 *Id.* at 2:39-47.

16 55. The patents also describe how this invention would apply to motor
17 vehicles:

18 The SRE 14 runs below the JVMs 10 in each processor and control tasks,
19 messaging, security, etc. For example, the Java application 26 controls
20 vehicle braking according to the sensor data collected by the sensor fusion
21 Java application 32. The SRE 14 in one example prevents unauthorized
22 data from being loaded into the processor 16 that runs brake control
23 application 26. The SRE 14 also prevents other Java applications that are
24 allowed to be loaded into processor 16 from disrupting critical braking
operations, or taking priority over the braking operations, performed by
Java application 26.

25 For example, the SRE 14 may prevent noncritical vehicle applications,
26 such as audio control, from being loaded onto processor 16. In another
27 example, noncritical operations, such as security control application 28,
28 are allowed to be loaded onto processor 16. However, the SRE 14 assigns
the security messages low priority values that will only be processed when

1 there are no braking tasks in application 26 that require processing by
2 processor 16.

3 *Id.* at 2:60-3:10.

4 56. Solutions to the problems outlined by the '028 patent are embodied, for
5 example, in claim 18:

6 A method for reconfiguring applications in a multiprocessor, comprising:

7 operating a wireless device manager in at least one processor in the
8 multiprocessor system, the wireless device manager configured to:

9 a. monitor for wireless signals from a new device not currently coupled to
10 the multiprocessor system, wherein the new device runs a first software
11 application that processes a first type of data; and

12 b. wirelessly connect the new device to the multiprocessor system;

13 operating a configuration manager in one of the multiple processors in the
14 multiprocessor system, the configuration manager configured to:

15 c. monitor operations of the multiple processors in the multiprocessor
16 system;

17 d. identify data codes in the wireless signals from the new device and use
18 the data codes to identify the first type of data processed by the first
19 software application running on the new device;

20 e. responsive to identifying the data codes from the new device, select a
21 second software application from among multiple different software
22 applications stored within memory in the multiprocessor system, wherein
23 the second software application is associated with the first type of data
24 processed by the new device and is not currently loaded into one of the
25 multiple processors in the multiprocessor system;

26 f. download a copy of the second software application selected from the
27 memory to one of the multiple processors in the multiprocessor system;

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- 1 g. reconfigure one of the multiple processors in the multiprocessor system
2 to run the second software application downloaded from the memory and
take over control and operation of the new device; and
- 3 h. process data from the new device with the second software application
4 operating in and controlled by the particular one of the multiple processors
5 in the multiprocessor system; and
- 6 i. operating a security manager configured to determine authority to access
7 at least some of the new devices, software applications or data used in the
8 multiprocessor system.

9 *Id.* at claim 18.

10 57. Solutions to the problems outlined by the '117 patent are embodied, for
11 example, in claim 1:

12 A computer system, comprising:
13 a memory;
14 a real-time operating system;
15 a user interface;
16 one or more processors in a processing system, wherein the processing
17 system is configured to:
18 operate a transceiver,
19 detect a new device within communication range of the transceiver,
20 detect a protocol used by the new device,
21 communicate with the new device in response to the detected
22 protocol conforming with a protocol used by the processing system;
23 an application management system configured to:
24 identify data parameters that include at least one of data codes, data
25 type and device ID associated with the new device,
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1 verify the new device data parameters as at least one of authorized
2 or unauthorized; and

3 responsive to verifying the data parameters as authorized, connect
4 to the new device, dynamically configure an application to process
5 the data types and launch the application in the processing system,
6 wherein the application in response to launching is configured to
take over control and operation of the new device including:

7 initiating transfer of data from the new device to the operating
8 system; and

9 initiate processing of the data received from the new device.
10

11 Ex. 5 at claim 1.

12 58. In essence, the patents-in-suit relate to novel and non-obvious inventions
13 in the field of in-vehicle device connectivity, specifically infotainment systems and
14 the AUTOSAR platform in cars and trucks.

15 **COUNT I**

16 **INFRINGEMENT OF U.S. PATENT NO. 6,778,073**

17 59. MicroPairing repeats and realleges each allegation above as if fully set
18 forth herein.

