

Tallying Repetitive Inter Partes Review Challenges: Supporting Data

Steven C. Carlson
Ryan M. Schultz

September 17, 2018



Methodology:

Using the Unified Patents database, the petitions were collected for each of the top five filers of IPR petitions, namely Apple, Samsung, Google, Microsoft, and LG Electronics. For each petition, the challenged claims were identified along with the named real-party-in-interest. It was noted if a Final Written Decision had been issued. The time-period reviewed was from the inception of IPRs to June 23, 2018.

Legend:

Pink Highlight – Instances where the PTAB issued multiple Final Written Decisions against at least one overlapping claim in the petitions.

Yellow Highlight – Instances where the petitioner filed multiple petitions challenging at least one overlapping claim.

Section 1:

Apple

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-00191	5,463,750	Apple	8-12	Apple	settlement	1	1
IPR2015-00192	5,463,750	Apple	1, 8, and 9	Apple	settlement	1	1
IPR2015-00980	5,566,287	Apple	1, 5, 7, and 16	Apple	Yes		1
IPR2014-01032	5,590,403	Apple	1 and 10	Apple			1
IPR2014-01035	5,659,891	Apple	1-5	Apple			1
IPR2014-01567	5,781,752	Apple	1-9	Apple			1
IPR2016-00923	5,812,789	Apple	1, 3-6, 11 and 15	Apple	Yes	1	1
IPR2016-01135	5,812,789	Apple	1-8 and 11-14	Apple	settlement	1	1
IPR2017-00512	5,812,789	HTC	1-8 and 11-14	HTC			
IPR2016-00847	5,812,789	HTC, LG	1, 3-6, 11 and 14	HTC, LG	Yes		
IPR2016-00664	5,812,789	ZTE	1, 3-6, 11 and 13	ZTE			
IPR2015-00966	5,831,637	Apple	1, 2, 5 and 6	Apple			1
IPR2015-00931	5,835,096	Apple	5	Apple			1
IPR2016-01203	5,850,482	Apple	1-3, 5-14, 16, 17, 22-26, 28 and 29	Apple	Yes		1
IPR2015-00969	5,884,033	Apple	1, 2, 9, 15 and 23	Apple	Yes		1
IPR2016-01567	5,894,441	Apple	6-12, 14 and 15	Apple			1
IPR2014-01033	5,894,506	Apple	8-14, 19 and 21	Apple		1	1
IPR2014-01034	5,894,506	Apple	8-14, 19 and 22	Apple		1	1
IPR2015-00849	5,902,347	Apple, Google, Samsung	5-10	Apple, Google, Samsung	Yes	1	1
IPR2015-00851	5,902,347	Apple, Google, Samsung	5-10	Apple, Google, Samsung	Yes	1	1
IPR2014-01036	5,915,210	Apple	1, 10 and 19	Apple			1
IPR2015-00015	5,915,210	T-Mobile	1, 10 and 19	T-Mobile			
IPR2016-01121	5,960,464	Apple	1, 3, 4, 7, 8, 10, 12, 13, 16, 17 and 19-23	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2016-00924	5,960,464	Apple	1-4, 7-13, 16-24, 32-36 and 40	Apple	Yes	1	1
IPR2017-00513	5,960,464	HTC	1, 3, 4, 7, 8, 10, 12, 13, 16, 17 and 19-23	HTC			
IPR2016-00848	5,960,464	HTC, LG	1-4, 7-13, 16-24, 32-36 and 40	HTC, LG	Yes		
IPR2016-00665	5,960,464	ZTE	1-4, 7-13, 16-24, 32-36 and 40	ZTE			
IPR2013-00081	5,982,889	Apple	1-4	Apple	Yes		1
IPR2016-00152	6,026,293	Apple	1, 2, 8-11, 13, 14 and 16	Apple			1
IPR2016-00004	6,029,052	Apple	1-6, 8-16 and 18	Apple	not instituted - procedural	1	1
IPR2016-00154	6,029,052	Apple	1-6, 8-16 and 18	Apple		1	1
IPR2017-00628	6,049,607	Apple	1 and 25	Apple			1
IPR2015-00964	6,111,584	Apple	1, 2, 4 and 6	Apple	not instituted - merits	1	1
IPR2015-00965	6,111,584	Apple	1, 2, 4 and 6	Apple	not instituted - merits	1	1
IPR2016-00110	6,122,263	Apple	39 and 40	Apple			1
IPR2015-00369	6,128,290	Apple	1-4	Apple	Yes		1
IPR2015-00373	6,128,290	Apple	6, 7, 9 and 10	Apple	Yes		1
IPR2018-00286	6,137,390	Apple	1-14 and 16-20	Apple			1
IPR2016-00971	6,148,081	Apple	1-3, 23 and 24	Apple			1
IPR2016-00109	6,157,620	Apple	1, 2, 33 and 36	Apple			1
IPR2018-00420	6,161,134	Apple	1, 2, 4, 5, 9-11, 13, 15, 16, 19, 25, 26 and 30	Apple			1
IPR2013-00080	6,173,403	Apple	1-12 and 17-19	Apple	Yes		1
IPR2018-00361	6,216,158	Apple	1, 2, 6-9, 12, 14, 15 and 20	Apple			1
IPR2016-01561	6,233,181	Apple	3 and 5	Apple			1
IPR2016-00887	6,233,518	Apple	45 and 46	Apple			1
IPR2016-00992	6,233,736	Apple	1-3 and 8-12	Apple			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-01919	6,291,966	Apple	1-17	Apple			1
IPR2017-00626	6,363,345	Apple	1-25 and 38-47	Apple	pending (Jul-2018)	1	1
IPR2017-00627	6,363,345	Apple	1-25 and 38-47	Apple		1	1
IPR2017-00732	6,377,637	Apple	1-14	Apple			1
IPR2016-00108	6,400,376	Apple	16, 17 and 28-31	Apple			1
IPR2018-00456	6,446,127	Apple	1-5, 8, 15, 21-24, 27, 28 and 30	Apple			1
IPR2015-00761	6,449,359	Apple	1, 3, 5, 7, 8, 12 and 18-20	Apple			1
IPR2016-01839	6,470,399	Apple	1, 3, 5, 11 and 14	Apple	Yes	1	1
IPR2016-01843	6,470,399	Apple	1, 3, 5, 11 and 14	Apple		1	1
IPR2016-01864	6,470,399	Apple	1, 3, 5, 11 and 14	Apple	Yes	1	1
IPR2016-00062	6,502,135	Apple	1, 3, 4, 7, 8, 10 and 12	Apple	Yes	1	1
IPR2013-00348	6,502,135	Apple	1-10, 12-15 and 18	Apple	not instituted - procedural	1	1
IPR2013-00349	6,502,135	Apple	1-10, 12-15 and 18	Apple		1	1
IPR2015-01046	6,502,135	Mangrove Partners Master Fund	1, 3, 4, 7, 8, 10 and 12	Mangrove Partners Master Fund	Yes		
IPR2015-01910	6,510,488	Apple	1, 3, 8 and 11	Apple			1
IPR2016-00883	6,532,413	Apple	64, 77 and 79	Apple			1
IPR2013-00191	6,563,529	Apple, Google	1-6, 10-15, 17-19, 21, 23-25, 27, and 28	Apple, Google	Yes		1
