

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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ALLIANCE LAUNDRY SYSTEMS, LLC,  
Petitioner,

v.

PAYRANGE LLC,  
Patent Owner.

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IPR2025-00573  
U.S. Patent No. 11,481,772

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**PETITION FOR *INTER PARTES* REVIEW  
UNDER 35 U.S.C. § 311-319 AND 37 C.F.R. § 42.100 *et seq.***

Mail Stop Patent Board  
Patent Trial and Appeal Board  
P.O. Box 1450  
Alexandria, VA 22313-1450

**TABLE OF CONTENTS**

I.	INTRODUCTION .....	1
II.	MANDATORY NOTICE OF RELATED MATTERS (37 C.F.R. § 42.8(B)(2)) .....	1
	A. Prior Proceedings: Patent Owner & Kiosoft .....	1
	B. Prior Proceedings: Patent Owner & CSC ServiceWorks.....	3
	C. Related Proceedings: Petitioner and Patent Owner.....	5
III.	IDENTIFICATION OF CHALLENGES: 37 C.F.R. § 42.104(b)).....	6
IV.	BACKGROUND OF THE '772 PATENT AND THE PRIOR ART.....	7
	A. The State of the Art Prior to December 2013 .....	7
	B. Overview of the Alleged Invention of the '772 Patent .....	10
	C. Summary of the '772 Patent Prosecution History.....	13
	D. Priority Date of the Challenged Claims .....	14
	E. The Challenged Claims .....	14
V.	SUMMARY OF THE ASSERTED PRIOR ART .....	17
	A. <i>Low</i> : U.S. Patent No. 10,210,501 (Ex. 1005).....	17
	B. <i>Arora</i> : U.S. Patent No. 9,898,884 (Ex. 1006).....	17
	C. <i>Freeny</i> : U.S. Patent No. 8,958,846 (Ex. 1007) .....	18
	D. <i>Casey</i> : U.S. Patent No. 8,255,323 (Ex. 1008).....	19
VI.	CLAIM CONSTRUCTION: 37 C.F.R. § 42.104(B)(3).....	19
	A. Applicable Law .....	19
	B. A Person Having Ordinary Skill in the Art.....	19

C.	Claim Term(s) .....	20
VII.	DETAILED EXPLANATION OF GROUNDS.....	20
A.	Ground 1: Claim 7 is Rendered Obvious Under 35 U.S.C. § 103 Over <i>Low</i> in View of <i>Arora</i> .....	20
1.	<i>Low</i> Discloses All Elements of Claim 1, From Which Claim 7 Depends.....	21
a.	[1.P] A method of presenting representations of payment accepting unit events.....	21
b.	[1.1] at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers: .....	21
c.	[1.2] identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device .....	23
d.	[1.3] the identifying based at least in part on an identifier corresponding to the one or more payment accepting units .....	25
e.	[1.4] wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services .....	26
f.	[1.5] displaying a user interface of the mobile payment application on the display of the mobile device .....	26
g.	[1.6] the user interface being configured to display a visual indication of the one or more payment accepting units .....	27
h.	[1.7] the user interface being configured to...accept user input to (i) receive selection by a	

	user of the mobile device of an available payment accepting unit of the one or more payment accepting units .....	27
i.	[1.8] the user interface being configured to...accept user input to...(ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units .....	28
j.	[1.9] establishing via the one or more radio transceivers a wireless communication path including the mobile device and the available payment accepting unit of the one or more payment accepting units .....	29
k.	[1.10] after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction .....	30
l.	[1.11] exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction .....	33
m.	[1.12] after exchanging the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device .....	34
2.	Obviousness Standards and Analysis .....	35
a.	Differences Between the Claimed Subject Matter and <i>Low</i> .....	35
b.	Obviousness Rationale for Why a POSA Would Have Modified <i>Low</i> with <i>Arora</i> to Arrive at the Claimed Subject Matter .....	36

c.	Obviousness Rationale for How a POSA Would Have Modified <i>Low</i> with <i>Arora</i> to Arrive at the Claimed Subject Matter .....	37
3.	Claim 7 .....	38
a.	[7.1] wherein the mobile device includes an accelerometer .....	38
b.	[7.2] and the method further comprises: based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit .....	38
c.	[7.3] and the method further comprises: ...in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path .....	40
B.	Ground 2: Claim 11 is Rendered Obvious Under 35 U.S.C. § 103 Over <i>Low</i> in View of <i>Arora</i> in Further View of <i>Freeny</i> and <i>Casey</i> .....	41
1.	<i>Low</i> Discloses All Elements of Claim 1, From Which Claim 11 Depends .....	41
2.	Obviousness Standards and Analysis .....	41
a.	Differences Between the Claimed Subject Matter and <i>Low</i> .....	41
b.	Obviousness Rationale for Why a POSA Would Have Modified <i>Low</i> with <i>Arora</i> , <i>Freeny</i> , and <i>Casey</i> to Arrive at the Claimed Subject Matter .....	43
(1)	Modifying <i>Low</i> with <i>Arora</i> .....	43
(2)	Modifying <i>Low/Arora</i> with <i>Freeny</i> .....	45
(3)	Modifying <i>Low/Arora/Freeny</i> with <i>Casey</i> .....	48

c.	Obviousness Rationale for How a POSA Would Have Modified <i>Low</i> with <i>Arora</i> , <i>Freeny</i> , and <i>Casey</i> to Arrive at the Claimed Subject Matter.....	48
3.	Claim 11 .....	49
a.	[11.1] wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes a visual representation of the available payment accepting unit .....	49
b.	[11.2] an indication of a prepared balance .....	53
c.	[11.3] an affordance that when slid, indicates the initiation of the transaction .....	55
d.	[11.4] wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device .....	56
VIII.	DISCRETIONARY DENIAL SHOULD NOT PRECLUDE INSTITUTION .....	58
A.	Discretionary Denial Under the <i>Fintiv</i> Factors is Not Warranted .....	58
B.	Discretionary Denial Under <i>General Plastic</i> is Not Warranted .....	61
1.	<i>General Plastic</i> Factor 1 .....	62
2.	<i>General Plastic</i> Factor 2 .....	64
3.	<i>General Plastic</i> Factor 3 .....	65
4.	<i>General Plastic</i> Factors 4 and 5.....	66
5.	<i>General Plastic</i> Factors 6 and 7.....	67
C.	Discretionary Denial Under 35 U.S.C. § 325(d) is Not Warranted .....	68
1.	The Prosecution History Does Not Warrant Discretionary Denial .....	68

a.	Factors (a) and (c).....	68
b.	Factors (b) and (d) .....	70
c.	Factors (e) and (f) .....	70
2.	The Prior Petitions Against the '772 Patent Do Not Warrant Discretionary Denial.....	71
IX.	MANDATORY NOTICES, STANDING, AND FEES.....	72
A.	Real Parties-in-Interest (37 C.F.R. § 42.8(b)(1)) .....	72
B.	Time for Filing (37 C.F.R. § 42.102).....	73
C.	Petitioner's Lead and Backup Counsel and Service Information: 37 C.F.R. § 42.8(b)(3) and (4).....	73
D.	Notice of Service Information (37 C.F.R. § 42.8(b)(4)).....	74
E.	Grounds for Standing (37 C.F.R. § 42.204(a); 35 U.S.C. § 315) .....	74
F.	Payment of Fees (37 C.F.R. § 42.103); Procedural Statements.....	75
X.	CONCLUSION.....	75

**PETITIONER’S EXHIBIT LIST**

<b>Exhibit No.</b>	<b>Description</b>	<b>Publication Date (unless otherwise noted)</b>	<b>Type of Prior Art</b>
1001	USPN 11,481,772 (the '772 Patent) (Patent submitted for <i>Inter Partes</i> Review)	December 18, 2013 (earliest possible priority date based on filing of provisional application)	N/A
1002	File History for USPN 11,481,772	N/A	N/A
1003	Declaration of Dr. B. Clifford Neuman Under 37 C.F.R. § 1.68 in Support of Petition for <i>Inter Partes</i> Review of the '772 Patent	N/A	N/A
1004	<i>Curriculum Vitae</i> of Dr. B. Clifford Neuman	N/A	N/A
1005	USPN 10,210,501 (“ <i>Low</i> ”)	July 25, 2013	§ 102(a), (d)
1006	USPN 9,898,884 (“ <i>Arora</i> ”)	April 4, 2013	§ 102(a), (d)
1007	USPN 8,958,846 (“ <i>Freeny</i> ”)	Aug. 23, 2006	§ 102(a), (d)
1008	USPN 8,255,323 (“ <i>Casey</i> ”)	Aug. 28, 2012 (issuance date)	§ 102(a)(1)
1009	PayRange’s Statutory Disclaimer of USPN 11,481,772 claims 1-6, 8-10, and 12-20	Filed on November 22, 2023	N/A
1010	USPN 3,457,391 (“ <i>Yamamoto</i> ”)	July 22, 1969 (issuance date)	§ 102(a)(1)
1011	USPN 3,931,497 (“ <i>Gentile</i> ”)	Jan. 6, 1976 (issuance date)	§ 102(a)(1)
1012	USPN 6,810,234 (“ <i>Räsänen</i> ”)	Oct. 26, 2004 (issuance date)	§ 102(a)(1)
1013	US Patent Pub. No. 2003/0172028 (“ <i>Abell</i> ”)	Mar. 7, 2002	§ 102(a), (d)

Exhibit No.	Description	Publication Date (unless otherwise noted)	Type of Prior Art
1014	US Patent Pub. No. 2003/0130902 (“ <i>Athwal</i> ”)	Nov. 4, 2002	§ 102(a), (d)
1015	Transcript, <i>Chemours Co. FC, LLC v. Daikin Indus., Ltd.</i> , 1:17-cv-01612, Dkt. 77, PageID.1319-1351 (D. Del. Jan. 3, 2019).	N/A	N/A
1016	Excerpted Copy of U.S. District Courts—Combined Civil and Criminal Federal Court Management Statistics-Profiles for the Reporting Period ending June 30, 2024, available at <a href="https://www.uscourts.gov/data-news/reports/statistical-reports/federal-court-management-statistics/federal-court-management-statistics-june-2024">https://www.uscourts.gov/data-news/reports/statistical-reports/federal-court-management-statistics/federal-court-management-statistics-june-2024</a> .	N/A	N/A
1017	PayRange Claim Chart for the USPN 11,481,772, attached as Exhibit L to PayRange’s Amended Counterclaims in <i>Alliance Laundry Systems, LLC v. PayRange, Inc.</i> , 24-cv-733-MN, Dkt. 18, PageID.1404-1416 (D. Del., filed Oct. 4, 2024)	N/A	N/A
1018	US Patent Pub. No. 2018/0374076 (“ <i>Wheeler</i> ”)	Dec. 27, 2018	N/A
1019	US Patent Pub. No. 2018/0197167 (“ <i>Ganesan</i> ”)	July 12, 2018	N/A
1020	US Patent Pub. No. 2019/0236586 (“ <i>Mei</i> ”)	Aug. 1, 2019	N/A
1021	US Patent Pub. No. 2016/0132870 (“ <i>Xu</i> ”)	May 12, 2016	N/A
1022	USPN 309,219 (“ <i>Fruen</i> ”)	Dec. 16, 1884 (issuance date)	N/A

<b>Exhibit No.</b>	<b>Description</b>	<b>Publication Date (unless otherwise noted)</b>	<b>Type of Prior Art</b>
1023	Exhibit A to PayRange's Amended Counterclaims in <i>Alliance Laundry Systems, LLC v. PayRange, Inc.</i> , 24-cv-733-MN, Dkt. 18, PageID.972-985 (D. Del., filed Oct. 4, 2024)	N/A	N/A

## **I. INTRODUCTION**

Alliance Laundry Systems LLC (“Petitioner”) respectfully petitions for *Inter Partes* Review (“IPR”) of Claims 7 and 11 of U.S. Patent No. 11,481,772 (“the ’772 Patent,” Ex. 1001). The ’772 Patent issued with twenty claims, but Patent Owner previously disclaimed all but Claims 7 and 11. Ex. 1009; Ex. 1003, ¶ 44. Petitioner respectfully requests that the Board institute trial for IPR of, and find unpatentable, remaining Claims 7 and 11 (“the Challenged Claims”) of the ’772 Patent.

## **II. MANDATORY NOTICE OF RELATED MATTERS (37 C.F.R. § 42.8(B)(2))**

### **A. Prior Proceedings: Patent Owner & Kiosoft**

The ’772 Patent was previously the subject of a petition for Post-Grant Review filed by Kiosoft Technologies, LLC (“Kiosoft”). *See* PGR2023-00042. Shortly before the Board’s institution decision was due, the proceedings were terminated due to settlement. *See id.*, Paper 9.

The dispute between Patent Owner<sup>1</sup> and Kiosoft included district court actions (which did not include the '772 Patent), and several PTAB proceedings, as shown below:

<b>Patent Owner &amp; Kiosoft Disputes</b>		
<b>Proceeding Number</b>	<b>Venue</b>	<b>Patent(s) at Issue</b>
20-cv-20970	S.D. Florida	9,134,994 9,659,296
20-cv-24342	S.D. Florida	10,719,833 10,891,608 10,891,614
CBM2020-00026	PTAB	9,659,296
IPR2021-00086	PTAB	9,659,296
PGR2021-00077	PTAB	10,719,833
PGR2021-00084	PTAB	10,891,608
PGR2021-00093	PTAB	10,891,614
PGR2022-00035	PTAB	11,074,580
PGR2023-00042	PTAB	11,481,772
PGR2023-00045	PTAB	11,488,174
PGR2023-00050	PTAB	11,501,296

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<sup>1</sup> Patent Owner changed its name from PayRange Inc. to PayRange LLC on October 28, 2024. See *Alliance Laundry Systems LLC v. PayRange Inc.*, No. 1:24-cv-00733-MN, Dkt. 31, PageID.1649 (D. Del. Dec. 5, 2024).

23-2378	Fed. Cir.	9,134,994 9,659,296
23-2425	Fed. Cir.	9,134,994 9,659,296

PayRange asserted USPN 10,891,614 (“the ’614 Patent”), the grandparent of the ’772 Patent via two continuation applications, in litigation captioned *PayRange Inc. v. KioSoft Technologies, LLC et al.*, 1:20-cv-24342 (S.D. Fla.). KioSoft thereafter filed a Petition for Post-Grant Review for the ’614 Patent. PGR2021-00093. On December 14, 2022, a Final Written Decision (“FWD”) was issued finding Claims 1-6, 8-10, 14-15, and 18-25 of the ’614 Patent unpatentable under Section 101. PGR2021-00093, FWD, Paper 38.

**B. Prior Proceedings: Patent Owner & CSC ServiceWorks**

Patent Owner previously sued CSC ServiceWorks, Inc. (“CSC”) for infringement of the ’772 Patent (and others) in Delaware District Court: *PayRange, Inc. v. CSC ServiceWorks, Inc.*, 22-cv-502-MN (D. Del.); *see also* 23-cv-278-MN (D. Del.); 24-cv-279-MN (D. Del.). CSC thereafter filed a petition for IPR against Claims 1-6 and 8-20 of the ’772 Patent. *See* IPR2023-01449. The next month, Patent Owner disclaimed Claims 1-6, 8-10, and 12-20 of the ’772 Patent. *See* Ex. 1009; *see also* IPR2023-01449, Ex. 2017.

This Board instituted IPR against remaining Claim 11 of the '772 Patent after finding that CSC's petition showed a reasonable likelihood of success in establishing unpatentability and declining to discretionarily deny institution. *See id.*, Paper 14 at 2, 10–11. Shortly thereafter, the IPR and District Court actions were terminated due to settlement. *See id.*, Paper 18.

The dispute between Patent Owner and CSC included district court actions and several other PTAB proceedings, as shown below:

<b>Patent Owner &amp; CSC Disputes</b>		
Proceeding Number	Venue	Patent(s) at Issue
22-cv-00502	D. Delaware	8,856,045
		10,438,208
		10,891,608
23-cv-00278	D. Delaware	8,856,045
		10,438,208
		10,891,608
		11,481,772
24-cv-000279	D. Delaware	10,719,833
		10,891,614
		11,488,174
IPR2023-01188	PTAB	10,891,608
IPR2023-01187	PTAB	10,438,208
IPR2023-01186	PTAB	8,856,045
IPR2023-01449	PTAB	11,481,772

**C. Related Proceedings: Petitioner and Patent Owner**

On June 20, 2024, Petitioner filed suit against Patent Owner for declaratory judgment of noninfringement of the '772 Patent, and related USPNs 11,966,920 ("920 Patent"), and 11,972,423 ("423 Patent"): *Alliance Laundry Systems, LLC v. PayRange Inc.*, 24-cv-733-MN (D. Del., filed June 20, 2024) ("the Delaware Litigation"). Patent Owner counterclaimed for infringement of the '772 Patent, the '920 Patent, the '423 Patent, and USPN 10,891,608 ("the '608 Patent"). Petitioner subsequently filed a partial motion to dismiss Patent Owner's counterclaims, which remains pending.

