

# US Patent & Trademark Office

## Patent Public Search | Text View

United States Patent	12387239
Kind Code	B2
Date of Patent	August 12, 2025
Inventor(s)	Hardin; Ryan et al.

### Exclusive delivery of content within geographic areas

#### Abstract

Application developers can request to have their applications registered for use with a content delivery platform. The operator of the content delivery platform establishes perimeters defining geographic areas, and maintains records reserving particular areas for delivery of content associated with particular sponsors. Registered applications running on mobile devices can request content from the content delivery platform. Based at least in part on the request, the content delivery platform can identify a target location, which may be the location of the mobile device, or some other location indicated in the request, A mobile device can be provided content based on the relationship of the target location to the geographic areas, so that a registered application running on a mobile device with a target location contained within a geographic area assigned to a particular sponsor will receive content related to that sponsor.

Inventors:	Hardin; Ryan (Henderson, TX), Hill; Andrew (Houston, TX)
Applicant:	Hardin; Ryan (Henderson, TX); Hill; Andrew (Houston, TX)
Family ID:	43030766
Appl. No.:	18/805245
Filed:	August 14, 2024

#### Prior Publication Data

Document Identifier	Publication Date
US 20240403916 A1	Dec. 05, 2024

#### Related U.S. Application Data

continuation parent-doc US 18764076 20240703 PENDING child-doc US 18805245  
continuation parent-doc US 17182809 20210223 US 12056736 20240806 child-doc US 18764076  
continuation parent-doc US 16019285 20180626 US 10984447 20210420 child-doc US 17182809  
continuation parent-doc US 15694786 20170902 US 10049387 20180814 child-doc US 16019285  
continuation parent-doc US 15009961 20160129 US 9779418 20171003 child-doc US 15694786  
continuation parent-doc US 14608285 20150129 US 9286625 20160315 child-doc US 15009961  
continuation parent-doc US 13856392 20130403 US 8977247 20150310 child-doc US 14608285  
continuation parent-doc US 12434094 20090501 US 8433296 20130430 child-doc US 13856392

#### Publication Classification

**Int. Cl.:** G06Q30/0251 (20230101); G06Q30/02 (20230101); H04L67/53 (20220101); H04M3/42 (20060101); H04W4/021 (20180101); H04W4/029 (20180101); H04W4/18 (20090101)

**U.S. Cl.:**

**CPC** G06Q30/0261 (20130101); G06Q30/02 (20130101); G06Q30/0266 (20130101); G06Q30/0267 (20130101); H04M3/42357 (20130101); H04W4/021 (20130101); H04W4/029 (20180201); H04W4/18 (20130101); H04L67/53 (20220501); H04M2242/14 (20130101)

Field of Classification Search

**CPC:** G06Q (30/02); G06Q (30/0277); G06Q (30/0269); G06Q (30/0261); G06Q (30/0241); G06Q (30/0207); G06Q (30/0276); G06Q (30/0272); G06Q (30/0266); G06Q (30/0251); G06Q (30/0264); G06Q (30/0267); G06Q (30/0257); H04W (4/029); H04W (4/21); H04W (4/02); H04W (4/23); H04L (51/52)

References Cited

U.S. PATENT DOCUMENTS

Patent No.	Issued Date	Patentee Name	U.S. Cl.	CPC
6418311	12/2001	Chmaytelli et al.	N/A	N/A
6449498	12/2001	Kirbas et al.	N/A	N/A
6542729	12/2002	Chmaytelli et al.	N/A	N/A
6542732	12/2002	Khazaka et al.	N/A	N/A
6628938	12/2002	Rachabathuni et al.	N/A	N/A
6701144	12/2003	Kirbas et al.	N/A	N/A
6721578	12/2003	Minear et al.	N/A	N/A
6753842	12/2003	Williams et al.	N/A	N/A
6782369	12/2003	Carrott	N/A	N/A
6792244	12/2003	Ross et al.	N/A	N/A
6810323	12/2003	Bullock et al.	N/A	N/A
6847888	12/2004	Fox et al.	N/A	N/A
6867733	12/2004	Sandhu et al.	N/A	N/A
6947772	12/2004	Minear et al.	N/A	N/A
6996394	12/2005	Minear et al.	N/A	N/A
7009556	12/2005	Stewart	N/A	N/A
7039398	12/2005	Chmaytelli et al.	N/A	N/A
7054649	12/2005	Yamazaki et al.	N/A	N/A
7065388	12/2005	Minear et al.	N/A	N/A
7080402	12/2005	Bates et al.	N/A	N/A
7089264	12/2005	Guido et al.	N/A	N/A
7092964	12/2005	Dougherty et al.	N/A	N/A
7096004	12/2005	Minear et al.	N/A	N/A
7096117	12/2005	Gale et al.	N/A	N/A
7099663	12/2005	Lundblade et al.	N/A	N/A
7103368	12/2005	Teshima	N/A	N/A
7113772	12/2005	Chmaytelli et al.	N/A	N/A
7124370	12/2005	Fish	N/A	N/A
7133685	12/2005	Hose et al.	N/A	N/A
7164986	12/2006	Humphries et al.	N/A	N/A
7200673	12/2006	Augart	N/A	N/A
7203967	12/2006	Chmaytelli et al.	N/A	N/A
7207802	12/2006	Wilson	N/A	N/A
7219145	12/2006	Chmaytelli et al.	N/A	N/A
7219303	12/2006	Fish	N/A	N/A
7263351	12/2006	Ross et al.	N/A	N/A
7324815	12/2007	Ross et al.	N/A	N/A
7457628	12/2007	Blumberg et al.	N/A	N/A
7519470	12/2008	Brasche et al.	N/A	N/A
7536172	12/2008	Minear et al.	N/A	N/A
7536695	12/2008	Alam et al.	N/A	N/A
7565447	12/2008	Gellens et al.	N/A	N/A
7577522	12/2008	Rosenberg	N/A	N/A
7610048	12/2008	Ross et al.	N/A	N/A
7627425	12/2008	Salmre et al.	N/A	N/A
7644126	12/2009	Chmaytelli	N/A	N/A
7684792	12/2009	Lundblade et al.	N/A	N/A
7712660	12/2009	Keohane et al.	N/A	N/A
7734285	12/2009	Chmaytelli et al.	N/A	N/A

7743407	12/2009	Sprigg et al.	N/A	N/A
7769767	12/2009	Petersen	N/A	N/A
7784089	12/2009	Lundblade et al.	N/A	N/A
7814106	12/2009	Guido et al.	N/A	N/A
7848765	12/2009	Phillips et al.	N/A	N/A
7921287	12/2010	Sprigg et al.	N/A	N/A
8010134	12/2010	Barnes et al.	N/A	N/A
8014762	12/2010	Chmaytelli et al.	N/A	N/A
8020001	12/2010	Lundblade et al.	N/A	N/A
8037515	12/2010	Lundblade	N/A	N/A
8112076	12/2011	Lundblade et al.	N/A	N/A
8135777	12/2011	Colligan et al.	N/A	N/A
8165079	12/2011	Lee et al.	N/A	N/A
8219115	12/2011	Nelissen	N/A	N/A
8249577	12/2011	Chmaytelli et al.	N/A	N/A
8321680	12/2011	Gantman et al.	N/A	N/A
8326315	12/2011	Phillips et al.	N/A	N/A
8374628	12/2012	Nelissen et al.	N/A	N/A
8385944	12/2012	Nelissen	N/A	N/A
8403755	12/2012	Kerr	N/A	N/A
8424068	12/2012	Lundblade	N/A	N/A
8468261	12/2012	Chmaytelli et al.	N/A	N/A
8505078	12/2012	Hohlfeld et al.	N/A	N/A
8510773	12/2012	Abou-Rizk et al.	N/A	N/A
8520511	12/2012	Chmaytelli et al.	N/A	N/A
8536999	12/2012	Holcman et al.	N/A	N/A
8588766	12/2012	Lundblade et al.	N/A	N/A
8620275	12/2012	Minear et al.	N/A	N/A
8620994	12/2012	Boyd et al.	N/A	N/A
8630634	12/2013	Chmaytelli et al.	N/A	N/A
8644847	12/2013	Nelissen et al.	N/A	N/A
8660613	12/2013	Minear et al.	N/A	N/A
8903407	12/2013	Chmaytelli	N/A	N/A
8750101	12/2013	Oh et al.	N/A	N/A
8761714	12/2013	Son et al.	N/A	N/A
8762205	12/2013	Narayanaswami et al.	N/A	N/A
8798613	12/2013	MacNaughtan et al.	N/A	N/A
8826145	12/2013	Kirkpatrick et al.	N/A	N/A
8856905	12/2013	Lundblade	N/A	N/A
8862150	12/2013	Phillips et al.	N/A	N/A
8868581	12/2013	Ryu et al.	N/A	N/A
8909248	12/2013	Phillips et al.	N/A	N/A
8942995	12/2014	Kerr	N/A	N/A
8943164	12/2014	Kies et al.	N/A	N/A
8983488	12/2014	Sweeney et al.	N/A	N/A
9015692	12/2014	Clavel	N/A	N/A
9122542	12/2014	Nelissen	N/A	N/A
9128956	12/2014	Salmre et al.	N/A	N/A
9148431	12/2014	Chmaytelli	N/A	N/A
RE45780	12/2014	Petersen	N/A	N/A
9231763	12/2015	Lundblade et al.	N/A	N/A
9251520	12/2015	Shen et al.	N/A	N/A
9270818	12/2015	Nelissen et al.	N/A	N/A
9286652	12/2015	Takishima	N/A	N/A
9338601	12/2015	Issa et al.	N/A	N/A
9373116	12/2015	Kerr	N/A	N/A
9400403	12/2015	Hesline	N/A	N/A
9418366	12/2015	Mayers	N/A	N/A
9436806	12/2015	Chmaytelli et al.	N/A	N/A
9503834	12/2015	Ross et al.	N/A	N/A
9555334	12/2016	Bernard et al.	N/A	N/A
9621549	12/2016	Benoit et al.	N/A	N/A
9654923	12/2016	Phillips et al.	N/A	N/A
9654978	12/2016	Lundblade et al.	N/A	N/A
9668096	12/2016	Phillips et al.	N/A	N/A
9781096	12/2016	Sade et al.	N/A	N/A
9836591	12/2016	Archibald et al.	N/A	N/A
9936347	12/2017	Nelissen	N/A	N/A

