



US011488174B2

(12) **United States Patent**
Patel

(10) **Patent No.:** **US 11,488,174 B2**
(45) **Date of Patent:** ***Nov. 1, 2022**

(54) **METHOD AND SYSTEM FOR PERFORMING MOBILE DEVICE-TO-MACHINE PAYMENTS**

(71) Applicant: **PAYRANGE INC.**, Portland, OR (US)

(72) Inventor: **Paresh K. Patel**, Portland, OR (US)

(73) Assignee: **PAYRANGE INC.**, Portland, OR (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 271 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **16/934,392**

(22) Filed: **Jul. 21, 2020**

(65) **Prior Publication Data**

US 2021/0142325 A1 May 13, 2021

Related U.S. Application Data

(63) Continuation of application No. 15/406,492, filed on Jan. 13, 2017, now Pat. No. 10,719,833, which is a (Continued)

(51) **Int. Cl.**
G06Q 20/40 (2012.01)
G06Q 20/18 (2012.01)

(Continued)

(52) **U.S. Cl.**
CPC **G06Q 20/405** (2013.01); **G06Q 20/18** (2013.01); **G06Q 20/322** (2013.01); (Continued)

(58) **Field of Classification Search**
CPC G06Q 20/405; G06Q 20/18; G06Q 20/322; G06Q 20/3226; G06Q 20/327; (Continued)

(56) **References Cited**

U.S. PATENT DOCUMENTS

5,479,602 A 12/1995 Baecker et al.
5,844,808 A 12/1998 Konsmo et al.
(Continued)

FOREIGN PATENT DOCUMENTS

CN 105139196 A 12/2015
EP 1571607 A2 9/2005
(Continued)

OTHER PUBLICATIONS

Nurel "Recent Developments in Wireless Network Systems", Izmir Institute of Technology, Sep. 2001, 280 pages) (Year: 2001).*

(Continued)

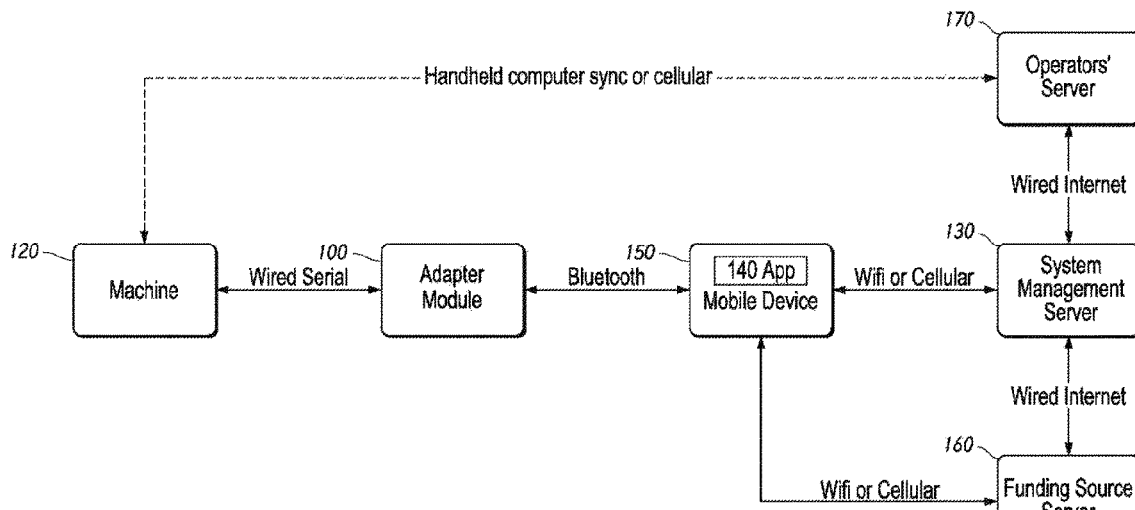
Primary Examiner — James D Nigh

(74) *Attorney, Agent, or Firm* — Morgan, Lewis & Bockius LLP

(57) **ABSTRACT**

A device with one or more processors, memory, and two or more communication capabilities obtains, from a payment module, an authorization request via a first communication capability (e.g., Bluetooth). The device sends, to a server, the authorization request via a second communication capability distinct from the first communication capability (e.g., cellular or WiFi technology). In response to sending the authorization request, the device obtains, from the server, authorization information via the second communication capability. After obtaining the authorization information, the device detects a trigger condition to perform a transaction with a payment accepting unit associated with the payment module. In response to detecting the trigger condition, the device sends, to the payment module, at least a portion of the authorization information via the first communication capability.