On January 17, 2025, Petitioner filed a Petition for Post-Grant Review of Claims 1-20 of the '920 and '423 Patents. *See* PGR2025-00027; PGR2025-00028. Petitioner will soon be filing a Petition for *Inter Partes* Review against the '608 Patent.

Shortly after Petitioner filed its complaint for declaratory judgment of noninfringement in the District of Delaware, Patent Owner filed complaints for infringement of the '772 Patent (and the '920 and '423 Patents) in the Western District of Texas against Card Concepts, Inc. ("CCI") and Nayax Ltd. ("Nayax"). *See PayRange Inc. v. Card Concepts Inc.*, 6:24-cv-00339 (W.D. Tex., filed June 24, 2024); *PayRange Inc. v. Nayax Ltd.*, 24-cv-00340 (W.D. Tex., filed June 24, 2024). From the public docket, it appears that Nayax has not yet been served. On December

19, 2024, PayRange voluntarily dismissed its claims against CCI without prejudice. *See PayRange Inc. v. Card Concepts Inc.*, 6:24-cv-00339, Dkt. 16 (W.D. Tex., Dec. 19, 2024).

**III. IDENTIFICATION OF CHALLENGES: 37 C.F.R. § 42.104(b))**

Petitioner respectfully requests IPR and a determination that the Challenged Claims of the '772 Patent are unpatentable based on the grounds listed below. Per 37 C.F.R. § 42.6(c), copies of the references are filed herewith. In support of the proposed grounds of unpatentability, this Petition is accompanied by the Declaration of Dr. B. Clifford Neuman (Ex. 1003).

<b>Ground</b>	<b>35 U.S.C. Basis</b>	<b>Challenged Claims</b>	<b>References</b>
1	§ 103	7	<i>Low in view of Arora</i>
2	§ 103	11	<i>Low in view of Arora in further view of Freeny and Casey</i>

*See also* Ex. 1003, ¶¶ 59-61.

For at least the reasons set forth in this Petition, Petitioner respectfully requests that the Board institute trial on the grounds set forth herein and determine that the Challenged Claims are unpatentable.

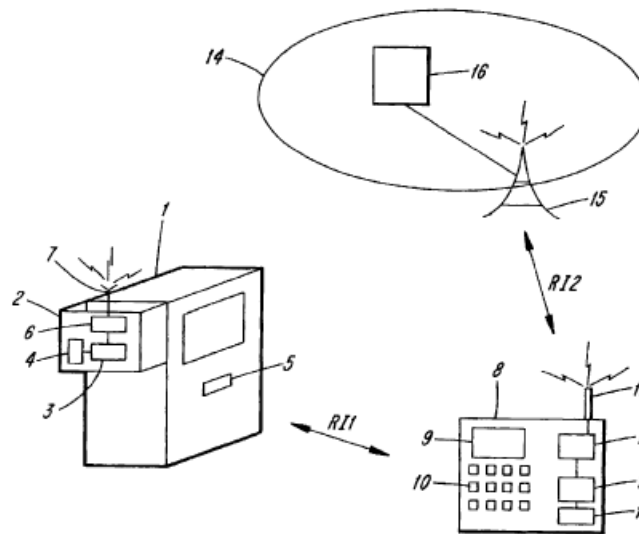
#### **IV. BACKGROUND OF THE '772 PATENT AND THE PRIOR ART**

##### **A. The State of the Art Prior to December 2013**

The '772 Patent states that “[v]ending machines...have been around for thousands of years.” Ex. 1001, 1:45–46. The “first simple mechanical coin operated vending machines were introduced in the 1880s.” *Id.*, 1:46–47. Since at least the 1960’s, alternative payment methods for vending machine transactions—such as credit cards—were in use. *See* Ex. 1003, ¶¶ 32–33; Ex. 1010. Vending machine payment over communication lines also existed before the invention of the Internet. Ex. 1003, ¶ 34; Ex. 1011.

Using a personal mobile device to conduct a vending machine transaction was also well-known. For example, *Räsänen* discloses conveying information between a vending machine and a mobile phone to conduct a transaction. *See* Ex. 1012; Ex. 1003, ¶¶ 35–37. *Räsänen* teaches that “a mobile telephone 8” comprises “a display 9,” “a keyboard 10,” and a “central processing unit [ ] 11.” *See id.*; Ex. 1012, 3:50–65, Fig. 1, reproduced below:

*Fig. 1*



Ex. 1012, Figure 1.

Using a mobile device to identify available vending machines based on proximity was also well-known. For instance, *Räsänen* teaches that communications over the local radio air interface protocol (RI1) are carried out over a small range. *Id.*, 3:46–49; *see also* Ex. 1003, ¶ 37. Mobile devices can then receive an alert when it is within range of the vending machine. *See id.*; Ex. 1012, 4:1–10; *see also* Ex. 1013; Ex. 1003, ¶ 38.

Enabling mobile payment to an offline vending machine was also introduced long before the '772 Patent. *Athwal* describes a method for transacting a payment using short-range communication that does not require the vending machine to be connected to a wireless network. Ex. 1003, ¶ 39; Ex. 1014, ¶¶ 19–22; *see also* Figure 1:

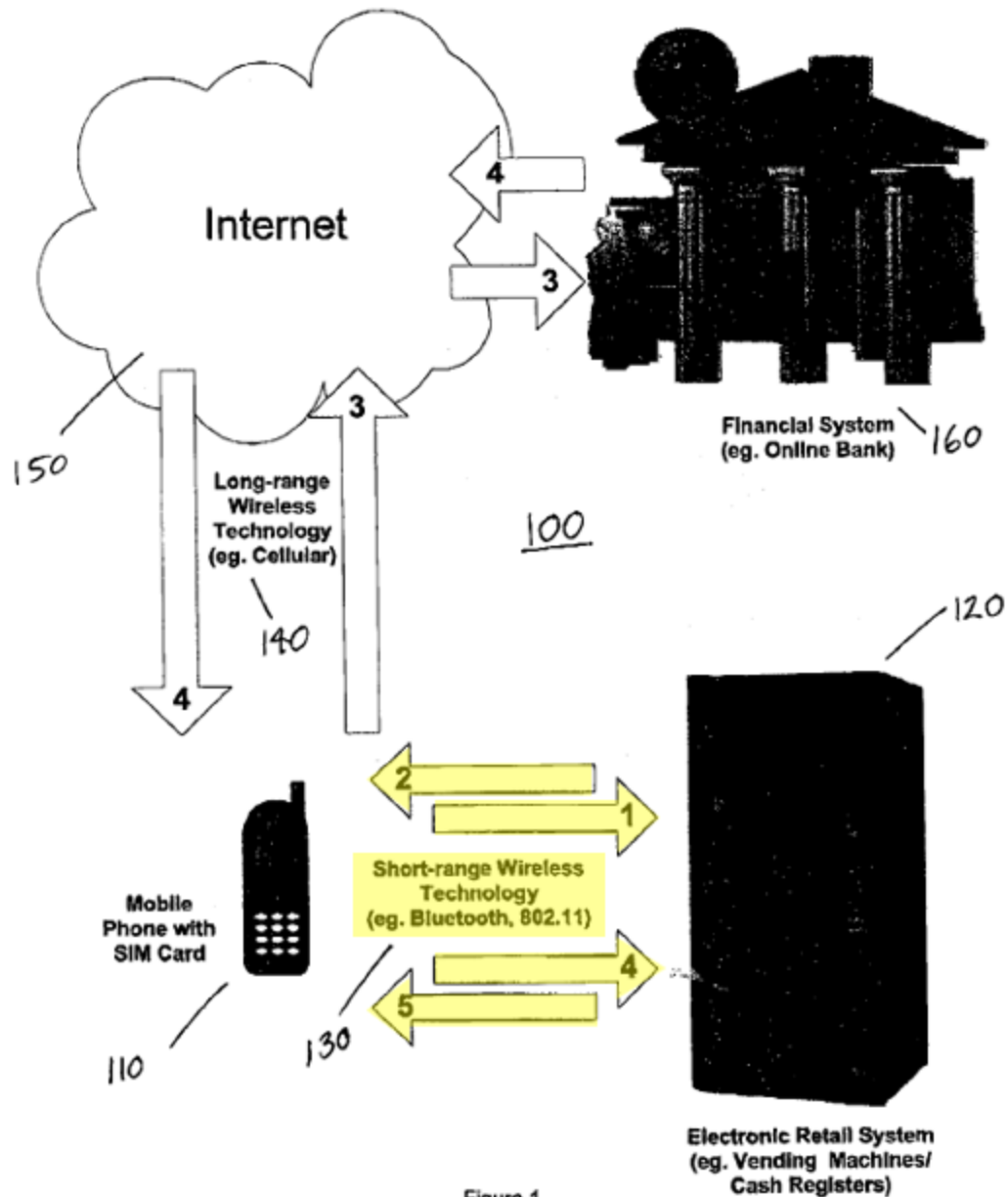


Figure 1

Ex. 1016, Figure 1 (annotated).

Using a mobile phone to provide the user interface for a vending machine transaction was also well-known. Ex. 1003, ¶ 40. *Räsänen* teaches downloading interface software instructions to the mobile phone, and that these downloadable instructions may provide the user with a list of available goods, the prices of the

goods, and an affordance that, when pressed, indicates conclusion of the transaction.

*See id.*; Ex. 1012, 4:47–58.

**B. Overview of the Alleged Invention of the '772 Patent**

The '772 Patent is entitled “Method and System for Presenting Representations of Payment Accepting Unit Events.” Ex. 1001. The specification explains that, historically, vending machines or “payment accepting units” required “coins, bills, or payment cards,” but “[a]s the number of people with Internet-connected mobile devices proliferates...[m]obile payment is a logical extension.” *Id.*, 2:2–12; Ex. 1003, ¶ 41.

The '772 Patent discloses using a mobile device to “present[] representations of payment accepting unit events on a display[.]” *Id.*; ¶ 42; Ex. 1001, Abstract. Figure 27A is a flowchart for presenting representations of payment accepting unit events. *Id.*, 5:42–44; Ex. 1003, ¶ 42. Figures 27A and 27B are shown below:

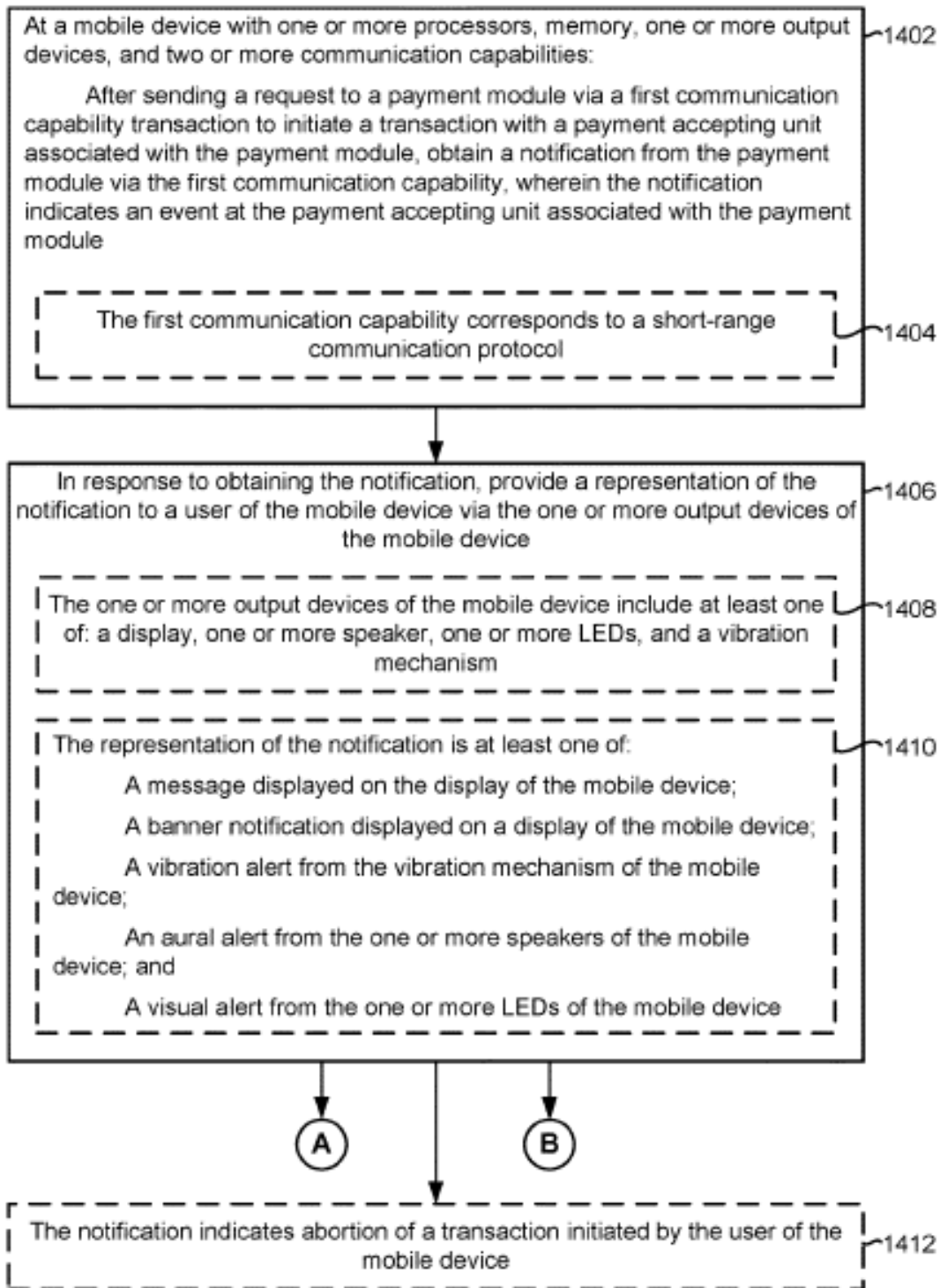
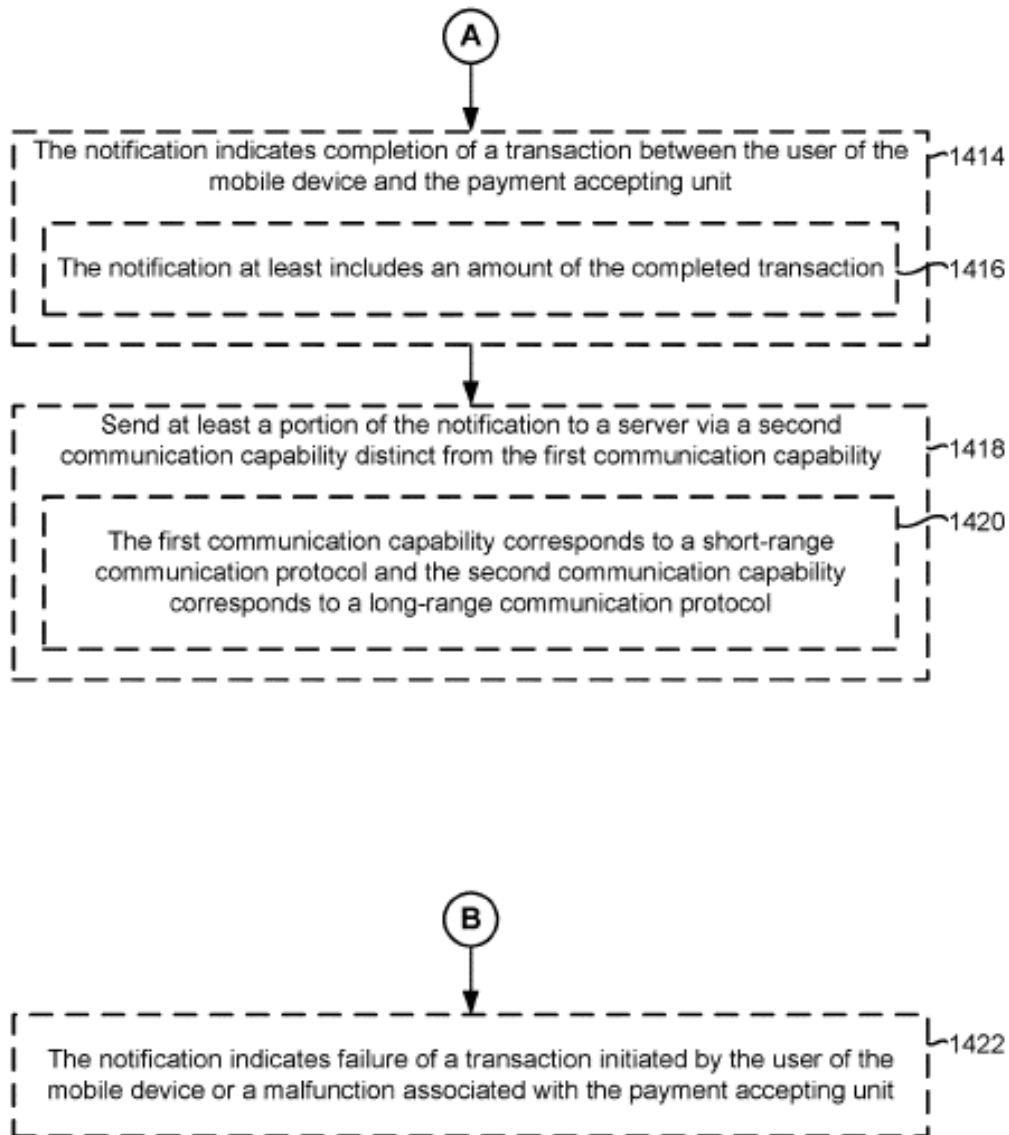


Figure 27A



**Figure 27B**

Ex. 1001, Figures 27A, 27B.