10002242	12/2017	Jakobsson et al.	N/A	N/A
10019602	12/2017	Kahana et al.	N/A	N/A
10043170	12/2017	Minear et al.	N/A	N/A
10135613	12/2017	McLean et al.	N/A	N/A
10248775	12/2018	Archibald et al.	N/A	N/A
10321264	12/2018	Phillips et al.	N/A	N/A
10602307	12/2019	Phillips et al.	N/A	N/A
10606996	12/2019	Archibald et al.	N/A	N/A
RE48001	12/2019	Lundblade et al.	N/A	N/A
10667080	12/2019	Phillips et al.	N/A	N/A
10691677	12/2019	Ryu et al.	N/A	N/A
10708712	12/2019	Phillips et al.	N/A	N/A
10721587	12/2019	Phillips et al.	N/A	N/A
10728697	12/2019	Phillips et al.	N/A	N/A
10728698	12/2019	Phillips et al.	N/A	N/A
10728699	12/2019	Phillips et al.	N/A	N/A
11044575	12/2020	Phillips et al.	N/A	N/A
11070936	12/2020	Phillips et al.	N/A	N/A
11082798	12/2020	Phillips et al.	N/A	N/A
11115777	12/2020	Phillips et al.	N/A	N/A
2002/0055880	12/2001	Unold	N/A	N/A
2002/0077084	12/2001	Zellner	N/A	N/A
2002/0107706	12/2001	Oliver et al.	N/A	N/A
2002/0107795	12/2001	Minear et al.	N/A	N/A
2002/0123373	12/2001	Kirbas et al.	N/A	N/A
2002/0142762	12/2001	Chmaytelli et al.	N/A	N/A
2002/0142844	12/2001	Kerr	N/A	N/A
2002/0161633	12/2001	Jacob et al.	N/A	N/A
2002/0169977	12/2001	Chmaytelli	N/A	N/A
2002/0173315	12/2001	Chmaytelli et al.	N/A	N/A
2002/0183056	12/2001	Lundblade et al.	N/A	N/A
2002/0194325	12/2001	Chmaytelli et al.	N/A	N/A
2003/0028621	12/2002	Furlong et al.	N/A	N/A
2003/0051169	12/2002	Sprigg et al.	N/A	N/A
2003/0060189	12/2002	Minear et al.	N/A	N/A
2003/0061504	12/2002	Sprigg et al.	N/A	N/A
2003/0064705	12/2002	Desiderio	N/A	N/A
2003/0078886	12/2002	Minear et al.	N/A	N/A
2003/0101454	12/2002	Ozer et al.	N/A	N/A
2003/0139192	12/2002	Chmaytelli et al.	N/A	N/A
2003/0142039	12/2002	Minear et al.	N/A	N/A
2003/0143990	12/2002	Minear et al.	N/A	N/A
2003/0198346	12/2002	Meifu et al.	N/A	N/A
2003/0208401	12/2002	Karsten et al.	N/A	N/A
2003/0207683	12/2002	Lempio	N/A	N/A
2004/0002301	12/2003	Ross et al.	N/A	N/A
2004/0058651	12/2003	Ross et al.	N/A	N/A
2004/0087347	12/2003	Minear et al.	N/A	N/A
2004/0097244	12/2003	Yamazaki et al.	N/A	N/A
2004/0110515	12/2003	Blumberg et al.	N/A	N/A
2004/0137886	12/2003	Ross	N/A	N/A
2004/0176105	12/2003	Ashmore et al.	N/A	N/A
2004/0198334	12/2003	Chmaytelli et al.	N/A	N/A
2004/0203616	12/2003	Minear et al.	N/A	N/A
2004/0203681	12/2003	Ross et al.	N/A	N/A
2004/0204719	12/2003	Ross et al.	N/A	N/A
2004/0205048	12/2003	Pizzo et al.	N/A	N/A
2004/0214550	12/2003	Jenkniis	N/A	N/A
2004/0220906	12/2003	Gargi et al.	N/A	N/A
2004/0224702	12/2003	Chaskar	N/A	N/A
2004/0248551	12/2003	Rowitch et al.	N/A	N/A
2004/0253965	12/2003	Sato et al.	N/A	N/A
2005/0009465	12/2004	Ross et al.	N/A	N/A
2005/0054324	12/2004	Chmaytelli et al.	N/A	N/A
2005/0055574	12/2004	Chmaytelli et al.	N/A	N/A
2005/0058067	12/2004	Chmaytelli et al.	N/A	N/A
2005/0097330	12/2004	Lundblade	N/A	N/A
2005/0114694	12/2004	Wager et al.	N/A	N/A

2005/0118999	12/2004	Zhu	N/A	N/A
2005/0144294	12/2004	Gellens et al.	N/A	N/A
2005/0187823	12/2004	Howes	N/A	N/A
2005/0192878	12/2004	Minear et al.	N/A	N/A
2005/0282535	12/2004	Chmaytelli et al.	N/A	N/A
2006/0009198	12/2005	Kasai et al.	N/A	N/A
2006/0058037	12/2005	Kenyon	N/A	N/A
2006/0064346	12/2005	Steenstra et al.	N/A	N/A
2006/0075040	12/2005	Chmaytelli	N/A	N/A
2006/0095957	12/2005	Lundblade et al.	N/A	N/A
2006/0107327	12/2005	Sprigg et al.	N/A	N/A
2006/0116817	12/2005	Salmre et al.	N/A	N/A
2006/0136292	12/2005	Bhati et al.	N/A	N/A
2006/0136297	12/2005	Willis et al.	N/A	N/A
2006/0141993	12/2005	Minear et al.	N/A	N/A
2006/0149630	12/2005	Elliott et al.	N/A	N/A
2006/0223494	12/2005	Chmaytelli et al.	N/A	N/A
2006/0236098	12/2005	Gantman et al.	N/A	N/A
2006/0253453	12/2005	Chmaytelli et al.	N/A	N/A
2006/0253481	12/2005	Guido et al.	N/A	N/A
2006/0270421	12/2005	Phillips et al.	N/A	N/A
2006/0281440	12/2005	Minear et al.	N/A	N/A
2006/0287958	12/2005	Lundblade et al.	N/A	N/A
2007/0066365	12/2006	Minear	N/A	N/A
2007/0112741	12/2006	Crawford	N/A	N/A
2007/0129888	12/2006	Rosenberg et al.	N/A	N/A
2007/0180111	12/2006	Chmaytelli et al.	N/A	N/A
2007/0185768	12/2006	Vengroff et al.	N/A	N/A
2007/0192409	12/2006	Kleinstern	N/A	N/A
2007/0198698	12/2006	Boyd et al.	N/A	N/A
2007/0198841	12/2006	Lundblade et al.	N/A	N/A
2007/0214180	12/2006	Crawford	N/A	N/A
2007/0219708	12/2006	Brasche et al.	N/A	N/A
2007/0244633	12/2006	Phillips et al.	N/A	N/A
2008/0004952	12/2007	Koli	N/A	N/A
2008/0032666	12/2007	Hughes et al.	N/A	N/A
2008/0032703	12/2007	Krumm et al.	N/A	N/A
2008/0033805	12/2007	Padin	N/A	N/A
2008/0046311	12/2007	Shahine	N/A	N/A
2008/0086356	12/2007	Glassman	N/A	N/A
2008/0094256	12/2007	Koen	N/A	N/A
2008/0098420	12/2007	Khivesara et al.	N/A	N/A
2008/0109317	12/2007	Singh	N/A	N/A
2008/0125099	12/2007	Brown et al.	N/A	N/A
2008/0125133	12/2007	Chmaytelli	N/A	N/A
2008/0137828	12/2007	Chmaytelli	N/A	N/A
2008/0146338	12/2007	Bernard et al.	N/A	N/A
2008/0154728	12/2007	Thomas	N/A	N/A
2008/0155017	12/2007	Minear et al.	N/A	N/A
2008/0162032	12/2007	Wuersch et al.	N/A	N/A
2008/0163073	12/2007	Becker et al.	N/A	N/A
2008/0182569	12/2007	Chmaytelli et al.	N/A	N/A
2008/0215524	12/2007	Fuchs et al.	N/A	N/A
2008/0225815	12/2007	Minear et al.	N/A	N/A
2008/0262897	12/2007	Howarter et al.	N/A	N/A
2008/0268876	12/2007	Gelfand et al.	N/A	N/A
2008/0270235	12/2007	Yoon	N/A	N/A
2008/0275772	12/2007	Suryanarayana	N/A	N/A
2008/0307498	12/2007	Johnson et al.	N/A	N/A
2008/0313039	12/2007	Altberge et al.	N/A	N/A
2009/0024476	12/2008	Baar et al.	N/A	N/A
2009/0029721	12/2008	Doraswamy	N/A	N/A
2009/0197582	12/2008	Lewis et al.	N/A	N/A
2009/0061890	12/2008	Andreasson et al.	N/A	N/A
2009/0063424	12/2008	Iwamura et al.	N/A	N/A
2009/0089288	12/2008	Petersen et al.	N/A	N/A
2009/0094248	12/2008	Petersen	N/A	N/A
2009/0131080	12/2008	Nadler et al.	N/A	N/A

2009/0135805	12/2008	Lee et al.	N/A	N/A
2009/0157632	12/2008	Ryu et al.	N/A	N/A
2009/0163227	12/2008	Collins	N/A	N/A
2009/0164602	12/2008	Kies et al.	N/A	N/A
2009/0165083	12/2008	McLean et al.	N/A	N/A
2009/0183264	12/2008	Chmaytelli et al.	N/A	N/A
2009/0186595	12/2008	Son et al.	N/A	N/A
2009/0191860	12/2008	Oh et al.	N/A	N/A
2009/0210700	12/2008	Nomura et al.	N/A	N/A
2009/0239510	12/2008	Sennett	N/A	N/A
2009/0275348	12/2008	Weinreich et al.	N/A	N/A
2010/0042320	12/2009	Salmre et al.	N/A	N/A
2010/0070351	12/2009	Kang	N/A	N/A
2010/0070606	12/2009	Shenfield et al.	N/A	N/A
2010/0075697	12/2009	Gupta et al.	N/A	N/A
2010/0113065	12/2009	Narayan et al.	N/A	N/A
2010/0120450	12/2009	Herz	N/A	N/A
2010/0130179	12/2009	Colligan et al.	N/A	N/A
2010/0131501	12/2009	Deeming	N/A	N/A
2010/0138294	12/2009	Bussmann et al.	N/A	N/A
2010/0173608	12/2009	Lundblade et al.	N/A	N/A
2010/0248709	12/2009	Chmaytelli et al.	N/A	N/A
2010/0269156	12/2009	Hohlfeld et al.	N/A	N/A
2010/0312646	12/2009	Gupta et al.	N/A	N/A
2010/0325708	12/2009	Lundblade et al.	N/A	N/A
2010/0332305	12/2009	Higgins	705/14.44	G06Q 30/0214
2011/0010383	12/2010	Thompson et al.	N/A	N/A
2011/0107107	12/2010	Gantman et al.	N/A	N/A
2012/0030742	12/2011	Lundblade	N/A	N/A
2012/0126974	12/2011	Phillips et al.	N/A	N/A
2012/0129553	12/2011	Phillips et al.	N/A	N/A
2012/0137349	12/2011	Lundblade et al.	N/A	N/A
2013/0072177	12/2012	Ross et al.	N/A	N/A
2013/0182838	12/2012	Kelley et al.	N/A	N/A
2013/0227667	12/2012	Lundblade	N/A	N/A
2013/0283395	12/2012	Chmaytelli et al.	N/A	N/A
2013/0326596	12/2012	Hohlfeld et al.	N/A	N/A
2014/0013390	12/2013	Sade et al.	N/A	N/A
2015/0005017	12/2014	Ryu et al.	N/A	N/A
2015/0065177	12/2014	Phillips et al.	N/A	N/A
2015/0148078	12/2014	Phillips et al.	N/A	N/A
2015/0163632	12/2014	Phillips et al.	N/A	N/A
2015/0382141	12/2014	Salmre et al.	N/A	N/A
2016/0021245	12/2015	Chmaytelli	N/A	N/A
2016/0028725	12/2015	Benoit et al.	N/A	N/A
2016/0063281	12/2015	Kahana et al.	N/A	N/A
2016/0171198	12/2015	Archibald et al.	N/A	N/A
2016/0227411	12/2015	Lundblade et al.	N/A	N/A
2016/0283064	12/2015	Ross et al.	N/A	N/A
2016/0299854	12/2015	Deivasigamani et al.	N/A	N/A
2016/0308849	12/2015	Sade et al.	N/A	N/A
2017/0053108	12/2016	Jakobsson et al.	N/A	N/A
2017/0289197	12/2016	Mandyam et al.	N/A	N/A
2017/0310677	12/2016	Chmaytelli et al.	N/A	N/A
2018/0068106	12/2017	Archibald et al.	N/A	N/A
2018/0124564	12/2017	Phillips et al.	N/A	N/A
2019/0156006	12/2018	Archibald et al.	N/A	N/A
2019/0373402	12/2018	Phillips et al.	N/A	N/A
2019/0373406	12/2018	Phillips et al.	N/A	N/A
2019/0380000	12/2018	Phillips et al.	N/A	N/A
2019/0380001	12/2018	Phillips et al.	N/A	N/A
2019/0380002	12/2018	Phillips et al.	N/A	N/A
2020/0112821	12/2019	Phillips et al.	N/A	N/A
2020/0112822	12/2019	Phillips et al.	N/A	N/A
2020/0112823	12/2019	Phillips et al.	N/A	N/A
2020/0112824	12/2019	Phillips et al.	N/A	N/A
2020/0112825	12/2019	Phillips et al.	N/A	N/A
2020/0120442	12/2019	Phillips et al.	N/A	N/A

