

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

SONRAI MEMORY LIMITED,

Plaintiff,

v.

APPLE INC.,

Defendant.

Civil Action No. 6:22-cv-00787-ADA

JURY TRIAL DEMANDED

PRELIMINARY INVALIDITY CONTENTIONS

Defendant Apple Inc. hereby provides its Preliminary Invalidity Contentions pursuant to the Scheduling Order.

INVALIDITY CONTENTIONS

Defendant Apple Inc. (“Defendant” or “Apple”) hereby provides its Invalidity Contentions pursuant to the Scheduling Order.

I. CLAIM CHARTS - ANTICIPATION

A. ’241 Patent

Attached hereto are the following charts setting forth where in the prior art references each element of the claims 1-3, 6, 9-11, and 24 (“the invalid claims”) of U.S. Patent No. 6,724,241 (“’241 Patent”) are found with regard to at least one asserted claim, at least under Sonrai’s apparent interpretation of the invalid claims as evidenced by Sonrai’s preliminary infringement contentions. Nothing in these invalidity contentions should be taken as an admission that Defendant agrees with Sonrai’s interpretation of the claims or Sonrai’s infringement contentions.

Exhibit	Description	Date	Bates Numbers
A-1	U.S. Patent No. 6,091,613 (“Yang”)	Filed 4/20/99 Issued 7/18/00	APL-SON787-PA-00002293 - APL-SON787-PA-00002300
A-2	U.S. Patent No. 6,356,488 (“Kang”)	Filed 11/27/00 Issued 3/12/02	APL-SON787-PA-00002589 - APL-SON787-PA-00002599
A-3	U.S. Patent No. 6,937,517 (“Pekny”)	Filed 7/18/02 Issued 8/30/05	APL-SON787-PA-00003680 - APL-SON787-PA-00003691
A-4	Japan Patent Application Publication S61-24094 (“Ujiie”)	Published 2/1/86	APL-SON787-PA-00000665 - APL-SON787-PA-00000686
A-5	U.S. Patent No. 6,404,274 (“Hosono”)	Filed 4/9/99 Issued 6/11/02	APL-SON787-PA-00002738 - APL-SON787-PA-00002754
A-6	U.S. Patent No. 6,643,151 (“Nebragic”)	Filed 10/9/01 Issued 11/4/03	APL-SON787-PA-00003161 - APL-SON787-PA-00003195

A-7	U.S. Patent No. 5,699,312 ("Wong")	Filed 4/18/96 Issued 12/16/97	APL-SON787-PA- 00002075 - APL- SON787-PA-00002080
A-8	Toshiba TC58256FT Product ("TC58256FT")	Date of first US sale: no later than 10/25/01	APL-SON787-PA- 00000001 - APL- SON787-PA-00000084
A-9	Toshiba TC58256AFT Product ("TC58256AFT")	Date of first US sale: no later than 10/25/01	APL-SON787-PA- 00001119 - APL- SON787-PA-00001154
A-10	U.S. Patent No. 6,597,235 ("Choi '235")	Filed 1/9/02 Published 8/1/02	APL-SON787-PA- 00003973 - APL- SON787-PA-00003979
A-11	U.S. Patent No. 6,535,051 ("Kim")	Filed 5/21/01 Published 12/20/01	APL-SON787-PA- 00003961 - APL- SON787-PA-00003972
A-12	Samsung K9F5608UOM-YCBO 256M NAND Flash product	Date of first US sale: no later than June 2001	APL-SON787-PA- 00003980 - APL- SON787-PA-00004005
A-13	U.S. Patent No. 5,986,947 ("Choi '947")	Filed: 4/9/98 Published: 11/16/99	APL-SON787-PA- 00003946 - APL- SON787-PA-00003960
A-14	U.S. Patent No. 5,673,223 ("Park")	Filed: 6/10/96 Published: 9/30/97	APL-SON787-PA- 00003939 - APL- SON787-PA-00003945
A-15	U.S. Patent No. 6,069,518 ("Nakai")	Filed 12/1/1994 Issued 5/30/2000	APL-SON787-PA- 00005146 - APL- SON787-PA-00005164

Much of the art identified in the attached Exhibits reflects common knowledge and the state of the art prior to the filing date of the '241 Patent. The references discussed in the Exhibits herein may be relied upon to show the state of the art in the relevant time frame. This prior art identification is only exemplary and is not in any way intended to limit the scope of what one of ordinary skill in the art would have understood at the relevant time period of the alleged inventions or the breadth of the state of the art to which the alleged inventions of the '241 Patent relate. Defendant reserves the right to rely upon additional prior art, information, testimony, and/or

knowledge to demonstrate what one of ordinary skill in the art would have understood prior to the date of the alleged invention of the invalid claims of the '241 Patent.