20 Claims, 44 Drawing Sheets



Related U.S. Application Data

- continuation of application No. 14/335,762, filed on Jul. 18, 2014, now Pat. No. 9,547,859, which is a continuation of application No. 14/214,644, filed on Mar. 14, 2014, now Pat. No. 8,856,045, which is a continuation-in-part of application No. 29/477,025, filed on Dec. 18, 2013, now Pat. No. Des. 755,183.
- (60) Provisional application No. 61/917,936, filed on Dec. 18, 2013.
- (51) **Int. Cl.**
G06Q 20/32 (2012.01)
G06Q 20/36 (2012.01)
G06Q 20/38 (2012.01)
G06Q 30/06 (2012.01)
G07F 9/00 (2006.01)
G07F 9/02 (2006.01)
- (52) **U.S. Cl.**
CPC **G06Q 20/327** (2013.01); **G06Q 20/3226** (2013.01); **G06Q 20/3278** (2013.01); **G06Q 20/36** (2013.01); **G06Q 20/3821** (2013.01); **G06Q 20/3823** (2013.01); **G06Q 20/3829** (2013.01); **G06Q 20/40** (2013.01); **G06Q 20/401** (2013.01); **G06Q 30/06** (2013.01); **G07F 9/001** (2020.05); **G07F 9/002** (2020.05); **G07F 9/023** (2013.01); **G06Q 2220/00** (2013.01)
- (58) **Field of Classification Search**
CPC G06Q 20/3278; G06Q 20/36; G06Q 20/3821; G06Q 20/3823; G06Q 20/3829; G06Q 20/40; G06Q 20/401; G06Q 30/06; G06Q 2220/00; G06Q 20/326; G07F 9/001; G07F 9/002; G07F 9/023; H04L 9/50
USPC 705/71
See application file for complete search history.
- (56) **References Cited**
U.S. PATENT DOCUMENTS
- | | | | | | | | |
|-----------|------|---------|-----------------------------------|--------------|------|---------|------------------------------------|
| 5,854,994 | A | 12/1998 | Canada et al. | 8,346,670 | B2 | 1/2013 | Hasson et al. |
| 5,880,733 | A | 3/1999 | Horvitz et al. | 8,356,754 | B2 | 1/2013 | Johnson et al. |
| 5,892,900 | A | 4/1999 | Ginter et al. | 8,376,227 | B2 | 2/2013 | Hammad et al. |
| 5,955,718 | A | 9/1999 | Levasseur | 8,396,589 | B2 | 3/2013 | Katzenstein Garibaldi |
| 6,056,194 | A | 5/2000 | Kolls | 8,412,626 | B2 | 4/2013 | Hirson et al. |
| 6,390,269 | B1 | 5/2002 | Billington | 8,438,066 | B1 | 5/2013 | Yuen |
| 6,462,644 | B1 | 10/2002 | Howell | 8,479,190 | B2 | 7/2013 | Sueyoshi et al. |
| 6,505,095 | B1 | 1/2003 | Kolls | 8,489,140 | B2 | 7/2013 | Weiner et al. |
| 6,584,309 | B1 | 6/2003 | Whigham | 8,517,766 | B2 | 8/2013 | Golko et al. |
| 6,743,095 | B2 | 6/2004 | Cole et al. | 8,548,426 | B2 | 10/2013 | Smith |
| 6,793,134 | B2 | 9/2004 | Clark | 8,577,734 | B2 | 11/2013 | Treyz |
| 6,810,234 | B1 | 10/2004 | Rasanen | 8,583,496 | B2 | 11/2013 | You et al. |
| 7,085,556 | B2 | 8/2006 | Offer | 8,596,528 | B2 | 12/2013 | Fernandes et al. |
| 7,110,954 | B2 | 9/2006 | Yung et al. | 8,596,529 | B1 | 12/2013 | Kolls |
| 7,127,236 | B2 | 10/2006 | Khan | 8,600,899 | B1 | 12/2013 | Davis |
| 7,131,575 | B1 | 11/2006 | Kolls | 8,606,702 | B2 | 12/2013 | Ruckart |
| 7,455,223 | B1 | 11/2008 | Wilson | 8,615,445 | B2 | 12/2013 | Dorsey et al. |
| 7,458,510 | B1 | 12/2008 | Zhou | 8,645,971 | B2 | 2/2014 | Carlson et al. |