IPR2018-00394	6,622,018	Apple	1-27	Apple	pending (Jul-2018)	1	1
IPR2018-00395	6,622,018	Apple	1-27	Apple		1	1
IPR2016-00050	6,633,550	Apple	1, 3-12 and 14-17	Apple			1
IPR2018-00523	6,661,203	Apple	1-10, 15-25 and 29	Apple	pending (Jul-2018)		1
IPR2015-00925	6,683,615	Apple	1 and 3	Apple	settlement	1	1
IPR2015-00926	6,683,615	Apple	1 and 3	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2018-00294	6,736,759	Apple	1-32	Apple			1
IPR2015-01930	6,763,424	Apple	1-9, 11, 13-16, 19-21 and 23-30	Apple			1
IPR2014-00060	6,799,084	Apple	1 and 4	Apple	not instituted - procedural	1	1
IPR2014-00061	6,799,084	Apple	1 and 4	Apple		1	1
IPR2017-01244	6,807,524	Apple	1-21 and 29-42	Apple			1
IPR2015-00577	6,819,923	Apple	11, 13 and 14	Apple			1
IPR2015-01933	6,831,865	Apple	1-5, 8, 18 and 24-29	Apple			1
IPR2015-00440	6,963,859	Apple	1, 3, 5, 8, 13, 15, 16, 19-21, 24, 29, 31, 33, 36, 40, 42, 43, 46-48, 51, 58, 60, 62, 65, 69, 71, 72, 75-77 and 81	Apple	not instituted - merits	1	1
IPR2015-00441	6,963,859	Apple	1, 3, 5, 8, 13, 15, 16, 19-21, 24, 29, 31, 33, 36, 40, 42, 43, 46-48, 51, 58, 60, 62, 65, 69, 71, 72, 75-77 and 81	Apple		1	1
IPR2015-00442	6,963,859	Apple	1, 3, 5, 8, 13, 15, 16, 19-21, 24, 29, 31, 33, 36, 40, 42, 43, 46-48, 51, 58, 60, 62, 65, 69, 71, 72, 75-77 and 81	Apple		1	1
IPR2015-01943	6,968,421	Apple	2-10 and 12-18	Apple			1
IPR2015-00963	6,977,649	Apple	21, 25 and 33	Apple			1
IPR2015-00971	6,985,586	Apple	1 and 2	Apple			1
IPR2014-00082	7,010,536	Apple	1 and 3-15	Apple		1	1
IPR2014-00083	7,010,536	Apple	1 and 3-15	Apple	not instituted - merits	1	1
IPR2014-00085	7,010,536	Apple	2-14 and 16	Apple	not instituted - merits	1	1
IPR2014-00086	7,010,536	Apple	2-14 and 16	Apple	Yes	1	1
IPR2014-00812	7,010,536	Twitter, Yelp	2-14 and 16	Twitter and Yelp	Yes		
IPR2015-01924	7,012,835	Apple	1, 4-10, 13, 15, 17, 18, 20-23, 25 and 27	Apple			1
IPR2015-01446	7,016,648	Apple, Samsung	1, 2, 6, 7, 9, 10, 12-16, 21-24, 26-28 and 30	Apple, Samsung	Yes	1	1
IPR2015-01445	7,016,648	Apple, Samsung	1-3, 5-7, 9, 13-17, 19, 21-23, 27, 28 and 30	Apple, Samsung	Yes	1	1
IPR2015-01444	7,039,033	Apple, Samsung	1, 4-7, 12, 14, 15, 22, 23, 25, 28, 34, 39, 40, 42 and 46	Apple, Samsung	Yes		1
IPR2015-00927	7,050,061	Apple	1 and 2	Apple			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2016-01004	7,055,169	Apple	1, 2, 12, 22 and 23	Apple			1
IPR2015-01896	7,072,667	Apple	12-15	Apple	Yes		1
IPR2018-00282	7,092,671	Apple	1-7 and 9-15	Apple			1
IPR2014-00030	7,103,380	Apple	2-14	Apple	settlement		1
IPR2017-00210	7,116,710	Apple	1-8, 10-17 and 19-33	Apple, Broadcom	pending (Jul-2018)	1	1
IPR2017-00211	7,116,710	Apple	1-8, 10-17 and 19-33	Apple, Broadcom		1	1
IPR2017-00212	7,116,710	Apple	1-8, 10-17 and 19-33	Apple, Broadcom		1	1
IPR2015-01909	7,120,729	Apple	15-17	Apple			1
IPR2015-00599	7,120,835	Apple	1-7 and 9-13	Apple	Yes		1
IPR2016-00616	7,149,511	Apple, Samsung	1-10 and 58-65	Apple, Samsung	Yes	1	1
IPR2016-00622	7,149,511	Apple, Samsung	1-10, 19-22, 58-65 and 68-71	Apple, Samsung	Yes	1	1
IPR2017-01075	7,151,802	Apple	1-3, 8-11, 16, 25-27, 32-35, 40, 49, 50, 52 and 53	Apple			1
IPR2014-00077	7,177,798	Apple	1-21	Apple	not instituted - merits	1	1
IPR2014-00319	7,177,798	Apple	1-21	Apple		1	1
IPR2014-00320	7,177,798	Apple	1-21	Apple		1	1
IPR2016-01365	7,181,608	Apple	1-31	Apple	Yes		1
IPR2015-01911	7,181,611	Apple	1, 3, 4, 10, 17, 19, 20, 23, 24 and 25	Apple			1
IPR2015-00932	7,187,383	Apple	1 and 10	Apple			1
IPR2014-00481	7,188,180	Apple	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Apple	Yes	1	1
IPR2014-00482	7,188,180	Apple	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Apple	Yes	1	1
IPR2015-01925	7,224,607	Apple	1, 4-10, 13, 15, 17, 18, 20-23, 25 and 27	Apple			1
IPR2015-00457	7,225,160	Apple	1-11 and 23-29	Apple	not instituted - merits	1	1
IPR2015-00458	7,225,160	Apple	1-3, 9, 10 and 23	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2017-01077	7,260,521	Apple	1, 2, 5-8, 10, 11, 14, 15, 17, 28, 29, 32, 33, 35, 37, 38, 41, 42, 44, 55, 56, 59, 60, 62	Apple			1
IPR2015-01616	7,265,494	Apple, Toshiba	1-3, 19 and 20	Apple, Toshiba	Yes		1
IPR2015-00456	7,269,576	Apple	1, 2, 4, 7-10 and 15	Apple		1	1
IPR2015-00455	7,269,576	Apple	1, 3, 4 and 7-10	Apple	not instituted - merits	1	1
IPR2015-00452	7,269,576	Apple	18, 19, 21, 24-27, 29, 32 and 34	Apple	not instituted - merits	1	1
IPR2015-00453	7,269,576	Apple	18, 19, 21, 24-27, 29, 32 and 34	Apple		1	1
IPR2015-00454	7,269,576	Apple	18, 19, 21, 24-27, 29, 32 and 34	Apple		1	1
IPR2015-01442	7,295,532	Apple, Samsung	1, 4, 5, 7-10, 12, 14-16, 23 and 24	Apple, Samsung	not instituted - merits	1	1
IPR2015-01443	7,295,532	Apple, Samsung	1, 4, 5, 7-10, 12, 14-16, 23 and 24	Apple, Samsung	Yes	1	1
IPR2015-00159	7,296,121	Apple, Amazon, HTC, Samsung	1-3, 8 and 11-25	Apple, Amazon, HTC, Samsung	Yes	1	1
IPR2015-00161	7,296,121	Apple, Amazon, HTC, Samsung	1-3, 8, 9, 11 and 14-25	Apple, Amazon, HTC, Samsung	not instituted - merits	1	1