Discovery has not yet opened, and Defendant reserves the right to supplement these contentions with prior art or additional information not currently known to Defendant, or as otherwise permitted by Local Rules or the Court. For example, Defendant may modify or supplement these contentions in the event that additional invalidity grounds or information becomes available, whether in response to any allowed amendment by Sonrai of its infringement contentions, or through discovery of additional prior art or material information, including third-party prior art systems or information. Defendant also incorporates herein by reference the IPR Petition and exhibits in Case IPR2021-01561, the institution decision by the Patent Trial and Appeals Board ("PTAB"), and subsequent filings in that proceeding. Defendant further reserves the right to rely on additional references and expert testimony to explain the knowledge of a person of skill in the art ("POSITA") and how a POSITA would interpret the disclosures of the '241 Patent or the prior art references.

B. '014 Patent

Attached hereto are the following charts setting forth where in the prior art references each element of the claims 1, 3, 5, 7, 11, 12-13, and 15 ("the invalid claims") of U.S. Patent No. 6,874,014 ("'014 Patent") are found with regard to at least one asserted claim, at least under Sonrai's apparent interpretation of the invalid claims as evidenced by Sonrai's preliminary infringement contentions. Nothing in these invalidity contentions should be taken as an admission that Defendant agrees with Sonrai's interpretation of the claims or Sonrai's infringement contentions.

Exhibit	Description	Date	Bates Numbers
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B-1	U.S. Patent No. 6,542,926 ("Zalewski")	Filed 6/10/98 Issued 4/1/03	APL-SON787-PA-00004178 - APL-SON787-PA-00004213
B-2	U.S. Patent No. 6,931,640 ("Asano")	Filed 1/9/01 Issued 8/16/05	APL-SON787-PA-00004742 - APL-SON787-PA-00004765
B-3	U.S. Patent No. 6,957,435 ("Armstrong")	Filed 4/19/01 Issued 10/18/05	APL-SON787-PA-00004036 - APL-SON787-PA-00004053
B-4	U.S. Patent No. 6,772,419 ("Sekiguchi")	Filed 9/11/98 Issued 8/3/04	APL-SON787-PA-00004006 - APL-SON787-PA-00004035
B-5	U.S. Patent No. 6,839,849 ("Ugon")	Filed 12/23/99 Issued 1/4/05	APL-SON787-PA-00004525 - APL-SON787-PA-00004537
B-6	U.S. Patent No. 7,073,044 ("Willis")	Filed 3/30/01 Issued 7/4/06	APL-SON787-PA-00004831 - APL-SON787-PA-00004851
B-7	U.S. Patent No. 5,910,987 ("Ginter")	Filed 12/4/96 Issued 6/8/99	APL-SON787-PA-00004214 - APL-SON787-PA-00004524
B-8	U.S. Patent No. 6,799,202 ("Hankinson")	Filed 12/16/99 Issued 9/28/04	APL-SON787-PA-00004538 - APL-SON787-PA-00004584
B-9	U.S. Patent No. 6,385,727 ("Cassagnol")	Filed 9/25/98 Issued 5/7/02	APL-SON787-PA-00005084 - APL-SON787-PA-00005111
B-10	U.S. Patent Pub. No. 2004/0210738 ("Kato")	Filed 4/27/04 Published 10/21/04	APL-SON787-PA-00005310 - APL-SON787-PA-00005339
B-11	Kunle Olukotun et. al., <i>The Case for a Single-Chip Multiprocessor</i> , <i>Proceedings Seventh International Symp. Architectural Support for Programming Languages and Operating Systems (ASPLOS VII)</i> , October 1996 ("Olukotun")	October 1996	APL-SON787-PA-00000745 - APL-SON787-PA-00000754