The '772 Patent specification explains that “in some implementations, the method 1400 is performed by the mobile device 150...or a component thereof (*e.g.*, the application 140).” *Id.*, 37:33–35. The mobile device sends a request to a payment module to initiate a transaction with a payment accepting unit. *Id.*, 37:42–51. “After sending [the] request...the mobile device obtains (1402) a notification from the payment module via the first communication capability, where the notification indicates an event at the payment accepting unit associated with the payment module.” *Id.* Then, “the mobile device provides (1406) a representation of the notification to a user of the mobile device via the one or more output devices of the mobile device.” *Id.*, 38:4–7; *see also* Ex. 1003, ¶ 43.

### **C. Summary of the '772 Patent Prosecution History**

The earliest patent application to which the '772 Patent claims priority is U.S. Provisional Application No. 61/917,936, filed December 18, 2013 (“the '936 Provisional”). Ex. 1001, p. 2. The application that issued as the '772 Patent was filed on March 14, 2022. *Id.*, p.1.

The only Office Action on the merits for the '772 Patent application rejected all pending claims under the obviousness-type double patenting over claims of USPN 9,659,296 (“the '296 Patent”), the '614 Patent, and provisionally over Application No. 17/147,305 (“the '305 Application”). Ex. 1002, pp. 148–49. The Examiner remarked that “[t]he only difference between the instant application and

the '614 Patent is merely a labeling difference.... [A]ll the features of claims 1-20 are contained in claims 1-25 of the '614 Patent.” *Id.*, p. 149. The same remark was made for the '296 Patent, and the '305 Application. *Id.*, pp. 148–49. The Applicant filed a terminal disclaimer in response. *Id.*, pp. 164–65; *see also* Ex. 1003, ¶¶ 45–48.

**D. Priority Date of the Challenged Claims**

For purposes of this Petition, Petitioner takes no position on the proper priority date for the Challenged Claims. Petitioner uses the earliest possible priority date claimed, December 18, 2013, for the invalidity grounds presented in this Petition. *See also* Ex. 1003, ¶ 21.

**E. The Challenged Claims**

Claims 7 and 11 are challenged herein. Claims 7 and 11 depend from Claim 1, which was disclaimed by Patent Owner. *See* Ex. 1009. Claim 1 recites:

[1.P] A method of presenting representations of payment accepting unit events, comprising:

[1.1] at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:

[1.2] identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device, [1.3] the identifying based at least in part on an

identifier corresponding to the one or more payment accepting units, [1.4] wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services;

[1.5] displaying a user interface of the mobile payment application on the display of the mobile device, [1.6] the user interface being configured to display a visual indication of the one or more payment accepting units and [1.7] accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units and [1.8] (ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units;

[1.9] establishing via the one or more radio transceivers a wireless communication path including the mobile device and the available payment accepting unit of the one or more payment accepting units;

[1.10] after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction;

[1.11] exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction; and

[1.12] after exchanging the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device.

Dependent Claim 7 recites:

[7.P] The method of claim 1, [7.1] wherein the mobile device includes an accelerometer and the method further comprises:

[7.2] based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit; and

[7.3] in accordance with a determination that the user is walking away from the available payment accepting unit, cancelling the wireless communication path.

Dependent Claim 11 recites:

[11.P] The method of claim 1, wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes:

[11.1] a visual representation of the available payment accepting unit;

[11.2] an indication of a prepared balance;

[11.3] an affordance that when slid, indicates initiation of the transaction;

[11.4] wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device.

## V. SUMMARY OF THE ASSERTED PRIOR ART

### A. *Low*: U.S. Patent No. 10,210,501 (Ex. 1005)

U.S. Patent No. 10,210,501 to Low et al. (“*Low*”) is titled “Electronic Payments to Non-Internet Connected Devices Systems and Methods.” *Low* issued on February 19, 2019 from an application filed on July 25, 2013 and is therefore prior art to the ’772 Patent under 35 U.S.C. §§ 102(a) and/or 102(d). *See* Ex. 1003, ¶¶ 28, 49.

*Low* teaches using a consumer’s wireless device to conduct transactions with unmanned devices such as vending machines. Ex. 1005, 1:16–20. The wireless device communicates with unmanned devices, which transmit a machine identifier to the wireless device. *Id.*, 2:11–28. “[I]n some embodiments, multiple machines may send their unique identifiers, such that the user is able to select one or more machines to purchase from.” *Id.*, 2:11-28. The user then selects their desired items, makes a purchase, and the vending machine dispenses the purchased item(s). *Id.*, 5:19–30. *See also* Ex. 1003, ¶ 50.

### B. *Arora*: U.S. Patent No. 9,898,884 (Ex. 1006)

U.S. Patent No. 9,898,884 to Arora et al. (“*Arora*”) is titled “Method and System of Personal Vending.” *Arora* issued on February 20, 2018 from an

application filed on April 4, 2013 and is therefore prior art to the '772 Patent under 35 U.S.C. §§ 102(a) and/or 102(d). *See also* Ex. 1003, ¶¶ 28, 51.

*Arora* teaches using a “personal electronic device” to utilize “a group of vending machines managed by a vending machine company[.]” Ex. 1006, Abstract. *Arora* displays to the consumer “either products or vending machines from a list of options provided via the user interface of the personal electronic device, wherein the list of options depends on the actual available inventory[.]” *Id.*, Abstract. The systems and methods of *Arora* disclose tracking a consumer’s purchase history and offering coupons to a consumer based upon the same. *Id.*, 13:47–14:16, Fig. 3; *see also* Ex. 1003, ¶ 52.

**C. *Freeny*: U.S. Patent No. 8,958,846 (Ex. 1007)**

U.S. Patent No. 8,958,846 to Freeny, Jr. (“*Freeny*”) is titled “Communication and Proximity Authorization Systems.” *Freeny* issued on February 17, 2015 from an application filed August 23, 2006 and is therefore prior art to the '772 Patent under 35 U.S.C. §§ 102(a) and/or 102(d). *See also* Ex. 1003, ¶¶ 28, 53.

*Freeny* discloses methods of transacting with a proximity service unit via a consumer’s wireless device. Ex. 1007, Abstract. Moreover, *Freeny* discloses a proximity authorization unit (which is a form of wireless device) that “can operate just like a smart card with the approved credit amount stored in the proximity authorization unit 2910 until transactions are authorized[.]” *Id.*, 37:60–63. The

customer's approved credit balance "can be checked at any time by the user of the proximity authorization unit[.]" *Id.*, 38:3-5; *see also* Ex. 1003, ¶ 54.

**D. Casey: U.S. Patent No. 8,255,323 (Ex. 1008)**

U.S. Patent No. to Casey et al ("*Casey*") is titled "Motion Based Payment Confirmation." *Casey* issued on August 28, 2012 and is therefore prior art to the '772 Patent under 35 U.S.C. § 102(a). *See also* Ex. 1003, ¶¶ 28, 55.

*Casey* describes techniques for confirming a payment transaction on an electronic device that includes a touchscreen. Ex. 1008, Abstract. *Casey* discloses methods of using a touchscreen to select payment methods or confirm payment. *Id.*, Fig. 5. In particular, a consumer may swipe their finger across a touchscreen to confirm payment. *Id.*, 16:36–47, Fig. 5; *see also* Ex. 1003, ¶ 56.

**VI. CLAIM CONSTRUCTION: 37 C.F.R. § 42.104(B)(3)**

**A. Applicable Law**

The claim construction standard of *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) applies to this proceeding. *See also* Ex. 1003, ¶ 57.

**B. A Person Having Ordinary Skill in the Art**

A person of ordinary skill in the art ("POSA") at the time of the earliest claimed filing date of the '772 Patent would have had an educational background of, or practical experience equivalent to, a bachelor's degree in electrical engineering, computer engineering, computer science, or equivalent training, and approximately

three years of experience with electronic payment systems, vending machine technologies, or distributed network systems. Lack of work experience can be remedied by additional education, and vice versa. Ex. 1003, ¶¶ 20–26.

**C. Claim Term(s)**

Petitioner submits that, for purposes of this Petition, the Board need not construe any claim terms to resolve the parties’ disputes, and the claims should be given their ordinary and customary meaning. *See id.*, ¶ 58. Petitioner reserves the right to further clarify those ordinary and customary meanings, or to respond to any construction proposed by Patent Owner and/or offer one or more constructions in response to any constructions proposed by Patent Owner.<sup>2</sup>

**VII. DETAILED EXPLANATION OF GROUNDS**

**A. Ground 1: Claim 7 is Rendered Obvious Under 35 U.S.C. § 103 Over *Low* in View of *Arora***

Even though Patent Owner previously disclaimed Claim 1, because Claims 7 and 11 depend from it, Petitioner shows herein why Claim 1 would be anticipated by *Low*.

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<sup>2</sup> Petitioner does not concede that any Challenged Claim meets the statutory requirements of 35 U.S.C. § 112.

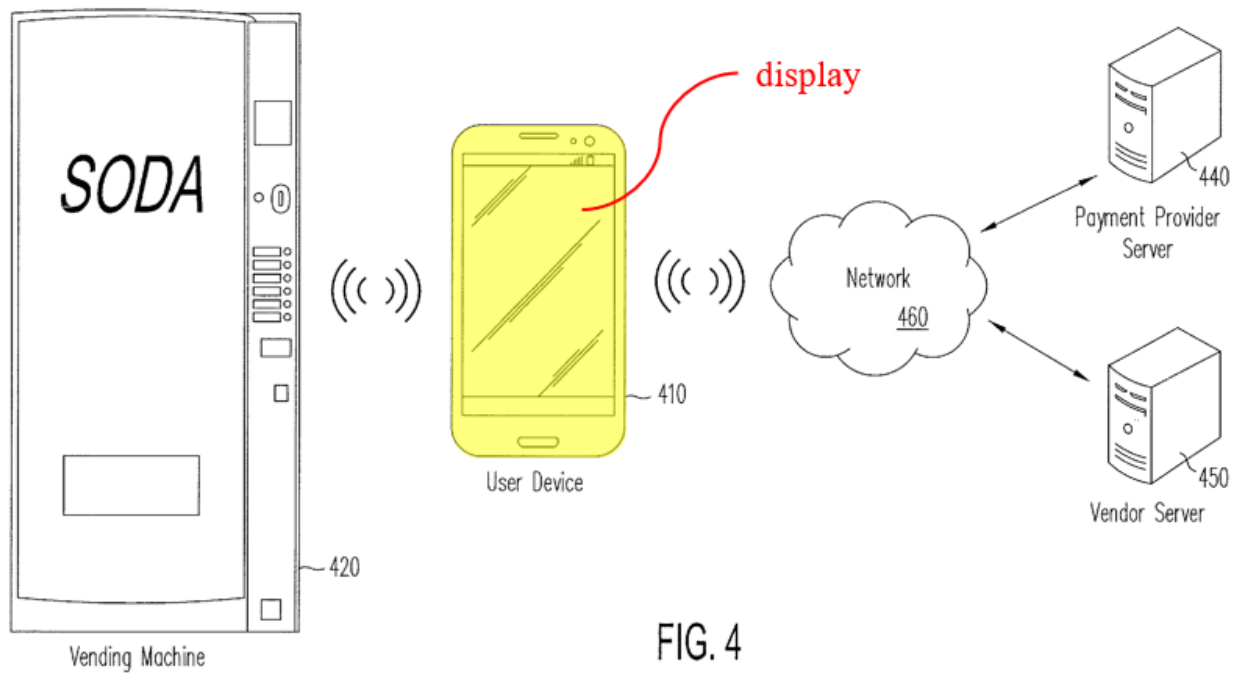
**1. *Low* Discloses All Elements of Claim 1, From Which Claim 7 Depends**

**a. [1.P] A method of presenting representations of payment accepting unit events**

*Low* discloses “systems and method[s] for an electronic payment to a non-Internet connected device.” Ex. 1005, Abstract. *Low* teaches that the user device 110 includes a purchase application 112, which provides “a convenient interface to permit user 102 to select, purchase, and dispense products for sale at a vending machine 120.” *Id.*, 3:49-60. Thus, to the extent the preamble is found to be limiting, it is taught by *Low*. Ex. 1003, ¶ 62.

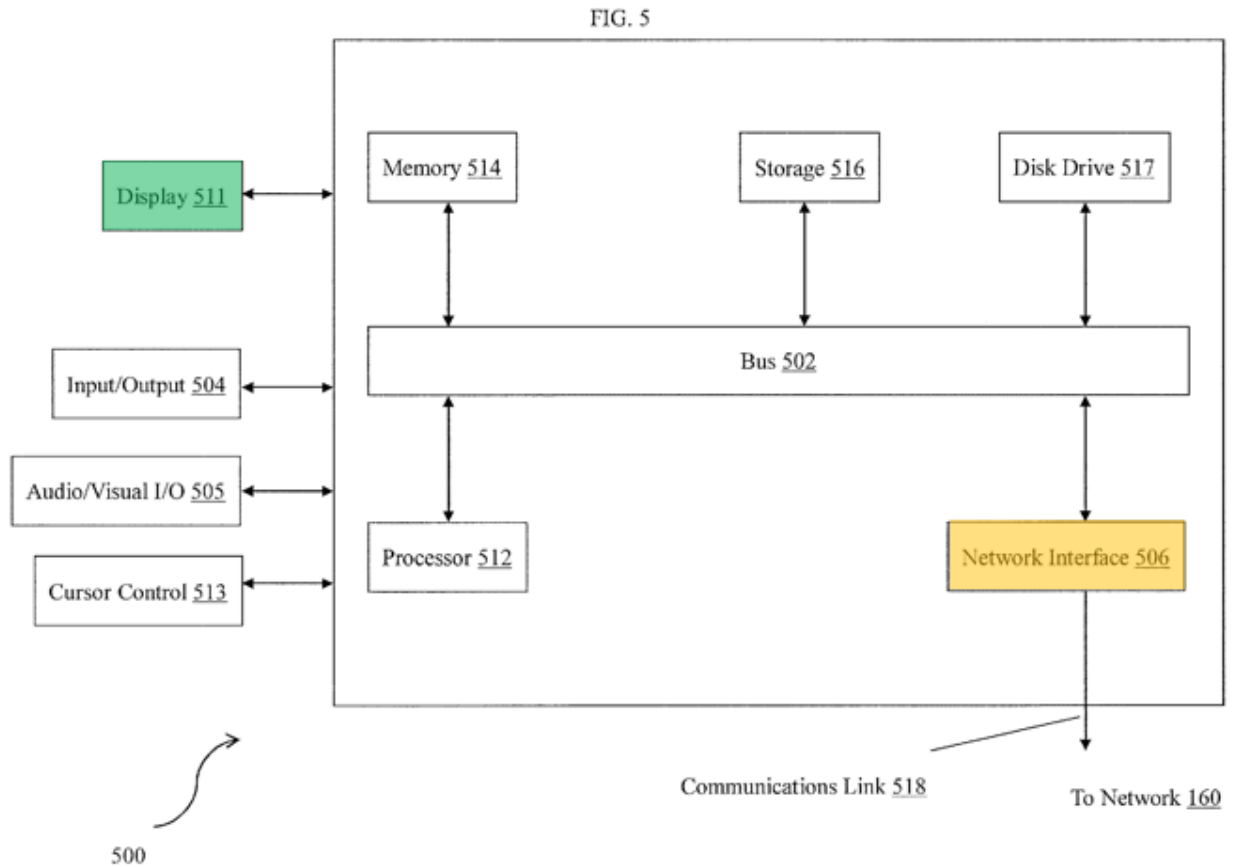
**b. [1.1] at a mobile device with one or more processors, memory, one or more output devices including a display, and one or more radio transceivers:**

*Low* teaches “a user device 110” that includes “one or more processors, memories, and other appropriate components for executing instructions.” Ex. 1005, 3:26–32. The “user device 110 may be implemented as...a smart phone.” *Id.*, 3:40–44. *Low* similarly describes a “user device 410,” highlighted in yellow in Figure 4 (below). *Id.*, 11:11–13. The user device 410 includes a display.