| 7,464,867 | B1 | 12/2008 | Kolls | 8,700,530 | B2 | 4/2014 | Smith |
| 7,672,680 | B1 | 3/2010 | Lee et al. | 8,707,276 | B2 | 4/2014 | Hill et al. |
| 7,690,495 | B1 * | 4/2010 | Kolls G07F 9/026
194/350 | 8,712,893 | B1 | 4/2014 | Brandmaier |
| | | | | 8,761,809 | B2 | 6/2014 | Faith et al. |
| | | | | 8,769,643 | B1 | 7/2014 | Ben Ayed |
| | | | | 8,788,341 | B1 | 7/2014 | Patel |
| | | | | 8,794,734 | B2 | 8/2014 | Drummond |
| | | | | 8,810,430 | B2 | 8/2014 | Proud |
| | | | | 8,819,659 | B2 | 8/2014 | Ramer et al. |
| | | | | 8,838,481 | B2 | 9/2014 | Moshfeghi |
| | | | | 8,850,421 | B2 | 9/2014 | Proud |
| | | | | 8,856,045 | B1 | 10/2014 | Patel |
| | | | | 8,881,975 | B1 | 11/2014 | Matthews |
| | | | | 8,898,620 | B2 | 11/2014 | Eizenman et al. |
| | | | | 8,903,737 | B2 | 12/2014 | Cameron et al. |
| | | | | 9,001,047 | B2 | 4/2015 | Forstall |
| | | | | 9,037,492 | B2 | 5/2015 | White |
| | | | | 9,092,768 | B2 | 7/2015 | Breitenbach et al. |
| | | | | 9,210,247 | B2 | 12/2015 | Vance et al. |
| | | | | 9,262,771 | B1 | 2/2016 | Patel |
| | | | | 9,395,888 | B2 | 7/2016 | Schiplacoff et al. |
| | | | | 9,424,603 | B2 | 8/2016 | Hammad |
| | | | | 9,483,763 | B2 | 11/2016 | Van Os |
| | | | | 9,547,859 | B2 | 1/2017 | Patel |
| | | | | 9,875,473 | B2 | 1/2018 | Patel |
| | | | | 9,898,884 | B1 | 2/2018 | Arora et al. |
| | | | | 10,163,292 | B1 | 12/2018 | Romero |
| | | | | 10,210,501 | B2 | 2/2019 | Low et al. |
| | | | | 10,304,057 | B1 | 5/2019 | Powell |
| | | | | 10,380,573 | B2 | 8/2019 | Lin et al. |
| | | | | 10,423,949 | B2 * | 9/2019 | Lyons G06Q 20/36 |
| | | | | 10,824,828 | B2 | 11/2020 | Ostri |
| | | | | 10,977,642 | B2 | 4/2021 | Khan |
| | | | | 11,182,794 | B1 | 11/2021 | Aument |
| | | | | 11,227,275 | B2 | 1/2022 | Van Heerden et al. |
| | | | | 11,373,147 | B1 | 6/2022 | Moore |
| | | | | 2002/0016740 | A1 | 2/2002 | Ogasawara |
| | | | | 2002/0164953 | A1 | 11/2002 | Curtis |
| | | | | 2003/0089767 | A1 | 5/2003 | Kiyomatsu |
| | | | | 2003/0110097 | A1 | 6/2003 | Lei |
| | | | | 2003/0130902 | A1 | 7/2003 | Athwal |
| | | | | 2003/0158891 | A1 * | 8/2003 | Lei G06Q 20/327
709/203 |
| | | | | 2003/0191811 | A1 | 10/2003 | Hashem |
| | | | | 2003/0206542 | A1 | 11/2003 | Holder |
| | | | | 2003/0236872 | A1 | 12/2003 | Atkinson |
| | | | | 2004/0049454 | A1 | 3/2004 | Kanno et al. |
| | | | | 2004/0117262 | A1 * | 6/2004 | Berger G06Q 20/341
705/16 |
| | | | | 2004/0122685 | A1 | 6/2004 | Bunce et al. |
| | | | | 2004/0133653 | A1 | 7/2004 | Defosse |
| | | | | 2005/0043011 | A1 | 2/2005 | Murray |
| | | | | 2005/0080510 | A1 | 4/2005 | Bates |
| | | | | 2005/0101295 | A1 | 5/2005 | Rupp |
| | | | | 2005/0177798 | A1 | 8/2005 | Thomson et al. |
| | | | | 2005/0181804 | A1 | 8/2005 | Misikangas |
| | | | | 2005/0232421 | A1 | 10/2005 | Simons et al. |
| | | | | 2005/0234776 | A1 | 10/2005 | Jacoves |
| | | | | 2006/0052157 | A1 | 3/2006 | Walker et al. |