B-12	Texas Instruments OMAP and/or documents descriptive thereof (“OMAP”)	Date of first US sale: no later than July 2000 Published: 2000-2001	APL-SON787-PA-00004970 - APL-SON787-PA-00004981; APL-SON787-PA-00005036 - APL-SON787-PA-00005043; APL-SON787-PA-00004947 - APL-SON787-PA-00004952; APL-SON787-PA-00005112 - APL-SON787-PA-00005114; APL-SON787-PA-00005115 - APL-SON787-PA-00005119; APL-SON787-PA-00005120 - APL-SON787-PA-00005122; APL-SON787-PA-00005123 - APL-SON787-PA-00005124; APL-SON787-PA-00005125 - APL-SON787-PA-00005127; APL-SON787-PA-00005183 - APL-SON787-PA-00005189
B-13	U.S. Patent No. 6,751,698 (“Deneroff”)	Filed: 9/29/99 Issued: 6/15/04	APL-SON787-PA-00004076 - APL-SON787-PA-00004177
B-14	U.S. Patent No. 5,144,692 (“Baker”)	Filed: 5/17/89 Issued: 9/1/92	APL-SON787-PA-00004585 - APL-SON787-PA-00004741
B-15	U.S. Patent Pub. No. 2002/0173344 (“Cupps”)	Filed: 3/16/01 Published 11/21/02	APL-SON787-PA-00004805 - APL-SON787-PA-00004830
B-16	Bilge Saglam and Vincent Mooney, <i>System-on-a-Chip Processor Synchronization Support in Hardware, IEEE Computer Society, Proceedings, Designation, Automation and Test in Europe</i> (IEEE March 13-16, 2001) (“Saglam”)	Published: at least by March 16, 2001	APL-SON787-PA-00004862 - APL-SON787-PA-00004868

B-17	U.S. Patent No. 6,314,501 ("Gulick")	Filed: 12/18/98 Issued: 11/6/01	APL-SON787-PA- 00004869 - APL- SON787-PA-00004946
B-18	U.S. Patent No. 6,542,991 ("Joy")	Filed: 5/11/99 Issued: 4/1/03	APL-SON787-PA- 00002959 - APL- SON787-PA-00002997
B-19	U.S. Patent No. 7,143,401 ("Babaian")	Filed: 2/20/01 Issued 11/28/06	APL-SON787-PA- 00004054 - APL- SON787-PA-00004075
B-20	U.S. Patent No. 6,874,014 ("AAPA")	Filed: 5/29/01 Issued: 3/29/05	APL-SON787-PA- 00005218 - APL- SON787-PA-00005225

Much of the art identified in the attached Exhibits reflects common knowledge and the state of the art prior to the filing date of the '014 Patent. The references discussed in the Exhibits herein may be relied upon to show the state of the art in the relevant time frame. This prior art identification is only exemplary and is not in any way intended to limit the scope of what one of ordinary skill in the art would have understood at the relevant time period of the alleged inventions or the breadth of the state of the art to which the alleged inventions of the '014 Patent relate. Defendant reserves the right to rely upon additional prior art, information, testimony, and/or knowledge to demonstrate what one of ordinary skill in the art would have understood prior to the date of the alleged invention of the invalid claims of the '014 Patent.

Discovery has not yet opened, and Defendant reserves the right to supplement these contentions with prior art or additional information not currently known to Defendant, or as otherwise permitted by Local Rules or the Court. For example, Defendant may modify or supplement these contentions in the event that additional invalidity grounds or information becomes available, whether in response to any allowed amendment by Sonrai of its infringement contentions, or through discovery of additional prior art or material information, including third-party prior art systems or information. With respect to the '014 Patent, on information and belief,

the additional systems include at least the Power4 by IBM (e.g., <https://www.ibm.com/ibm/history/ibm100/us/en/icons/power4/>); the Stanford Hydra CMP (e.g., <http://bwrcs.eecs.berkeley.edu/Classes/CS252/Notes/cs252.lecture.20.pdf>); and the HP MPOC (e.g., <https://www.hpl.hp.com/techreports/2002/HPL-2002-186.html>). Defendant also incorporates herein by reference the IPR Petition and exhibits in Case IPR2021-01454, the institution decision by the Patent Trial and Appeals Board (“PTAB”), and filings in that proceeding. Defendant further reserves the right to rely on additional references and expert testimony to explain the knowledge of a person of skill in the art (“POSITA”) and how a POSITA would interpret the disclosures of the ’014 Patent or the prior art references.