Ex. 1005, Figure 4 (annotated).

*Low* teaches that user device 110/410 can be “implemented as computer system 500,” which includes a “display 511” (shown in green below) and a “transceiver or network interface 506” (shown in orange below) that “transmits and receives signals between computer system 500 and other devices, such as another user device, a merchant server, or a payment provider server via network 560.” *Id.*, 12:39–56.



Ex. 1005, Figure 5 (annotated).

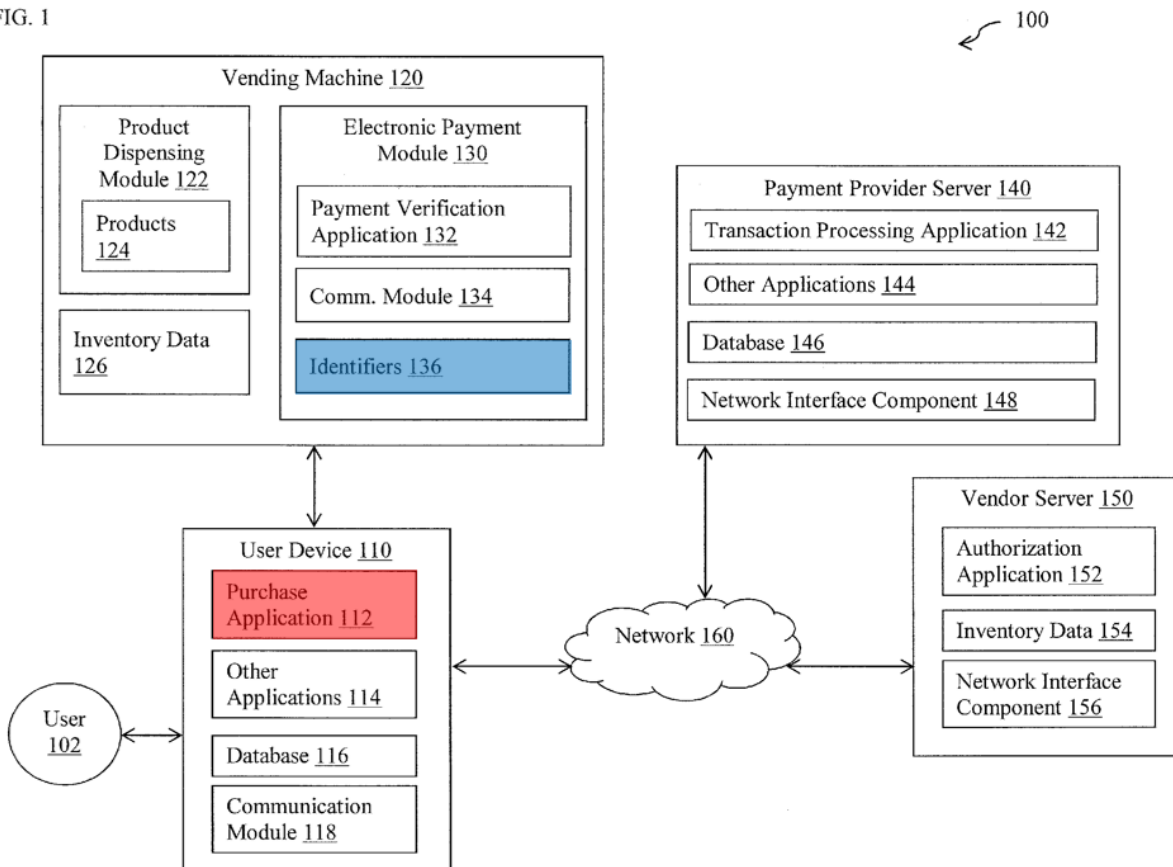
Thus, *Low* teaches at a mobile device (user device 110/410) with one or more processors (e.g., processor 512), memory (e.g., memory 514), one or more output devices including a display (e.g., display 511), and one or more radio transceivers (e.g., transceiver or network interface 506). Ex. 1003, ¶¶ 63–65.

- c. **[1.2] identifying one or more payment accepting units in proximity to the mobile device that are available to accept payment from a mobile payment application executing on the mobile device**

*Low* teaches that “[u]ser device 110 may further include one or more identifiers 136 which may be implemented, for example, as...data associated with

hardware of vending machine 120...or other appropriate data used for authentication/identification of vending machine 120[.]” Ex. 1005, 6:16–21. *Low* further teaches that “the user may utilize a user device to access payment provider server 140 and receive locations of available [non-Internet connected machines] NICMs,” and can further receive “information corresponding to a plurality of NICM near user device 110,” such as “directions, map coordinates, and/or a GPS location of desired NICM.” *Id.*, 9:4–23; *see also id.* 2:26–28. The purchase application 112 is shown in blue and the identifiers 136 are shown in red in annotated Figure 1 of *Low*:

FIG. 1



Ex. 1005, Figure 1 (annotated).

Thus, *Low* teaches identifying (e.g., via identifiers 136) one or more payment accepting units (e.g., NICMs, such as vending machine 120) in proximity to the mobile device (e.g., “near user device 110”) that are available to accept payment from a mobile payment application (e.g., purchase application 112) executing on the mobile device (e.g., user device 110). Ex. 1003, ¶¶ 66–67.

**d. [1.3] the identifying based at least in part on an identifier corresponding to the one or more payment accepting units**

As set forth above, *Low* teaches that “[u]ser device 110 may further include one or more identifiers 136 which may be implemented, for example, as...data associated with hardware of vending machine 120...or other appropriate data used for authentication/identification of vending machine 120.” Ex. 1005, 6:16–21. “The non-Internet connected machine (NICM) transmits a machine identifier to the user device.” *Id.*, 2:16–20, 9:16–23. Thus, *Low* teaches the identifying based at least in part on an identifier (e.g., machine identifier, such as the identifiers 136) corresponding to the one or more payment accepting units (i.e., NICMs, such as vending machine 120). Ex. 1003, ¶¶ 68–69.

**e. [1.4] wherein the one or more payment accepting units are payment operated machines that accept payment for dispensing of products and/or services**

*Low* teaches that “vending machine 120 may be a vending machine, kiosk, terminal, or other device for dispensing items that are purchased.” Ex. 1005, 4:57–59. Thus, *Low* teaches wherein the one or more payment accepting units (i.e., vending machine 120) are payment operated machines that accept payment for dispensing of products and/or services (e.g., “dispensing items that are purchased”). Ex. 1003, ¶¶ 70–71.

**f. [1.5] displaying a user interface of the mobile payment application on the display of the mobile device**

*Low* teaches “[p]urchase application 112 may be used, for example, to provide a convenient interface to permit user 102 to select, purchase, and dispense products for sale at a vending machine 120.” Ex. 1005, 3:57–60. A “menu is...displayed on the user device, and the user selects desired item(s) for purchase.” *Id.*, 2:24–25. Thus, *Low* teaches displaying a user interface (e.g., “interface”) of the mobile payment application (e.g., purchase application 112) on the display (e.g., display 511) of the mobile device (e.g., user device 110). Ex. 1003, ¶¶ 72–73.

**g. [1.6] the user interface being configured to display a visual indication of the one or more payment accepting units**

*Low* teaches that a NICM “transmits a machine identifier to the user device.” Ex. 1005, 2:16–20. *Low* further teaches that the user device may “receive a machine identifier from identifiers 136.” *Id.*, 8:66–9:2. “[M]ultiple machines may send their unique identifiers, such that the user is able to select one or more machines to purchase from.” *Id.*, 2:26–28. A POSA would understand that the user device 110 is configured to display the available machines such that the user is able to interact with the display to select the one or more machines from which to make a purchase. Ex. 1003, ¶ 74. Thus, *Low* teaches the user interface (e.g., “interface”) being configured to display (e.g., “such that the user is able to select one or more machines to purchase from”) a visual indication of the one or more payment accepting units (e.g., “machine identifier”). *Id.*, ¶ 75.

**h. [1.7] the user interface being configured to...accept user input to (i) receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units**

*Low* teaches that a NICM “transmits a machine identifier to the user device.” Ex. 1005, 2:16–20. *Low* further teaches that “*multiple machines* may send their unique identifiers, *such that the user is able to select one or more machines to purchase from.*” *Id.*, 2:26–28 (emphasis added). A POSA would understand that

the user device 110 is configured to display the available machines such that the user is able to interact with the display to select the one or more machines from which to make a purchase. Ex. 1003, ¶ 76. Thus, *Low* teaches the user interface (e.g., “interface”) being configured to accept user input to receive selection by a user of the mobile device of an available payment accepting unit of the one or more payment accepting units (e.g., “user is able to select one or more machines to purchase from”). *Id.*, ¶ 77.

- i. **[1.8] the user interface being configured to...accept user input to...(ii) trigger payment by the mobile payment application for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units**

*Low* teaches that the “user device displays the purchase request and, if the information is correct, the user selects a payment button or option on the user device, which communicates the payment request to a payment provider.” Ex. 1005, 2:46–49. *Low* teaches that the purchase request is approved and the “user device may then communicate the purchase authorization to the machine, which may decrypt the information and dispense the purchased items(s) associated with the transaction number.” *Id.*, 2:49–62; Ex. 1003, ¶ 78. Thus, *Low* teaches the user interface (e.g., “interface”) being configured to accept user input to trigger payment by the mobile payment application (e.g., “user selects a payment button or option on the user

device”) for a transaction initiated by the user of the mobile device with the available payment accepting unit of the one or more payment accepting units (e.g., user device “communicates the payment request to a payment provider” and, after processing, “communicate[s] the purchase authorization to the machine, which may decrypt the information and dispense the purchased items(s) associated with the transaction number”). *Id.*, ¶ 79.

**j. [1.9] establishing via the one or more radio transceivers a wireless communication path including the mobile device and the available payment accepting unit of the one or more payment accepting units**

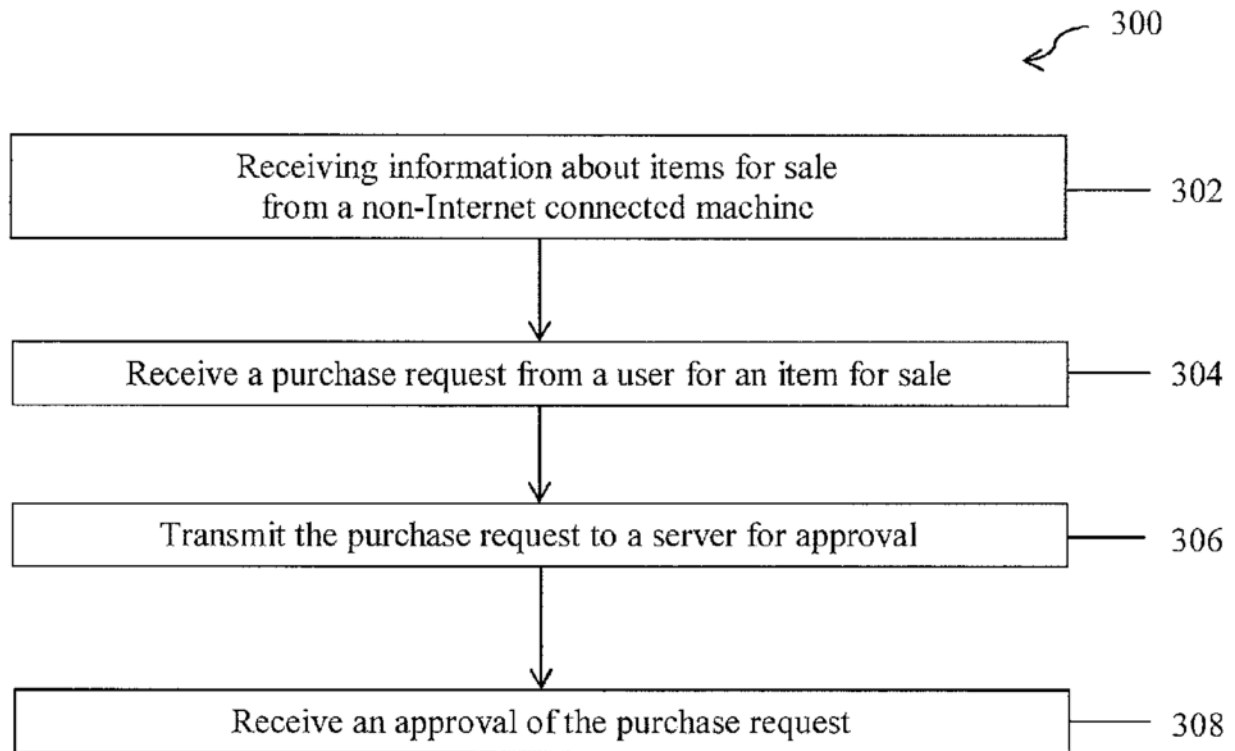
*Low* teaches a user device that “communicates with a non-Internet connected unmanned device/machine via wireless communication, such as Bluetooth or NFC (Near Field Communication) means[.]” Ex. 1005, 2:11–16, 2:38–39. *Low* teaches that the user device 110 may receive inventory data 154 from a vending machine 120 “using an Internet connection of user device 110 *after a short range communication link is established* between user device 110 and vending machine 120.” *Id.*, 8:24–28 (emphasis added). Thus, *Low* teaches establishing via the one or more radio transceivers (e.g., “transceiver or network interface 506”) a wireless communication path (e.g., “communication link is established,” “device[s] are paired”) including the mobile device (e.g., user device 110) and the available

payment accepting unit of the one or more payment accepting units (e.g., NICMs, such as vending machine 120). *Id.*, ¶¶ 80–81.

**k. [1.10] after establishing the wireless communication path, enabling user interaction with the user interface of the mobile payment application to complete the transaction**

*Low* teaches that the user device 110 may receive inventory data 154 (e.g., purchasable products at vending machine 120) from a vending machine 120 “using an Internet connection of user device 110 *after a short range communication link is established* between user device 110 and vending machine 120.” Ex. 1005, 8:24–28 (emphasis added), 8:22–24. Referring to Figure 3 of *Low*, “a flowchart illustrating a method for use by a user device for an electronic payment to a non-Internet connected device” is shown. *Id.*, 10:1–3.