IPR2015-00163	7,296,121	Apple, Amazon, HTC, Samsung	1-6, 8-12 and 15-25	Apple, Amazon, HTC, Samsung	Yes	1	1
IPR2015-00172	7,296,121	Apple, Amazon, HTC, Samsung	1-9, 11, 12, and 16-24	Apple, Amazon, HTC, Samsung		1	1
IPR2015-01376	7,296,121	LG, Sony	1-3, 8, 11, 12 and 15-25	LG, Sony	Yes		
IPR2015-01353	7,296,121	LG, Sony	4-6, 11, 12, and 19-24	LG, Sony	Yes		
IPR2015-01695	7,298,327	Apple	1-4, 6, 17-19, 24, 25, 47, 50, 54, 60-62, 67, 69, 72 and 76	Apple		1	1
IPR2015-01694	7,298,327	Apple	1-6, 13-19, 24, 25, 28, 31-33, 47, 50, 54, 55, 60-62, 65-67, 69, 72, 74, 76 and 80	Apple	not instituted - merits	1	1
IPR2016-01118	7,321,368	Apple	1, 7, 13, 15, 17, 18, 20 and 23-25	Apple			1
IPR2015-01173	7,329,970	Apple, Motorola, Toshiba	1, 3-5, 10-14, 19, 48, 49, 51 and 52	Apple, Motorola, Toshiba	Yes		1
IPR2017-01369	7,336,260	Apple	3-9	Apple	not instituted - procedural		1
IPR2016-01884	7,336,260	Apple	1 and 2	Apple			1
IPR2015-00411	7,365,871	Apple	1-15	Apple	not instituted - merits	1	1
IPR2015-00413	7,365,871	Apple	1-3, 5-7, 12 and 14	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-00412	7,365,871	Apple	1-8 and 12-14	Apple	Yes	1	1
IPR2015-01366	7,365,871	ZTE	1-8 and 12-14	ZTE	Yes		
IPR2015-00188	7,418,504	Apple	1, 2, 5, 6, 14-17, 19-23, 26-41, 43-47 and 50-60	Apple	not instituted - procedural	1	1
IPR2015-00189	7,418,504	Apple	1, 2, 5, 6, 14-17, 19-23, 26-41, 43-47 and 50-60	Apple		1	1
IPR2013-00393	7,418,504	Apple	1-3, 5-8 and 14-60	Apple	not instituted - procedural	1	1
IPR2013-00394	7,418,504	Apple	1-3, 5-8 and 14-60	Apple	not instituted - procedural	1	1
IPR2017-00700	7,421,032	Apple	11-17	Apple, Broadcom			1
IPR2017-00701	7,421,032	Apple	1-10	Apple, Broadcom			1
IPR2017-00728	7,421,032	Apple	18-23	Apple, Broadcom			1
IPR2014-00235	7,433,483	Apple	1-6, 8, 10, 16 and 18-20	Apple	Yes		1
IPR2015-00935	7,454,201	Apple	1, 5, 7-11 and 13	Apple			1
IPR2013-00354	7,490,151	Apple	1-16	Apple	not instituted - procedural	1	1
IPR2015-00187	7,490,151	Apple	1, 2, 6-8 and 12-14	Apple	not instituted - procedural	1	1
IPR2016-00063	7,490,151	Apple	1, 2, 6-8 and 12-14	Apple	Yes	1	1
IPR2016-00167	7,490,151	Black Swamp IP	1, 2, 6-8 and 12-14	Black Swamp IP	Yes		
IPR2015-01047	7,490,151	Mangrove Partners Master Fund	1, 2, 6-8 and 12-14	Mangrove Partners Master Fund	Yes		
IPR2014-00207	7,496,854	Apple, Google, Motorola Mobility	1-18, 36-56, 86-95, 97, 98, 100 and 101	Apple, Google, Motorola Mobility	Yes		1
IPR2014-00206	7,496,854	Apple, Google, Motorola Mobility	19-35, 57-85, 96 and 99	Apple, Google, Motorola Mobility	Yes		1
IPR2015-01172	7,498,749	Apple, Motorola, Toshiba	21 and 23	Apple, Motorola, Toshiba	Yes		1
IPR2015-01603	7,498,749	Apple, Toshiba	1, 2, 4-7, 9-12, 14, 15, 20, 22 and 24	Apple, Toshiba	Yes		1
IPR2015-00443	7,523,072	Apple	1, 8, 10, 16, 18 and 24	Apple		1	1
IPR2015-00444	7,523,072	Apple	1, 8, 10, 16, 18 and 24	Apple		1	1
IPR2015-00445	7,523,072	Apple	1, 8, 10, 16, 18 and 24	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-01697	7,525,484	Apple	25-27, 31, 36-40, 45, 49-51, 56, 57, 60, 61, 63 and 72	Apple		1	1
IPR2015-01696	7,525,484	Apple	25-28, 31, 36-43, 45, 47-51, 55-57, 60, 61, 63 and 72	Apple		1	1
IPR2017-00220	7,535,890	Apple	1-6, 14, 15, 17-20, 28, 29, 31-34, 40-43, 51-54, 62-65 and 68	Apple	not instituted - merits	1	1
IPR2017-00221	7,535,890	Apple	1-6, 14, 15, 17-20, 28, 29, 31-34, 40-43, 51-54, 62-65 and 68	Apple	Yes	1	1
IPR2016-01134	7,542,045	Apple	1, 4, 5, 7, 9, 10, 12 and 15-17	Apple			1
IPR2015-00414	7,643,168	Apple	1-31	Apple	Yes		1
IPR2018-01026	7,653,508	Apple	5	Apple	pending (Jul-2018)		1
IPR2018-00387	7,653,508	Apple	1-4, 6-8, 11-16 and 19	Apple			1
IPR2015-01942	7,657,702	Apple	1-44	Apple			1
IPR2015-01902	7,693,552	Apple	1-3, 5, 9, 11-13, 15, 19, 21 and 22	Apple	Yes		1
IPR2014-00079	7,702,682	Apple	1-23	Apple	not instituted - merits	1	1
IPR2014-00080	7,702,682	Apple	1-23	Apple		1	1
IPR2015-00928	7,710,425	Apple	1, 2, 6 and 11	Apple	settlement	1	1
IPR2015-00929	7,710,425	Apple	1, 2, 6 and 11	Apple		1	1
IPR2016-00961	7,725,740	Apple	1, 2 and 4-9	Apple			1
IPR2016-01208	7,746,916	Apple, Microsoft, Nokia	1-10	Apple, Microsoft, Nokia	Yes	1	1
IPR2016-01209	7,746,916	Apple, Microsoft, Nokia	1-10	Apple, Microsoft, Nokia	Yes	1	1
IPR2016-01277	7,746,916	HTC, Samsung, ZTE	1-10	HTC, Samsung, ZTE	Yes		
IPR2016-01280	7,746,916	HTC, Samsung, ZTE	1-10	HTC, Samsung, ZTE	Yes		
IPR2016-00753	7,752,649	Apple	39, 54, 62 and 67	Apple			1
IPR2015-01702	7,764,231	Apple	1, 3, 6, 7, 11, 17, 18, 20, 24, 25, 27, 39, 40, 72, 78, 81, 155, 162, 165 and 215	Apple		1	1
IPR2015-01703	7,764,231	Apple	1, 3, 6, 7, 11, 17, 18, 20, 24, 25, 27, 39, 40, 72, 78, 81, 155, 162, 165 and 215	Apple		1	1
IPR2015-00685	7,765,482	Apple, Twitter	1, 4, 6, 8, 10, 12, 25 and 51	Apple, Twitter	settlement	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-00686	7,765,482	Apple, Twitter	1, 4, 6, 8, 10, 12, 25, 37 and 51	Apple, Twitter		1	1