**FOREIGN PATENT DOCUMENTS**

<b>Patent No.</b>	<b>Application Date</b>	<b>Country</b>	<b>CPC</b>
20040021267	12/2003	KR	N/A
20080019867	12/2007	KR	N/A
1020080019867	12/2007	KR	N/A
WO2008082794	12/2007	WO	N/A

**OTHER PUBLICATIONS**

Exhibit C-14B: Invalidity Chart for the U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Jeon '867 Other Prior Art, pp. 1-3319. cited by applicant

Martin Bauer et al.: “Information Management and Exchange in the Nexus Platform” Version 2.0-30.4.04, Report No. 2004/04, Universitat Stuttgart 627-Nexus, pp. 1-58—IBM 635. cited by applicant

Lisa Peterson et al.: “Location-Based Advertising—The Key to Unlocking the Most Value in the Mobile Advertising and Location-Based Services Markets,” Peterso Mobility Solutions, Dec. 2009, p. 1-39—IBM 693; and. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Defendant's Invalidity and Ineligibility Contentions, pp. 1-88. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, C-15: Subject Matter Eligibility Contentions for U.S. Pat. No. 11,948,171 (the “171 Patent”), pp. 1-140. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, A-15: Subject Matter Eligibility Contentions for U.S. Pat. No. 8,977,247 (the “247 Patent”), pp. 1-4 cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-14B: Invalidity Chart for the U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Jeon '867 Other Prior Art, pp. 1-3319. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-03B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Jacob '633 and Other Prior Art, pp. 1-3391. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-04A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Bussmann '294 and Other Prior Art, pp. 1-1680. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-04B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Bussmann '294 and Other Art, pp. 1-3349. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-05A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Chmaytel '453 and Other Prior Art, pp. 1-1748. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-02A: Invalidity Chat for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Hughes '606 and Other Prior Art, pp. 1-1760. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-08A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Narayan '065 and Other Prior Art, pp. 1-1642. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-08B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Narayan '065 and Other Prior Art, pp. 1-3290. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-09A: Invalidity Chat for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Ashmore '105 and Other Prior Act, pp. 1-1548. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-09B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Ashmore '105 and Other Prior Art, pp. 1-3103. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-10A: Invalidity Chart for U.S Pat. No. 11,948,171 (the “171 Patent”) Based on Sweeney '488 and Other Prior Act, pp. 1-1668. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-05B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Chmaytel '453 and Other Prior Art, pp. 1-3463. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-06A: Invalidity Chat for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Colligan '777 and Other Prior Art, pp. 1-1621. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-06B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Colligan '777 and Other Prior Art, pp. 1-3243. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-13A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on MacNaughtan '613 and Other Prior Art, pp. 1-1547. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-14A: Invalidity Chat for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Jeon '867 and Other Prior Art, pp. 1-1643. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-13B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on MacNaughtan '613 and Other Prior Art, pp. 1-3102. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-02B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Hughes '666 and Other Prior Art, pp. 1-3517. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-10B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Sweeney '488 and Other Prior Art, pp. 1-3334. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-03A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Jacob '633 and Other Prior Art, pp. 1-1705. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-11A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Phillips '421 and Other Prior Art, pp. 1-1649. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-07B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Collins '227 and Other Prior Art, pp. 1-3514. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-07A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Collins '227 and Other Prior Art, pp. 1-1773. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-12A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Rosenberg '888 and Other Prior Art, pp. 1-1637. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-12B: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Rosenberg '888 and Other Prior Art, pp. 1-3266. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit E-02: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Kontti and Other Prior Art, pp. 1-628. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-02: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Kontti and Other Prior Art, pp. 1-474. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit F-05: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Xtify and Other Prior Art, pp. 1-899. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-01: Invalidity Chart U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on 5130 GMSP and Other Prior Art, pp. 1-325. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-03: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Navteq LBA and Other Prior Art, pp. 1-339. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-04: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Verve and Other Prior Art, pp. 1-483. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-05: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Xtify and Other Prior Art, pp. 1-248. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit E-01: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on 5130 GMSP and Other Prior Art, pp. 1-409. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit E-04: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Verve and Other Prior Art, pp. 1-602. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit F-03: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Navteq LBAP and Other Prior Art, pp. 1-963. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit E-05: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Xtify and Other Prior Art, pp. 1-344. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit F-02: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Kontti and Other Prior Art, pp. 1-1342. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit F-04: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Verve and Other Prior Art, pp. 1-1243. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-09: Invalidity Chat for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Ashmore '105 and Other Prior Art, pp. 1-1387. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-11: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Phillips '421 and Other Prior Art, pp. 1-1411. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit D-06: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Maximo and Other Prior Art, pp. 1-510. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit E-06: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Maximo and Other Prior Art, pp. 1-599. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-13: Invalidity Chat for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on MacNaughtan '613 and Other Prior Art, pp. 1-1333. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-12: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Rosenberg '888 and Other Prior Art, pp. 1-1403. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-14: Invalidity Chat for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Jeon '867 and Other Prior Art, pp. 1-1407. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit F-06: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Maximo and Other Prior Art, pp. 1-1165. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-01: Invalidity Chat for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Andreasson '890 and Other Prior Art, pp. 1-873. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-02: Invalidity Chat for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Hughs '666 and Other Prior Art, pp. 1-766. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-05: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Chmaytelli '453 and Other Prior Art, pp. 1-892. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-03: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Jacob '633 and Other Prior Art, pp. 1-884. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-04: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Bussmann '294 and Other Prior Art, pp. 1-917. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-07: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Collins '227 and Other Prior Art, pp. 1-911. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, B-15: Subject Matter Eligibility Contentions for U.S. Pat. No. 9,286,625 (the “625 Patent”), pp. 1-42. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit C-01A: Invalidity Chart for U.S. Pat. No. 11,948,171 (the “171 Patent”) Based on Andreasson '890 and Other Prior Art, pp. 1-1547. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-06: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Colligan '777 and Other Prior Art, pp. 1-815. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-08: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Narayan '065 and Other Prior Art, pp. 1-864. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-08: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Ashmore '10 and Other Prior Art, pp. 1-811. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-11: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Phillips '421 and Other Prior Art, pp. 1-831. cited by applicant



Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-10: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Sweeney '48 and Other Prior Art, pp. 1-763. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-12: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Rosenberg '888 and Other Prior Art, pp. 1-834. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-13: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on MacNaughta '613 and Other Prior Art, pp. 1-879. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit A-14: Invalidity Chart for U.S. Pat. No. 8,977,247 (the “247 Patent”) Based on Jeon '867 and Other Prior Art, pp. 1-833. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-01: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Andreasson '890 and Other Prior Art, pp. 1-1491. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-02: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Hughes '666 and Other Prior Art, pp. 1-1331. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-03: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Jacob '633 and Other Prior Art, pp. 1-1494. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-05: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Chmaytelli '453 and Other Prior Art, pp. 1-1495. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-04: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Bussmann '294 and Other Prior Art, pp. 1-1490. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-06: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Colligan '777 and Other Prior Art, pp. 1-1395. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-07: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Collins '227 and Other Prior Art, pp. 1-1510. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-08: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Narayan '065 and Other Prior Art, pp. 1-1426. cited by applicant

Civil Action No. 2:24-cv-00367-JRG-RSP, Exhibit B-10: Invalidity Chart for U.S. Pat. No. 9,286,625 (the “625 Patent”) Based on Sweeney '48 and Other Prior Art, pp. 1-1332. cited by applicant

Dave Burrows, NAVTEQ Part 1/3, Wayback Machine—  
<http://wed.archive.org/web/20081010232840/http://www.pocketgpsworld.com:80/navteq.php> Nov. 3, 2004, p. 1-5—IBM 1344. cited by applicant

Xtify Quick Start—The Wayback Machine—<https://web.archive.org/web/20081221030447?http://www.xtify.com:80/doc/quickstart>—IBM1488 cited by applicant

Verve Wireless: Verve Publishing Platform—The Wayback Machine—  
[https://web.archive.org/web/20070312106853/http://www.verviewireless.com:80/verve\\_publication/verve\\_publication.htm](https://web.archive.org/web/20070312106853/http://www.verviewireless.com:80/verve_publication/verve_publication.htm), p. 1—IBM1340. cited by applicant

Judson Green.: NAVTEQ Overview—PPT, pp. 1-14—IBM1003. cited by applicant

Nokia Buys Mapping Service for \$8.1 Billion—Acquisition of Navteq will Enable Nokia to Add Navigation Capabilities to More of Its Mobile Devices, pp. 1-5—IBM1017. cited by applicant

“Canalys Navigation Forum 2007 Barcelona,” The Wayback Machine—  
<http://web.archive.org/web/20080418001619/http://www.pocketgpsworld.com:80/canalys-navigation-forum-2007.php>, pp. 1-9—IBM1022. cited by applicant

Mobi Ad News: Nokie Ad Service—The Wayback Machine—<https://web.archive.org/web/20080315190925/http://www.mobiadnews.com:80/?p=579>, pp. 1—IBM1031. cited by applicant

NAVTEQ Reports More Drivers are Updating Navigation System Maps, Nov. 11, 2008, pp. 1-2—IBM1032. cited by applicant

NAVTEQ Part 1/3—A Visit to NAVTEQ, Nov. 3, 2004—The Wayback Machine—  
<https://web.archive.org/web/20081010232840/http://www.pocketgpsworld.com:80/navteq.php>, pp. 1-5—IBM1344. cited by applicant

NAVTEQ Part 2/3—A Visit to NAVTEQ, Nov. 3, 2004—The Wayback Machine—  
<https://web.archive.org/web/20080430033214/http://pocketgpsworld.com:80/navteq2.php>—IBM1342. cited by applicant

NAVTEQ Part 3/3—A Visit to NAVTEQ, Nov. 3, 2004—The Wayback Machine—  
<https://web.archive.org/web/20080430210810/http://pocketgpsworld.com:80/navteq3.php>—IBM1034. cited by applicant

NAVTEQ Location Point Advertising Services Unveiled at CES: New Channel for Advertisers, New Revenue Stream for Location Based, pp. 1-4—IBM996. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.H—Invalidity of U.S. Pat. No. 8,443,296 in view of Collins '227, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '880, Begum '606, Levkovitz '852, Sanctis '837, Bussmann '294, Mello '479, Busch '815, Svendsen '073, Xtif, and/or AppLoop, p. 1-683. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Home Depot's Invalidity Contentions, Subject Matter Eligibility Contentions, and Accompanying Document Production, Civil Action No. 2:24-cv-00694-JRG-RSP, p. 1-45. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.I—Invalidity of U.S. Pat. No. 8,433,296 in view of Andreasson '890, p. 1-102. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.J—Invalidity of U.S. Pat. No. 8,443,296 in view of Andreasson '890, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '880, Begum '606, Levkovitz '852, Sanctis '837, Bussmann '294, Mello '479, Busch '815, Svendsen '073, Xtify, and/or AppLoop, p. 1-638. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.K—Invalidity of U.S. Pat. No. 8,433,296 in view of Vela '724, p. 1-193. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.L—Invalidity of U.S. Pat. No. 8,433,296 in view of Vela '724, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '880, Begum '606, Levkovitz '852, Sanctis '837, Bussman '294, Mello '479, Busch '815, Svendsen '073, Xtify, and/or AppLoop, p. 1-729. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.M—Invalidity of U.S. Pat. No. 8,433,296 in view of Jacob '633, Hughes '666, Chmaytel '453, Collins '227, Andreasson '890, and Vela '724, p. 1-649. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.1EC. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.2EC. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.3EC. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.4EC. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.A—Invalidity of U.S. Pat. No. 8,433,296 in view of Jacob '633, p. 1-105. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.B—Invalidity of U.S. Pat. No. 8,433,296 in view of Jacob '633, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '606, Levkovitz '852, Sanctis '837, Bussmann '294, Mello '479, Busch '815, Svendsen '073, Xtify, and/or AppLoop, p. 1-644. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.C—Invalidity of U.S. Pat. No. 8,433,296 in view of Hughes '666, p. 1-126. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.D—Invalidity of U.S. Pat. No. 8,433,296 in view of Hughes '666, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '880, Begum '606, Levkovitz '852, Sanctis '837, Bussmann '294, Mello '479, Busch '815, Svendsen '073, Xtify, and/or AppLoop, p. 1-665. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.E—Invalidity of U.S. Pat. No. 8,433,296 in view of Chmaytelli '453. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.F—Invalidity of U.S. Pat. No. 8,433,296 in view of Chmaytelli '453, Macaluso '238, Kinoshita '866, Smith '558, Sato '965, Ahn '281, Begum '880, Begum '606, Levkovitz '852, Sanctis '837, Bussmann '294, Mello '479, Busch '815, Svendsen '073, Xtify, and/or AppLoop, p. 1-696. cited by applicant