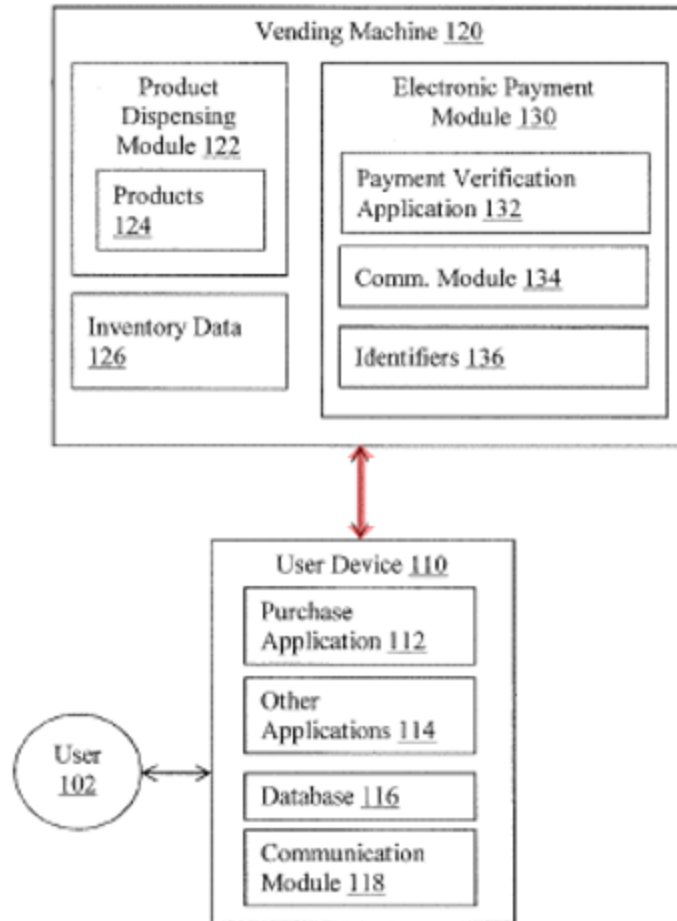
FIG. 3



Ex. 1005, Figure 3.

Furthermore, a POSA would understand the bi-directional arrow (shown in red below) between the user device 110 and the vending machine 120 of Figure 1 of *Low* reflects an established communication path between the user device 110 and the vending machine 120. Ex. 1003, ¶¶ 82–83.

FIG. 1



Ex. 1005, Figure 1 (excerpted/annotated).

Thus, *Low* teaches after establishing the wireless communication path (e.g., “communication link is established,” “device[s] are paired”), enabling user interaction with the user interface of the mobile payment application (e.g., purchase application 112) to complete the transaction (e.g., “a method for use by a user device for an electronic payment to a non-Internet connected device,” as shown in Figure 3 of *Low*). Ex. 1003, ¶ 84.

**I. [1.11] exchanging information with the available payment accepting unit via the one or more radio transceivers, in conjunction with the transaction**

*Low* teaches that “[e]lectronic payment module 130 includes generally a payment verification application 132, communication module 134, and identifiers 136 necessary to effectuate and verify and electronic payment of products 124.” Ex. 1005, 5:54–57. “Payment verification application 132...may receive an approval of a payment from user device 110, verify the approval, and dispense items purchased from products 124 using product dispensing module 122.” *Id.*, 5:66–6:3. *Low* teaches that this information is exchanged via the “communication module 134 [which is] adapted to communicate with user device 110” via “wireless short range communication devices including microwave, radio frequency, infrared, Bluetooth, and near field communication devices.” *Id.*, 6:9–15. Thus, *Low* teaches exchanging information (e.g., information such as approval of payment) with the available payment accepting unit via the one or more radio transceivers (e.g., “wireless short range communication devices”), in conjunction with the transaction (e.g., approval of payment). Ex. 1003, ¶¶ 85–86.

**m. [1.12] after exchanging the information, displaying, on the display, an updated user interface of the mobile payment application to the user of the mobile device**

*Low* teaches user device 110 may “display to user 102...lists of products 124,” and “[i]nventory data 126 may...adjust viewable inventory levels of products 124 for display to user 102.” Ex. 1005, 8:31–33, 9:8–11. A POSA would understand that after a product 124 is purchased at a vending machine 120, the user device 110 displays an updated inventory level of products 124 to account for that purchased product (i.e., displaying one less item available). Ex. 1003, ¶ 87. Thus, *Low* teaches after exchanging the information, displaying, on the display (i.e., display 511), an updated user interface (i.e., “adjust[ed] viewable inventory”) of the mobile payment application (i.e., purchase application 112) to the user of the mobile device (i.e., user device 110). *Id.*, ¶ 88. Additionally or alternatively, at a minimum, a POSA would understand *Low* as teaching a user device 110 having a user interface that would revert to its initial, pre-transaction state following the completion of the transaction so that the user device 110 could be utilized to complete a subsequent transaction, likewise representing an updated user interface. *Id.*, ¶¶ 89–90.

For at least these reasons, *Low* teaches all the limitations of Claim 1. *Id.*, ¶ 91; *see also id.*, ¶ 29.

## 2. Obviousness Standards and Analysis

Questions of obviousness under 35 U.S.C. § 103 are resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966); *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). *See* Ex. 1003, ¶¶ 30–31, 92.

### a. Differences Between the Claimed Subject Matter and *Low*

*Low* does not explicitly disclose that its user device includes an accelerometer, such that “based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit[,] and in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path,” as recited in dependent Claim 7. *See* Ex. 1003, ¶ 93.

However, *Arora* explicitly discloses a personal electronic device that includes an “accelerometer” (Ex. 1005, 26:65–27:6), and the location of a customer relative to two vending machines 30, 31 and a defined transaction distance therefrom may be determined through data from the accelerometer. *Id.*, 13:28–35; Ex. 1003, ¶ 94. A POSA would understand that because *Arora* determines the customer is exiting the transaction distance based on data from the accelerometer, then *Arora* teaches

cancelling the wireless communication path between the personal electronic device and the vending machine. *Id.*, ¶ 95.

**b. Obviousness Rationale for Why a POSA Would Have Modified *Low* with *Arora* to Arrive at the Claimed Subject Matter**

A POSA would be motivated to modify the user device of *Low* to include an accelerometer and cancel the wireless communication path between the user device and the vending machine if data from the accelerometer indicates that the user device was walking away from the vending machine, as taught by *Arora*. Ex. 1003, ¶¶ 96–97.

A POSA would have found it obvious to modify *Low* with *Arora* in this manner because, as just one example, *Arora* provided a finite number of approaches to determining a customer’s location, including using “inertial guidance” from data from an accelerometer (*see* Ex. 1006, 13:28–32), and that location is used to determine the zones and communication that should occur with particular devices. Ex. 1003, ¶ 100. One of ordinary skill in the art would have understood that maintaining connections requires resources on both ends of the connection (i.e., between the user device and the vending machine), and that such connections should not remain active when not needed in order to preserve those resources for other interactions. *Id.*, ¶ 101–02; *see KSR*, 550 U.S. at 421.

Additionally, a near-field communication is, by definition, limited by the distance at which it can transmit information, further motivating a POSA to cancel the communication path between the vending machine and user device if data from the accelerometer indicated that the user was departing the range of near field communication to conserve resources. Ex. 1003, ¶¶ 98–99.

**c. Obviousness Rationale for How a POSA Would Have Modified *Low* with *Arora* to Arrive at the Claimed Subject Matter**

Once motivated to modify *Low* with *Arora*, a POSA would have (i) readily understood how to do so with a reasonable expectation of success and (ii) found it obvious and routine to implement any modifications needed to make those combinations work. Ex. 1003, ¶ 103. For example, a POSA would have understood that the accelerometer present in a mobile device, such as that described in *Arora*, was one of a finite possible means described in *Arora* to determine the location or trajectory of a user. Using that information to cancel the wireless connection when the user was walking away from the vending machine would have been a simple modification to the system of *Low* to conserve resources. *Id.*, ¶ 104.

Additionally or alternatively, it would have been within the knowledge of a POSA at the time to understand that conservation of resources would be desirable to reduce costs and energy. Armed with the knowledge that the location and trajectory of a user can be determined based on the teachings of *Arora*, a POSA would have

understood that cancelling the wireless communication path between *Low*'s user device and vending machine would conserve resources in situations where the user was walking away from the vending machine and was thus no longer a potential customer. Ex. 1003, ¶ 105.

**3. Claim 7**

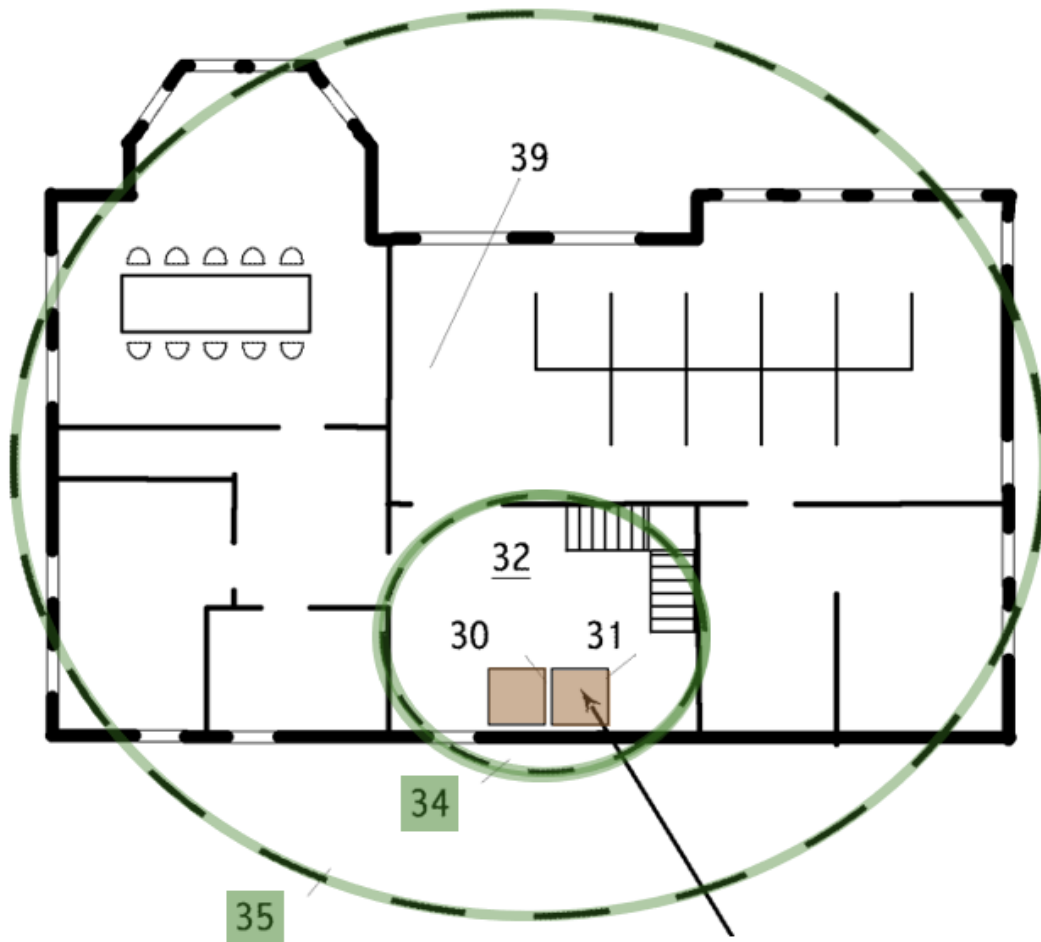
**a. [7.1] wherein the mobile device includes an accelerometer**

*Arora* discloses a personal electronic device 18 that includes an “accelerometer.” Ex. 1006, 13:34–35, 26:65–27:6. Thus, *Low* in view of *Arora* teaches wherein the mobile device (e.g., personal electronic device 18) includes an accelerometer (e.g., “accelerometer”). *See also* Ex. 1003, ¶ 106–09.

**b. [7.2] and the method further comprises: based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit**

*Arora* discloses two vending machines 30, 31 (brown annotations) that define multiple transaction distances therefrom, including a “within sight” distance 34 and a “potential buyer” distance 35 (green annotations). Ex. 1003, ¶ 110; Ex. 1006, 12:34–13:5, Figure 1:

Fig. 1



Ex. 1006, Figure 1 (excerpted/annotated).

*Arora* further discloses a personal electronic device that includes an “accelerometer” (*id.*, 26:65–27:6), and the location of the customer relative to the vending machines 30, 31 may be determined through “[i]nertial guidance [which] may use an accelerometer...in the customer 17’s personal electronic device 18.” *Id.*, 13:28–35; Ex. 1003, ¶ 111. A POSA would understand “inertial guidance” to mean determining the location and trajectory of the user device, including whether the user

(e.g., the user in possession of the user device) is walking away from the vending machine. Ex. 1003, ¶ 111–14. Thus, *Low* in view of *Arora* teaches based on data from the accelerometer, determining whether the user is walking away from the available payment accepting unit (e.g., *Arora*'s teachings of determining customer location based on “[i]nertial guidance [which] may use an accelerometer...in the customer 17's personal electronic device 18”). *Id.*, ¶ 115.

**c. [7.3] and the method further comprises: ...in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path**

A POSA would have found it obvious to cancel the communication link between *Low*'s user device and vending machine if the inertial guidance from the accelerometer, as taught by *Arora*, determined that the user was walking away from the vending machine to, among other things, conserve resources by preventing the vending machine 120 of *Low* from trying to maintain a short range communication link with a user device 110 that is moving away from the vending machine 120. *Id.*, ¶¶ 103–105, 116–17.

Thus, *Low* in view of *Arora* teaches all limitations of Claim 7, i.e., in accordance with a determination that the user is walking away from the available payment accepting unit, canceling the wireless communication path (e.g., a POSA armed with *Low* would have been motivated to cancel the wireless communication

path between the user device 110 and the vending machine 120 to conserve resources if it was determined that the user device 110 was moving away from the vending machine 120, as taught by *Arora*). *Id.*, ¶¶ 106–17.

**B. Ground 2: Claim 11 is Rendered Obvious Under 35 U.S.C. § 103 Over *Low* in View of *Arora* in Further View of *Freeny* and *Casey***

**1. *Low* Discloses All Elements of Claim 1, From Which Claim 11 Depends**

*See supra* § VII.A.1; Ex. 1003, ¶ 118.

**2. Obviousness Standards and Analysis**

*See supra* § VII.A.2; Ex. 1003, ¶ 119.

**a. Differences Between the Claimed Subject Matter and *Low***

*Low* teaches almost every element of dependent Claim 11. *See supra* § VII.A.1; Ex. 1003, ¶ 120. *Low* teaches “[c]omputer system 500 includes...an input/output (I/O) component 504 that processes a user action, such as selecting keys from a keypad/keyboard, selecting one or more *buttons or links, etc.*,” (Ex. 1005, 12:39–46 (emphasis added)) and “the user selects a *payment button or option* on the user device” (*id.*, 2:46–49 (emphasis added)).

However, *Low* does not explicitly disclose that the user interface of the purchase application 112 includes “a visual representation of the available payment accepting unit,” as recited in Claim 11. Ex. 1003, ¶ 121. However, *Arora*, which is in the same field of endeavor as *Low*—conducting a transaction at an unmanned

machine with a user device (*Id.*, ¶ 122)—explicitly discloses a user interface including “a visual representation of the available payment accepting unit,” and a POSA would have found it obvious to modify *Low* to include this feature. *Id.*, ¶ 122. *Arora* discloses a personal electronic device 40 including “two different vending machines, 41 and 42” displayed on the screen of the personal electronic device 40. Ex. 1006, 13:47–49, Figure 3; Ex. 1003, ¶ 123.

Additionally, *Low* does not explicitly disclose that the user interface of the purchase application 112 includes “an indication of a prepared balance,” as recited in Claim 11. Ex. 1003, ¶ 124. However, *Freeny*, which is also in the same field of endeavor as *Low* (*Id.*, ¶ 125), explicitly discloses a user interface including “an indication of a prepared balance,” and a POSA would have found it obvious to modify *Low/Arora* to include this feature. *Id.* *Freeny* discloses a customer performing a “customer bank balance request after the customer is connected to their bank,” where an “approved credit amount” “can be checked at any time by the user of the proximity authorization unit.” Ex. 1007, 9:32-35, 38:3-5; Ex. 1003, ¶ 126.

Finally, *Low* does not explicitly disclose that the user interface of the purchase application 112 includes “an affordance that when slid, indicates the initiation of the transaction” and “wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device,” as recited in Claim 11. *Id.*, ¶ 127. However, *Casey*, which is also in the same field of endeavor

as *Low*—conducting a transaction at an unmanned machine with a user device (*Id.*, ¶ 128)—explicitly discloses a slide bar 182 whereby “a user may drag the slide bar to the left to the decline position 186 to decline the payment or the user may drag the slide bar 182 to the right to the confirmation position 188 to confirm the payment transaction.” Ex. 1008, 13:44–51; Ex. 1003, ¶ 128.