IPR2015-00687	7,765,482	Apple, Twitter	13, 14, 16-19, 20-23, 35, 37, 38, 40-42 and 44-46	Apple, Twitter		1	1
IPR2015-00688	7,765,482	Apple, Twitter	13, 14, 16-23, 35, 37, 38, 40-42, 44-46 and 49	Apple, Twitter		1	1
IPR2016-01177	7,768,965	Apple, Microsoft, Nokia	1-3, 8 and 9	Apple, Microsoft, Nokia	Yes		1
IPR2016-01310	7,768,965	HTC, Samsung, ZTE	1-3, 8 and 9	HTC, Samsung, ZTE	Yes		
IPR2015-00351	7,774,280	Apple	1-5, 8, 11-16, 19, 22, 24-28, 31 and 34	Apple	not instituted - merits	1	1
IPR2015-00352	7,774,280	Apple	1-5, 8, 11-16, 19, 22, 24-28, 31 and 34	Apple		1	1
IPR2015-00353	7,774,280	Apple	1-5, 8, 11-16, 19, 22, 24-28, 31 and 34	Apple		1	1
IPR2015-00354	7,774,280	Apple	1-5, 8, 11-16, 19, 22, 24-28, 31 and 34	Apple		1	1
IPR2016-01114	7,777,753	Apple	1, 2, 4, 7-10 and 12	Apple			1
IPR2015-01174	7,781,980	Apple, Motorola	1, 3-5 and 32	Apple, Motorola	Yes		1
IPR2013-00596	7,802,310	Apple	24, 32, 70, 81, 82 and 86	Apple	Yes		1
IPR2016-01907	7,808,488	Apple	1, 2, 9, 10, 17, 18 and 29	Apple			1
IPR2017-01371	7,808,488	Apple	3-8, 11-16 and 19-28	Apple			1
IPR2016-01185	7,809,373	Apple, Microsoft, Nokia	15-21 and 23-25	Apple, Microsoft, Nokia			1
IPR2016-01347	7,809,373	Samsung, ZTE	1-10, 12, 13, 15-21 and 23-25	Samsung, ZTE			
IPR2015-01949	7,818,490	Apple	34-38 and 40-64	Apple			1
IPR2015-01945	7,818,490	Apple	66-72 and 94-106	Apple			1
IPR2015-01950	7,818,490	Apple	73-92	Apple			1
IPR2013-00004	7,831,926	Kyocera	30, 31, 40, 41, 43, 52, 55, 59, 72 and 75	Kyocera	Yes		
IPR2016-01228	7,881,236	Apple, Microsoft, Nokia	1-10 and 12-13	Apple, Microsoft, Nokia	Yes	1	1
IPR2016-01229	7,881,236	Apple, Microsoft, Nokia	1-10 and 12-13	Apple, Microsoft, Nokia	Yes	1	1
IPR2018-01028	7,881,902	Apple	8	Apple	pending (Jul-2018)		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2018-00424	7,881,902	Apple	1-6 and 9-10	Apple			1
IPR2015-01031	7,900,229	Apple	14-16, 19, 21, 24, 26, 28, 30 and 31	Apple	Yes		1
IPR2017-00423	7,916,781	Apple	13-22	Apple, Broadcom		1	1
IPR2017-00297	7,916,781	Apple	3-12 and 19-21	Apple, Broadcom	Yes	1	1
IPR2014-00208	7,917,843	Apple, Google, Motorola Mobility	1-44	Apple, Google, Motorola Mobility	Yes		1
IPR2014-00268	7,921,139	Apple	1-8 and 10-23	Apple			1
IPR2015-00185	7,921,211	Apple	1, 2, 5, 6, 14-17, 19-23, 26-41, 43-47 and 50-60	Apple		1	1
IPR2015-00186	7,921,211	Apple	1, 2, 5, 6, 14-17, 19-23, 26-41, 43-47 and 50-60	Apple		1	1
IPR2013-00397	7,921,211	Apple	1-3, 5-8 and 14-60	Apple	not instituted - procedural	1	1
IPR2013-00398	7,921,211	Apple	1-3, 5-8 and 14-60	Apple	not instituted - procedural	1	1
IPR2015-00576	7,941,174	Apple	1-19	Apple			1
IPR2018-01093	7,944,353	Apple	1-20	Apple			1
IPR2015-01931	7,970,987	Apple	1-9, 11 and 13	Apple			1
IPR2014-00484	7,987,274	Apple	1-5, 7, 8, 10, 12, 13, 15, 17 and 18	Apple	Yes	1	1
IPR2014-00483	7,987,274	Apple	1-5, 7, 8, 10, 12, 13, 15, 17 and 18	Apple	Yes	1	1
IPR2014-00403	7,987,274	Microsoft	1-5, 7, 8, 10, 12, 13, 15, 17 and 18	Microsoft	Yes		
IPR2014-00404	7,987,274	Microsoft	1-5, 7, 8, 10, 12, 13, 15, 17 and 18	Microsoft	Yes		
IPR2015-01171	7,994,726	Apple, Motorola	1, 3-10, 19, 20 and 27	Apple, Motorola	Yes		1
IPR2015-00355	8,001,053	Apple	1-5, 8, 9, 15-19, 22, 23, 26-30, 33 and 34	Apple	not instituted - merits	1	1
IPR2015-00356	8,001,053	Apple	1-5, 8, 9, 15-19, 22, 23, 26-30, 33 and 34	Apple		1	1
IPR2015-00357	8,001,053	Apple	1-5, 8, 9, 15-19, 22, 23, 26-30, 33 and 34	Apple		1	1
IPR2015-00358	8,001,053	Apple	1-5, 8, 9, 15-19, 22, 23, 26-30, 33 and 34	Apple		1	1
IPR2015-01700	8,032,153	Apple	1-3, 6, 7, 15, 17, 18, 20, 21, 23, 24, 27-29, 32, 33, 35-39 and 42	Apple	not instituted - merits	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-01701	8,032,153	Apple	1-3, 6, 7, 15, 17, 18, 20, 23, 24, 27, 29, 35-39 and 42	Apple		1	1
IPR2015-01908	8,050,095	Apple	1-9 and 11-14	Apple			1
IPR2014-00485	8,051,181	Apple	1-29	Apple	not instituted - procedural	1	1
IPR2014-00486	8,051,181	Apple	1-29	Apple		1	1
IPR2015-00578	8,055,820	Apple	1-24	Apple			1
IPR2015-01463	8,090,309	Apple	1-14	Apple	not instituted - merits	1	1
IPR2016-00794	8,090,309	Apple	1-14	Apple	Yes	1	1
IPR2016-00302	8,090,862	Apple	1-20	Apple			1
IPR2016-01366	8,090,936	Apple	1-24	Apple	Yes		1
IPR2015-00930	8,144,156	Apple	6, 9, 11 and 14	Apple			1
IPR2017-01701	8,157,730	Apple	1-18	Apple			1
IPR2016-00755	8,191,091	Apple	13-16, 18, 20, 21, 23, 24, 26, 27 and 30	Apple	Yes		1
IPR2018-00821	8,213,970	Apple	1-13	Apple			1
IPR2017-00927	8,218,481	Apple	1-4, 6, 8-11 and 13	Apple, Microsoft, Nokia	Yes	1	1
IPR2017-00068	8,218,481	Apple, Microsoft, Nokia	1-4, 6, 8-11 and 13	Apple, Microsoft, Nokia	Yes	1	1
IPR2016-00981	8,218,481	Apple, Microsoft, Nokia	1-4, 6, 8-11, 13, 15 and 16	Apple, Microsoft, Nokia	Yes	1	1
IPR2016-00758	8,218,481	HTC, ZTE	1-4, 6, 8-11 and 13	HTC, ZTE	Yes		
IPR2017-00106	8,218,481	Samsung	1-4, 6, 8-11 and 13	Samsung	Yes		
IPR2016-01342	8,218,481	Samsung, ZTE	1-4, 6, 8-11 and 13	Samsung, ZTE	Yes		