(56)

References Cited

U.S. PATENT DOCUMENTS

2007/0186105	A1	8/2007	Bailey	2012/0316963	A1	12/2012	Moshfeghi
2007/0187491	A1	8/2007	Godwin et al.	2012/0330844	A1	12/2012	Kaufman
2007/0227856	A1	10/2007	Gopel	2013/0030931	A1	1/2013	Moshfeghi
2007/0255653	A1	11/2007	Tumminaro	2013/0054016	A1	2/2013	Canter et al.
2008/0033880	A1	2/2008	Fiebiger et al.	2013/0054336	A1	2/2013	Graylin
2008/0040265	A1	2/2008	Rackley	2013/0054395	A1	2/2013	Cyr et al.
2008/0126213	A1	5/2008	Robertson et al.	2013/0067365	A1	3/2013	Shrufi et al.
2008/0141033	A1	6/2008	Ginter et al.	2013/0085835	A1	4/2013	Horowitz
2008/0154727	A1	6/2008	Carlson	2013/0100886	A1	4/2013	Cherian
2008/0154735	A1	6/2008	Carlson	2013/0110296	A1	5/2013	Khoo
2008/0163257	A1	7/2008	Carlson et al.	2013/0117490	A1	5/2013	Harriman
2008/0167017	A1	7/2008	Wentker et al.	2013/0117738	A1	5/2013	Livingston et al.
2008/0167991	A1	7/2008	Carlson et al.	2013/0124289	A1	5/2013	Fisher
2008/0183480	A1	7/2008	Carlson et al.	2013/0126607	A1	5/2013	Behjat
2008/0201226	A1	8/2008	Carlson et al.	2013/0143498	A1	6/2013	Niemi
2008/0208762	A1	8/2008	Arthur et al.	2013/0166448	A1	6/2013	Narayanan
2008/0249658	A1	10/2008	Walker	2013/0185150	A1	7/2013	Crum
2008/0254853	A1	10/2008	Wright et al.	2013/0191789	A1 *	7/2013	Calman G06F 3/017 715/863
2008/0255947	A1	10/2008	Friedman	2013/0217333	A1	8/2013	Sprigg et al.
2008/0319913	A1	12/2008	Wiechers et al.	2013/0246171	A1 *	9/2013	Carapelli G06Q 20/325 705/14.51
2009/0037284	A1	2/2009	Lewis et al.	2013/0246364	A1	9/2013	Bhavith
2009/0076896	A1	3/2009	Dewitt	2013/0267121	A1	10/2013	Hsu
2009/0099961	A1	4/2009	Ogilvy	2013/0267176	A1	10/2013	Hertel et al.
2009/0106160	A1	4/2009	Skowronek	2013/0275303	A1	10/2013	Fiore
2009/0119190	A1	5/2009	Realini	2013/0275305	A1	10/2013	Duplan
2009/0171682	A1	7/2009	Dixon et al.	2013/0278622	A1	10/2013	Sun et al.
2009/0306818	A1	12/2009	Slagley et al.	2013/0297422	A1	11/2013	Hunter et al.
2009/0306819	A1	12/2009	Insolia et al.	2013/0311379	A1	11/2013	Smith
2009/0313132	A1	12/2009	Kenna et al.	2013/0311382	A1	11/2013	Fosmark et al.
2009/0327089	A1	12/2009	Kanno et al.	2013/0331985	A1	12/2013	Felique
2010/0061294	A1	3/2010	Proctor, Jr. et al.	2013/0332293	A1	12/2013	Ran
2010/0094456	A1	4/2010	Simpkins et al.	2013/0346305	A1	12/2013	Mendes
2010/0198400	A1	8/2010	Pascal	2014/0006451	A1	1/2014	Mullis et al.
2010/0276484	A1	11/2010	Banerjee	2014/0019367	A1	1/2014	Khan et al.
2010/0280956	A1	11/2010	Chutorash	2014/0025958	A1 *	1/2014	Calman G06F 21/6218 713/189