**b. Obviousness Rationale for Why a POSA Would Have Modified *Low* with *Arora*, *Freeny*, and *Casey* to Arrive at the Claimed Subject Matter**

In view of the collective teachings of *Low*, *Arora*, *Freeny*, and *Casey* it would have been obvious to a POSA to include in the user interface of the purchase application 112 of *Low* any suitable graphical user interface elements that would be “convenient...to permit user 102 to select, purchase, and dispense products for sale at a vending machine 120” (Ex. 1005, 3:57–60), including a visual representation of the available payment accepting unit, as taught by *Arora*, an indication of a prepared balance, as taught by *Freeny*, and an affordance that is slid in response to a user input of a swipe to indicate initiation of the transaction, as taught by *Casey*. Ex. 1003, ¶ 129.

**(1) Modifying *Low* with *Arora***

A POSA would have found it obvious to modify *Low* with *Arora* based on, at a minimum, the express teachings in *Low*. Ex. 1003, ¶ 130. *Low*’s disclosure that “[u]ser device 110 may further include one or more identifiers 136 which may be

implemented, for example, as . . . other appropriate data used for authentication/identification of vending machine 120” (Ex. 1005, 6:16-22), and that “the user may utilize a user device to . . . receive locations of available NICMs” and “directions, map coordinates, and/or a GPS location of desired NICM” (*id.*, 9:14-23) indicates that *Low*, to the extent it does not explicitly do so, provides—under the former, more rigid “TSM” standard—a teaching, suggestion, or motivation to a POSA to modify the user interface to include “a visual representation of the available payment accepting unit,” such as that taught by *Arora*. Ex. 1003, ¶ 131; *see KSR*, 550 U.S. at 407, 419. A POSA would understand that providing a visual representation of the available payment accepting unit (i.e., “icons or photographs, 41 and 42 [that] are representative of two actual machines,” as taught by *Arora*) would make the user interface of *Low* more “convenient,” for example, if the user was illiterate or a non-native speaker of whichever language the purchase application 112 was in. *Id.*, ¶ 132–33.

In addition to *Low*’s express teachings, there are a variety of other rationales for why a POSA would have been motivated to modify the user interface of *Low* to include a visual representation of the available payment accepting unit as taught by *Arora*. *Id.*, ¶ 134.

*First*, modifying *Low*’s user interface to include the machine icon interface elements 41, 42 taught by *Arora*’s user interface reflects a simple combination of

prior art elements (i.e., *Low*'s user interface lacking a visual representation of the available payment accepting unit with *Arora*'s user interface that includes the machine icons 41, 42) to yield predictable results. This is because a POSA would understand that presenting machine icons 41, 42 of *Arora*'s user interface on the user interface of the purchase application 112 of *Low* would predictably allow a user to easily identify the machine they wish to purchase from. *Id.*, ¶ 135; *see KSR*, 550 U.S. at 416.

*Second*, replacing a portion of *Low*'s user interface with the portion of *Arora*'s user interface that includes the machine icons 41, 42 represents a simple substitution of one known element for another to obtain predictable results, because a POSA would understand that presenting machine icons on the user interface of the purchase application of *Low* would predictably allow a user to easily identify the machine they wish to purchase from. *Ex. 1003*, ¶ 136; *see KSR*, 550 U.S. at 417.

The foregoing rationales are exemplary in nature and additional rationales may equally apply as discussed in additional detail in the Declaration of Petitioner's expert Dr. Neuman. *Ex. 1003*, ¶¶ 137–40; *see KSR*, 550 U.S. at 417, 421.

## **(2) Modifying *Low/Arora* with *Freeny***

A POSA would have found it obvious to modify *Low/Arora* with *Freeny* based on, at a minimum, the express teachings in *Low*. *Id.*, ¶ 141. *Low* teaches that “user device 110 may request funding source information...[which] may include a

funding card and/or a user account.” Ex. 1005, 10:34–38. The funding source information is used by the payment provider server 440 to “check[] for adequate funds and charg[e] the account/funding card.” *Id.*, 11:64–66. These teachings indicate that *Low*, to the extent it does not explicitly do so, provides—under the former, more rigid “TSM” standard—a teaching, suggestion, or motivation to a POSA to modify the user interface to include “an indication of a prepared balance” (i.e., an “approved credit amount”) that “can be checked at any time by the user of the proximity authorization unit,” as taught by *Freeny*. Ex. 1003, ¶ 142; *see KSR*, 550 U.S. at 419. A POSA would understand that providing an indication of a prepared balance would make the user interface of *Low* more “convenient,” for example, by providing the user with information regarding available funds to purchase items at the vending machine 120. *Id.*, ¶ 143. This would allow the user to make informed purchasing decisions, such that when the payment provider server 440 “check[s] for adequate funds and charg[es] the account/funding card” (Ex. 1005, 11:64–66), the user has confidence that the transaction will be accepted. *Id.*

In addition to *Low*’s express teachings, there are a variety of other rationales for why a POSA would have been motivated to modify the user interface of *Low/Arora* to include an indication of a prepared balance as taught by *Freeny*. *Id.*, ¶ 144.

*First*, modifying the user interface of *Low/Arora* with *Freeny*'s user interface that includes an "approved credit amount" that "can be checked at any time by the user of the proximity authorization unit," represents a combination of prior art elements to yield predictable results. Ex. 1003, ¶ 145. A POSA would understand that presenting the "approved credit amount" of *Freeny*'s user interface on the user interface of the purchase application of *Low/Arora* would predictably inform a user of the funds that are available to purchase items from the machine. *Id.*; *see KSR*, 550 U.S. at 416.

*Second*, replacing a portion of the user interface of *Low/Arora* with the portion of *Freeny*'s user interface that includes the "approved credit amount" represents a simple substitution of one known element for another to obtain predictable results, because a POSA would understand that presenting the "approved credit amount" of *Freeny*'s user interface on the user interface of the purchase application of *Low/Arora* would predictably inform a user of the funds that are available to purchase items from the machine. Ex. 1003, ¶ 146; *see KSR*, 550 U.S. at 417.

Again, the foregoing rationales are exemplary in nature and additional rationales may equally apply as discussed in additional detail in the Declaration of Petitioner's expert Dr. Neuman. Ex. 1003, ¶¶ 147–50; *see KSR*, 550 U.S. at 417, 421.

**(3) Modifying *Low/Arora/Freeny* with *Casey***

A POSA would have found it obvious to modify *Low/Arora/Freeny* with *Casey* because, as just one example, a graphical user interface element that can be slid in response to a user input of a swipe represents one of a finite number of identified, predictable solutions, with a reasonable expectation of success. *Id.*, ¶ 151; *see KSR*, 550 U.S. at 421. A POSA would understand that the user interface of *Low* can include any suitable graphical user interface elements responsive to any suitable user inputs, such as taps, swipes, or other gestures. *Id.*, ¶ 152. *Casey* presents a POSA with one of a finite number of identified, predictable solutions, i.e., a slide bar 182 whereby “a user may drag the slide bar to the left to the decline position 186 to decline the payment or the user may drag the slide bar 182 to the right to the confirmation position 188 to confirm the payment transaction.” Ex. 1008, 13:44–51; Ex. 1003, ¶ 153.

**c. Obviousness Rationale for How a POSA Would Have Modified *Low* with *Arora*, *Freeny*, and *Casey* to Arrive at the Claimed Subject Matter**

Once motivated to modify *Low* with *Arora*, *Low/Arora* with *Freeny*, and *Low/Arora/Freeny* with *Casey*, a POSA would have (i) readily understood how to do so with a reasonable expectation of success and (ii) found it obvious and routine to implement any modifications needed to make those combinations work. Ex. 1003, ¶ 154. For example, a POSA would have understood that the user interface of

the purchase application 112 of *Low* could display a variety of information based on the nature of graphical user interfaces and *Low*'s teachings that the "purchase application 112 may be implemented as a downloadable application having a user interface" or "a web browser configured to view information available over the Internet." Ex. 1005, 3:57–4:2; Ex. 1003, ¶ 155. A POSA would have understood that modifying the purchase application 112, e.g., by modifying the software corresponding to the purchase application 112 or modifying the website that the purchase application 112 accesses, would be a simple and routine task to display whichever graphical user interface elements are desired, including a visual representation of the available payment accepting unit (as taught by *Arora*), an indication of a prepared balance (as taught by *Freeny*), and an affordance that is slid in response to a user input of a swipe to indicate initiation of the transaction (as taught by *Casey*). *Id.*, ¶ 156.

### 3. Claim 11

- a. **[11.1] wherein the user interface of the mobile payment application, after establishing the wireless communication path, includes a visual representation of the available payment accepting unit**

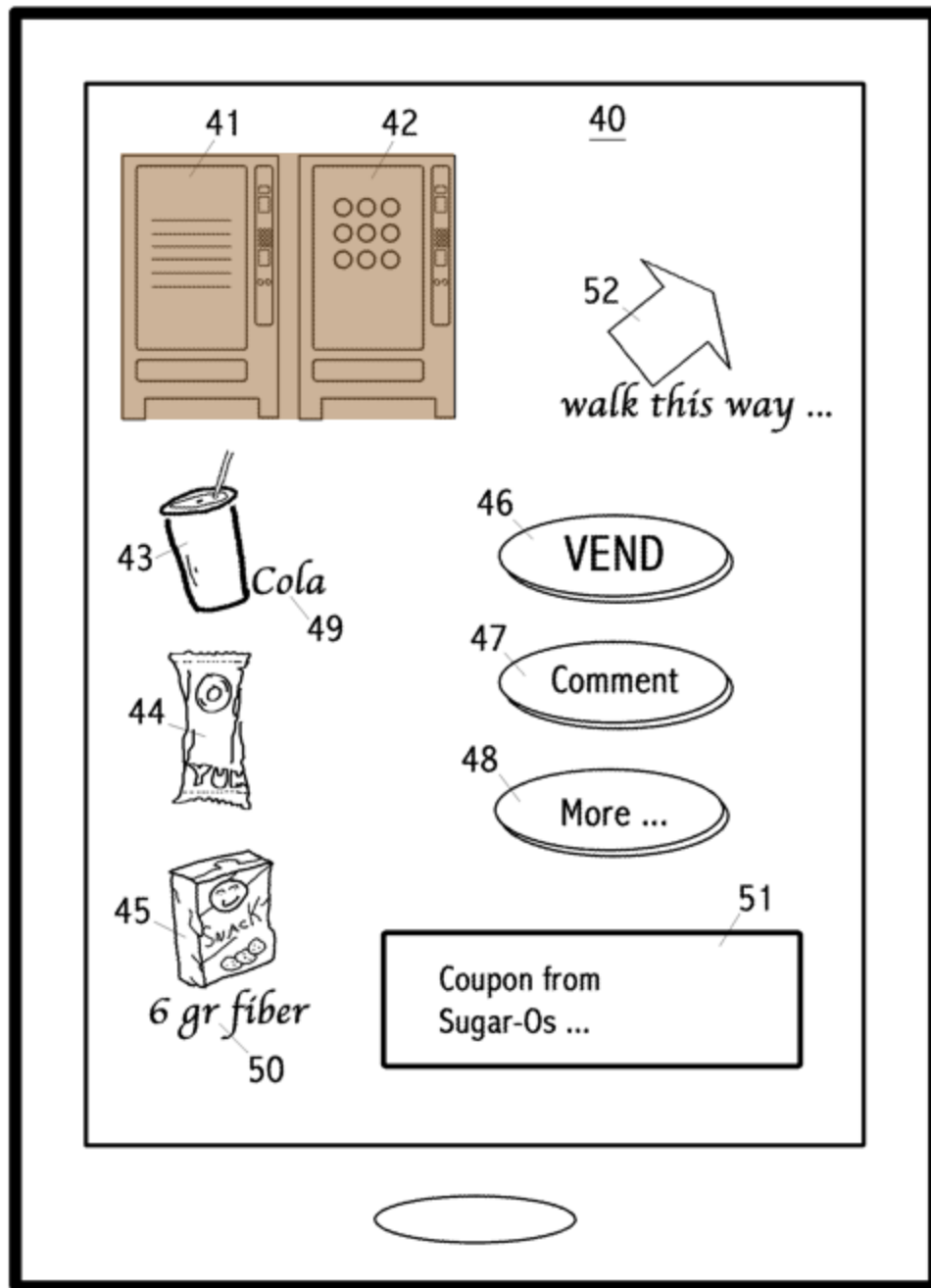
*Low* teaches that the user device 110 receives information from a vending machine 120 "using an Internet connection of user device 110 *after a short range communication link is established* between user device 110 and vending machine

120.” Ex. 1005, 8:24–28 (emphasis added). *Low* teaches that a NICM “transmits a machine identifier to the user device.” Ex. 1005, 2:16–20; 2:26–28. *Low* further teaches that the user device 110 may “receive a machine identifier from identifiers 136.” *Id.*, 8:66–9:2. *Low* teaches that the user device may “receive locations of available NICMs.” *Id.*, 9:16–21. A POSA would understand that the purchase application 112 of *Low* includes a user interface including a visual representation of one or more payment accepting units because *Low* teaches that “the user is able to select one or more machines to purchase from,” which selection would necessarily occur by virtue of the user making the selection through the user interface of the purchase application 112. Ex. 1003, ¶¶ 157–58. Thus, *Low* teaches wherein the user interface (i.e., “interface”) includes a visual representation of the available payment accepting unit (i.e., a POSA would understand that *Low*’s teaching that “the user is able to select one or more machines to purchase from” means the user interface of the user device 110 displays a visual representation of the available machine). *Id.*, ¶ 159.

However, to the extent Patent Owner may argue that *Low* does not explicitly teach “wherein the user interface includes a visual representation of the available payment accepting unit,” *Arora* does, and a POSA would have found it obvious to modify the user interface of *Low* to include a visual representation of one or more payment accepting units, as taught by *Arora*, with a reasonable expectation of

success. Ex. 1003, ¶ 160; *see supra* § VII.A.2. Figure 3 of *Arora* “shows an exemplary screen on a personal electronic device, 40” including “two different vending machines, 41 and 42,” shown in brown below. Ex. 1006, 13:47–49, Figure 3; Ex. 1003, ¶ 161. *Arora* further teaches that “the icons or photographs, 41 and 42 are representative of two actual machines co-located with a customer and owner of the personal electronic device, whose screen is shown, 40,” and “the customer selects which machine she wishes to use by touching icon 41 or 42.” *Id.*; Ex. 1006, 13:49–54.

Fig. 3



Ex. 1006, Figure 3 (annotated).

Petitioner has explained why and how a POSA would modify *Low* with *Arora*.  
*See supra* § VII.A.2; Ex. 1003, ¶ 162. Thus, *Low* in view of *Arora* teaches wherein

the user interface of the mobile payment application (e.g., *Low*'s user interface of the purchase application 112), after establishing the wireless communication path ("110 after a short range communication link is established"), includes a visual representation of the available payment accepting unit (e.g., *Low*'s user interface modified to include visual representations of one or more payment accepting units, such as the visual representations of the "two different vending machines, 41 and 42," as taught by *Arora*). Ex. 1003, ¶ 163.

**b. [11.2] an indication of a prepared balance**

*Low* teaches that "user device 110 may request funding source information," which "may include a funding card and/or a user account." Ex. 1005, 10:34–38. *Low* further teaches that "user device 410 may communicate the purchase request to payment service provider 440," which "may validate the funding source, *such as by checking for adequate funds* and charging the account/funding card." *Id.*, 11:56–66 (emphasis added). A POSA would understand that *Low*'s teachings of the user device requesting funding source information including a funding card and/or a user account and the server validating that there are adequate funds to complete the transaction strongly implies that the user interface includes an indication of a prepared balance. Ex. 1003, ¶ 164–65. Thus, *Low* in view of *Arora* teaches the user interface (e.g., "interface" of *Low*) includes an indication of a prepared balance (e.g., "funding source information" of *Low*). *Id.*, ¶ 166.

However, to the extent Patent Owner may argue that *Low* in view of *Arora* does not explicitly teach “the user interface includes...an indication of a prepared balance,” *Freeny* does, and a POSA would have found it obvious to modify *Low/Arora* with the indication of a prepared balance, such as taught by *Freeny*, with a reasonable expectation of success. *Id.*, ¶ 167; *see supra* at § VII.A.2. *Freeny* teaches a customer performing a “customer bank balance request after the customer is connected to their bank.” Ex. 1007, 9:32–35. An approved credit amount “can be checked at any time by the user of the proximity authorization unit.” *Id.*, 38:3–5. A POSA would understand that displaying an approved credit amount and credit balance constitutes an indication of a prepared balance. Ex. 1003, ¶¶ 168–69; *see also, e.g., CSC ServiceWorks, Inc. v. PayRange Inc.*, IPR2023-01449, Institution Decision, Paper 14 at \*25-26 (PTAB April 12, 2024).