IPR2016-01349	8,218,481	ZTE	1-4, 6, 8-11, 13, 15 and 16	ZTE	Yes		
IPR2017-02041	8,239,852	Apple	1-8 and 16-18	Apple	not instituted - merits	1	1
IPR2017-02202	8,239,852	Apple	1-8 and 16-18	Apple		1	1
IPR2017-00222	8,243,723	Apple	1-8	Apple	Yes		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2017-00702	8,284,833	Apple	1-14	Apple, Broadcom	not instituted - merits	1	1
IPR2017-00703	8,284,833	Apple	1-14	Apple, Broadcom		1	1
IPR2015-01175	8,288,952	Apple, Motorola	1-4, 14, 16, 17, 19, 22-24, 26, 27 and 38-40	Apple, Motorola	Yes		1
IPR2014-00203	8,306,993	Apple, Google, Motorola Mobility	1-24	Apple, Google, Motorola Mobility			1
IPR2015-01934	8,316,177	Apple	1-9	Apple			1
IPR2015-00446	8,370,956	Apple	1-18	Apple	not instituted - merits	1	1
IPR2015-00447	8,370,956	Apple	1-18	Apple		1	1
IPR2015-00448	8,370,956	Apple	1, 2, 4-8, 10-14 and 16-18	Apple		1	1
IPR2015-00449	8,393,007	Apple	1-15	Apple	not instituted - merits	1	1
IPR2015-00450	8,393,007	Apple	1-15	Apple		1	1
IPR2015-00451	8,393,007	Apple	1-15	Apple		1	1
IPR2015-01898	8,434,020	Apple	1, 2, 6, 8, 10-11, 13 and 16	Apple	Yes		1
IPR2016-01500	8,457,022	Apple	1 and 6	Apple			1
IPR2014-00234	8,457,340	Apple	1-7 and 29-34	Apple			1
IPR2016-01493	8,457,676	Apple	1, 3, 19 and 21	Apple	Yes		1
IPR2015-00866	8,458,341	Apple	1-11, 14-25 and 28	Apple	Yes	1	1
IPR2015-00867	8,458,341	Apple	1-11, 14-25 and 28	Apple	not instituted - merits	1	1
IPR2015-01879	8,492,933	Apple	1 and 2	Apple	Yes		1
IPR2016-00331	8,504,696	Apple	1-11, 14-25 and 28-30	Apple	Yes	1	1
IPR2016-00332	8,504,696	Apple	1-11, 14-25 and 28-31	Apple	Yes	1	1
IPR2014-00237	8,504,697	Apple	1-11, 14-25 and 28-32	Apple	Yes	1	1
IPR2014-00238	8,504,697	Apple	1-11, 14-25 and 28-33	Apple	Yes	1	1
IPR2017-00158	8,504,746	Apple	1, 4, 6-8, 10, 11, 14, 20, 21, 23 and 30	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2016-01862	8,504,746	Apple	1, 4, 6-8, 10, 11, 14, 20, 21, 23, 30, 34 and 35	Apple	not instituted - merits	1	1
IPR2016-01863	8,504,746	Apple	1, 4, 6-8, 10, 11, 14, 20, 21, 23, 30, 34 and 35	Apple	Yes	1	1
IPR2015-00868	8,516,131	Apple	1-10, 13-22 and 25-27	Apple	Yes	1	1
IPR2015-00869	8,516,131	Apple	1-10, 13-22 and 25-27	Apple		1	1
IPR2016-00748	8,519,834	Apple	6-14	Apple	Yes		1
IPR2018-00884	8,539,552	Apple	1-25	Apple	pending (Jul-2018)		1
IPR2016-01201	8,542,815	Apple	1, 7, 27, 28, 34, 54, 72-74, 92, 93 and 111	Apple	Yes		1
IPR2017-01399	8,542,815	Apple	3, 4, 8, 9, 11, 12, 14-16, 30, 31, 35, 36, 38, 39, 42, 43, 61, 65, 66, 81, 85, 86, 100, 104 and 105	Apple	pending (Jul-2018)		1
IPR2016-00754	8,559,635	Apple	1-4, 7, 13, 18, 20, 21, 28-30, 32 and 33	Apple	Yes	1	1
IPR2016-01520	8,559,635	Apple	3, 4, 7, 13, 18, 20, 21, 28-30, 32 and 33	Apple	Yes	1	1
IPR2015-00870	8,560,705	Apple	1-30	Apple	Yes	1	1
IPR2015-00871	8,560,705	Apple	1-30	Apple	Yes	1	1
IPR2016-01603	8,581,710	Apple	1, 7-10 and 12	Apple			1
IPR2017-01368	8,581,710	Apple	13, 18, 19 and 20	Apple			1
IPR2015-00399	8,583,556	Apple	1, 8, 9, 11, 12, 19, 20 and 22	Apple	settlement	1	1
IPR2015-00400	8,583,556	Apple	1, 8, 9, 11, 12, 19, 20 and 22	Apple		1	1
IPR2015-00683	8,612,515	Apple, Twitter	1, 2, 5-7, 11, 18, 19, 21-23, 26, 28-30, 38-41, 52 and 53	Apple, Twitter	settlement	1	1
IPR2015-00684	8,612,515	Apple, Twitter	1, 2, 5-7, 11, 18, 19, 21-23, 26, 28-30, 38-41, 52 and 53	Apple, Twitter		1	1
IPR2017-00887	8,619,051	Apple	1-15	Apple		1	1
IPR2016-01371	8,619,051	Apple	1-3 and 5-15	Apple	not instituted - merits	1	1
IPR2017-01702	8,652,040	Apple	1-3, 11-21, 23-25, 27, 29-32, 34-40, 43-46 and 48-53	Apple			1
IPR2017-01703	8,652,040	Apple	4-10, 22, 26, 28, 33, 41, 42, 47 and 54-57	Apple	pending (Jul-2018)		1
IPR2017-00896	8,659,571	Apple	1-7 and 23-29	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2016-01372	8,659,571	Apple	1-7, 12-18 and 23-29	Apple	Yes	1	1
IPR2018-00389	8,712,723	Apple	1-3, 5-7 and 10-18	Apple			1
IPR2018-01027	8,712,723	Apple	4 and 19	Apple	pending (Jul-2018)		1
IPR2015-01899	8,713,476	Apple	1, 4, 7-9, 20, 28 and 29	Apple	Yes		1
IPR2017-01804	8,724,622	Apple	3, 6-8, 10, 11, 13-23, 27-35, 38 and 39	Apple		1	1
IPR2018-00579	8,724,622	Apple	3, 6-8, 10, 11, 13-23, 27-35, 38 and 39	Apple		1	1
IPR2017-00223	8,724,622	Apple	3-4, 6-8, 10-19, 21-23 and 38	Apple	not instituted - merits	1	1
IPR2017-00224	8,724,622	Apple	3-4, 6-8, 10-19, 21-23 and 38	Apple		1	1
IPR2017-01805	8,724,622	Apple	4, 5, 12 and 24-26	Apple	not instituted - procedural	1	1
IPR2018-00580	8,724,622	Apple	4, 5, 12 and 24-26	Apple		1	1
IPR2015-01464	8,725,063	Apple	1-61	Apple	not instituted - merits	1	1
IPR2015-01465	8,725,063	Apple	1-61	Apple	Yes	1	1
IPR2017-01310	8,749,507	Apple	1-18	Apple		1	1
IPR2016-01777	8,749,507	Apple	1-5, 9-12 and 14-17	Apple	not instituted - merits	1	1
IPR2016-00751	8,752,088	Apple	14	Apple			1
IPR2017-00897	8,773,356	Apple	1-26	Apple	not instituted - procedural	1	1
IPR2016-01381	8,773,356	Apple	1-3, 5, 7, 9-13, 15, 17, 19-23, 25 and 26	Apple	Yes	1	1
IPR2015-01904	8,812,059	Apple	1-17	Apple	not instituted - procedural	1	1