2010/0312692	A1	12/2010	Teicher	2014/0032413	A1 *	1/2014	Low G07F 9/026 705/44
2010/0320266	A1	12/2010	White	2014/0040028	A1	2/2014	King et al.
2010/0329285	A1	12/2010	Stanton	2014/0040117	A1	2/2014	Jain
2011/0029405	A1	2/2011	Cronin	2014/0052524	A1	2/2014	Andersen
2011/0040686	A1	2/2011	Carlson	2014/0064116	A1 *	3/2014	Linde H04L 67/06 370/252
2011/0125561	A1	5/2011	Marcus	2014/0067542	A1	3/2014	Everingham
2011/0153436	A1	6/2011	Krampe	2014/0074714	A1 *	3/2014	Melone G06Q 20/322 235/487
2011/0153442	A1	6/2011	Krampe	2014/0074723	A1	3/2014	Kamat
2011/0172848	A1	7/2011	Breitenbach et al.	2014/0085046	A1	3/2014	Shin et al.
2011/0178883	A1	7/2011	Granbery	2014/0085109	A1	3/2014	Stefik
2011/0225067	A1	9/2011	Dunwoody	2014/0089016	A1	3/2014	Smullin
2011/0238476	A1	9/2011	Carr	2014/0100977	A1	4/2014	Davis
2011/0244799	A1	10/2011	Roberts et al.	2014/0122298	A1	5/2014	Oyer
2011/0251892	A1	10/2011	Laracey	2014/0136301	A1	5/2014	Valdes
2011/0251910	A1	10/2011	Dimmick	2014/0136411	A1	5/2014	Cho
2011/0276636	A1	11/2011	Cheng et al.	2014/0143055	A1	5/2014	Johnson
2011/0289023	A1	11/2011	Forster et al.	2014/0143074	A1	5/2014	Kolls
2012/0011024	A1	1/2012	Dorsey et al.	2014/0172179	A1	6/2014	Baudin
2012/0016731	A1	1/2012	Smith et al.	2014/0180852	A1	6/2014	Kamat
2012/0029691	A1	2/2012	Mockus et al.	2014/0108108	A1	7/2014	Artman
2012/0030047	A1	2/2012	Fuentes	2014/0188708	A1	7/2014	Govindarajan et al.
2012/0036045	A1	2/2012	Lowe et al.	2014/0201066	A1	7/2014	Roux et al.
2012/0066096	A1	3/2012	Penide	2014/0249995	A1	9/2014	Ogilvy
2012/0078735	A1	3/2012	Bauer et al.	2014/0278989	A1	9/2014	Calman
2012/0108173	A1	5/2012	Hahm et al.	2014/0279008	A1	9/2014	Calman
2012/0136478	A1	5/2012	Anand	2014/0279101	A1	9/2014	Duplan et al.
2012/0150742	A1	6/2012	Poon et al.	2014/0279556	A1	9/2014	Priebatsch
2012/0158172	A1	6/2012	Wencslao	2014/0289047	A1	9/2014	Yee
2012/0160912	A1	6/2012	Laracey	2014/0317611	A1	10/2014	Wojcik et al.
2012/0197740	A1	8/2012	Grigg et al.	2014/0324627	A1	10/2014	Haver
2012/0231844	A1	9/2012	Coppinger	2014/0351099	A1	11/2014	Zhu
2012/0246074	A1	9/2012	Annamalai et al.	2014/0361872	A1	12/2014	Garcia et al.
2012/0253852	A1	10/2012	Pourfailah	2014/0378057	A1	12/2014	Ramon et al.
2012/0254631	A1	10/2012	Skillman et al.	2015/0006421	A1	1/2015	Pearson
2012/0255653	A1	10/2012	Chin	2015/0051977	A1	2/2015	Lyman
2012/0258773	A1	10/2012	Alvarez Rivera	2015/0073980	A1	3/2015	Griffin et al.
2012/0276845	A1	11/2012	Wikander				
2012/0290472	A1	11/2012	Mullen				