II. CLAIM CHARTS – OBVIOUSNESS

A. ’241 Patent

If the Judge or Jury finds that a particular prior art reference described in the charts referred to in Section I, above, does not teach or disclose a particular claim limitation, that limitation and the claims in which it appears still are rendered obvious for the reasons stated for that limitation in Exhibit C-1, which explains where each particular limitation is found in other prior art references and/or in the knowledge of a POSITA, at least under Sonrai’s apparent interpretation of the invalid claims as evidenced by Sonrai’s preliminary infringement contentions. Nothing in these invalidity contentions should be taken as an admission that Defendant agrees with Sonrai’s interpretation of the claims or Sonrai’s infringement contentions. Moreover, Ex. C-1 provides exemplary motivations to modify and/or combine the primary prior art reference with the other listed prior art. Defendant also incorporates herein by reference the IPR Petition and exhibits in Case IPR2021-01561. Defendant further reserves the right to rely on additional references and expert testimony to explain the knowledge of a POSITA and how a POSITA would interpret the disclosures of the ’241 Patent or the prior art references. Sonrai has not disclosed any alleged secondary

considerations for non-obviousness, such as long felt but unsolved need, copying, failure of others, commercial success, among others. To the extent Sonrai is later able to identify and rely on any such alleged secondary considerations, including attempting to cite to purported evidence in support thereof, Defendant reserves the right to respond.

B. '014 Patent

If the Judge or Jury finds that a particular prior art reference described in the charts referred to in Section I, above, does not teach or disclose a particular claim limitation, that limitation and the claims in which it appears still are rendered obvious for the reasons stated for that limitation in Exhibit C-2, which explains where each particular limitation is found in other prior art references and/or in the knowledge of a POSITA, at least under Sonrai's apparent interpretation of the invalid claims as evidenced by Sonrai's preliminary infringement contentions. Nothing in these invalidity contentions should be taken as an admission that Defendant agrees with Sonrai's interpretation of the claims or Sonrai's infringement contentions. Moreover, Ex. C-2 provides exemplary motivations to modify and/or combine the primary prior art reference with the other listed prior art. Defendant also incorporates herein by reference the IPR Petition and exhibits in Case IPR2021-01454. Defendant further reserves the right to rely on additional references and expert testimony to explain the knowledge of a POSITA and how a POSITA would interpret the disclosures of the '014 Patent or the prior art references. Sonrai has not disclosed any alleged secondary considerations for non-obviousness, such as long felt but unsolved need, copying, failure of others, commercial success, among others. To the extent Sonrai is later able to identify and rely on any such alleged secondary considerations, including attempting to cite to purported evidence in support thereof, Defendant reserves the right to respond.

III. SECTION 112 DEFENSES

A. '241 Patent

Based on Sonrai's apparent interpretation of claim terms in the '241 Patent as evidenced by the allegations in its complaints and preliminary infringement contentions, Defendant hereby provides the following contentions regarding invalidity under 35 U.S.C. § 112. The following contentions, made pursuant to the procedural schedule in this case, are subject to revision and amendment, including pursuant to the Orders issued in this case, to the extent appropriate in light of further investigation and discovery regarding the defenses, the review and analysis of expert witnesses, and/or the testimony of fact witnesses, including the named inventors, and any final or amended infringement contentions served by Sonrai. As stated above, the claim charts provided are based on Sonrai's apparent interpretation of the claim scope, and should not be taken as an admission that the claims comply with 35 U.S.C. § 112.

Subject to the reservation of rights above, Defendant provides below an identification of asserted claims along with an identification of the specific limitations that are invalid pursuant to 35 U.S.C. § 112 ¶ 1 as lacking written description and/or enablement support.

1. Lack of Written Description

The claims of the '241 Patent are invalid because they fail to meet the written description requirement of 35 U.S.C. § 112. The '241 Patent does not describe the claimed invention in sufficient detail that a POSITA can reasonably conclude that the inventors had possession of the claimed invention, at least under Sonrai's apparent interpretations as to their scope based on its preliminary infringement contentions, for at least the following claim terms or phrases:

- “a plurality of loads selectively coupleable to an output of the pumping circuit, each load associated with a specific pump voltage” (claims 1-3, 6, 9-11)