19 60. This cause of action arises under the patent laws of the United States, and
20 in particular, 35 U.S.C. §§ 271, *et seq.*

21 61. MicroPairing is the owner of the '073 patent with all substantial rights to
22 the '073 patent including the exclusive right to enforce, sue, and recover damages for
23 past and future infringements.

24 62. The '073 patent is valid and enforceable and was duly issued in full
25 compliance with Title 35 of the United States Code.

26 63. Attached hereto as Ex. 6, and incorporated herein by reference, is a claim
27 chart detailing how Mazda infringes the '073 patent.
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DIRECT INFRINGEMENT (35 U.S.C. § 271(a))

64. Mazda has directly infringed and continues to directly infringe one or more claims of the '073 patent in this District and elsewhere in California and the United States.

65. To this end, Mazda has infringed and continues to infringe, either by itself or via an agent, at least claim 10 of the '073 patent by, among other things, making, having made, offering to sell, selling, testing and/or using Mazda vehicles with infotainment systems.

DAMAGES

66. Mazda is liable for its infringements of the '073 patent pursuant to 35 U.S.C. § 271.

67. MicroPairing has been damaged as a result of Mazda's infringing conduct described in this Count. Mazda is, thus, liable to MicroPairing in an amount that adequately compensates it for Mazda's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

INFRINGEMENT OF U.S. PATENT NO. 7,793,136

68. MicroPairing repeats and realleges each allegation above as if fully set forth herein.

69. This cause of action arises under the patent laws of the United States, and in particular, 35 U.S.C. §§ 271, *et seq.*

70. MicroPairing is the owner of the '136 patent with all substantial rights to the '136 patent including the exclusive right to enforce, sue, and recover damages for past and future infringements.

71. The '136 patent is valid and enforceable and was duly issued in full compliance with Title 35 of the United States Code.

1 at least claims 18 and 31 of the '136 patent. Mazda knew or should have known that
2 its actions have induced, and continue to induce, such infringements.

3 78. Mazda specifically intends to induce infringement of the '136 patent by
4 instructing and encouraging its customers and end users to use Mazda vehicles in a
5 manner that infringes the '136 patent. For example, Mazda provides Mazda owners
6 and other users with user guides and other instructional materials on how to use
7 infotainment systems in a way that results in infringement of the '136 patent. *See*,
8 *e.g.*, 2020 Mazda CX-9 Owner's Manual
9 ([https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-](https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-owners-manual.pdf)
10 [owners-manual.pdf](https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-owners-manual.pdf)), which provides owners and other users with instructions on how
11 to use the infotainment system in a way that results in infringement of the '136 patent.

12 79. In the alternative to actual knowledge, Mazda was (and continues to be)
13 willfully blind to the fact that use of the Mazda vehicles with infotainment systems
14 infringe the '136 patent. Mazda was put on notice that use of Mazda vehicles infringe
15 the '136 patent through the independent notice and claim charts MicroPairing served,
16 as well as through the charts included with MicroPairing's Original Complaint, First
17 Amended Complaint, and this Second Amended Complaint. By receiving such notice
18 of infringement, Mazda obtained a subjective belief that there is a high probability that
19 use of the Mazda vehicles with infotainment systems infringe the '136 patent. Despite
20 being put on notice of infringement and provided with claim charts illustrating
21 infringement, Mazda has not taken any actions to avoid the conduct alleged to
22 infringe, has not responded to MicroPairing's notice letter to offer any assertion as to
23 why Mazda vehicles with infotainment systems do not infringe the '136 patent, and
24 has not sought to remedy its infringements by offering to take a license. Mazda's
25 failure to act reflects deliberate actions to avoid learning that the use of Mazda
26 vehicles with infotainment systems infringe the '136 patent and, more generally, a
27 policy of not earnestly reviewing the intellectual property of others.

28 **DAMAGES**

1 80. Mazda is liable for its infringements of the '136 patent pursuant to 35
2 U.S.C. § 271.

3 81. MicroPairing has been damaged as a result of Mazda's infringing
4 conduct described in this Count. Mazda is, thus, liable to MicroPairing in an amount
5 that adequately compensates it for Mazda's infringements, which, by law, cannot be
6 less than a reasonable royalty, together with interest and costs as fixed by this Court
7 under 35 U.S.C. § 284.