Civil Action No. 2:24-cv-00694-JRG-RSP, Exhibit 296.G—Invalidity of U.S. Pat. No. 8,433,296 in view of Collins '227, p. 1-143. cited by applicant

AdMob, Inc., “Help For Advertisers—Target the Specific User You Want to Reach”, <http://www.admob.com/home/help/helpfiles/Advertisers/Target>, May 19, 2009. cited by applicant

AdMob, Inc., “Iphone for Advertisers”, [http://www.admob.com/home/help/helpfiles/Advertisers/iPhone Ad](http://www.admob.com/home/help/helpfiles/Advertisers/iPhone%20Ad), May 19, 2009. cited by applicant

AdMob, Inc., “Help for Advertisers—Ad Pricing”, <http://www.admob.com/home/help/helpfiles/Advertisers/AdPricing>, May 19, 2009. cited by applicant

Amadeo, The (Updated) History of Android (Oct. 31, 2016), <http://arstechnica.com/gadgets/2014/06/building-android-a-40000-word-history-of-google-mobile-os/>. cited by applicant

Android Team, Android Developer Challenge Judges and Top 50 Details (May 14, 2008), <https://android-developers.googleblog.com/2008/05/android-developer-challenge-judges-and.html>. cited by applicant

Android Team, Android Developer Challenge Slide Deck (May 14, 2008), available at [https://android.googlesource.com/platform/frameworks/base/+archive/54b6cfa9a9e5b861a9930af873580d6dc20f773c.tar.gz\(“adc1r1\\_deck.pdf”](https://android.googlesource.com/platform/frameworks/base/+archive/54b6cfa9a9e5b861a9930af873580d6dc20f773c.tar.gz(“adc1r1_deck.pdf”) cited by applicant

Android Team, Android Developers Have Risen to the Challenge (Apr. 17, 2008), <https://android-developers.googleblog.com/2008/04/android-developers-have-risen-to.html>. cited by applicant

Android Team, Android is Now Open Source (Oct. 21, 2008), <https://android-developers.googleblog.com/2008/10/android-is-now-open-source.html>. cited by applicant

Android Team, Android Market: A User-Driven Content Distribution System (Aug. 28, 2008), <https://android-developers.googleblog.com/2008/08/android-market-user-driven-content.html>. cited by applicant

Android Team, Android SDK m5-rc14 Now Available (Feb. 13, 2008), <https://android-developers.googleblog.com/2008/02/android-sdk-m5-rc14-now-available.html>. cited by applicant

Android Team, Android SDK Update: m5-rc15 Released (Mar. 3, 2008), <https://android-developers.googleblog.com/2008/03/android-sdk-update-m5-rc15-released.html>. cited by applicant

Android Team, Android: The First Week (Nov. 16, 2007), <https://android-developers.googleblog.com/2007/11/android-first-week.html>. cited by applicant

Android Team, Announcing a Beta Release of the Android SDK (Aug. 18, 2008), <https://android-developers.googleblog.com/2008/08/announcing-beta-release-of-android-sdk.html>. cited by applicant

Android Team, Announcing the Android 1.0 SDK, Release 1 (Sep. 23, 2008), <https://android-developers.googleblog.com/2008/09/announcing-android-10-sdk-release-1.html>. cited by applicant

Android Team, Announcing: Apps for Android (Mar. 4, 2008), <https://android-developers.googleblog.com/2008/03/announcing-apps-for-android.html>. cited by applicant

Android Team, Life Can Be Tough: Here Are a Few SDK Improvements to Make It a Little Easier (Dec. 14, 2007), <https://android-developers.googleblog.com/2007/12/life-can-be-tough-here-are-few-sdk.html>. cited by applicant

Android Team, Panoramio (Sep. 22, 2008), <https://android-developers.googleblog.com/2008/09/panoramio.html>. cited by applicant

Android Team, SDK Archives (last updated Aug. 11, 2021), [https://developer.android.com/sdk/older\\_releases](https://developer.android.com/sdk/older_releases). cited by applicant

Android Team, The Stories Behind the Apps (Oct. 28, 2008), <https://android-developers.googleblog.com/2008/10/stories-behind-apps.html>. cited by applicant

Android Team, The Top 50 Applications (May 12, 2008), <https://android-developers.googleblog.com/2008/05/top-50-applications.html>. cited by applicant

Android Team, This is the Droid You're Looking for (Nov. 12, 2007), <https://android-developers.googleblog.com/2007/11/posted-by-jason-chen-android-advocate.html>. cited by applicant

Android Team, WikiNotes for Android: Routing Intents (Mar. 19, 2008), <https://android-developers.googleblog.com/2008/03/wikinotes-for-android-routing-intent.html>. cited by applicant

AOSP Initial Contribution (Oct. 21, 2008), <https://android.googlesource.com/platform/frameworks/base/+54b6cfa989e5b861a9930af873580d6dc20f773c>. cited by applicant

Barbeau et al., Location API 2.0 for J2ME—A New Standard in Location for Java-Enabled Mobile Phones, Jan. 31, 2008, Computer Communications. cited by applicant

Bauer et al., Information Management and Exchange in the Nexus Platform, Version 2.0, Sep. 3, 2004, Universitat Stuttgart. cited by applicant

Cheng, It's Official: Google Announces Open-Source Mobile Phone OS, Android (Nov. 5, 2007), <https://arstechnica.com/gadgets/2007/11/its-official-google-announces-open-source-mobile-phone-os-android/>. cited by applicant

Claim Construction Order—*Hardin et al. v. Samsung Elecs. Co., Ltd. et al.*, 2:21-cv-00290-JRG, ECF No. 86 (E.D. Tex. Aug. 25, 2022). cited by applicant

Declaration of David Williams ISO 387 Patent IPR Petition—1327, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 387 Patent IPR Petition—1328, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 387 patent IPR Petition—1329, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 418 Patent IPR Petition—1330, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 418 Patent IPR Petition—1331, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 418 Patent IPR Petition—1332, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 447 Patent IPR Petition—1333, August, Aug. 2, 2022. cited by applicant

Declaration of David Williams ISO 447 Patent IPR Petition—1334, Aug. 2, 2022. cited by applicant

Google, Inc., “How are ads ranked?”, <http://adwords.google.com/support/bin/answer.py?hl=en&answer=6111>, May 18, 2009. cited by applicant

Google, Inc., “How do ads cycle through the search page results?”, <http://adwords.google.com/support/bin/answer.py?hl=en&answer=87402>, May 18, 2009. cited by applicant

Google, Inc., “How do I create a mobile ad?”, <http://adwords.google.com/support/bin/answer=29488&cbid>, May 18, 2009. cited by applicant

Google, Inc., “How does customized targeting work?”, <http://adwords.google.com/support/bin/answer.py?answer=116>, May 18, 2009. cited by applicant

Google, Inc., “Lesson 3c: Language & Location Targeting”, <http://www.google.com/adwords/learningcenter/text/print-19158.html>, May 19, 2009. cited by applicant

Google, Inc., “What are mobile ads?”, <http://adwords.google.com/support/bin/answer.py?answer=29492&cbid>, May 18, 2009. cited by applicant

Google, Inc., “What are the different options for targeting ads to mobile phones and devices?”, <https://adwords.google.com/support/bin/answer=107265&hl=en.sub.--U.S>, May 18, 2009. cited by applicant

Google, Inc., “What is the position preference?”, <http://adwords.google.com/support/bin/answer.py?hl=en&answer=31788>, May 19, 2002. cited by applicant

Google, Inc., “Why can't I see my ad?”, <http://adwords.google.com/support/bin/answer.py?hl=en&answer=6105>, May 18, 2009. cited by applicant

IPR2022-01327, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,049,387 B2, Feb. 7, 2023. cited by applicant

IPR2022-01328, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,049,387 B2, Feb. 8, 2023. cited by applicant

IPR2022-01329, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,049,387 B2, Feb. 8, 2023. cited by applicant

IPR2022-01330, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 9,779,418 B2, Feb. 8, 2023. cited by applicant

IPR2022-01331, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 9,779,418B2, Feb. 7, 2023. cited by applicant

IPR2022-01332, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 9,779,418 B2, Feb. 8, 2023. cited by applicant

IPR2022-01333, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,984,447 B2, Feb. 7, 2023. cited by applicant

IPR2022-01334, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,984,447 B2, Feb. 8, 2023. cited by applicant

IPR2022-01335, Decision Granting Institution of Inter Partes Review of U.S. Pat. No. 10,984,447 B2, Feb. 8, 2023. cited by applicant

Jing et al., Client-Server Computing in Mobile Environments, Jun. 1999, ACM Computing Surveys, vol. 31, No. 2. cited by applicant

Location API for Java™ 2 Micro Edition, Version 1.0.1. cited by applicant

Marmasse et al., Location-Aware Information Delivery with ComMotion, 2000, Springer-Verlag Berlin Heidelberg. cited by applicant

Martens et al., OGAS—Open Geographic Applications Standard: An Open User-Centric Description Language for Exchangeable Location-Based Services, Sep. 4, 2008, GI/ITG KuVS Fachgespräch Ortsbezogene Anwendungen und Dienste. cited by applicant

Miller, MWC08: Hands-on With a Working Google Android Device (Feb. 12, 2008), <https://www.zdnet.com/article/mwc08-hands-on-with-a-working-google-android-device/>. cited by applicant

Nicklas et al., NexusScout: An Advanced Location-Based Application on a Distributed, Open Mediation Platform, 2003, VLDB Conference. cited by applicant

Parsons, The Java Location API, Jan. 2006, Dr. Dobb's Journal. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 9,779,418—Case IPR2022-01332, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,049,387—Case IPR2022-01327, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,049,387—Case IPR2022-01328, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,049,387—Case IPR2022-01329, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,984,447—Case IPR2022-01333, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,984,447—Case IPR2022-01334, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 10,984,447—Case IPR2022-01335, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 9,779,418—Case IPR2022-01330, Aug. 2, 2022. cited by applicant

Petition for Inter Partes Review of U.S. Pat. No. 9,779,418—Case IPR2022-01331, Aug. 2, 2022. cited by applicant

Press Release, Open Handset Alliance, Leading Mobile Players Demonstrate Early Look of an Android at Mobile World Congress 2008 in Barcelona (Feb. 11, 2008), [https://www.openhandsetalliance.com/press\\_021108.html](https://www.openhandsetalliance.com/press_021108.html). cited by applicant

Press Release, Open Handset Alliance, Open Handset Alliance Releases Android SDK (Nov. 12, 2007), [https://www.openhandsetalliance.com/press\\_111207.html](https://www.openhandsetalliance.com/press_111207.html). cited by applicant

Ranganathan et al., MiddleWhere: A Middleware for Location Awareness in Ubiquitous Computing Applications, 2004. cited by applicant

Scheifler, X Window System Protocol, X Version 11, Release 6.9, 7.0 (“X Window System Protocol 2005”), 2005. cited by applicant

Sohn et al., Place-its: A Study of Location-Based Reminders on Mobile Phones, Sep. 11, 2005, UbiComp. cited by applicant