(56)

References Cited

U.S. PATENT DOCUMENTS

2015/0100152	A1	4/2015	Trevino et al.	
2015/0105901	A1	4/2015	Joshi et al.	
2015/0120546	A1	4/2015	Fernandes	
2015/0120555	A1	4/2015	Jung	
2015/0149992	A1	5/2015	Wade et al.	
2015/0154579	A1	6/2015	Teicher	
2015/0169312	A1	6/2015	Patel	
2015/0170131	A1	6/2015	Patel	
2015/0170132	A1	6/2015	Patei	
2015/0170136	A1	6/2015	Patel	
2015/0178702	A1	6/2015	Patel	
2015/0220381	A1*	8/2015	Horgan	G06F 11/0748 714/27
2015/0235202	A1	8/2015	Zabaia	
2015/0278811	A1	10/2015	Lalchandani	
2015/0287085	A1	10/2015	Windmueller	
2015/0302377	A1	10/2015	Sweitzer	
2015/0317720	A1	11/2015	Ramaratnam	
2015/0332029	A1	11/2015	Coxe	
2015/0346994	A1	12/2015	Chanyontpatanakul	
2015/0373537	A1	12/2015	Toksvig	
2016/0019604	A1	1/2016	Kobayashi	
2016/0063476	A1	3/2016	Baldie	
2016/0086145	A1	3/2016	Tsutsui	
2016/0092859	A1	3/2016	Klingen	
2016/0196220	A1	7/2016	Perez et al.	
2016/0232515	A1	8/2016	Jhas	
2016/0292469	A1	10/2016	Ianni	
2016/0335620	A1	11/2016	Lyons et al.	
2017/0006656	A1	1/2017	Nacer et al.	
2017/0193508	A1	1/2017	Patel et al.	
2017/0193478	A1	7/2017	Dhurka	
2017/0330164	A1*	11/2017	Suelberg	G06Q 10/087
2018/0005220	A1	1/2018	Laracey	
2018/0197167	A1	7/2018	Ganesan et al.	
2018/0240096	A1	8/2018	Patel	
2018/0276674	A1*	9/2018	Ramachandirane	G06Q 20/18
2018/0374076	A1	12/2018	Wheeler et al.	
2019/0236586	A1	8/2019	Mei et al.	
2019/0244205	A1	8/2019	Fieglein	
2019/0244465	A1	8/2019	Saunders et al.	

FOREIGN PATENT DOCUMENTS

EP	2061001	A1	5/2009
JP	2002-183812	A	6/2002
JP	2003-242401	A	8/2003
JP	2003-323662	A	11/2003
JP	2004-252640	A	9/2004
JP	2005-526325	T	9/2005
JP	2009-259226	A	11/2009
JP	2012-504273	T	2/2012
WO	WO 2003/098561		11/2003
WO	WO 2007/015610	A1	2/2007
WO	WO 2008/083022	A1	7/2008
WO	WO 2008/083025	A2	7/2008
WO	WO 2008/083078	A2	7/2008
WO	WO 2008/083089	A1	7/2008
WO	WO 2008/083105	A2	7/2008
WO	WO 2008/083115	A1	7/2008
WO	WO 2008/083119	A1	7/2008
WO	WO 2009/070430	A2	6/2009
WO	WO 2013/132995	A1	9/2013
WO	WO 2013/177416	A2	11/2013
WO	WO 2014/093857	A1	6/2014
WO	WO 2016/123545	A1	8/2016
WO	WO 2017/010936	A1	1/2017
WO	WO 2017/143079	A1	8/2017

OTHER PUBLICATIONS

"The benefits of offline vs. online vending machines", retrieved from <https://web.archive.org/web/20181109215952/https://www.parlevsystems.com/2018/10/23/online-offline-infographic/>, Oct. 23, 2018, 5 pages) (Year: 2018).*

@RobocopyEs, posted Oct. 11, 2014, retrieved Feb. 13, 2018, <URL:<https://twitter.com/robocopies>> 2 pgs.

Adams, How can stationary kiosks thrive in a mobile world?, American Banker, 2012.

Balan et al., mFerio: the design and evaluation of a peer-to-peer mobile payment system, Jun. 2009, 14 pgs.

Balfe et al., e-EMV: emulating EMV for internet payments with trusted computing Technologies, Oct. 2008, 12 pgs.

Bing, Bing Images Search: "dongle", <http://www.bing.com/images/search?q=dongle&FORM=HDRSC2>, Dec. 5, 2013, 8 pgs.

Carlson, Specification, U.S. Appl. No. 60/871,898, filed Dec. 26, 2006, 169 pgs.

Frolick, Assessing M-Commerce Opportunities, Auerbach Publications Inc., Information Systems Management, Spring 2004.

Google, Chromecast, <http://www.google.com/intl/devices/chromecast/>, Dec. 12, 2013, 4 pgs.

How to Pay the New Way, youtube, Apr. 5, 2018, 4 pgs.

How will Apple's new mobile wallet Passbook impact other mobile wallets?, posted Jun. 13, 2012, retrieved Feb. 13, 2018 from <URL:<https://www.quora.com/How-will-Apples-new-mobile-wallet-Passbook-impact-other-mobile-wallets>>, 5 pgs.

Kadambi et al., Near-Field Communication-based Secure Mobile Payment Service, Aug. 2009, 10 pgs.