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9 **COUNT III**

10 **INFRINGEMENT OF U.S. PATENT NO. 7,178,049**

11 82. MicroPairing repeats and realleges each allegation above as if fully set
12 forth herein.

13 83. This cause of action arises under the patent laws of the United States, and
14 in particular, 35 U.S.C. §§ 271, *et seq.*

15 84. MicroPairing is the owner of the '049 patent with all substantial rights to
16 the '049 patent including the exclusive right to enforce, sue, and recover damages for
17 past and future infringements.

18 85. The '049 patent is valid and enforceable and was duly issued in full
19 compliance with Title 35 of the United States Code.

20 86. Attached hereto as Ex. 8, and incorporated herein by reference, is a claim
21 chart detailing how Mazda infringes the '049 patent.

22 **DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

23 87. Mazda has directly infringed and continues to directly infringe one or
24 more claims of the '049 patent in this District and elsewhere in California and the
25 United States.

26 88. To this end, Mazda has infringed and continues to infringe, either by
27 itself or via an agent, at least claims 29 – 31 of the '049 patent by, among other things,
28 developing and implementing in Mazda vehicles software implementing the

1 AUTOSAR platform. Through its development and implementation of such software,
2 Mazda directs and controls the Mazda vehicles' performance of the steps of the
3 claimed methods, as Mazda provides software that is not accessible to end users and
4 automatically performs the steps of the claimed methods through normal operation of
5 the vehicle with the implemented software without action by the user.

6 89. Further, Mazda conditions receipt of various benefits upon performance
7 of the patented methods (e.g., by providing users and passengers with redundant
8 and/or fault tolerant safety and control systems to provide improved vehicle safety and
9 reliability through the implementation of the AUTOSAR platform, as well as by
10 providing manufacturer warranties conditioned upon operation of the vehicle without
11 modification of the software).

12 90. In addition, by implementing in Mazda vehicles software implementing
13 the AUTOSAR platform in a manner in which the end user does not control
14 performance of one or more steps of the claimed methods, Mazda establishes and
15 controls the manner and/or timing of the performance of such method steps. Indeed,
16 Mazda publicly indicates that the software in its vehicles (including the software
17 implementing the AUTOSAR platform) is owned and controlled by Mazda. *See, e.g.*,
18 <https://www.mazdausa.com/site/terms-of-use-connectedservices>,
19 <https://www.mazdausa.com/site/privacy-connectedservices>.

20 91. In addition, at least for Mazda vehicles that Mazda leases to end users, on
21 information and belief Mazda retains title to and ownership and control over such
22 Mazda vehicles.

23 92. As discussed above, Mazda does more than merely sell a product with
24 software that performs the claimed methods. Rather, Mazda exercises control over the
25 equipment and software that performs the method claimed in at least claims 29-31 of
26 the '049 patent.

27 93. In addition or in the alternative, Mazda has infringed and continues to
28 infringe, either by itself or via an agent, at least claims 29-31 of the '049 patent by,

1 among other things, testing and using Mazda vehicles that operate on the AUTOSAR
2 platform. For example, on information and belief, Mazda, either by itself or via an
3 agent, conducts testing on and/or uses Mazda vehicles that operate on the AUTOSAR
4 platform as part of its research and development, manufacturing, and/or quality
5 control processes. Further, on information and belief, Mazda, either by itself or via an
6 agent, conducts testing on and/or uses Mazda vehicles that operate on the AUTOSAR
7 platform in connection with public demonstrations, automotive shows, trade shows,
8 and dealership test drives with customers.

9 **INDIRECT INFRINGEMENT (INDUCEMENT – 35 U.S.C. § 271(b))**

10 94. In addition and/or in the alternative to its direct infringement, Mazda has
11 indirectly infringed and continues to indirectly infringe one or more claims of the '049
12 patent by inducing direct infringement by its Mazda vehicle customers and end users.

13 95. Mazda has knowledge of the '049 patent, its infringements, and the
14 infringements of its customers and end users based, at least, on independent notice
15 served on Mazda via Federal Express (complete with claim charts) and on Mazda's
16 receipt of the Original Complaint, First Amended Complaint, and this Second
17 Amended Complaint in this action.