Wayback Machine, “Iphone App Advertisement”, <http://www.blog.yieldbuild.com/2008/08/21/iphone-app-advertising/>, Aug. 24, 2008. cited by applicant

Declaration of Chan Wook Doh—IBM00223. cited by applicant

Alcatel-Lucent 5130 Geographic Messaging Service Platform (GMSP), Location-Based Social Networking Application for Mobile Device, pp. 1-4—IBM765—Doubled 732-769. cited by applicant

Gisuser, New Technology Collaboration with DaimlerChrysler, NAVTEQ to Demonstrate Wireless Map Update Technology at ITS World Congress, p. 1-10—IBM 1351. cited by applicant

U.S. Appl. No. 60/946,677—IBM 1037. cited by applicant

Dave Burrows, NAVTEQ Part 1/3, Wayback Machine—  
<http://wed.archive.org/web/20081010232840/http://www.pocketopsworld.com:80/navteq.php> Nov. 3, 2004, p. 1-5—IBM 1344. cited by applicant

FAQ—What is Xtify ? The Wayback Machine—<https://web.archive.org/web/20081221030457/http://xtify.com:80/getstartedfaq>—IBM1525. cited by applicant

Why Xtify ?—The Wayback Machine—[https://web.archive.org/web/20081221031619/http://xtify.com\\_80/getstarted/whyxtify](https://web.archive.org/web/20081221031619/http://xtify.com_80/getstarted/whyxtify)—IBM1523. cited by applicant

U.S. Appl. No. 61/050,180—IBM1493. cited by applicant

Xtify User Guide—The Wayback Machine—<https://web.archive.org/web/20081009030112/http://www.xtify.com:80/support/guide>—IBM1491. cited by applicant

Xtify Quick Start—The Wayback Machine—<https://web.archive.org/web/20081221030447?http://xtify.com:80/doc/quickstart>—IBM1488. cited by applicant

Xtfiy—How it Works—IBM 1485. cited by applicant

Xtify—API Overview—The Wayback Machine—<https://web.archive.org/web/20081009160717/http://www.xtfiy.com:80/doc/api>—IBM1483. cited by applicant

Xtify Documentation Home—The Wayback Machine—<https://web.archive.org/web/20081009030107/http://xtify.com:80/doc>—IBM1527. cited by applicant

Alcatel-Lucent MiLocator—The Wayback Machine—<https://web.archive.org/web/20070208102957/http://www.alcatel> , p. 1-2—IBM 1375. cited by applicant

Alcatel-Lucent MiLocator—MiLocator is Flexible, intelligent, supports a large number of devices, and can easily be configured to fit end-user requirements—The Wayback Machine—<https://web.archive.org/web/20070208102957/http://www.alcatel> , p. 1—IBM 1374. cited by applicant

Alcatel-Lucent MiLocator—The Wayback Machine—<https://web.archive.org/web/20070208102957/http://www.alcatel> p. 1—IBM 1373. cited by applicant

Alcatel-Lucent, User-Centric Experience for Enterprises—Alcatel-Lucent enables an enriched communication experience for enterprises—The Wayback Machine—<https://web.archive.org/web/20070502175503/http://www.alcatel>—p. 1—IBM 1372. cited by applicant

Alcatel-Lucent, User-Centric Experience—The Wayback Machine—<https://web.archive.org/web/20070113112646/http://www.alcatel> , p. 1—IBM1371. cited by applicant

Gisuser: NAVTEQ to Showcase Leading Map-Enhanced Traffic Solutions at ITS World Congress, Oct. 23, 2008, pp. 1-6—IBM1365. cited by applicant

Benefits—With NAVTEQ, each turn is the right one—The Wayback Machine—  
[https://web.archive.org/web/20081114185043/http://www.navteq.com/about/vehicle\\_vbenefits.h](https://web.archive.org/web/20081114185043/http://www.navteq.com/about/vehicle_vbenefits.h), p. 1-2—IBM 1363. cited by applicant

What is NAVTEQ Data—Precision, Richness. A Better way to go—The Wayback Machine—  
<https://web.archive.org/web/20081113005038/http://www.navteq.com/about/whatis.html>, p. 1-2—IBM 1361. cited by applicant

What's Possible—Changing the Way the World Turns. One Revolution at a Time. The Wayback Machine—  
[https://web.archive.org/web/20081114013243/hrp://www.navteq.com/about/whatis\\_possibilities.html](https://web.archive.org/web/20081114013243/hrp://www.navteq.com/about/whatis_possibilities.html) pp. 1-2—IBM 1349. cited by applicant

The Silicon Review: “The Mobile Marketing Solution that Drives Engagement and Results: Verve” pp. 1-13—IBM1145. cited by applicant

Destination CRM: “Verve Integrates with Yext for Multilocation Marketing,” Oct. 17, 2018, pp. 1-3—IBM1158. cited by applicant

Juha Kolari et al., Context-Aware Services for Mobile User—Technology and User Experiences, ESPOO 2004 VTT Publications 539, p. 1-178—IBM 1161. cited by applicant

Verve Wireless—The Wayback Machine—<https://web.archive.org/web/20070312105843/http://www.vervewireless.com:80/index.html>, p. 1—IBM 1036. cited by applicant

Product Review and Service: Overview—The Wayback Machine—  
[https://web.archive.org/web/20080116141435/http://www.vervewireless.com:80/product\\_ov](https://web.archive.org/web/20080116141435/http://www.vervewireless.com:80/product_ov), p. 1—IBM1339. cited by applicant

Verve Wireless: Verve Publishing Platform—The Wayback Machine—  
[https://web.archive.org/web/20070312105853/http://www.vervewireless.com:80/verve\\_publi](https://web.archive.org/web/20070312105853/http://www.vervewireless.com:80/verve_publi) , p. 1—IBM1340. cited by applicant

Verve Wireless: Products and Services—The Wayback Machine—  
<https://web.archive.org/web/20070312105811/http://www.vervewireless.com:80/products.html>, p. 1—IBM1341. cited by applicant

Alcatel-Lucent 5130 Geographic Messaging Services Platform (GMSP) Location Based Social Networking Application for Mobile Devices, pp. 1-4—IBM765. cited by applicant

Xtify—What is Xtify? p. 1-2—IBM1486. cited by applicant

Xtify—Supported Platforms—The Wayback Machine—  
<https://web.archive.org/web/20081009183669/http://www.xtify.com:80/doc/supportedplatforms>, p. 1—IBM1490. cited by applicant

Martin Bauer et al.: “Information Management and Exchange in the Nexus Platform” Version 2.0-30.4.04, Report No. 2004/04, Universitat Stuttgart SFB 627-Nexus, pp. 1-58—IBM 635. cited by applicant

Lisa Peterson et al.: “Location-Based Advertising—The Key to Unlocking the Most Value in the Mobile Advertising and Location-Based Services Markets,” Peterso Mobility Solutions, Dec. 2009, p. 1-39—IBM 693. cited by applicant

Mundogeo: NAVTEQ Acquires Acuity Mobile, p. 1-3—IBM986. cited by applicant

Alcatel-Lucent 5130 Geographic Messaging Services Platform (GMSP) Location-Driven Marketing Messages Direct to Mobile Devices, pp. 1—IBM732. cited by applicant

Alcatel-Lucent 5130 Geographic Messaging Services Platform (GMSP) Providing Superior Location-Driven Services, pp. 1-4—IBM736. cited by applicant

Alcatel-Lucent, 1020 Placecast Team for Mobile Advertising, May 25, 2009, pp. 1-2—IBM740. cited by applicant

Staff Writers: “Alcatel-Lucent Launches Next-Gen Location-Driven Services Platform”, GPS Daily—Connecting Anyone Anywhere, Sep. 12, 2008, pp. 1-2, IBM742. cited by applicant

Alcatel-Lucent Debuts Location-Driven Moobile Services Platform, Sep. 9, 2008, pp. 1-5 IBM744. cited by applicant

Marin Perez: “Alcatel-Lucent Launches Location-Based Service—The GMSP Software will Enable Carriers to More Easily Offer Location-Based Services like Proximity Social Networking, Mobile Marketing, and Family Tracking,” Information Week Sep. 10, 2008, pp. 1-12—IBM749. cited by applicant

Susan Campbell: "5130 GMSP Now Available from Alcatel-Lucent to Push Info Based on Location," pp. 1-4—IBM 761. cited by applicant

Michael Morisy: "Alcatel-Lucent's 5130 GMSP Taps into Location-Based Services Revenue." Sep. 11, 2008, pp. 1-8—IBM769. cited by applicant

Juha Kolari: "Special Theme: Applications and Service Platforms for the Mobile User—Kontti-Context-Aware Mobile Portal," No. 54 Jul. 2003 pp. 1-2—IBM777. cited by applicant

Veikko Ikonen: "Experiences in Using Role-Playing, Computer Game and Physical Action to Enhance User Involvement in Design of Future Applications," VTT Information Technology, pp. 1-7—IBM779. cited by applicant

Veikko Ikonen et al.: Context-Aware Historical Route—The Old Tampere, pp. 1-5—IBM 786. cited by applicant

"Kontti-Context-Aware Services for Mobile Users," The Wayback Machine—  
<https://web.archive.org/web/20030120053347/http://www.vtt.fi:80/tte/projects/kontti>, p. 1—IBM791. cited by applicant

Juha Kolari et al.: In the Zone: Views Through a Context Aware Mobile Portal, pp. 1-5—IBM792. cited by applicant

Johan Plomp et al.: Sharing Content and Experiences in Smart Environments, pp. 1-23—IBM797. cited by applicant

Mavromatic and Technology: "NAVTEQ and XM Radio Introduce XM NavTraffic," Apr. 7, 2004, pp. 1-4—IBM982. cited by applicant

Exercise 2: Exploring the Data Portal—NAVTEQ—AutoCAD Map 3D 2009 Documentation, pp. 1-7—IBM989. cited by applicant

NAVTEQ 2010 Q2 Street Network for the United States, Including Puerto Rico and the US Virgin Islands, Canada and Mexico in SDC Format, Released Quarterly, pp. 1-162—IBM820. cited by applicant

NAVTEQ Network for Developers, Advertising Zone—The Wayback Machine—  
<https://web.archive.org/web/2008115071653/http://developer.navteq.com/site/global/zones/advertising/pPadvertising>, pp. 1—IBM1000. cited by applicant

NAVTEQ Network for Developers—Advertising Business Models, pp. 1-2—IBM1001. cited by applicant

---

*Primary Examiner:* Akonai; Olumide Ajibade

*Attorney, Agent or Firm:* Davidson Kappel LLC

---

## Background/Summary

CROSS REFERENCE TO RELATED APPLICATIONS (1) This continuation patent application claims priority from U.S. Non-provisional patent application having Ser. No. 18/764,076, filed 3 Jul. 2024, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 17/182,809, filed 23 Feb. 2021, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 12,056,736 issued on 6 Aug. 2024, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 16/019,285, filed 26 Jun. 2018, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 10,984,447 issued on 20 Apr. 2021, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 15/694,786, filed 2 Sep. 2017, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 10,049,387 issued on 14 Aug. 2018, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 15/009,961, filed 29 Jan. 2016, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 9,779,418 issued on 3 Oct. 2017, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 14/608,285, filed 29 Jan. 2015, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 9,286,625 issued on 15 Mar. 2016, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 13/856,392, filed 3 Apr. 2013, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 8,977,247 issued on 10 Mar. 2015, which claims priority from co-pending U.S. Non-provisional patent application having Ser. No. 12/434,094, filed 1 May 2009, entitled "EXCLUSIVE DELIVERY OF CONTENT WITHIN GEOGRAPHIC AREAS", now U.S. Pat. No. 8,433,296 issued on 30 Apr. 2013, all having a common applicant herewith and being incorporated herein in their entirety by reference.

### FIELD

(1) This disclosure relates generally to delivery of content, and more particularly to delivery of content within reserved geographic areas.

### BACKGROUND

(2) Advertisements can be delivered to various devices, including mobile devices, within communications range of areas transmitters or other information providers. For example, advertisements can be delivered to cellular phones within range of a particular cellular phone provider's network area. Furthermore, advertisements can be delivered using digital billboards, or via the Internet, based on user interactions and preferences.