Madlmayr et al., Near Field Communication Based Mobile Payment System, Austrian Research Funding Agency, Project 811408, Mar. 6, 2008, 13 pgs.

Novotny, Applying RFID technology in the retail industry-benefits and concerns from the consumer's perspective, Institute of Economic Science, Eszterhazy Karoly College, Eger, Hungary, Retail Technologies for the 21 Century, innovation and competitiveness in the retail industry, 2015.

Nurel, Recent Developments in Wireless Network Systems, Izmir Institute of Technology, Sep. 2001, 280 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/320,534, dated Mar. 2, 2018, 26 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/320,534, dated Apr. 16, 2015, 21 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/320,534, dated Nov. 30, 2016, 24 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/321,717, dated Jun. 18, 2015, 22 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/321,724, dated Oct. 8, 2015, 19 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/321,724 dated Dec. 13, 2017, 22 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/321,733, dated Nov. 14, 2014, 11 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/335,762, dated Jun. 9, 2016, 15 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/456,683, dated Jun. 8, 2015, 14 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/458,192, dated Sep. 16, 2015, 26 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/458,199, dated Jun. 24, 2015, 8 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/641,236, dated Mar. 11, 2016, 16 pgs.

Patel, Final Office Action, U.S. Appl. No. 14/968,703, dated Feb. 12, 2019, 22 pgs.

Patel, Final Office Action, U.S. Appl. No. 15/435,228, dated Oct. 2, 2020, 24 pgs.

Patel, Final Office Action, U.S. Appl. No. 15/893,514, dated Jul. 22, 2021, 12 pgs.

Patel, Final Office Action, U.S. Appl. No. 15/956,741, dated Oct. 2, 2020, 12 pgs.

Patel, Notice of Allowance, U.S. Appl. No. 14/214,644, dated Jun. 10, 2014, 9 pgs.

(56)

References Cited**OTHER PUBLICATIONS**

Patel, Notice of Allowance, U.S. Appl. No. 14/321,733, dated Feb. 27, 2015, 9 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/335,762, dated Oct. 3, 2016, 7 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/335,762, dated Mar. 30, 2015, 9 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/456,683, dated Oct. 8, 2015, 15 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/458,192, dated Oct. 12, 2017, 8 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/458,199, dated Jun. 20, 2017, 9 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/611,065, dated Mar. 26, 2018, 18 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/614,336, dated Dec. 11, 2015, 8 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/614,336, dated Nov. 25, 2015, 13 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 14/968,703, dated Jun. 27, 2019, 10 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 15/406,492, dated Mar. 11, 2020, 9 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 15/435,228, dated Aug. 12, 2021, 9 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 15/603,400, dated Dec. 18, 2019, 8 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 15/603,400, dated Jun. 18, 2020, 5 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 15/878,352, dated Oct. 23, 2020, 8 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 16/029,483, dated Dec. 23, 2020, 21 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 16/748,727, dated May 9, 2022, 16 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 16/748,727, dated Jan. 20, 2022, 15 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 16/750,477, dated Jan. 26, 2022, 14 pgs.
 Patel, Notice of Allowance, U.S. Appl. No. 16/934,933, dated Mar. 31, 2021, 8 pgs.
 Patel, Office Action, U.S. Appl. No. 14/320,534, dated Apr. 8, 2016, 21 pgs.
 Patel, Office Action, U.S. Appl. No. 14/320,534, dated Oct. 29, 2014, 18 pgs.
 Patel, Office Action, U.S. Appl. No. 14/321,717, dated Dec. 19, 2014, 16 pgs.
 Patel, Office Action, U.S. Appl. No. 14/321,724, dated Mar. 13, 2017, 21 pgs.
 Patel, Office Action, U.S. Appl. No. 14/321,724, dated May 15, 2015, 19 pgs.
 Patel, Office Action, U.S. Appl. No. 14/321,733, dated Aug. 21, 2014, 9 pgs.
 Patel, Office Action, U.S. Appl. No. 14/335,762, dated Dec. 10, 2014, 7 pgs.
 Patel, Office Action, U.S. Appl. No. 14/335,762, dated Sep. 18, 2015, 13 pgs.
 Patel, Office Action, U.S. Appl. No. 14/456,683, dated Jan. 2, 2015, 10 pgs.
 Patel, Office Action, U.S. Appl. No. 14/458,192, dated Mar. 23, 2017, 26 pgs.
 Patel, Office Action, U.S. Appl. No. 14/458,192, dated Jan. 30, 2015, 24 pgs.
 Patel, Office Action, U.S. Appl. No. 14/458,199, dated Jan. 5, 2015, 7 pgs.
 Patel, Office Action, U.S. Appl. No. 14/458,199, dated Mar. 28, 2016, 8 pgs.