18 96. Despite having knowledge that use of the Mazda vehicles with
19 infotainment systems and that operate on the AUTOSAR platform infringe the '049
20 patent (which knowledge of infringement Mazda obtained at least through the
21 independent notice and claim charts MicroPairing served, as well as through the charts
22 included with MicroPairing's Original Complaint, First Amended Complaint, and this
23 Second Amended Complaint), Mazda has specifically intended, and continues to
24 specifically intend, for persons who acquire and use such vehicles, including Mazda's
25 customers and end users, to use the vehicles in a way that results in infringement of
26 the '049 patent, including at least claims 29 – 31. Mazda's ongoing actions represent
27 a specific intent to induce infringement of at least claims 29 – 31 of the '049 patent.
28

1 Mazda knew or should have known that its actions have induced, and continue to
2 induce, such infringements.

3 97. Mazda specifically intends to induce infringement of the '049 patent by
4 instructing and encouraging its customers and end users to use their Mazda vehicles in
5 a manner that infringes the '049 patent. For example, Mazda provides Mazda owners
6 and other users with user guides and other instructional materials on how to use the
7 infotainment system and vehicle safety features that implicate the AUTOSAR
8 platform in a way that results in infringement of the '049 patent. *See, e.g.*, 2020
9 Mazda CX-9 Owner's Manual ([https://www.mazdausa.com/siteassets/pdf/owners-
10 optimized/2021/cx-9/2021-cx-9-owners-manual.pdf](https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-owners-manual.pdf)), which provides owners and
11 users with instructions on how to use the vehicle safety features that implicate the
12 AUTOSAR platform in a way that results in infringement of the '049 patent. Mazda
13 also provides in its vehicles' computer programs (i.e., instructions) that cause
14 performance of claimed methods.

15 98. In the alternative to actual knowledge, Mazda was (and continues to be)
16 willfully blind to the fact that use of the Mazda vehicles that operate on the
17 AUTOSAR platform infringe the '049 patent. Mazda was put on notice that use of
18 Mazda vehicles infringe the '049 patent through the independent notice and claim
19 charts MicroPairing served, as well as through the charts included with MicroPairing's
20 Original Complaint, First Amended Complaint, and this Second Amended Complaint.
21 By receiving such notice of infringement, Mazda obtained a subjective belief that
22 there is a high probability that use of the Mazda vehicles that operate on the
23 AUTOSAR platform infringe the '049 patent. Despite being put on notice of
24 infringement and provided with claim charts illustrating infringement, Mazda has not
25 taken any actions to avoid the conduct alleged to infringe, has not responded to
26 MicroPairing's notice letter to offer any assertion as to why Mazda vehicles that
27 operate on the AUTOSAR platform do not infringe the '049 patent, and has not
28 sought to remedy its infringements by offering to take a license. Mazda's failure to

1 act reflects deliberate actions to avoid learning that the use of Mazda vehicles that
2 operate on the AUTOSAR platform infringe the '049 patent and, more generally, a
3 policy of not earnestly reviewing the intellectual property of others.

4 **DAMAGES**

5 99. Mazda is liable for its infringements of the '049 patent pursuant to 35
6 U.S.C. § 271.

7 100. MicroPairing has been damaged as a result of Mazda's infringing
8 conduct described in this Count. Mazda is, thus, liable to MicroPairing in an amount
9 that adequately compensates it for Mazda's infringements, which, by law, cannot be
10 less than a reasonable royalty, together with interest and costs as fixed by this Court
11 under 35 U.S.C. § 284.

12 **COUNT IV**

13 **INFRINGEMENT OF U.S. PATENT NO. 8,020,028**

14 101. MicroPairing repeats and realleges each allegation above as if fully set
15 forth herein.

16 102. This cause of action arises under the patent laws of the United States, and
17 in particular, 35 U.S.C. §§ 271, et seq.

18 103. MicroPairing is the owner of the '028 patent with all substantial rights to
19 the '028 patent including the exclusive right to enforce, sue, and recover damages for
20 past and future infringements.

21 104. The '028 patent is valid and enforceable and was duly issued in full
22 compliance with Title 35 of the United States Code.

23 105. Attached hereto as Ex. 9, and incorporated herein by reference, is a claim
24 chart detailing how Mazda infringes the '028 patent.