Petitioner has explained why and how a POSA would modify *Low/Arora* with *Freeny*. *See supra* § VII.B.2; Ex. 1003, ¶ 170. Thus, *Low* in view of *Arora* in further view of *Freeny* teaches the user interface (e.g., *Low*’s user interface of the user device 110) includes an indication of a prepared balance (e.g., *Low*’s user interface modified to include the approved credit amount and credit balance as taught by *Freeny*). Ex. 1003, ¶ 171.

**c. [11.3] an affordance that when slid, indicates the initiation of the transaction**

*Low* teaches the “user selects a payment button or option on the user device, which communicates the payment request to a payment provider.” Ex. 1005, 2:46-49. “After processing, the payment provider may approve the payment request,” “transmit a purchase authorization to the user device,” and “[t]he user device may then communicate the purchase authorization to the machine, which may...dispense the purchased items(s) associated with the transaction number.” *Id.*, 2:49–62. In the related district court litigation, Patent Owner has argued that this “sliding” limitation is satisfied by a “Pay” button with no sliding functionality. *See* Ex. 1017 at 14 (Patent Owner arguing a “Pay” button is equivalent to an affordance that slides and stating “the differences between the pressed button and a swiped affordance would be regarded by a POSITA to be insubstantial”).

To the extent Patent Owner’s interpretation is correct, *Low* teaches this limitation. Ex. 1003, ¶¶ 172–74. *Low* teaches “[c]omputer system 500 includes...an input/output (I/O) component 504 that processes a user action, such as selecting keys from a keypad/keyboard, *selecting one or more buttons* or links, etc.,” (Ex. 1005, 12:39–46) and “the user *selects a payment button or option* on the user device” (*id.*, 2:46–49) (emphasis added). Insofar as the Board interprets this limitation as being satisfied by a graphical user interface element that receives a user input or selection,

a POSA would understand that *Low* contemplates that any suitable user action is acceptable, and a user input swiping a graphical user interface element that slides is just one example of an acceptable input that was well known in the art at the time of the '772 Patent. Ex. 1003, ¶ 175–76.

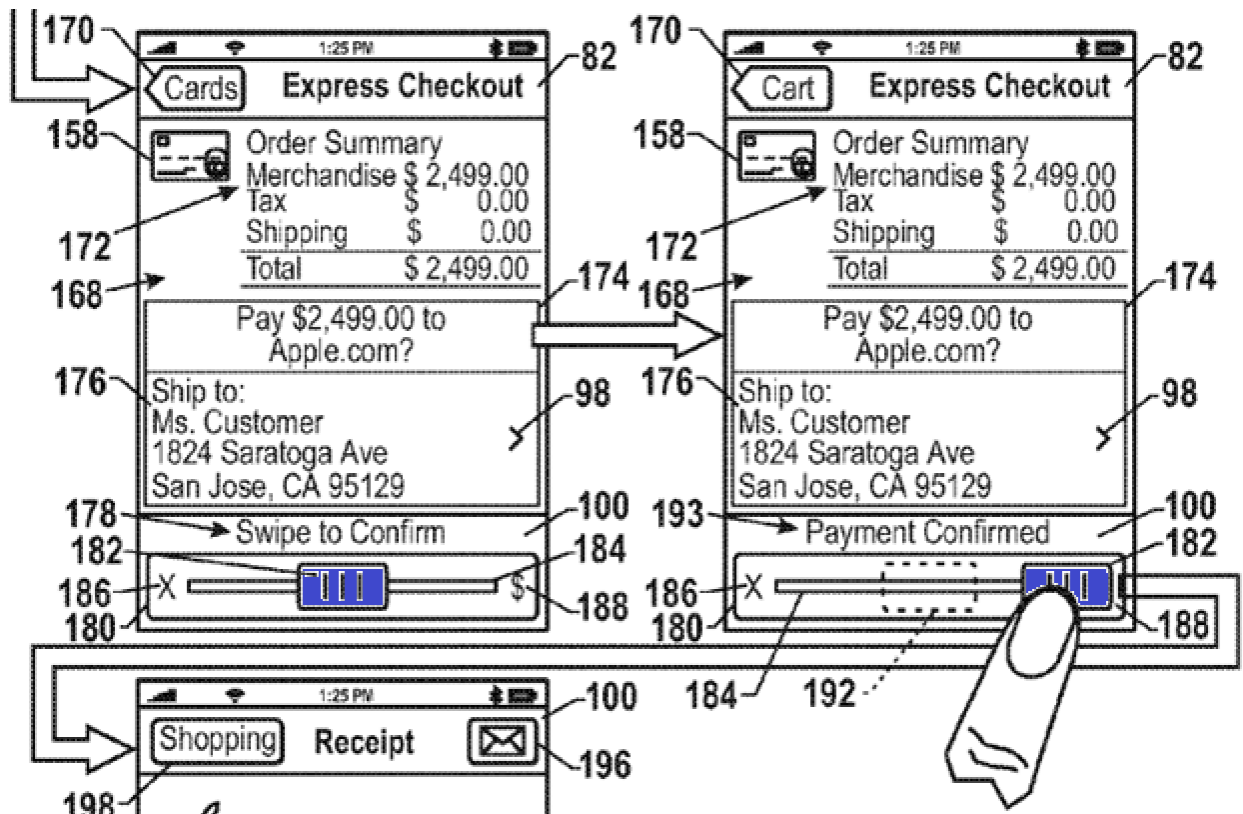
Thus, consistent with Patent Owner’s interpretation, *Low* in view of *Arora* in further view of *Freeny* teaches the user interface (e.g., *Low*’s user interface of the user device 110) includes an affordance (e.g., “payment button or option on the user device”) that when slid (e.g., “the user selects a payment button or option on the user device”), indicates initiation of the transaction (e.g., “the user selects a payment button or option on the user device, which communicates the payment request to a payment provider,” resulting in the purchased item(s) being dispensed). Ex. 1003, ¶ 177.

To the extent the Board disagrees with Patent Owner’s interpretation that pressing a pay button is equivalent to “sliding,” *Casey* teaches wherein the user input is a swipe that causes the affordance to be slid, as set forth below. *See* Ex. 1003, ¶ 178.

**d. [11.4] wherein the affordance is slid in response to receiving a user input of swipe on the affordance displayed on the display of the mobile device**

*Casey* discloses a slide bar 182 (shown in blue below) whereby “a user may drag the slide bar to the left to the decline position 186 to decline the payment or the

user may drag the slide bar 182 to the right to the confirmation position 188 to confirm the payment transaction.” Ex. 1008, 13:44–51.



Ex. 1008, Figure 5 (excerpted/annotated).

Thus, *Low* in view of *Arora* in further view of *Freeny* and *Casey* teaches wherein the user input is a swipe that causes the affordance to be slid (e.g., “button” of *Low* or *Low*’s teaching that any suitable user action is acceptable, and a user input swiping a graphical user interface element that slides is just one example of an acceptable input that was well known in the art at the time of the ’772 Patent, as demonstrated by *Casey*). Ex. 1003, ¶¶ 179–81.

## VIII. DISCRETIONARY DENIAL SHOULD NOT PRECLUDE INSTITUTION

### A. Discretionary Denial Under the *Fintiv* Factors is Not Warranted

The Board considers the six *Fintiv* Factors when considering discretionary denial. *See Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential) (“*Fintiv*”); *see also* “Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation,” dated June 21, 2022 (“Interim Guidance”). The *Fintiv* factors weigh against discretionary denial here.

**Factor 1** supports institution because Petitioner will request a stay of the Delaware Litigation and there is a significant likelihood that the district court will stay the case if IPR is instituted. Courts in the District of Delaware routinely grant motions to stay when IPRs or PGRs have been instituted. *See, e.g., Ethicon LLC v. Intuitive Surgical, Inc.*, 17-871, 2019 WL 1276029, at \*3 (D. Del. Mar. 20, 2019); *see also* Ex. 1015, *Chemours Co. FC, LLC v. Daikin Indus. Ltd.*, 1:17-cv-01612, Dkt. 77, at 29:1-32:24 (D. Del. Jan. 3, 2019). This weighs against discretionary denial. *Fintiv* at \*6–7.

**Factor 2** supports institution because the Delaware Litigation is at a very early stage. No trial date has been set, and based on recent statistics, it is unlikely that the Delaware Litigation would reach trial before March 2027. *See* Ex. 1016 (federal

statistics noting a median time of 32.9 months from filing to trial in the District of Delaware for civil cases for the 12-month period ending June 2024). By contrast, the Board’s statutory FWD deadline in this proceeding will be approximately August 2026. This factor supports institution.

**Factor 3** strongly favors institution because the Delaware Litigation is in a very early stage. Petitioner’s partial motion to dismiss is pending; Petitioner has not yet even answered Patent Owner’s counterclaims. No discovery requests have been exchanged, no case schedule has been entered, and there is no timeline for claim construction proceedings. *See* Delaware Litigation, Dkts. 21–28, 30. This strongly favors institution. *See Fintiv* at 9–10.

Finally, under the Interim Guidance, “the PTAB will not discretionarily deny institution of an IPR or PGR in view of parallel district court litigation where a petitioner stipulates not to pursue in a parallel district court proceeding the same grounds as in the petition or any grounds that could have reasonably been raised in the petition.” Interim Guidance at 7. Consistent with the Interim Guidance, Petitioner stipulates that, if the instant IPR is instituted, it will not pursue against the ’772 Patent in the parallel district court proceeding the same grounds as in this petition or any grounds that could have reasonably been raised in this petition. *Id.* at 7.

**Factor 4** supports institution in view of the stipulation above. Moreover, this Petition challenges Claim 7 of the '772 Patent, which Patent Owner is not asserting against Petitioner in the Delaware Action. This non-overlapping claim, and Petitioner's challenge thereto, weighs in favor of institution.

**Factor 5** weighs slightly in favor of discretionary denial, as the parties to this proceeding are the same as the Delaware Litigation. However, the Board frequently declines to exercise its discretion to deny when, "[a]lthough factor 5 weighs in favor of denial due to similarity of parties, when balanced with factors 1-4, there is no indication of inefficiencies or duplication of efforts between the PTAB and the district court." *Sony Group Corp. v. Inmusic Brands, Inc.*, IPR2023-00294, 2023 WL 5167545, at \*6 (PTAB July 25, 2023).

**Factor 6** strongly supports institution because Petitioner has strong grounds of invalidity under Section 103. In fact, the Board has previously instituted IPR based on some of the same prior art references asserted herein. Specifically, in IPR2023-01449, CSC filed a Petition requesting IPR of Claims 1–6 and 8–20 of the '772 Patent. PayRange thereafter disclaimed Claims 1–6, 8–10, and 12–20, such that only Claim 11 remained challenged in the proceeding. *See id.*, Exhibit 2017. The Board instituted review on Claim 11 of the '772 Patent with Ground 4 of the Petition, which asserted a combination of six prior art references, including *Low*, *Arora*, *Casey*, and *Freeny*, which are asserted here. *See id.*, Paper 14, at \*26. In the

Institution Decision, the Board found that the Petitioner had sufficiently shown that the combination of the six asserted prior art references taught all of the limitations of Claims 1 and 11. *See id.*, Paper 14, at \*19. Rather than wait for a FWD after institution, Patent Owner chose to settle the case. *See id.*, Paper 18.

Ground 2 of this Petition (against Claim 11) is even stronger than the six-reference combination asserted in IPR2023-01449. The primary reference in IPR2023-01449 was USPN 7,458,510 (“*Zhou*”). *See id.*, Paper 14, at \*10. While Petitioner agrees that *Zhou* is a strong prior art reference, Petitioner relies instead on *Low* as the primary reference because it teaches every limitation of Claim 1. *See supra* § VII.A.1. In addition, by relying on *Low* as the primary reference, this Petition asserts a combination of only four prior art references, as opposed to six, which simplifies and strengthens the motivation-to-combine analysis as a POSA would have arrived at all the limitations of Claim 11 through the teachings of fewer references. *See supra* § VII.A.2, VII.B.2.

There is thus a strong likelihood that the Board will find the Challenged Claims invalid under the grounds asserted herein. The Board should not discretionarily deny institution under *Fintiv*.

**B. Discretionary Denial Under *General Plastic* is Not Warranted**

The Board considers the factors set forth in *General Plastic* in evaluating whether discretionary denial is warranted in view of prior challenges to a patent. *See*

*General Plastic Industrial Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 16 (PTAB Nov. 14, 2017).

Claims 7 and 11 have previously been subject to a Petition for PGR, filed by KioSoft (*see* PGR2023-00042), and Claim 11 has previously been subject to a Petition for IPR, filed by CSC. *See* PGR2023-00042; IPR2023-01449 (referred to collectively as the “Prior Petitions”). However, Patent Owner settled these proceedings before the Board reached a FWD. PGR2023-00042 was terminated due to settlement before the Board even reached an institution decision. *See* PGR2023-00042, Paper 9. As to IPR2023-01449, the Board instituted IPR even after Patent Owner disclaimed 90% of the claims of the ’772 Patent. *See* IPR2023-01449, Paper 14. Just three weeks later, the case was terminated due to settlement, before the Board reached a FWD. *See id.*, Paper 18.

**1. *General Plastic* Factor 1**

*General Plastic* Factor 1 considers whether the same petitioner previously filed a petition directed to the same claims of the same patent. *Unified Patents Inc. v. Bradium Technologies LLC*, IPR2018-00952, 2018 WL 6721788, at \*8 (PTAB Dec. 20, 2018). This factor “weigh[s] overwhelmingly against a discretionary denial” because Petitioner here is unrelated to the prior petitioners. *Id.* at \*9.

Petitioner also does not have a “significant relationship” with the prior petitioners. *See, e.g., Valve Corp. v. Electronic Scripting Prods., Inc.*, IPR2019-

00062, Paper 11, at \*10 (PTAB April 2, 2019). Patent Owner sued KioSoft and CSC for patent infringement years before it asserted claims against Petitioner. *See supra* § II; *Bayerische Motoren Werke Aktiengesellschaft v. Paice LLC*, IPR2020-01386, 2021 WL 409355, at \*8 (PTAB Feb. 5, 2021) (that Patent Owner sued BMW separately from its competitors weighed against finding a significant relationship).

Further, the litigations against KioSoft, CSC, and Petitioner involve different accused products. *Compare Alliance v. PayRange*, 24-cv-733-MN, Dkt. 18, PageID.949, at ¶ 1 (D. Del. Oct. 4, 2024) (accusing Alliance’s “Speed Queen” and “Huebsch” products), *with PayRange v. KioSoft*, 20-cv-24342, Dkt. 142 at ¶ 22 (S.D. Fla. Jan. 31, 2023) (accusing KioSoft’s apps, kiosks, and terminals); 20-cv-20970, Dkt. 1 at ¶ 21 (S.D. Fla. Mar. 3, 2020) (same); *PayRange v. CSC*, 24-cv-279, Dkt. 1, PageID.268, at ¶ 22 (D. Del. Mar. 4, 2024) (accusing CSC’s “CSC Go” app); 1:24-cv-00278, Dkt. 73, PageID.1445, at ¶ 5 (D. Del. April 3, 2024) (same); *and* 22-cv-502, Dkt. 1, PageID.2–3 at ¶ 4 (D. Del. April 19, 2022) (accusing CSC’s “CSC Go” and “CSCPay Mobile” apps). *See Aktiengesellschaft*, 2021 WL 409355, at \*8 (that Petitioner is not a co-defendant in pending litigation involving same products weighs against finding a significant relationship). In addition, whereas KioSoft and CSC have settled their disputes with Patent Owner, Petitioner has not. *See supra* § II; *Aktiengesellschaft*, 2021 WL 409355, at \*8.

Petitioner’s reliance on Dr. Neuman—the same expert as in IPR2023-01449—does not support a finding that Petitioner is related to prior petitioner CSC. Petitioner relies on testimony from the same expert as in IPR2023-01449 because Dr. Neuman has the relevant skill in the art and has prior experience with the ’772 Patent—thus simplifying Dr. Neuman’s analysis. *See Aktiengesellschaft*, 2021 WL 409355, at \*8; Ex. 1003, ¶¶ 9–26. Further, the grounds asserted herein are not the same as those asserted in IPR2023-01449. For instance, Claim 7 was not challenged in IPR2023-01449 and while both Petitions challenge Claim 11, the asserted prior art combinations are not identical. In addition, Dr. Neuman is not an employee of CSC; Dr. Neuman is an Associate Professor of Computer Science Practice at the University of Southern California. *See* Ex. 1003, ¶¶ 12–13; *see also Aktiengesellschaft*, 2021 WL 409355, at \*8 (finding no “improper advantage” in using same expert for subsequent petition, where expert’s “testimony formed part of the basis for the prior cancellation of claims . . . that have limitations identical to limitations in the ‘Challenged Claims’”).