Patel, Office Action, U.S. Appl. No. 14/611,065, dated Jun. 13, 2017, 17 pgs.
 Patel, Office Action, U.S. Appl. No. 14/614,336, dated May 27, 2015, 17 pgs.
 Patel, Office Action, U.S. Appl. No. 14/641,236, dated Feb. 7, 2018, 19 pgs.
 Patel, Office Action, U.S. Appl. No. 14/641,236, dated May 29, 2015, 10 pgs.
 Patel, Office Action, U.S. Appl. No. 14/968,703, dated Aug. 7, 2018, 31 pgs.
 Patel, Office Action, U.S. Appl. No. 15/406,492, dated Jul. 25, 2019, 16 pgs.
 Patel, Office Action, U.S. Appl. No. 15/435,228, dated Mar. 26, 2020, 21 pgs.
 Patel, Office Action, U.S. Appl. No. 15/603,400, dated Jun. 12, 2019, 10 pgs.
 Patel, Office Action, U.S. Appl. No. 15/878,352, dated Jun. 24, 2020, 12 pgs.
 Patel, Office Action, U.S. Appl. No. 15/893,514, dated Oct. 29, 2020, 17 pgs.
 Patel, Office Action, U.S. Appl. No. 15/956,741, dated Apr. 22, 2020, 10 pgs.
 Patel, Office Action, U.S. Appl. No. 15/956,741, dated Dec. 27, 2021, 10 pgs.
 Patel, Office Action, U.S. Appl. No. 16/029,483, dated Apr. 27, 2020, 28 pgs.
 Patel, Office Action, U.S. Appl. No. 16/681,673, dated Dec. 24, 2021, 20 pgs.
 Patel, Office Action, U.S. Appl. No. 16/934,933, dated Oct. 28, 2020, 9 pgs.
 Patel, Office Action, U.S. Appl. No. 17/216,399, dated Apr. 8, 2022, 14 pgs.
 PayRange Inc., Communication Pursuant to Article 94(3), EP 14828617.2, dated Dec. 19, 2017, 6 pgs.
 PayRange Inc., Communication Pursuant to Article 94(3), EP 16706931.9, dated Jun. 29, 2018, 8 pgs.
 PayRange Inc., Communication Pursuant to Rules 161(1) and 162, EP 14828617.2, dated Sep. 21, 2016, 2 pgs.
 PayRange Inc., Communication Pursuant to Rules 161(1) and 162, EP 16706931.9, dated Sep. 21, 2017, 2 pgs.
 PayRange Inc., Communication under Rule 71(3) EPC, EP 14828617.2, dated Nov. 19, 2020, 8 pgs.
 PayRange Inc., Communication under Rule 71(3) EPC, EP 17708929.9, dated Jun. 12, 2020, 5 pgs.
 PayRange Inc., European Search Report, EP 20203134.1, dated Feb. 9, 2021, 2 pgs.
 PayRange Inc., European Search Report, EP 21165692.1, dated Sep. 14, 2021, 9 pgs.
 PayRange Inc., IPRP, PCT/US2014/071284, dated Jun. 21, 2016, 6 pgs.
 PayRange Inc., IPRP, PCT/US2016/015763, dated Aug. 1, 2017, 7 pgs.
 PayRange Inc., IPRP, PCT/US2017/015676, dated Jul. 31, 2018, 9 pgs.
 PayRange Inc., IPRP, PCT/US2017/018194, dated Aug. 21, 2018, 17 pgs.
 PayRange Inc., IPRP, PCT/US2019/060777, dated May 11, 2021, 7 pgs.
 PayRange Inc., ISR/WO, PCT/US2014/071284, dated Mar. 25, 2015, 9 pgs.
 PayRange Inc., ISR/WO, PCT/US2016/015763, dated Apr. 8, 2016, 9 pgs.
 PayRange Inc., ISR/WO, PCT/US2017/015676, dated Apr. 18, 2017, 11 pgs.
 PayRange Inc., ISR/WO, PCT/US2017/018194, dated Apr. 12, 2017, 10 pgs.
 PayRange Inc., ISR/WO, PCT/US2019/060777, dated Feb. 6, 2020, 11 pgs.
 PayRange Inc., ISR/WO, PCT/US2021/042632, dated Nov. 17, 2021, 11 pgs.

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.