25 **DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

26 106. Mazda has directly infringed and continues to directly infringe one or
27 more claims of the '028 patent in this District and elsewhere in California and the
28 United States.

1 107. To this end, Mazda has infringed and continues to infringe, either by
2 itself or via an agent, at least claim 18 of the '028 patent by, among other things,
3 developing and implementing infotainment systems and associated software in Mazda
4 vehicles. Through its development and implementation of such infotainment systems,
5 Mazda directs and controls the Mazda vehicles' performance of the steps of the
6 claimed methods, as Mazda provides software that is not accessible to end users and
7 automatically performs the steps of the claimed methods through normal operation of
8 the vehicle with the implemented infotainment system and associated software
9 without action by the user.

10 108. Further, Mazda conditions receipt of various benefits upon performance
11 of the patented methods (e.g., by providing users and passengers with seamless
12 integration of key infotainment system functionality consistent with consumer
13 expectations through the implementation of the implementation of the infotainment
14 systems and associated software, as well as by providing manufacturer warranties
15 conditioned upon operation of the vehicle without modification of the infotainment
16 system or software).

17 109. In addition, by implementing in Mazda vehicles infotainment systems in
18 a manner in which the end user does not control performance of one or more steps of
19 the claimed methods, Mazda establishes and controls the manner and/or timing of the
20 performance of such method steps. Indeed, Mazda publicly indicates that the software
21 in its vehicles (including the software implementing the AUTOSAR platform) is
22 owned and controlled by Mazda. *See, e.g.,* [https://www.mazdausa.com/site/terms-of-](https://www.mazdausa.com/site/terms-of-use-connectedservices)
23 [use-connectedservices](https://www.mazdausa.com/site/terms-of-use-connectedservices), <https://www.mazdausa.com/site/privacy-connectedservices>.

24 110. In addition, at least for Mazda vehicles that Mazda leases to end users, on
25 information and belief Mazda retains title to and ownership and control over such
26 Mazda vehicles.

27 111. As discussed above, Mazda does more than merely sell a product with
28 software that performs the claimed methods. Rather, Mazda exercises control over the

1 equipment and software that performs the method claimed in at least claim 18 of the
2 '028 patent.

3 112. In addition or in the alternative, Mazda has infringed and continues to
4 infringe, either by itself or via an agent, at least claim 18 of the '028 patent by, among
5 other things, testing and using Mazda vehicles with infotainment systems. For
6 example, on information and belief, Mazda, either by itself or via an agent, conducts
7 testing on and/or uses Mazda vehicles with infotainment systems as part of its
8 research and development, manufacturing, and/or quality control processes. Further,
9 on information and belief, Mazda, either by itself or via an agent, conducts testing on
10 and/or uses Mazda vehicles with infotainment systems in connection with public
11 demonstrations, automotive shows, trade shows, and dealership test drives with
12 customers.

13 **INDIRECT INFRINGEMENT (INDUCEMENT – 35 U.S.C. § 271(b))**

14 113. In addition and/or in the alternative to its direct infringement, Mazda has
15 indirectly infringed and continues to indirectly infringe one or more claims of the '028
16 patent by inducing direct infringement by its Mazda vehicle customers and end users.

17 114. Mazda has knowledge of the '028 patent, its infringements, and the
18 infringements of its customers and end users based, at least, on Mazda's receipt of the
19 First Amended Complaint and of this Second Amended Complaint via service by
20 Notice of Electronic Filing, which constitutes service under the Local Rules of this
21 Court.

22 115. Despite having knowledge that use of the Mazda vehicles with
23 infotainment systems and that employ infotainment systems infringe the '028 patent
24 (which knowledge of infringement Mazda obtained at least through the claim charts
25 included with MicroPairing's First Amended Complaint and this Second Amended
26 Complaint), Mazda has specifically intended, and continues to specifically intend, for
27 persons who acquire and use such vehicles, including Mazda's customers and end
28 users, to use the vehicles in a way that results in infringement of the '028 patent,

1 including at least claim 18. Mazda's ongoing actions represent a specific intent to
2 induce infringement of at least claim 18 of the '028 patent. Mazda knew or should
3 have known that its actions have induced, and continue to induce, such infringements.