Because there is no meaningful relationship between Petitioner, KioSoft, and CSC, *General Plastic* Factor One favors granting institution. *See id.*

## **2. General Plastic Factor 2**

*General Plastic* Factor 2 considers whether at the time of filing of the first petition the petitioner knew of the prior art asserted in the second petition or should

have known of it. *Unified Patents*, 2018 WL 6721788, at \*8. This factor is inapplicable because Petitioner was not involved in the Prior Petitions. *Id.*, at \*9; *see also Prolenium US Inc. v. Allergan Industrie, Sas*, 2020 WL 1491363, IPR2019-01617, at \*15 (PTAB Mar. 20, 2020).

### **3. *General Plastic* Factor 3**

Factor 3 considers whether Petitioner had received patent owner’s preliminary response and the Board’s institution decision on the first petition by the time it filed the present petition. *Unified Patents*, 2018 WL 6721788, at \*8. A redacted copy of Patent Owner’s Preliminary Response and the Board’s Institution Decision in IPR2023-01449 was publicly available at the time that Petitioner is filing the present Petition. *See* IPR2023-01449, Ex. 1012; *id.*, Paper 14. A copy of Patent Owner’s Preliminary Response in PGR2023-00042 was also publicly available. *See* PGR2023-00042, Paper 6. However, Petitioner is not asserting identical invalidity grounds as those asserted in the Prior Petitions and there has been no prior Board decision on Claim 7, which is challenged here. *See, e.g., Aktiengesellschaft*, 2021 WL 409355, at \*9.

In addition, *General Plastic* was concerned with follow-on petitions that “allow petitioners the opportunity to strategically stage their prior art and arguments in multiple petitions, using [Board] decisions as a roadmap, until a ground that is found that results in the grant of review.” *Unified Patents*, 2018 WL 6721788, at

\*10. Here, this is Petitioner's first petition against the '772 Patent and, as discussed above, Petitioner has no relation to the prior petitioners. *See id.* Therefore, Factor 3 is neutral or weighs slightly against discretionary denial. *See id.*

#### **4. General Plastic Factors 4 and 5**

Factor 4 considers the length of time that elapsed between the time petitioner learned of the prior art asserted in the second petition and the filing of the second petition and factor 5 considers whether the petitioner provides an adequate explanation for the time elapsed between filings of multiple petitions. *Unified Patents*, 2018 WL 6721788, at \*8. These factors favor institution because the timing between the prior and present petitions is a product of PayRange's own patent assertion campaigns. *See supra* § II. While PayRange first began enforcing patents related to the '772 Patent in 2020, it was not until March of 2024 that Alliance became the subject of PayRange's aggressions. *See Ex. 1023* at 9. Specifically, in March 2024, PayRange sent Alliance the first of a series of letters asserting the '772 Patent and other related patents against certain of Alliance's products. *See id.*, at 1-7. Alliance attempted to resolve PayRange's dispute through correspondence which outlined Alliance's non-infringement and invalidity positions, but, when it became clear that PayRange nonetheless intended to pursue litigation, Alliance filed its complaint for Declaratory Judgement, initiating the Delaware Litigation. *See Alliance v. PayRange*, 24-cv-733-MN, Dkt. 1, PageID.12-16, at ¶¶ 50-66. (D. Del.,

filed June 20, 2024). PayRange then counterclaimed, asserting infringement of the '772 Patent, among other patents, on August 23, 2024. *Id.*, Dkt. 11.

Thus, Alliance had no reason to file a challenge to the '772 Patent until this dispute began. *See id.*; *see also Aktiengesellschaft*, 2021 WL 409355, at \*8. Alliance should not be punished for being in the third wave of PayRange's aggressions. *Id.*

### **5. *General Plastic* Factors 6 and 7**

Factor 6 considers the finite resources of the Board and factor 7 considers the requirement under § 316(a)(11) to issue a final determination not later than one year after the date on which the Director notices institution of review. *Unified Patents*, 2018 WL 6721788, at \*8. These factors favor institution. The previously-filed IPR petition was settled just three weeks after the Board instituted IPR (before the Board reached a FWD), and the previously-filed PGR petition was settled before the Board even reached an Institution Decision. Furthermore, this Petition is based on different grounds than those asserted in the Prior Petitions. Thus, the Board is not merely performing work that it has already performed previously by instituting this IPR. *See Unified Patents*, 2018 WL 6721788, at \*10. To the extent that the prior art references overlap with those previously considered, this merely streamlines the Board's analysis. *See Aktiengesellschaft*, 2021 WL 409355, at \*9.

**C. Discretionary Denial Under 35 U.S.C. § 325(d) is Not Warranted**

Under § 325(d), discretionary denial is only warranted when the same, or substantially the same, prior art or arguments were previously presented to the Office in a proceeding pertaining to the challenged patent. *See, e.g., Advanced Bionics, LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6, at \*7 (PTAB Feb. 13, 2020). The factual inquiry is guided by six *Becton Dickinson* factors, which in this case, weigh in favor of institution. *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 (PTAB Dec. 15, 2017).

**1. The Prosecution History Does Not Warrant Discretionary Denial**

**a. Factors (a) and (c)**

*Becton, Dickinson* Factors (a) and (c) consider “(a) the similarities and material differences between the asserted art and the prior art involved during examination” and “(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection.” *Id.* at \*17. Neither factor supports discretionary denial here. During prosecution, the ’772 Patent faced only a non-statutory double-patenting rejection based on the ’614 Patent and others. *See supra* § IV.C. Only four references were discussed by the Examiner during prosecution. The first two, discussed in the May 23, 2022 Office Action (but not the basis of a rejection) were *Wheeler* (U.S. Pub. No. 2018/0374076) and *Ganesan* (U.S. Pub. No. 2018/0197167). *See* Ex. 1002, pp.146–51. Neither of these

even qualify as prior art to the '772 Patent because their earliest effective filing date post-dates the earliest possible priority date for the '772 Patent. *See* Exs. 1018, 1019. In the Notice of Allowance, the Examiner mentioned two other references (*Mei* and *Xu*) and then stated that they “fail[ed] to teach or suggest the above noted limitations.” Ex. 1002, pp. 2082–83. These references also would not be prior art to the '772 Patent. Exs. 1020, 1021.

*Low* and *Arora* were submitted as part of an IDS containing more than four hundred references. Ex. 1002, pp. 185, 188. The Examiner signed this IDS as “considered” ten days after it was submitted. Ex. 1002, pp. 2111–21. Thus, while *Low* and *Arora* may technically constitute the “same art” under Factor (a), this does not weigh meaningfully against institution, as the Examiner “merely signed the [IDS] without explaining why he disagreed with the [prior art at issue].” *Apple Inc. v. Seven Networks, LLC*, IPR2020-00285, Paper 10, at \*30 (PTAB July 28, 2020); *Samsung Elecs. Co. v. Power2B, Inc.*, IPR2021-01190, Paper 11, at \*19 (PTAB Jan. 6, 2022).

Furthermore, *Freeny* and *Casey* were not presented during prosecution and are relied upon for three of the limitations of claim 11. This clearly weighs against institution. *See, e.g., Apple*, IPR2020-00285, at \*31.

Factor (c) strongly favors institution, as *Low* and *Arora* were not substantively evaluated (either alone or in combination) during examination, and were instead only

listed in an IDS. *See, e.g., Lyft, Inc. v. RideShare Displays, Inc.*, IPR2021-01602, Paper 7, at \*14–15 (PTAB Apr. 11, 2022).

**b. Factors (b) and (d)**

Factors (b) and (d) consider “(b) the cumulative nature of the asserted art and the prior art evaluated during examination” and “(d) the extent of the overlap between the arguments made during examination and the manner in which the Petitioner relies on the prior art or Patent Owner distinguishes the prior art.” The combination of *Low*, *Arora*, *Freeny*, and *Casey* was not considered by the Examiner; there were no anticipatory or obviousness-based rejections against the ’772 Patent during prosecution. Accordingly, these references cannot be cumulative of the art considered by the Examiner and/or cited in an Office Action. Further, this Petition asserts unpatentability based on obviousness grounds, which does not overlap with the double-patenting rejection asserted during prosecution of the ’772 Patent. Thus, factors (b) and (d) strongly favor institution.

**c. Factors (e) and (f)**

*Becton, Dickinson* Factors (e) and (f) consider “(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art;” and “(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.”

Petitioner has shown that the Examiner did not evaluate, or erred in its evaluation, of the asserted *Low*, *Arora*, *Freeny*, and *Casey* references. The arguments set forth in this Petition provide substantial evidence that was not considered by the Examiner. Thus, the Board's consideration of the prior art and arguments is warranted, and factors (e) and (f) strongly favor institution.

**2. The Prior Petitions Against the '772 Patent Do Not Warrant Discretionary Denial**

In addition, even though *Low*, *Arora*, and *Casey* were the basis for Ground 2 in PGR2023-00042, and *Low*, *Arora*, *Casey*, and *Freeny* were part of the basis for the grounds presented in IPR2023-01449, this does not favor discretionary denial under § 325(d).

First, PGR2023-00042 was terminated before the Board reached an institution decision and thus the Board did not evaluate *Low*, *Arora*, or *Casey*, alone or in combination. *See* PGR2023-00042, Paper 9. In addition, although the Board instituted IPR in IPR2023-01449, the proceeding was terminated before the Board reached a FWD. IPR2023-01449, Paper 18. The Board likely would have found Claim 11 unpatentable based on a combination of prior art involving *Low*, *Arora*, *Casey*, and *Freeny* (and others), but was not given an opportunity to do so due to the parties' settlement. *See supra* § II.B.

Second, the focus of IPR2023-01449 was *Zhou*, whereas *Low* is the focus here. *Samsung Electronics America, Inc. v. Uniloc Luxembourg S.A.*, IPR2017-01797, Paper 8 at \*33 (PTAB Feb. 6, 2018) (declining to discretionarily deny based in part because “while Zydney has been the basis of grounds presented in a previous petition by a different petitioner, Zydney is not the primary focus of the grounds here; Griffin is”).

Third, the fact that the ’772 Patent has been subject to multiple petitions is a direct result of PayRange filing serial lawsuits against various defendants and its decision to settle certain of those lawsuits before the Board could reach a FWD on the ’772 Patent. *See supra* § II. Repeated challenges does not favor discretionary denial here, where the repeated challenges are due to Patent Owner’s own conduct. *Samsung*, IPR2017-01797, Paper 8 at \*33–34 (“Patent Owner’s complaint about the multiple *inter partes* review petitions . . . is not persuasive when the volume appears to be a direct result of its own litigation activity. The discretion to deny petitions is for the panel to wield under certain conditions, but not in every situation where a Patent Owner complains of repeated challenges against its patents.”).

## **IX. MANDATORY NOTICES, STANDING, AND FEES**

### **A. Real Parties-in-Interest (37 C.F.R. § 42.8(b)(1))**

Alliance Laundry Systems, LLC is the real party in interest for this matter.

**B. Time for Filing (37 C.F.R. § 42.102)**

The '772 Patent issued on October 25, 2022. This Petition is being filed more than nine months after the '772 Patent issued.

**C. Petitioner's Lead and Backup Counsel and Service Information:  
37 C.F.R. § 42.8(b)(3) and (4)**

Pursuant to 37 C.F.R. § 42.8(b)(3), Petitioner provides the following designation of counsel:

Lead Counsel	Backup Counsel
Sarah E. Waidelich, Reg. No. 78,706 Honigman LLP 315 E. Eisenhower Parkway, Suite 100 Ann Arbor, MI 48103 Telephone: (734) 418-4242 Facsimile: (734) 418-4243 Email: swaidelich@honigman.com	Scott D. Barnett, Reg. No. 67,309 Honigman LLP 39400 Woodward Ave., Suite 101 Bloomfield Hills, MI 48304 Telephone: (248) 566-8416 Facsimile: (248) 566-8417 Email: sbarnett@honigman.com  David J. Thomas, Reg. No. 75,471 Honigman LLP 660 Woodward Avenue, Suite 2200 Detroit, MI 48226 Telephone: (248) 566-8642 Facsimile: (248) 566-8643 dthomas@honigman.com  Jenna E. Saunders, Reg. No. 79,464 Honigman LLP 321 N. Clark Street, Suite 500 Chicago, IL 60654 Telephone: 312-429-6046 Facsimile: 312-701-9335 Email: jsaunders@honigman.com

**D. Notice of Service Information (37 C.F.R. § 42.8(b)(4))**

Service on Petitioner may be made by mail or hand delivery to: Honigman LLP, 315 E. Eisenhower Parkway, Suite 100, Ann Arbor, Michigan 48108. The fax numbers for lead and backup counsel are shown above. Petitioner also consents to electronic service by email at swaidelich@honigman.com and sbarnett@honigman.com.

**E. Grounds for Standing (37 C.F.R. § 42.204(a); 35 U.S.C. § 315)**

The undersigned and Petitioner certify that (1) the '772 Patent is eligible for IPR and (2) Petitioner is not barred or estopped from requesting IPR of the challenged claims on the grounds identified herein. Petitioner has not filed a civil action challenging the validity of a claim of the '772 Patent; in the Delaware action, Petitioner's Complaint seeks only a declaratory judgment of noninfringement. *See* 35 U.S.C. § 315(a)(1); *see also, e.g., Ariosa Diagnostics v. Isis Innovation Ltd.*, IPR2012-00022, 2013 WL 2181162, at \*4–5 (PTAB Feb. 12, 2013); *Intel Corp. v. PACT XPP Schweiz AG*, IPR2020-00539, 2020 WL 5467346, at \*4–5 (PTAB Sept. 10, 2020).

Patent Owner's earliest Counterclaim asserting infringement of the '772 Patent by Petitioner was filed and effectively served on August 23, 2024. *Alliance v. PayRange*, 24-cv-733-MN, Dkt. 11, at ¶ 1 (D. Del. Aug. 23, 2024). Petitioner is

filing this Petition before the one-year deadline for filing an IPR proceeding under 35 U.S.C. § 315(b), which is August 22, 2025.

**F. Payment of Fees (37 C.F.R. § 42.103); Procedural Statements**

The undersigned authorizes the Director to charge any required fees, including those due under 37 C.F.R. § 42.15(a), to Deposit Account No. 503145. Concurrently filed herewith are Powers of Attorney and an Exhibit List per 37 C.F.R. § 42.10(b) and §42.63(e), respectively.

**X. CONCLUSION**

Petitioner respectfully requests the Board institute IPR for Claims 7 and 11 of the '772 Patent.

Respectfully submitted,

Dated: February 3, 2025

By: /Sarah E. Waidelich/  
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***Attorney for Petitioner Alliance Laundry Systems LLC***

**CERTIFICATE OF SERVICE OF THE PETITION**

The undersigned certifies service pursuant to 37 C.F.R. §§42.6(e) and 42.105(b) on the Patent Owner on the signature date below by Priority Mail Express of a copy of this Petition for IPR, all exhibits thereto, and Petitioner's Power of Attorney, at the correspondence address of record for the '772 Patent:

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Palo Alto, CA 94304-1124  
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Additionally, the undersigned certifies service on the Patent Owner on its litigation counsel in the Delaware Litigation at the email addresses below:

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Dated: February 3, 2025

/Sarah E. Waidelich/  
Sarah E. Waidelich (Reg. No. 78,706)

**CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME  
LIMITATION, TYPEFACE REQUIREMENTS, AND TYPE STYLE  
REQUIREMENTS**

This Petition complies with the type-volume limitation in 37 C.F.R. §42.24(a) in that it contains 13,177 words, excluding the parts exempted by 37 C.F.R. § 42.24(a), as measured by the word processing software used to prepare the document.

This Petition complies with the general format requirements of 37 C.F.R. § 42.6(a) and has been prepared using Microsoft Office 365 in 14-point Times New Roman.

Dated: February 3, 2025

/Sarah E. Waidelich/  
Sarah E. Waidelich (Reg. No. 78,706)