IPR2015-01905	8,812,059	Apple	1-17	Apple		1	1
IPR2017-01914	8,838,976	Apple	1-13	Apple			1
IPR2015-01009	8,843,643	Apple	1-9, 12-24 and 27-32	Apple	Yes	1	1
IPR2015-01010	8,843,643	Apple	1-9, 12-24 and 27-32	Apple	Yes	1	1
IPR2015-00812	8,850,009	Apple	1-8, 10-20 and 22-25	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2015-00813	8,850,009	Apple	1-8, 10-20 and 22-25	Apple	not instituted - merits	1	1
IPR2018-00811	8,856,539	Apple	1-3, 5-8, 12, 16-24, 26-31, 34, 37 and 38	Apple	pending (Jul-2018)	1	1
IPR2018-00812	8,856,539	Apple	1-3, 5-8, 16-24, 26-30, 37 and 38	Apple		1	1
IPR2016-01480	8,867,472	Apple	1, 10, 11, 14, 28, 37, 38 and 41	Apple	Yes		1
IPR2015-00810	8,868,705	Apple	1-34	Apple	Yes	1	1
IPR2015-00811	8,868,705	Apple	1-34	Apple	Yes	1	1
IPR2018-00289	8,872,646	Apple	1, 3, 5-11, 13-18 and 20	Apple			1
IPR2016-01737	8,880,862	Apple	1-4, 6, 7, 13, 23-34, 47-58, 83-96, 99, 100, 105-111, 113 and 116	Apple	Yes		1
IPR2016-01739	8,880,862	Apple	5, 35-46, 97, 98 and 112	Apple	Yes		1
IPR2016-01738	8,880,862	Apple	8-12, 14-22, 59-82, 101-104, 114, 115 and 117	Apple	Yes		1
IPR2017-00318	8,886,269	Apple	1-10	Apple	Yes	1	1
IPR2017-01554	8,886,269	Apple	1-10	Apple	Yes	1	1
IPR2017-01704	8,888,701	Apple	1-15	Apple			1
IPR2016-01585	8,904,516	Apple	1-9, 11-23 and 25-28	Apple	Yes		1
IPR2017-00319	8,923,941	Apple	1-13	Apple			1
IPR2017-00321	8,923,941	Apple	14-21	Apple	Yes		1
IPR2017-00315	8,929,965	Apple	1-12	Apple	Yes		1
IPR2017-01552	8,929,965	Fitbit	1-12	Fitbit	Yes		
IPR2017-01883	8,942,776	Apple	1-5 and 8	Apple			1
IPR2016-01849	8,966,144	Apple	1-3, 5-7, 9, 15-17, 19, 21, 26, 27, 29, 34, 37-39, 41, 49, 52, 54, 56, 57, 59-64, 66, 67, 78-83 and 86	Apple	not instituted - merits	1	1
IPR2016-01860	8,966,144	Apple	1-3, 5-7, 9, 15-17, 19, 21, 26, 27, 29, 34, 37-39, 41, 49, 52, 54, 56, 57, 59-64, 66, 67, 78-83 and 86	Apple		1	1
IPR2017-00154	8,966,144	Apple	1-3, 5-7, 9, 15-17, 19, 21, 26, 27, 29, 34, 37-39, 41, 49, 52, 54, 56, 57, 59-64, 66, 67, 78-83 and 86	Apple		1	1
IPR2017-00679	8,966,144	Apple	1-6, 8, 10, 13-16, 22, 27-40, 42-49, 52-55, 59-65, 77 and 80-87	Apple		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Apple is petitioner or RPI
IPR2017-00670	8,966,144	Apple	7, 9, 11, 12, 17-21, 23-26, 41, 50, 51, 56-58, 66-76, 78 and 79	Apple	pending (Jul-2018)	1	1
IPR2016-01212	8,966,144	Canon, Fujifilm, JVC Kenwood, Nikon, Olympus,	1-6, 8, 10, 13-16, 22, 27-40, 42-49, 52-55, 59-65, 77 and 80-87	Canon, Fujifilm, JVC Kenwood, Nikon, Olympus, Panasonic	Yes		
IPR2016-01216	8,966,144	Canon, Fujifilm, JVC Kenwood, Nikon, Olympus,	7, 9, 11, 12, 17-21, 23-26, 41, 50, 51, 56-58, 66-76, 78 and 79	Canon, Fujifilm, JVC Kenwood, Nikon, Olympus, Panasonic	Yes		
IPR2017-00316	8,989,830	Apple	1-6, 8-16 and 18-20	Apple		1	1
IPR2017-00317	8,989,830	Apple	1-6, 8-16 and 18-20	Apple	Yes	1	1
IPR2017-01553	8,989,830	Fitbit	1-6, 8-16 and 18-20	Fitbit	Yes		
IPR2017-00225	8,995,433	Apple	1-6 and 8	Apple	Yes		1
IPR2017-00337	9,038,163	Apple	1-10, 12-18, 21-31, 33-39, and 42	Apple	Yes		1
IPR2017-01947	9,044,180	Apple	1-32	Apple			1
IPR2018-00813	9,100,826	Apple	1, 2, 7, 8, 10, 11, 14, 15, 21, 22, 24, 26, 27, 30, 31 and 34	Apple		1	1
IPR2018-00810	9,100,826	Apple	1, 2, 7, 8, 10, 11, 14, 15, 21, 22, 24, 26, 27, 30, 31 and 34	Apple		1	1
IPR2016-01198	9,179,005	Apple	1, 24-26, 49, 50, 73-79, 83, 84, 88, 89, 92, 94-96, 98 and 99	Apple	Yes		1
IPR2017-01398	9,179,005	Apple	8, 12, 13, 33, 37, 38, 41, 57, 61, 62, 81-82, 86, 90 and 91	Apple			1
IPR2017-00156	9,189,437	Apple	1, 4-6, 9-16, 18, 30, 32 and 34	Apple		1	1
IPR2016-01841	9,189,437	Apple	1, 4-6, 9-16, 18, 30, 32, 34, 43 and 45	Apple		1	1
IPR2016-01842	9,189,437	Apple	1, 4-6, 9-16, 18, 30, 32, 34, 43 and 45	Apple	Yes	1	1
IPR2016-01844	9,189,437	Apple	1, 4-6, 9-16, 18, 30, 32, 34, 43 and 45	Apple		1	1
IPR2016-01840	9,189,437	Apple	1, 4-6, 9-16, 18, 30, 34, 43 and 45	Apple	not instituted - merits	1	1
IPR2018-00695	9,289,135	Apple	23-31	Apple			1
IPR2018-01140	9,402,032	Apple	1 and 13-15	Apple			1
IPR2018-00818	9,408,055	Apple	1-54	Apple			1
IPR2017-01993	9,414,199	Apple	1-5	Apple			1
IPR2018-00817	9,445,251	Apple	1-35	Apple			1

Section 2:

Google

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2014-00200	5,535,320	Google, Yahoo	1-20	Google, Yahoo	Yes		1
IPR2017-00536	5,754,946	Google	1, 2, 4 and 6-9	Google	settlement	1	1
IPR2017-00537	5,754,946	Google	1, 2, 4 and 6-9	Google		1	1
IPR2017-00529	5,809,428	Google	8-10	Google	settlement	1	1
IPR2017-00530	5,809,428	Google	8-10	Google		1	1
IPR2017-00559	5,809,428	Google	8-10	Google		1	1
IPR2015-00079	5,838,551	Google	1-3	Google			1
IPR2017-00532	5,894,506	Google	1-7 and 15-18	Google	settlement	1	1
IPR2017-00533	5,894,506	Google	1-7 and 15-18	Google		1	1
IPR2017-00534	5,894,506	Google	8-14 and 19-21	Google		1	1
IPR2017-00535	5,894,506	Google	8-14 and 19-21	Google		1	1
IPR2015-00849	5,902,347	Google, Apple, Samsung	5-10	Google, Apple, Samsung	Yes	1	1