- “a pumping circuit comprising one or more stages operable to receive a supply voltage and generate a selected one of a plurality of pump voltages” (claims 1-3, 6, 9-11);
- “a load selector means for selectively coupling a load associated with a specific pump voltage to the output of said pumping circuit” (claims 1-3, 6, 9-11);
- “wherein the load selector means includes a target output pump selector for shutting down the variable charge pump circuit when the target output pump voltage (V_{cfrb}) is greater than or equal to a reference voltage (V_{ref})” (claim 2);
- “wherein the load selector means further includes a maximum ripple on the target output selector means for adding a load, whenever a maximum ripple on the target output voltage (V_{cfrb}) greater than the reference voltage (V_{ref}) then the maximum ripple on the target output selector means adds additional loads until the V_{cfrb} voltage is less than or equal to the reference voltage (V_{ref})” (claim 3);
- “each load selector means comprises an elevator circuit having an input terminal and an output terminal” (claim 9); and
- “turning on a load associated with the selected V_{pump} ” (claim 24)

2. Lack of Enablement

The claims of the '241 Patent are invalid because they fail to meet the enablement requirement of 35 U.S.C. § 112. The '241 Patent does not permit a POSITA to make or use the alleged full scope of the claimed invention from the disclosures of the '241 Patent without undue experimentation, at least under the Court's constructions and Sonrai's apparent interpretations as to the claim scope based on its preliminary infringement contentions, for at least the following limitations:

- “a plurality of loads selectively coupleable to an output of the pumping circuit, each load associated with a specific pump voltage” (claim 1-3, 6, 9-11)
- “a pumping circuit comprising one or more stages operable to receive a supply voltage and generate a selected one of a plurality of pump voltages” (claim 1-3, 6, 9-11);
- “a load selector means for selectively coupling a load associated with a specific pump voltage to the output of said pumping circuit” (claim 1-3, 6, 9-11);
- “wherein the load selector means includes a target output pump selector for shutting down the variable charge pump circuit when the target output pump voltage (V_{cfra}) is greater than or equal to a reference voltage (V_{ref})” (claim 2);
- “wherein the load selector means further includes a maximum ripple on the target output selector means for adding a load, whenever a maximum ripple on the target output voltage (V_{cfrb}) greater than the reference voltage (V_{ref}) then the maximum ripple on the target output selector means adds additional loads until the V_{cfrb} voltage is less than or equal to the reference voltage (V_{ref})” (claim 3)
- “each load selector means comprises an elevator circuit having an input terminal and an output terminal” (claim 9); and
- “turning on a load associated with the selected V_{pump} ” (claim 24)

3. Indefiniteness

The claims of the '241 Patent include the following claim limitations that are indefinite for informing a POSITA with reasonable certainty as to the full scope of the claims, at least under

Sonrai's overly broad interpretation of the claims. Accordingly, the claims in which they appear are invalid under 35 U.S.C. § 112 ¶ 2.

- “a load selector means for selectively coupling a load associated with a specific pump voltage to the output of said pumping circuit” (claim 1-3, 6, 9-11);
- “wherein the load selector means includes a target output pump selector for shutting down the variable charge pump circuit when the target output pump voltage (V_{cfra}) is greater than or equal to a reference voltage (V_{ref})” (claim 2);
- “wherein the load selector means further includes a maximum ripple on the target output selector means for adding a load, whenever a maximum ripple on the target output voltage (V_{cfrb}) greater than the reference voltage (V_{ref}) then the maximum ripple on the target output selector means adds additional loads until the V_{cfrb} voltage is less than or equal to the reference voltage (V_{ref})” (claim 3);
- “the load selector means is a plurality of switches, one switch for each of said loads, each switch having a first terminal, a second terminal, and an enable terminal, the switch being coupled in series with each load, the first terminal of the switch being coupled to the output pump and the second terminal of the switch is coupled to each load” (claim 6);
- “an elevator circuit having an input terminal and an output terminal” (claim 9);
- “wherein each load is a capacitor or a current sinker” (claim 10);
- “turning on a load associated with the selected V_{pump} ” (claim 24);
- “comparing a target output voltage (V_{cfra}) with a reference voltage (V_{ref}) whenever the target output voltage greater than the reference voltage, disabling the charge pump

circuit; whenever the target output voltage is less or equal to the voltage reference, leaving the charge pump circuit on" (claim 24).

B. '014 Patent

Based on Sonrai's apparent interpretation of claim terms in the '014 Patent as evidenced by the allegations in its complaints and preliminary infringement contentions, Defendant hereby provides the following contentions regarding invalidity under 35 U.S.C. § 112. The following contentions, made pursuant to the procedural schedule in this case, are subject to revision and amendment, including pursuant to the Orders issued in this case, to the extent appropriate in light of further investigation and discovery regarding the defenses, the review and analysis of expert witnesses, and/or the testimony of fact witnesses, including the named inventors, and any final or amended infringement contentions served by Sonrai. As stated above, the claim charts provided are based on Sonrai's apparent interpretation of the claim scope, and should not be taken as an admission that the claims comply with 35 U.S.C. § 112.