(3) When delivering advertisements and other content to some mobile devices, currently available technologies can broadcast the content to all devices equipped to receive them. In some cases, advertisements are broadcast to any mobile device within a city, or a similar area. When delivering non-broadcast content, for example via the Internet, it is common to deliver the content in response to a request, received from the receiving device. In some cases, push technology can be used to deliver content to multiple users concurrently.

(4) In each of these cases, a mobile device can usually receive content from multiple different content providers. Current technologies are, therefore, less than perfect.

### SUMMARY

(5) Various embodiments disclosed herein include registering an application program for use with a content delivery platform, establishing multiple perimeters defining respective geographic areas, and maintaining records associating sponsors with particular geographic areas. The content delivery platform can receive a request from a registered application program for content to be displayed on a mobile device, and the request can be used to determine a target location. In some embodiments, a sponsor is selected based on a relationship between the target location and one or more reserved geographic areas. Content is then provided to the application

program.

(6) In some embodiments, the content delivery platform can record a request identifier associated with a received request, and provide the request identifier to the mobile device to assist in tracking future actions relating to the request for content. The content delivery platform can also receive information related to user interaction with the provided content, including the request identifier, and provide additional content in response to the received information.

(7) Content can be delivered to a mobile device running a registered application if a target location is at least partially within a predetermined radial distance of a geographical area associated with a sponsor; if the mobile device is not located within the predetermined radial distance, the radial distance can be increased. In some embodiments, content is delivered if the target location, e.g. the location of the mobile device or another location of interest, is located entirely within a geographic area exclusively reserved by a particular sponsor. In some embodiments, the content delivery platform can select from among several sponsors in deciding which content to deliver to a mobile device.

(8) In at least one embodiment, the content delivery system reserves exclusive interests in geographic areas for particular sponsors based on the sponsors' requests, and store a record of that interest. In some embodiments, the content delivery system receives, from a sponsor, content to be delivered to mobile devices based on a target location being positioned within particular geographic areas. The content delivery system can also reserve an interest in geographic areas that remain unreserved by other sponsors. Furthermore, some embodiments include time based restrictions.

(9) Various embodiments can be implemented as a system that includes memory, a communications interface, and a processor that cooperate to store and execute a program of instructions implementing various methods and techniques described herein. Furthermore, some embodiments can be implemented as a computer readable medium tangibly embodying a program of instructions.

---

## Description

### BRIEF DESCRIPTION OF THE DRAWINGS

(1) FIG. 1 is an abstract representation of exclusive content delivery to particular reserved areas according to various embodiments of the present disclosure;

(2) FIG. 2 is a diagram illustrating a target location other than the location of the mobile device executing a registered application, according to embodiments of the present disclosure;

(3) FIG. 3 is a graph representing expanded search areas to determine which content is delivered according to various embodiments of the present disclosure;

(4) FIG. 4 is a flowchart illustrating a method of reserving a geographic area according to embodiments of the present disclosure;

(5) FIG. 5 is a flowchart illustrating registration of an application for content delivery according to embodiments of the present disclosure;

(6) FIG. 6 is a flowchart illustrating delivery of content to particular applications in a reserved area according to embodiments of the present disclosure;

(7) FIG. 7 is a diagram illustrating a processing system according to embodiments of the present disclosure.

### DETAILED DESCRIPTION

(8) Various embodiments of the present disclosure provide for delivering content, such as advertising, to registered applications being run on any of various mobile electronic devices configured to be readily moved, carried, or otherwise transported between different various geographic areas defined by perimeters. Sponsors can reserve an exclusive interest, or in some embodiments a semi-exclusive interest, in a geographic area, so that other sponsors' advertisements are excluded from being broadcast or otherwise provided to a registered program being executed on a mobile device located within a reserved geographic area.

(9) Referring first to FIG. 1, system 100, is illustrated. System 100 can provide for exclusive delivery of advertising or other content to registered applications running on mobile devices located within a particular proximity to a reserved geographic area. System 100, as illustrated, includes content delivery platform 112, which is in communication with developer platform 108, and systems or individuals operating under control of sponsor A 121, sponsor C 123, and sponsor B 125. Content delivery platform 112 receives a request from developer platform 108 to register a program or other application for use on mobile devices. Content delivery platform 112 can use the registered application program to provide selected content to mobile devices.

(10) In some embodiments, a registered application program is provided to mobile devices by developer platform 108, content delivery platform 112, one of sponsor A 121, sponsor C 123, or sponsor B 125, or by another desired delivery mechanism. In some embodiments, registering the application program with content delivery platform 112 allows developer 108 to receive revenue from sponsor A 121, sponsor C 123, or sponsor B 125 for content displayed on a mobile device located within, or in proximity to, a geographical area reserved by one or more of the sponsors.

(11) Sponsor A 121, sponsor C 123, or sponsor B 125 can reserve an exclusive interest in a particular geographic area by sending a request to content delivery platform 112. In some embodiments, the request can be for exclusive delivery of content to mobile devices running any registered application within given geographic areas, or for content to be delivered to particular registered applications based on a target location. The request can also include time limitations, limitations based on the length of time a mobile device remains within a given geographic area, or other desired limitations. Furthermore, the reserved interest can be either completely exclusive, or semi-exclusive.

(12) System 100 can include a network, for example Internet 131, through which content delivery platform 112, can communicate to other networked devices; and communication towers 144, which can include AM or FM broadcast towers, mobile telephone stations, or other suitable communication infrastructure, including satellites (not illustrated) that might be useful in providing content based on a target location. Content delivery platform 112 can use this communication infrastructure to communicate with various computing devices, including portable computer 179, which may include laptop computers, desktop computers, palmtop computers, tablet computers, digital video recorders (DVRs), television set-top boxes, or any of various general or dedicated purpose computers that can be carried or transported; wireless device 177, which can include personal digital assistants (PDAs), cellular telephones, personal communication system (PCS) devices, music players, video players, gaming consoles, or portable televisions; or any of various devices that may be included in, or carried by, motor vehicles 171, 173, or 175, including navigation systems, satellite radios, or the like. It should be noted that the term "mobile device" can include all computing devices as listed above that can communicate with content

delivery platform **112**, the above listing of devices is not exhaustive, and that a device that qualifies as one type of device may also be considered to be of another type. For example, a mobile phone may also be a general purpose computing device, a radio, a television, and a navigation system.

(13) Still referring to FIG. **1**, consider first motor vehicle **171**, which is located within sponsor A's reserved geographic area **143**. A driver of first motor vehicle **171** can receive advertisements or other content from Sponsor A via a registered application running on a radio, a PDA, a cellular telephone, a laptop, or a global positioning navigation device (none of which are specifically illustrated). In this example, because first motor vehicle **171** is located within sponsor A's reserved geographic area **143**, content delivery platform **121** provides content exclusively related to sponsor A **121**; advertisements or other content from sponsor C **123** and sponsor B **125** can be excluded.

(14) Portable computer **179** can be connected to Internet **131** via a hardwired network connection, a Wi-Fi connection or other suitable communication connection. In some embodiments, if portable computer **179** is running a registered program application, the user of portable computer **179** will receive content related exclusively to sponsor A as long as he is within sponsor A's reserved geographic area **143**. In some embodiments, the driver of first motor vehicle **171** and the user of laptop **179** will still be able to receive advertisements from other sponsors through devices not running a program that has been registered on content delivery platform **112**, or through non-registered programs running on the same device.

(15) In some embodiments, the location of mobile devices, or another target location, can be determined using various suitable methods. For example, a mobile device running a registered application can provide location information to content delivery platform **112** in the form of latitude or longitude coordinates, raw or processed GPS data, or other location information received and recorded by either the device itself or another device. In some embodiments, a target location, e.g. the location of a mobile device, can be determined based on signals received from cellular transmission towers, satellites, or methods such as triangulation or dead reckoning, or by IP address. Content delivery platform **112** can receive the location of mobile devices from a third source, for example a location provider, a cellular telephone network provider, or a third party tracking source, rather than from the mobile device itself. Thus, the location of a mobile device can be received from the mobile device, determined by content delivery platform **112**, received from a third-party source, or determined based on a combination of these or other methods.

(16) Sponsor A's reserved geographic area **143** illustrates an embodiment in which a perimeter can be defined by streets, county boundaries, city boundaries, landmarks, or other features commonly found on maps. In contrast, sponsor B's reserved geographic area **145** can be an ellipse, circle, oval, or other geometric shape that can be determined, at least in part, based on a radius.

(17) In this example, both second motor vehicle **173** and wireless device **177** are located within sponsor B's reserved geographic area **145**. The driver of second motor vehicle **173** and the user of wireless device **177** can receive advertisements or other content via towers **144**. For example, if the driver of second motor vehicle **173** is operating a navigation device executing an application program registered by developer **108**, advertisements and other content received on the navigation device can be determined based on the location within sponsor B's reserved geographic area **145**. Likewise, the user of wireless device **177** will receive advertisements related to sponsor B from within a registered application. In some embodiments, content delivery platform **112** can prevent content from sponsor A **121** and sponsor C **123** from being delivered to a mobile device carried by second motor vehicle **173** and wireless device **177**, because both motor vehicle **173** and wireless device **177** are located in sponsor B's reserved geographic area **145**.

(18) Turning next to sponsor A and sponsor C's reserved geographic area **147**, note that the perimeter is a square, rectangle or similarly shaped. In some embodiments, the perimeter may be defined entirely by longitude and latitude lines and/or coordinates that constitute an area. In other embodiments, sponsor A and sponsor C's reserved geographic area **147** can be partially bounded by a longitude or latitude line, a road, river, railway, county, state, parish, city, locality, or other desired boundary. In some embodiments, the perimeter of a sponsor A and sponsor C's reserved geographic area **147** can be defined by a combination of longitude or latitude lines, with one or more remaining boundaries defined based on radius or diameter.

(19) Because third motor vehicle **175** is within sponsor A and sponsor C's reserved geographic area **147**, a mobile device carried by third motor vehicle **175** can receive advertising content from either or both sponsor A and sponsor C. In some embodiments, the interest in sponsor A and sponsor C's reserved geographic area **147** can be equally divided between sponsor A **121** and sponsor C **123**, while in other embodiments one of sponsor A **121** and sponsor C **123** can have an interest superior to that of the other. In some embodiments, content delivery platform **112** can deliver advertisements or other content related to Sponsor A at selected times, while content related to Sponsor C is delivered at other times. Additionally, content related to sponsor A may be delivered via a first registered application, while content related to sponsor C can be delivered via a second registered application. Thus, sponsors can advertise or provide other content to members of particular demographics based on a type of application a particular demographic is more likely to use.

(20) Referring next to FIG. **2**, a target location other than a mobile device in a system **200** is illustrated according to embodiments of the present disclosure. As shown in FIG. **2**, a user of registered application **231** is located within the perimeter defining first sponsor's reserved area **207**. Object of interest **233** is located in second sponsor's reserved area **205**. In some embodiments, object of interest **233** can be any type of object of interest to the user of registered application **231**. For example, object of interest **233** could be a friend of the user of registered application **231**, and this friend may be employing a mobile phone, a laptop, a kiosk computer, a PDA, or any other device capable of sending location information **216** directly or indirectly to registered application **231**. In some embodiments, target location information **216** can be any type of information that can be used to determine the location of the object of interest **233**. In at least one embodiment, target location information **216** may be a geocoded twitter message. In another example, object of interest **233** could be an end destination on a map, and the location information **216** of this end destination can be sent to registered application **231**.

(21) In response to receiving the target location information **216** from object of interest **233**, registered application **231** can send a request **213** to content delivery platform **212**. The request can include, but is not limited to, information indicating the location of object of interest **233**, a request for content, information indicating the location of registered application **231**, information indicating the identity of the registered application **231**, and a previously received request identifier.