IPR2015-00851	5,902,347	Google, Apple, Samsung	5-10	Google, Apple, Samsung	Yes	1	1
IPR2014-00532	5,959,633	Google, Samsung	1-4, 6, 8-11, 13 and 15	Google, Samsung	Yes		1
IPR2014-00980	5,978,791	Google, Youtube	1-4, 29-33, 35 and 41	Google, YouTube			1
IPR2015-00662	6,014,698	Google	1-3, 5-7, 9, 11-16 and 23	Google	Yes		1
IPR2015-00666	6,014,698	Google	17-20, 22-31, 34-39, 41-47 and 49	Google	Yes		1
IPR2015-00205	6,037,937	Google	13-17 and 19-24	Google			1
IPR2015-00204	6,037,937	Google	1-5 and 7-12	Google			1
IPR2015-00283	6,038,295	Google	17-24	Google			1
IPR2014-00533	6,057,854	Google, Samsung	1-3, 5, 7, 10-12, 14, 16, 19, 44, 54-57, 59, 61-66, 68, 69 and 71	Google, Samsung	Yes		1
IPR2014-00787	6,121,960	Google	1-3, 5, 7-10, 12-14, 19-22 and 24-30	Google	Yes		1
IPR2015-00211	6,128,298	Google	19	Google			1
IPR2015-00212	6,128,298	Google	23	Google			1
IPR2015-00197	6,128,298	Google	11-13 and 24-26	Google			1
IPR2015-00210	6,128,298	Google	14-18 and 22	Google			1
IPR2015-00202	6,128,298	Google	27-30	Google			1
IPR2015-00206	6,128,298	Google	31 and 32	Google			1
IPR2016-01522	6,151,493	Google, LG	1-6 and 8-10	Google, LG	Yes		1
IPR2015-00845	6,199,076	Google, Barnes & Noble, Lenovo	1-6, 14 and 15	Google, Barnes & Noble, Lenovo			1
IPR2016-00045	6,233,518	Google	45 and 46	Google, HTC, LG, Motorola, Samsung	Yes		1
IPR2013-00547	6,243,099	Google	1, 3-5, 11 and 13	Google	Yes		1
IPR2015-00658	6,286,045	Google	1-12, 14-19 and 34-42	Google			1
IPR2015-00657	6,286,045	Google	20-31, 43, 44, 47, 48, 59, 61-63, 72, 73, 75, 77 and 78	Google	Yes		1
IPR2015-00660	6,286,045	Google	49-53, 55-58, 64-67 and 69-71	Google	Yes		1
IPR2017-00819	6,292,743	Google	15	Google, HTC, Huawei, ZTE			1
IPR2014-00452	6,323,853	Google, Motorola	1-79	Google, Motorola	Yes		1
IPR2014-01518	6,323,853	Samsung	1-79	Samsung	Yes		
IPR2015-00200	6,333,973	Google	1-7	Google			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2015-00207	6,333,973	Google	21-26	Google			1
IPR2015-00201	6,333,973	Google	8-13 and 33	Google			1
IPR2018-00644	6,415,227	Google, LG	1-3 and 36	Google, LG			1
IPR2014-00977	6,415,280	Google, Youtube	10, 15, 16, 18, 25, 31-33, 36 and 38	Google, YouTube			1
IPR2015-00235	6,463,131	Google	1-8	Google		1	1
IPR2015-00236	6,463,131	Google	1-8	Google		1	1
IPR2017-00815	6,480,783	Google	1 and 3	Google, Waze			1
IPR2016-01535	6,480,783	Google	12-16, 18 and 19	Google, Waze	Yes		1
IPR2017-00816	6,480,783	Google	4 and 6	Google, Waze			1
IPR2017-00817	6,480,783	Google, Waze	20, 22 and 23	Google, Waze	pending (Jul-2018)		1
IPR2018-00346	6,523,061	Dish Network	1-5, 7-11 and 13- 17	Dish Network	settlement		
IPR2018-00384	6,523,061	Google	1-18	Google			1
IPR2015-01737	6,525,768	Google, Lenovo	1-16	Google, Lenovo			1
IPR2015-01746	6,529,824	Google	1-15	Google			1
IPR2016-00022	6,532,413	Google	64, 77 and 79	Google, HTC, LG, Motorola, Samsung	yes		1
IPR2014-00534	6,552,732	Google, Samsung	1-5, 8, 9, 12, 36 and 42	Google, Samsung	yes		1
IPR2013-00191	6,563,529	Google, Apple	1-6, 10-15, 17-19, 21, 23-25, 27 and 28	Google, Apple	yes		1
IPR2016-00797	6,604,101	Google	1, 2, 4-7, 12, 13, 15-17 and 22-28	Google, AOL			1
IPR2017-00818	6,615,130	Google	6	Google, Waze			1
IPR2016-01536	6,615,130	Google	1-4	Google, Waze	Yes		1
IPR2016-01537	6,615,130	Google	1-4	Google, Waze	Yes	2	1
IPR2014-00052	6,628,314	Facebook	11-13, 15, 18 and 20	Facebook	Yes		
IPR2014-00053	6,628,314	Facebook	11-13, 15, 18 and 20	Facebook	Yes		
IPR2014-00738	6,628,314	Google	11-22	Google	Yes	1	1
IPR2014-00038	6,628,314	Google	11-13, 15, 18 and 20	Google	Yes	1	1
IPR2014-00743	6,628,314	Google	11-13, 15, 18 and 20	Google	Yes	1	1
IPR2014-00744	6,628,314	Google	11-13, 15, 18 and 20	Google	Yes	1	1
IPR2014-00698	6,628,314	Match, People Media	11-13, 15, 18 and 20	Match, People Media	Yes		
IPR2014-00699	6,628,314	Match, People Media	11-13, 15, 18 and 20	Match, People Media	Yes		
IPR2014-00039	6,628,314	Microsoft	11-22	Microsoft	Yes		
IPR2017-00409	6,690,387	Google	1-12	Google, Acer, Asus		1	1
IPR2017-00408	6,690,387	Google	9-12	Google, Acer, Asus		1	1
IPR2018-00474	6,742,021	Google	1, 2, 5, 7-13, 15-20, 22-26, 72, 73, 76, 78-89 and 127-132	Google		1	1
IPR2018-00475	6,742,021	Google	3, 4, 6, 9, 14, 21, 74, 75, 77 and 80	Google		1	1
IPR2018-00476	6,757,718	Google	1-27	Google			1
IPR2015-00215	6,765,591	Google	1, 4, 7 and 8	Google			1
IPR2014-00031	6,771,290	Google	2 and 3	Google	Yes	1	1
IPR2014-00033	6,771,290	Google	2 and 3	Google	Yes	1	1
IPR2017-00437	6,772,114	Google	10-16, 20 and 21	Google, Acer, Asus	Yes		1
IPR2018-00646	6,792,353	Google, LG	1-3, 6 and 7	Google, LG			1
IPR2014-00979	6,928,442	Google, Youtube	1, 2, 4, 7, 23, 27, 28 and 30	Google, YouTube			1
IPR2015-00090	6,937,572	Google	17-20	Google		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2015-00091	6,937,572	Google	17-20	Google		1	1
IPR2013-00249	6,981,007	Google	1-9 and 11-15	Google	Yes		1
IPR2014-00036	7,024,205	Google	1-6	Google	Yes		1
