UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
MIDLAND-ODESSA DIVISION

RESONANT SYSTEMS, INC. d/b/a RevelHMI, *Plaintiff*, v. APPLE INC., *Defendant*.	Case No. 7:23-cv-00077-DC JURY TRIAL DEMANDED

DEFENDANT APPLE INC.'S PROPOSED CLAIM CONSTRUCTIONS

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Pursuant to the Court's December 20, 2023, Scheduling Order, Dkt. No. 40, Defendant Apple Inc. ("Apple") hereby proposes the following constructions for terms, phrases, and/or clauses from United States Patent Nos. 8,093,767 (the "'767 patent"), 8,860,337 (the "'337 patent"), 9,941,830 (the "'830 patent") and 11,152,882 (the "'882 patent") (collectively, the "Patents-in-Suit"). Unless otherwise indicated below, any occurrence of a listed claim term, phrase, and/or clause is intended to receive the same construction across all Patents-in-Suit for which the listed term, phrase, and/or construction is proposed for construction.

Apple reserves the right to modify, supplement, or amend the proposed constructions for the claim terms, phrases, and/or clauses set forth below. Additionally, Apple reserves the right to request separately the construction of portions of the identified claim terms, phrases, and/or clauses.

Apple further reserves all rights to assert that terms, phrases, and/or clauses in the Patents-in-Suit are invalid under 35 U.S.C. § 112, other than as indefinite, including without limitation the terms, phrases, and/or clauses listed herein and/or the terms, phrases and/or clauses listed in Apple's Preliminary Invalidity Contentions and any supplements thereto.

This list is preliminary, and Apple reserves the right to add, delete, and/or amend proposed constructions for claim terms, phrases, and/or clauses from the list based on, without limitation, the construction(s) propounded by Plaintiff Resonant Systems, Inc. d/b/a RevelHMI ("Resonant") or any information learned throughout the course of the claim construction process. Apple reserves the right to include Resonant's proposed claim terms, phrases, and/or clauses in its list.

To the extent the claim terms, phrases, and/or clauses set forth below include terms, phrases, and/or clauses appropriate to be construed separately, such terms, phrases, and/or clauses are deemed part of this disclosed list. Similarly, to the extent it is appropriate to construe terms,

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phrases, and/or clauses listed below in the context of additional claim language, such additional language is deemed part of this disclosure.

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
1.	*Preambles*: "linear resonant vibration module"; "linear vibration module"; "vibration module"; "oscillating resonant module[s]"	'767 patent, claim 1; '337 patent, claims 1, 2, 4; '830 patent, claims 1, 19, 20; '882 patent, claims 1, 10	Limiting
2a.	"a control component that includes a microprocessor and that controls supply of power from the power supply to the driving component to cause the moveable component to linearly oscillate, the control component including, in addition to the microprocessor, a control program, stored in one of a separated electronic memory or within the processor, that is executed by the microprocessor to control operation of the linear resonant	'767 patent, claim 1	Subject to 35 U.S.C. 112 ¶ 6 Function: controlling supply of power from the power supply to the driving component to cause the movable component to linearly oscillate; controlling operation of the linear resonant vibration module; receiving output signals from sensors within the linear resonant vibration module during operation of the linear resonant vibration module; and adjusting one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of linear resonant vibration module produces desired outputs from the one or more sensors corresponding to one or more operational control parameters Structure: a microprocessor; a switch that receives a directional signal d from the processor and that selects a corresponding direction of the two opposite directions in which the driving component drives the moveable component; a control program, stored in one of a separated electronic memory or within the processor, that is executed by the microprocessor wherein the control program performs the algorithm shown in Figs. 7A–C and described at 6:15–8:3; and equivalents thereof

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
	vibration module, and a switch that receives a directional signal d from the processor and that selects a corresponding direction of the two opposite directions in which the driving component drives the moveable component, the control component receiving output signals from sensors within the linear resonant vibration module during operation of the linear resonant vibration module and adjusting one or more operational control outputs of the control component according to the received output signals from the sensors in order that subsequent operation of linear resonant vibration module produces desired outputs from the one or more		

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
	sensors corresponding to one or more operational control parameters”		
2b.	“a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude [that are independently] specified by user input received from the user-input features [wherein the control component drives simultaneous oscillation of the moveable component at two or more frequencies to generate complex vibration modes.]”	’337 patent, claims 1, 2, 4	<u>Claims 1, 4</u> Subject to 35 U.S.C. 112 ¶ 6 Function: controlling supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude [that are independently] specified by user input received from the user-input features Structure: the switches shown in Figures 5A–6 and described at 5:45–65, 6:2–8 with either (i) the oscillator circuit described at 11:43–12:5 or (ii) the processor/microprocessor/ microcontroller/CPU that performs the algorithm shown in Figures 7A–C and described at 6:43–8:30 and 13:3–41; and equivalents thereof <u>Claim 2</u> Subject to 35 U.S.C. 112 ¶ 6 Function: controlling supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by user input received from the user-input features; driving simultaneous oscillation of the movable component at two or more frequencies to generate complex vibration modes Structure: the switches shown in Figures 5A–6 and described at 5:45–65, 6:2–8 with the processor/microprocessor/microcontroller/ CPU that performs the algorithm shown in Figures 7A–C and described at 6:43–8:30; and 13:3–41; and equivalents thereof