(22) Content delivery platform **212** can receive and process request **213** to identify the location of registered application **231** and the location of object of interest **233**. In some embodiments, both locations need not be identified. Furthermore, in some embodiments the specific location need not be identified, as long as a determination that object of interest **233** is located within a given proximity of second sponsor's reserved area **205**, or that registered application **231** is located within first sponsor's reserved area **207**.

(23) Content delivery platform **212** can provide registered application information **217** to second sponsor **225** to allow second sponsor

225 to deliver second sponsor's content **214** to registered application **231**. Registered application information **217** can be an application identifier, a request identifier, a target location, a communications address, or other information that can be utilized by second sponsor **225**. In some embodiments, application information **217** need not be provided to second sponsor **225**, but instead can be processed internally by content delivery platform **212**, and a determination can be made for second sponsor's content **214** to be delivered directly to application **231** from content delivery platform **212**, or a third party (not illustrated).

(24) Note that in the illustrated embodiment, despite the fact that registered application **231** is located within first sponsor's reserved area **207**, the information delivered to registered application **231** can be content related exclusively to second sponsor's reserved area **205**, in which object of interest **233** is located. This is because, in the illustrated embodiment, the target location is the location of object of interest **233**, rather than the location of a mobile device executing registered application **231**.

(25) In some embodiments, information from the first sponsor can also be delivered to registered application **231**, because the locations of the device running registered application **231** and object of interest **233** are both considered target locations. Furthermore, in some embodiments content need not be delivered directly from second sponsor **225**, but instead can be provided by content delivery platform **212**, or a third party (not illustrated).

(26) Referring next to FIG. 3, a graph showing various geographic areas with reference to longitude and latitude is illustrated according to some embodiments of the present disclosure. The geographic areas in FIG. 3 are for illustration only and carry no particular significance with respect to their geometric shapes. Graph **300** includes a triangular area **320**, reserved for sponsor A; pentagonal area **371**, reserved for sponsor G; and octagonal area **330**, also reserved for sponsor G. In the illustrated example, sponsor G has two physical addresses: G **1 327**, which lies within sponsor G's reserved octagonal area **330**, and G **2 328** which, lies within sponsor A's reserved triangular area **320**. Furthermore, in the illustrated embodiment, sponsor A does not have a physical location within sponsor A's reserved triangular area **320**. These examples help illustrate that there is not necessarily a correlation between a sponsor's physical address and a reserved geographic area, although in some embodiments there may be such a correlation.

(27) As illustrated by FIG. 3, a single target location F **333** is located within sponsor G's reserved octagonal area **330**, and target location F **333** can be a mobile device running a registered application, or target location F **333** can represent a target location other than the location of a mobile device, as illustrated in FIG. 2. In some embodiments, the mobile device with target location F **333** receives advertising exclusively from advertiser G.

(28) As further illustrated by FIG. 3, there are four target locations: target location A **321**, target location B **323**, target location C **325**, and target location G **392** within advertiser A's reserved triangular area **320**. Note also, however, that target location G **392** also lies within one of sponsor G's reserved geographic areas, pentagonal area **371**. Consider the following example in which target location A **321** and target location B **323** each are mobile devices executing a first application registered with a content delivery platform, such as content delivery platform **112**, of FIG. 1. Further assume, for purposes of this example, that target location C **325** is a mobile device executing a second, different application, which is also registered with the content delivery platform. Because both the first and second applications are registered with the content delivery platform, each of the three devices, with target location A **321** target location B **323** and target location C **325** can receive advertisements or other content from within their respective applications. In this example, the content delivered to all three devices can be related exclusively to sponsor A, regardless of which registered application is being executed, because sponsor A has the only reserved interest in the portions of triangular area **320** occupied by mobile devices having target locations A **321** B **323** and C **325**.

(29) In some embodiments, target location G **392** can be a mobile device running two or more registered applications, and can receive content related to sponsor A, because the mobile device lies within triangular area **320**. But, target location G **392** also lies within pentagonal area **371**, and the mobile device can therefore receive content associated with sponsor G. In some embodiments, content related to sponsor A can be delivered via one of the registered applications, while another registered application receives and displays content related to sponsor G. In other embodiments, one of sponsor A or sponsor G can have a superior interest to the other, and a preference can be given to that sponsor's content for delivery. For example, sponsor G may have a superior interest in pentagonal area **371**, which also forms part of triangular area **320**. In such a case, if content related to sponsor G is available for delivery to the application on the mobile device with target location G **392**, that content will be delivered in preference to content related to sponsor A. However, if there is no high priority content related to sponsor G to be delivered, content related to sponsor A may be provided in its stead. Various other priority and time sharing mechanisms and methods can be implemented according to the teachings set forth herein. Note that in some embodiments, multiple registered applications are not required to implement priority and time sharing mechanisms.

(30) In some instances, a mobile device can have target locations, such as target location D **340** or target location E **356**, located outside of areas reserved by sponsors. In such a case, a check can be made to determine if either target location D **340** or target location E **356** are located within a given proximity of a sponsor-reserved area such as triangular area **320** or octagonal area **330**. So, for example, a check can be made to determine whether any reserved areas lie within a given radius of target location D **340**, defining a search area **341**, or within a given radius of target location E **356**, defining a search area **351**. In some embodiments, if no sponsor reserved area intersects an area within an initially small radius, further checks can be performed by incrementally increasing the radius. So, for example, after a first check finds no advertiser reserved areas within search areas **341** or **351**, the search areas can be increased to encompass areas **343** and **353**, respectively.

(31) In the illustrated example, there is no reserved area intersecting search area **353**, but sponsor H **357** has a physical address within area **353**. In some embodiments, once it is determined that a registered sponsor has a physical address location within a search radius, but there are no sponsor reserved geographic areas in proximity to or encompassing a target location, an advertisement or other content can be delivered to a mobile device, such as the device with target location **356**.

(32) Another situation arises when there are no sponsor reserved geographic areas intersecting a search area, but there are multiple sponsor physical locations within a given radius. Consider area **343**, which contains sponsor E's location **349**, and sponsor F's location **347**. Because neither sponsor E nor sponsor F has established a reserved area that intersects with search area **343**, a random choice can be made between these two sponsors to determine which sponsor's content to provide to the registered application on the device with target location D **340**. In other embodiments, preference may be given to one of sponsor E's location **349** and sponsor F's location **347** based on each physical locations' proximity to target location D **340**, based on a travel time between the device with target location D **340** and the sponsors' locations, or based on some other desired parameter. In further embodiments, if no sponsor's reserved geographic area intersects any portion of area **343**, no content is sent to mobile device D with target location **340**, despite the fact that location sponsor E's location **359**, and sponsor F's location **347** are both within the perimeter defining search area **343**.



(33) In some embodiments, the search radius can continue to be expanded until a search area **345** intersects with a sponsor's reserved geographic area. In the illustrated embodiment, search area **345** intersects sponsor A's reserved triangular area **320**. Note that sponsor G's physical location **328** is also located within search area **345**. In some embodiments, content from either sponsor A or sponsor G can be selected using any of various processes, because target location D **340** is not located entirely within triangular area **320**. In some embodiments, however, because the expanded search area **345** encompasses even a portion of sponsor A's reserved triangular area **320**, content related to sponsor G will be excluded, and content related to sponsor A will be exclusively provided to mobile device with target location D **340**. In some embodiments, because target location D **340** is not located within sponsor A's reserved triangular area **320**, content related to sponsor A will be excluded, and content related to sponsor G will be exclusively provided to mobile device with target location D **340**.

(34) Additional techniques accounting for the proximity of exclusively reserved advertising areas and sponsor's physical locations with respect to mobile device locations can be implemented according to the teaching set forth herein. For example, in some embodiments, sponsors may obtain an interest in all otherwise unreserved geographic areas. For example, a content delivery system can deliver content from a "default" sponsor, if it is determined that no other content is to be delivered to a mobile device.

(35) Referring next to FIG. 4, a method **400** for allowing sponsors to reserve particular geographic areas will be discussed according to embodiments of the present disclosure. Method **400** begins, as illustrated by block **401**. As illustrated by block **403**, a content delivery platform, for example content delivery platform **112** as illustrated in FIG. 1, can receive a request for sponsor registration, which can also include receiving physical address location from the sponsor. As illustrated by block **405**, the sponsor can establish perimeters defining geographic areas of exclusive or semi-exclusive control. These geographic areas are areas the sponsor wishes to reserve for delivery of his own advertisements or other content controlled by the sponsor.

(36) The perimeters established can be based on map features, such as streets, rivers, landmarks, or any of the other various map features. The perimeters can also be defined by latitude and longitude, or various geometric constructs having a given relative position to either a point location, a map location, a physical address, or otherwise. Some embodiments allow for establishing perimeters defining areas based on a combination of the various types of constructs. So, for example, latitude, longitude and map features may be used to establish the reserved area, or a combination of coordinates and geometric constructs can be used in conjunction with other suitable boundary identifiers to establish an area that may be reserved specifically for content related to a particular advertiser or sponsor.

(37) In some embodiments, the perimeters may be generated interactively, using sponsor established perimeter definitions, or other unique sponsor requests. Some embodiments employ pre-defined areas, or allow selection of areas based on predetermined factors, and present sponsors a choice from among previously established options.

(38) As illustrated by block **407**, a sponsor's request for a selected area is received. As illustrated by block **409**, a check is made to determine if the selected area, or a portion of the selected area, has already been reserved by another sponsor. If the area selected by the sponsor is already owned or is otherwise unavailable, method **400** may return to block **407**, and the sponsor can choose another area. In some embodiments, overlap of various sponsor areas may be allowed based on type of business, type of application used to deliver the content, or otherwise.

(39) As illustrated by block **411**, if an area selected for exclusive or semi-exclusive content delivery is available, the selected geographic area can be reserved for the sponsor. And as illustrated by block **413**, the sponsor can be notified that an interest in the geographic area has been reserved for him.

(40) A sponsor can provide content for delivery to mobile devices having target locations contained within its reserved area, as illustrated by block **415**. This content can include advertisements, still image content, animated content, video content, audio content, alphanumeric identifiers, or other content suitable for delivery to mobile devices via registered applications. As illustrated by block **417**, the content received from the sponsor can be stored for later delivery to registered applications running on mobile devices having target locations that exist within the sponsor's reserved area, which such target locations may include, but are not limited to, when the mobile device or target location physically enters or remains within the sponsor's reserved area for a desired length of time. In some embodiments, content can be delivered to a mobile device by the sponsor or another party in response to a notification that the mobile device or target location has entered or is contained within the sponsor's reserved area. Method **400** ends, as illustrated at block **419**.

(41) Referring next to FIG. 5, a method **500** of registering an application program for use in conjunction with a content delivery platform is illustrated according to various embodiments of the present disclosure. Method **500** begins as illustrated by block **501**. As illustrated by block **503**, an application can be registered on a content delivery platform in response to a request by a developer, for example developer **108** as illustrated in FIG. 1. As illustrated by block **505**, a request for content can be received from a device running a registered application. In some embodiments, the same registered application may be executed on any of various mobile devices, including mobile telephones, personal digital assistants, laptops, and the like. Furthermore, multiple devices may execute copies of the same registered application, multiple different registered applications may be executed on a single mobile device, and multiple different registered applications may be executed on multiple devices.

(42) As illustrated by block **507** a determination is made as to whether the application sending the request for content has a target location that is located within a sponsor's reserved geographic area. In some embodiments, the target location may be the location of the device. In some embodiments, the target location may be a location other than the location of the device, as illustrated in FIG. 2. As illustrated by block **509**, if the target location is located within a sponsor's reserved area, content from the corresponding sponsor can be chosen for delivery to the mobile device. The content can be chosen based on a number of different parameters or combinations of parameters. In some embodiments, different sponsors may designate particular content to be provided on different days of the week or at different times of day. Some such embodiments allow a single geographic area to be shared by different advertisers or sponsors. For example, content associated with a first sponsor may be selected for delivery in a particular geographic area during the lunch hour, while content related to a second sponsor is selected for delivery in that same geographic area between the hours of midnight and 2 am.