4 116. Mazda specifically intends to induce infringement of the '028 patent by
5 instructing and encouraging its customers and end users to use their Mazda vehicles in
6 a manner that infringes the '028 patent. For example, Mazda provides Mazda owners
7 and other users with user guides and other instructional materials on how to use the
8 infotainment system in a way that results in infringement of the '028 patent. *See, e.g.*,
9 2020 Mazda CX-9 Owner's Manual
10 ([https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-](https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-owners-manual.pdf)
11 [owners-manual.pdf](https://www.mazdausa.com/siteassets/pdf/owners-optimized/2021/cx-9/2021-cx-9-owners-manual.pdf)), which provides owners and users with instructions on how to use
12 the infotainment system in a way that results in infringement of the '028 patent.
13 Mazda also provides in its vehicles computer programs (i.e., instructions) that cause
14 performance of claimed methods.

15 117. In the alternative to actual knowledge, Mazda was (and continues to be)
16 willfully blind to the fact that use of the Mazda vehicles with infotainment systems
17 infringe the '028 patent. Mazda was put on notice that use of Mazda vehicles infringe
18 the '136 patent through the claim charts included with MicroPairing's First Amended
19 Complaint and this Second Amended Complaint. By receiving such notice of
20 infringement, Mazda obtained a subjective belief that there is a high probability that
21 use of the Mazda vehicles with infotainment systems infringe the '028 patent. Despite
22 being put on notice of infringement and provided with claim charts illustrating
23 infringement, Mazda has not taken any actions to avoid the conduct alleged to
24 infringe, has not responded to MicroPairing's complaint or claim charts to offer any
25 assertion as to why Mazda vehicles with infotainment systems do not infringe the '028
26 patent, and has not sought to remedy its infringements by offering to take a license.
27 Mazda's failure to act reflects deliberate actions to avoid learning that the use of
28

1 Mazda vehicles with infotainment systems infringe the '028 patent and, more
2 generally, a policy of not earnestly reviewing the intellectual property of others.

3 **DAMAGES**

4 118. Mazda is liable for its infringements of the '028 patent pursuant to 35
5 U.S.C. § 271.

6 119. MicroPairing has been damaged as a result of Mazda's infringing
7 conduct described in this Count. Mazda is, thus, liable to MicroPairing in an amount
8 that adequately compensates it for Mazda's infringements, which, by law, cannot be
9 less than a reasonable royalty, together with interest and costs as fixed by this Court
10 under 35 U.S.C. § 284.

11 **COUNT V**

12 **INFRINGEMENT OF U.S. PATENT NO. 8,006,117**

13 120. MicroPairing repeats and realleges each allegation above as if fully set
14 forth herein.

15 121. This cause of action arises under the patent laws of the United States, and
16 in particular, 35 U.S.C. §§ 271, et seq.

17 122. MicroPairing is the owner of the '117 patent with all substantial rights to
18 the '117 patent including the exclusive right to enforce, sue, and recover damages for
19 past and future infringements.

20 123. The '117 patent is valid and enforceable and was duly issued in full
21 compliance with Title 35 of the United States Code.

22 124. Attached hereto as Ex. 10, and incorporated herein by reference, is a
23 claim chart detailing how Mazda infringes the '117 patent.

24 **DIRECT INFRINGEMENT (35 U.S.C. § 271(a))**

25 125. Mazda has directly infringed and continues to directly infringe one or
26 more claims of the '117 patent in this District and elsewhere in California and the
27 United States.

28

1 G. Judgment and Order that the Court find this case exceptional under the
2 provisions of 35 U.S.C. § 285; and

3 H. Such other and further relief as the Court may deem just and proper.

4 **DEMAND FOR JURY TRIAL**

5 Pursuant to Federal Rule of Civil Procedure 38(b), MicroPairing demands a
6 trial by jury on all issues triable by jury.

7
8 DATED: September 28, 2021 Respectfully submitted,

9
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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing document was filed electronically via the CM/ECF System on September 28, 2021. This filing will generate a Notice of Electronic filing (“NEF”) which will be sent to all counsel of record in this case. Under Local Rule 5-3.2.1, this NEF constitutes service pursuant to the Federal Rules of Civil Procedure.

/s/ Ryan E. Hatch