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
2c.	"a control component that controls supply of power from the power supply to the driving component to cause the moveable component to oscillate at a frequency and an amplitude specified by one or more stored values [wherein the control component drives simultaneous oscillation of the moveable component at two or more frequencies to generate complex vibration modes.]"	'830 patent, claims 1, 19, 20	Subject to 35 U.S.C. 112 ¶ 6 Function: controlling supply of power from the power supply to the driving component to cause the movable component to oscillate at a frequency and an amplitude specified by one or more stored values Structure: the switches shown in Figures 5A–6 and described at 5:52–6:5, 6:9–16 and the processor/microprocessor/microcontroller/ CPU that performs the algorithm shown in Figures 7A–C and described at 6:52–8:40 and 13:20–59; and equivalents thereof
2d.	"a control component that receives control signals input to the oscillating resonant module [by the controller], receives outputs from the one or more sensors, and controls oscillation of the mass to produce a vibration	'882 patent, claims 1, 10	Subject to 35 U.S.C. 112 ¶ 6 Function: receiving control signals input to the oscillating resonant module; receiving outputs from the one or more sensors; controlling oscillation of the mass to produce a vibration response according to the received control signals by generating, using one or more of the received sensor outputs, control outputs to an actuator that drives the mass to oscillate Structure: the processor/logic circuitry that performs the algorithm shown in Fig. 45 and described at 31:19–32:13

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
	response according to the received control signals by generating, using one or more of the received sensor outputs, control outputs to an actuator that drives the mass to oscillate"		
3a.	"a driving component that drives the moveable component in each of two opposite directions"	'767 patent, claim 1	Subject to 35 U.S.C. 112 ¶ 6 Function: driving the moveable component in each of two opposite directions Structure: coils 420, 514, 626, 1202, 1204, 1302, 1304, 1412, 1414, electromagnets shown in Figs. 10–11 each with alternating current applied thereto; and equivalents thereof
3b.	"a driving component that drives the moveable component in each of two opposite directions within the housing"	'337 patent, claims 1, 2, 4	Subject to 35 U.S.C. 112 ¶ 6 Function: driving the moveable component in each of two opposite directions within the housing Structure: coils 420, 514, 626, 1202, 1204, 1302, 1304, 1412, 1414, electromagnets shown in Figs. 10–11 each with alternating current applied thereto; and equivalents thereof
3c.	"a driving component that drives the moveable component to oscillate within the housing"	'830 patent, claims 1, 19, 20	Subject to 35 U.S.C. 112 ¶ 6 Function: driving the moveable component to oscillate within the housing Structure: coils 420, 514, 626, 1202, 1204, 1302, 1304, 1412, 1414, 1510 (also shown in Figs. 16–17), electromagnets shown in Figs. 10–11 each with alternating current applied thereto; and equivalents thereof
4	"an oscillation path,	'882 patent,	"a curved oscillation path"

No.	Term, Clause, and/or Phrase	Patent Claim(s)	Proposed Construction
	which represents a segment of a space curve”	claims 1, 10	
5	“the one or more sensors”	’767 patent, claim 1; ’830 patent, claim 4	Indefinite
6	“the d”	’767 patent, claim 2	Indefinite
7	“desired outputs”	’767 patent, claim 1; ’830 patent, claim 4	Indefinite
8	“the one or more operational control outputs”	’830 patent, claim 4	Indefinite
9	“the received output signals”	’830 patent, claim 4	Indefinite
10	“the sensors”	’830 patent, claim 4	Indefinite
11	“the mass”	’882 patent, claims 1, 3–7, 10	Indefinite
12	“the oscillating resonant module[s]” / “the one or more oscillating resonant module[s]”	’882 patent, claims 10, 17, 19, 20	Indefinite
13	“the physical device”	’882 patent, claim 17	Indefinite
14	“is are” (or all of claim 7)	’882 patent, claim 7	Indefinite
15	“claim 1”	830 patent, claim 4	Plain and ordinary meaning
16	“claim 1”	882 patent, claim 17	Plain and ordinary meaning

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the counsel of record for Plaintiff Resonant who are deemed to have consented to electronic service are being served on February 15, 2024, with a copy of this document via electronic mail.

/s/ James Yang
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