(43) In some embodiments, content from one sponsor can be selected for delivery in a particular geographic area in specific situations, even though a different sponsor has generally reserved that same geographic area. For example, content from a first sponsor can be delivered during a football game to mobile devices located in a geographic area normally reserved by a second sponsor, effectively trumping content related to the second sponsor that would otherwise be delivered. In some embodiments, additional criteria can be applied to determine which sponsors' content will be provided to mobile devices in a particular geographic area.

(44) As illustrated by block **511**, selected content can be provided to an application for display on a mobile device. In at least one

embodiment, different content from the same sponsor can be provided to the same device for display within different applications, or the same content from the same sponsor can be displayed for all mobile devices running all registered applications that have target locations within the delivery area for the content. For example, a first program run on a mobile device may display a first advertisement within that program while a second program running on the same device may display a second advertisement, which is different from the first advertisement. In some embodiments in which an interest in a particular geographic area is shared between multiple sponsors, a primary sponsor's content can be exclusively displayed via a first registered application running on a particular mobile device, while content from other sponsors can be displayed via a second and subsequent applications running on the same mobile device.

(45) As illustrated by block **513**, if the target location is not within a sponsor's reserved area, a determination can be made regarding whether at least one sponsor's presence is within a first predetermined radius of the target location. In some embodiments, a determination is made regarding whether a sponsor's physical location is within a predetermined radius of the target location. In some embodiments, a determination is made regarding whether a sponsor's geographic area, or a portion of a sponsor's geographic area, is contained within a predetermined radius of the target location. If at least one sponsor's presence is within a predetermined radius of the target location, a sponsor is chosen from a random or pseudo-random process, as illustrated by block **519**. Content is then selected for delivery, as illustrated by block **509**. As illustrated by block **515**, if a sponsor's presence is not within a predetermined radius of the target location, the search radius can be increased. As illustrated by block **517**, a check can be made to determine whether any more increases should be made. In some embodiments, the search radius can continue to be increased incrementally, in a logarithmic manner, or otherwise, until at least a portion of a sponsor's reserved area intersects the search area defined by the search radius. In some embodiments, the search radius can be increased a predetermined number of times, or can be limited based on system resources, time constraints, or other desired parameters. The processes illustrated by blocks **513**, **515**, and **517** can be repeated until a positive indication is produced by the process at block **517**.

(46) As illustrated by block **519**, content from a randomly or pseudo-randomly selected sponsor can be delivered to a mobile device if the target location is not within a desired proximity to a sponsor's reserved area. In some embodiments, rather than delivering content randomly, content selections can be made based on desired criteria. Content related to a sponsor that reserved all otherwise unallocated space can be delivered to a mobile device executing a registered application. In some such embodiments, if any particular geographic areas have not yet been reserved, or if any device requesting content does not have a target location contained within a reserved geographic area, the default sponsor's content can be delivered to the mobile device. Method **500** ends as illustrated by block **521**.

(47) Preferring next to FIG. **6**, a method of interaction between a mobile device and a content providing platform is illustrated according to various embodiments of the present disclosure. Method **600** begins as illustrated by block **601**. As illustrated by block **603** an application platform key can be provided to a developer in response to the developer registering an application for use on the application platform. The developer can, in turn, provide the key to mobile devices on which the registered application is installed. As illustrated by block **605**, when a mobile device requests content from the content providing platform, the mobile device can send the key along with its request. As illustrated by block **607**, the content providing platform can verify that the key matches a valid key stored in its database, or elsewhere, before providing content to the application.

(48) In some embodiments, key verification can be performed by an entity other than the content providing platform. As illustrated by block **627**, if a verification check on the key fails, no content is provided to the requesting application, and the method **600** ends.

(49) As illustrated by block **609**, if the key is validated a session can be initiated between the application on the mobile device, and the content delivery platform. As illustrated by block **611** in at least one embodiment, the application running on the mobile device sends the mobile device's location, or another target location, to the content delivery platform. However, in some embodiments the actual location is not sent by the device, but may be provided to the content delivery platform from another source. Furthermore, the content delivery platform, or a subsystem of a communications system employed by the content delivery platform, can determine the location of the mobile device based on raw, partially, or completely processed information received from the mobile device or from another source. For example, the mobile device can forward information associated with a target location to the content delivery platform, or the content delivery server can obtain location information from a third party application or device, from a home location register (HLR), from a visiting location register (VLR), from raw, differential, processed or semi-processed GPS data, from power signals used in code-division multiple access (CDMA) or other wireless communications systems, or otherwise.

(50) As illustrated by block **613**, the content delivery platform records the request from the registered application in a request identifier in the platform database, or some other suitable storage location. The request identifier can be used in some embodiments to track further interaction with the registered application, or to deliver additional content to a requesting mobile device. Thus, in some embodiments, a mobile device or other target location that is only temporarily located within a particular sponsor's reserved geographic area may continue to receive information from that sponsor after the mobile device, or the target location, exits the sponsor's reserved area. In other embodiments, content related to a sponsor is discontinued in response to a mobile device exiting, or the target location losing focus within, the sponsor's reserved area.

(51) As illustrated by block **615**, the content delivery platform can deliver the request identifier to the requesting application along with the requested content. As illustrated by block **617**, a user of the mobile device can interact with the provided content using any of various methods such as pressing a button, selecting a user selectable object on a graphical user interface, or otherwise. The application on the mobile device can send an indication of the interaction to the content delivery platform via the same communication channel used to send the request, or via a different communications channel.

(52) As illustrated by block **619**, a registered application running on a mobile device can send an additional information request to the platform using the previously assigned request identifier. In some embodiments, using the previously assigned platform request identifier permits tracking of a series of interactions between a particular application and the content delivery platform. Furthermore, using the request identifier can allow individualized content to be delivered to different registered applications which may or may not be running on the same mobile device.

(53) As illustrated by block **621**, a determination is made regarding whether a request identifier sent in conjunction with a request for further information is maintained in the platform database or other suitable storage. As illustrated by block **623**, if the request identifier is contained in the database or other storage area, the content delivery platform can update a request identifier record as being complete. And as illustrated by block **625**, the content delivery platform can deliver more content to the requesting application. As illustrated by block **627**, method **600** can proceed to end after delivering the additional content.

(54) The methods and processes discussed previously, as well as other embodiments, may be implemented in a processing system

executing a set of instructions stored in memory, or on a removable computer readable medium. An example of a system according to some embodiments is illustrated in FIG. 7. Referring now to FIG. 7, a high-level block diagram of a processing system is illustrated and discussed. Processing system 700 includes one or more central processing units, such as CPU A 705 and CPU B 707, which may be conventional microprocessors interconnected with various other units via at least one system bus 710. CPU A 705 and CPU B 707 may be separate cores of an individual, multi-core processor, or individual processors connected via a specialized bus 711. In some embodiments, CPU A 705 or CPU B 707 may be a specialized processor, such as a graphics processor, other co-processor, or the like. (55) Processing system 700 includes random access memory (RAM) 720; read-only memory (ROM) 715, wherein the ROM 715 could also be erasable programmable read-only memory (EPROM) or electrically erasable programmable read-only memory (EEPROM); and input/output (I/O) adapter 725, for connecting peripheral devices such as disk units 730, optical drive 736, or tape drive 737 to system bus 710; a user interface adapter 740 for connecting keyboard 745, mouse 750, speaker 755, microphone 760, or other user interface devices to system bus 710; communications adapter 765 for connecting processing system 700 to an information network such as the Internet or any of various local area networks, wide area networks, telephone networks, or the like; and display adapter 770 for connecting system bus 710 to a display device such as monitor 775. Mouse 750 has a series of buttons 780, 785 and may be used to control a cursor shown on monitor 775.

(56) It will be understood that processing system 700 may include other suitable data processing systems without departing from the scope of the present disclosure. For example, processing system 700 may include bulk storage and cache memories, which provide temporary storage of at least some program code in order to reduce the number of times code must be retrieved from bulk storage during execution.

(57) Various disclosed embodiments can be implemented in hardware, software, or a combination containing both hardware and software elements. In one or more embodiments, the invention is implemented in software, which includes but is not limited to firmware, resident software, microcode, etc. Some embodiments may be realized as a computer program product, and may be implemented as a computer-usable or computer-readable medium embodying program code for use by, or in connection with, a computer, a processor, or other suitable instruction execution system.

(58) For the purposes of this description, a computer-usable or computer readable medium can be any apparatus that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device. By way of example, and not limitation, computer readable media may comprise any of various types of computer storage media, including volatile and non-volatile, removable and non-removable media implemented in any suitable method or technology for storage of information such as computer readable instructions, data structures, program modules, or other data. Computer storage media include, but are not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks (DVD) or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage or other magnetic storage devices, or any other medium which can be used to store the desired information and which can be accessed by a computer. Data structures and transmission of data (including wireless transmission) particular to aspects of the disclosure are also encompassed within the scope of the disclosure.

(59) Various embodiments have been described for delivering content related to a commercial media program. Other variations and modifications of the embodiments disclosed may be made based on the description provided, without departing from the scope of the invention as set forth in the following claims.

## Claims

1. A method for improving location services for a computer program on a mobile device by using the mobile device in combination with another mobile device and a third-party wireless communications source to determine a geographic location of the mobile device, the method comprising: receiving, by a content delivery platform, location information derived from the other mobile device; receiving, by the content delivery platform, signal information sent by the third-party wireless communications source; using, at least one processor of the content delivery platform, the location information derived from the other mobile device, and the signal information sent by the third-party wireless communication source in combination to determine the geographic location of the mobile device; and delivering, from the content delivery platform and to the computer program, content previously received by the content delivery platform, in response to a request by the computer program for the content and upon a determination by the at least one processor of the content delivery platform that the geographic location of the mobile device is associated with a geographic area and is within a predetermined proximity of a target location.
2. The method of claim 1, further comprising: in response to the geographic location of the mobile device being determined, displaying a first advertisement on a display of the mobile device via the computer program.
3. The method of claim 1, wherein the content comprises data representing one or more alphanumeric identifiers associated with physical locations within the geographic area.
4. The method of claim 3, wherein the geographic area is defined by the area contained within a predetermined radial distance surrounding the location of the mobile device.
5. The method of claim 4, wherein the location information used to determine the geographic location of the mobile device is associated with at least one target location of the other mobile device.
6. The method of claim 4, wherein, in the event no physical locations having alphanumeric identifier associations are found within the geographic area, increasing the predetermined radial distance until at least one physical location having an alphanumeric identifier is found within the geographic area.
7. The method of claim 1, further comprising: using cache memory to minimize the number of retrievals during the execution of the method.
8. The method of claim 7, wherein using the cache memory comprises using the cache memory with the at least one processor.
9. The method of claim 7, wherein using the cache memory comprises using the cache memory in a data processing system distinct from a processing system that comprises the content delivery platform.
10. The method of claim 1, further comprising: performing a verification whether the computer program on the mobile device has authorization to initiate a location session with the content delivery platform.
11. The method of claim 10, wherein: in response to the verification passing, allowing the computer program to initiate the location

session with the content delivery platform; and in response to the verification failing, not allowing the computer program to initiate the location session with the content delivery platform.

12. The method of claim 11, wherein: performing the verification comprises performing a check on a key associated with the computer program and stored on the mobile device.

13. The method of claim 2, wherein the computer program is an application program and further comprising: delivering, to the mobile device and from a platform used by developers for delivery of their application programs to the mobile device, the application program, thereby allowing a developer of the application program to receive revenue for the displaying.

14. The method of claim 1, wherein: the mobile device and the other mobile device are each personal communication devices for the purpose of being carried by individuals.

15. The method of claim 1, wherein: the determination that the geographic location of the mobile device is associated with a geographic area includes a determination that the mobile device has entered the geographic area.

16. The method of claim 15, further comprising: receiving, by the content delivery platform, the request by the computer program, wherein the request for the content is for exclusive delivery of the content to the computer program and not to be broadcast to other computer programs installed on the mobile device; receiving, by the content delivery platform, geographic data to have the geographic area reserved for delivery of the content to the computer program; and reserving, in at least one memory, the geographic area for delivery of the content to the computer program.

---