Subject to the reservation of rights above, Defendant provides below an identification of asserted claims along with an identification of the specific limitations that are invalid pursuant to 35 U.S.C. § 112 ¶ 1 as lacking written description and/or enablement support.

1. Lack of Written Description

The claims of the '014 Patent are invalid because they fail to meet the written description requirement of 35 U.S.C. § 112. The '014 Patent does not describe the claimed invention in sufficient detail that a POSITA can reasonably conclude that the inventors had possession of the claimed invention, at least under Sonrai's apparent interpretations as to their scope based on its preliminary infringement contentions, for at least the following claim terms or phrases:

- "multiple operating systems residing in a memory connected to said multiple processors" (claim 1)

- "wherein each of said multiple processors executes an operating system of said multiple operating systems" (claim 1)
- "two or more of said multiple processors are capable of simultaneously executing two or more operating systems of said multiple operating systems" (claim 1)
- "multiple operating systems residing in a memory connected to said groups" (claim 7)
- "wherein each of said groups executes an operating system of said multiple operating systems" (claim 7)
- "two or more of said plurality of processor groups are capable of simultaneously executing two or more operating systems of said multiple operating systems" (claim 7)
- "processor means for executing a plurality of operating system means" (claim 12)
- "wherein said processor means is operable to simultaneously execute two or more operating system means of said plurality of operating system means" (claim 12)
- "memory means for storing said plurality of operating system means" (claim 12)

2. **Lack of Enablement**

The claims of the '014 Patent are invalid because they fail to meet the enablement requirement of 35 U.S.C. § 112. The '014 Patent does not permit a POSITA to make or use the alleged full scope of the claimed invention from the disclosures of the '014 Patent without undue experimentation, at least under Sonrai's apparent interpretations as to the claim scope based on its preliminary infringement contentions, for at least the following limitations:

- "multiple operating systems residing in a memory connected to said multiple processors" (claim 1)

- "wherein each of said multiple processors executes an operating system of said multiple operating systems" (claim 1)
- "two or more of said multiple processors are capable of simultaneously executing two or more operating systems of said multiple operating systems" (claim 1)
- "multiple operating systems residing in a memory connected to said groups" (claim 7)
- "wherein each of said groups executes an operating system of said multiple operating systems" (claim 7)
- "two or more of said plurality of processor groups are capable of simultaneously executing two or more operating systems of said multiple operating systems" (claim 7)
- "wherein each of said groups executes a distinct operating system of said multiple operating systems" (claim 11)
- "processor means for executing a plurality of operating system means" (claim 12)
- "wherein said processor means is operable to simultaneously execute two or more operating system means of said plurality of operating system means" (claim 12)
- "memory means for storing said plurality of operating system means" (claim 12)

3. Indefiniteness

The claims of the '014 Patent include the following claim limitations that are indefinite for informing a POSITA with reasonable certainty as to the full scope of the claims, at least under Sonrai's overly broad interpretation of the claims. Accordingly, the claims in which they appear are invalid under 35 U.S.C. § 112 ¶ 2.

- "two or more of said plurality of processor groups are capable of simultaneously executing two or more operating systems of said multiple operating systems" (claim 7)
- "wherein each of said groups executes a distinct operating system of said multiple operating systems" (claim 11)
- "processor means for executing a plurality of operating system means" (claim 12)
- "wherein said processor means is operable to simultaneously execute two or more operating system means of said plurality of operating system means" (claim 12)
- "memory means for storing said plurality of operating system means" (claim 12)

IV. TECHNICAL DOCUMENT PRODUCTION

Defendant has produced the following technical documents sufficient to show the operation of the accused products identified in Sonrai's preliminary infringement contentions: APL-SON787-00000001-APL-SON787-00775966. Defendant has further identified additional technical documents that contain confidential information of third-party SK Hynix and Defendant will produce those additional third-party SK Hynix confidential documents upon approval by SK Hynix.

DATED: December 5, 2022

/s/ John M. Guaragna

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CERTIFICATE OF SERVICE

The undersigned certifies that on this 5th day of December, 2022, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document through email.

/s/ John M. Guaragna
John M. Guaragna