IPR2015-01714	7,072,667	Google, LG	1-15	Google, LG	Yes	1	1
IPR2015-01715	7,072,667	Google, LG	1-15	Google, LG	Yes	1	1
IPR2017-00410	7,184,064	Google	1-9	Google, Acer, Asus		1	1
IPR2017-00411	7,184,064	Google	1-9	Google, Acer, Asus		1	1
IPR2014-00037	7,203,752	Google	25-29	Google	Yes		1
IPR2014-01338	7,389,181	Google	1 and 3-11	Google	Yes	1	1
IPR2014-01339	7,389,181	Google	1 and 3-11	Google	Yes	1	1
IPR2014-00027	7,463,151	Google	21 and 22	Google	Yes		1
IPR2014-00207	7,496,854	Google, Apple, Motorola	1-18, 36-56, 86-95, 97, 98, 100 and 101	Google, Apple, Motorola	Yes		1
IPR2014-00206	7,496,854	Google, Apple, Motorola	19-35, 57-85, 96 and 99	Google, Apple, Motorola	Yes		1
IPR2015-00846	7,509,178	Google, Barnes & Noble, Lenovo	1-9, 13-17, 28 and 29	Google, Barnes & Noble, Lenovo	Yes		1
IPR2017-00447	7,529,806	Google	1-16	Google, Acer, Asus			1
IPR2017-02083	7,535,890	Google	14-20, 23, 24, 26, 28-34, 37, 39, 51-54, 57, 58, 60, 62-65, 68 and 70	Google, Huawei, Motorola		1	1
IPR2017-02082	7,535,890	Google	1-6, 9, 10, 12, 14, 16-20, 23, 24, 26, 40-43, 46, 47, 49, 51-54, 57, 58 and 60	Google, Huawei, Motorola		1	1
IPR2017-02084	7,535,890	Google	7, 8, 11, 13, 21, 22, 25, 27, 35, 36, 38, 44, 45, 48, 50, 55, 56, 59, 61, 66, 67 and 69	Google, Huawei, Motorola			1
IPR2013-00548	7,542,035	Google	1, 7, 13, 22, 33, 44, 53, 54, 69, 73, 78, 80, 82-84, 86, 89, 98, 102, 105, 113, 115, 118-121 and 123	Google	Yes		1
IPR2016-01669	7,552,124	Google	1-10	Google			1
IPR2017-00898	7,552,124	Microsoft, Samsung, ZTE	1-10	Microsoft, Samsung, ZTE			
IPR2017-02054	7,633,524	Google, Lenovo	1, 4, 5 and 14	Google, Huawei, Lenovo, Motorola			1
IPR2015-01738	7,650,234	Google	1-30	Google			1
IPR2015-00806	7,765,482	Google, HTC	12, 13, 16, 18, 19, 21-25, 35-38, 40-42, 44-46 and 49	Google, HTC, LG, Motorola	yes		1
IPR2014-00978	7,802,310	Google, Youtube	1, 2, 5-8, 10-12, 14, 16-19, 24, 29, 32, 70, 81, 82 and 86	Google, YouTube			1
IPR2017-01685	7,804,948	Google	1-4, 6-8, 18, 21 and 22	Google			1
IPR2014-01031	7,848,353	Google	1-8 and 21-27	Google, Motorola	Yes		1
IPR2017-01684	7,853,000	Google	1-8, 12 and 18-23	Google			1
IPR2017-02052	7,907,172	Google	1, 2, 4, 7-9 and 12-26	Google, Huawei, Lenovo, Motorola			1
IPR2014-00208	7,917,843	Google, Apple, Motorola	1-44	Google, Apple, Motorola	Yes		1
IPR2014-00450	7,921,356	Google	1-20	Google	Yes		1
IPR2014-01340	7,929,800	Google	1-4, 10, 11, 13-15 and 18	Google	Yes		1
IPR2016-00212	7,974,339	Google	1, 6, 7, 9, 10, 12 and 13	Google, On2, YouTube	Yes	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2016-00215	7,974,339	Google	1, 6, 7, 9, 10, 12 and 13	Google, On2, YouTube	Yes	1	1
IPR2015-00347	8,010,988	Google	1-3, 7-17, 21-34, 37, 38, 40-43, 46, 47 and 49-52	Google, YouTube	Yes		1
IPR2013-00546	8,077,176	Google	1, 4, 12, 16, 17 and 19-21	Google	Yes		1
IPR2018-01115	8,078,158	Google	10, 19 and 20	Google			1
IPR2014-01341	8,078,396	Google	1, 2, 5, 8-13 and 16	Google	Yes		1
IPR2017-02056	8,134,600	Google, Lenovo	1-5, 8-10, 12 and 13	Google, Huawei, Lenovo, Motorola			1
IPR2014-01188	8,156,096	Google	16, 17, 19 and 20	Google	Yes		1
IPR2017-02085	8,199,747	Google	1-15	Google, Huawei, Motorola			1
IPR2015-00345	8,205,237	Google	1-27, 29, 30, 32-35, 37, 38 and 40	Google, YouTube	Yes		1
IPR2018-01079	8,213,970	Google	1 and 3-9	Google, Huawei, LG			1
IPR2015-01472	8,306,514	Google, Dropcam, Nest Labs	1, 3-6, 30, 32 and 33	Google, Dropcam, Nest Labs			1
IPR2014-00203	8,306,993	Google, Apple, Motorola	1-24	Google, Apple, Motorola			1
IPR2015-01470	8,311,522	Google, Dropcam, Nest Labs	1, 3, 6, 17, 21, 24 and 25	Google, Dropcam, Nest Labs			1
IPR2015-01473	8,311,523	Google, Dropcam, Nest Labs	1, 3, 4, 6, 8-10, 19, 21, 23, 25 and 26	Google, Dropcam, Nest Labs			1
IPR2015-01474	8,311,524	Google, Dropcam, Nest Labs	1, 3-5, 7 and 9	Google, Dropcam, Nest Labs			1
IPR2015-01471	8,315,618	Google, Dropcam, Nest Labs	1, 3, 4, 15 and 19-25	Google, Dropcam, Nest Labs			1
IPR2015-01475	8,315,619	Google, Dropcam, Nest Labs	1, 3, 4, 8, 19, 21, 23, 29, 30 and 32	Google, Dropcam, Nest Labs			1
IPR2017-00913	8,402,384	Google	1-13	Google			1
IPR2015-00474	8,437,797	Google	1-16	Google			1
IPR2018-01258	8,441,438	Google	1 and 3-5	Google, Huawei			1
IPR2017-02053	8,477,197	Google, Lenovo	1-4 and 7-19	Google, Huawei, Lenovo, Motorola			1
IPR2017-01620	8,489,868	Google	1, 13, 76-86, 88-95, 98, 100, 104, 112, 113, 137, 139 and 142	Google		1	1
IPR2017-01619	8,489,868	Google	1, 13, 76-95, 98, 100, 104, 108, 112, 113, 137-139 and 142-144	Google		1	1
IPR2014-00347	8,504,631	Google, Twitter	1-10	Google, Twitter			1
IPR2015-01747	8,538,498	Google	1-24	Google, Lenovo			1
IPR2018-01257	8,552,978	Google	10 and 12	Google, Huawei			1
IPR2015-00724	8,558,921	Google	1-17	Google			1
IPR2017-01665	8,566,960	Google	1-25	Google			1
IPR2017-01683	8,571,194	Google	1-16	Google			1
IPR2015-00179	8,572,279	Google	1-4, 6-11, 13-21, 24, 27-35, 37, 38, 42, 43, 47-49, 54, 55, 62 and 63	Google			1
IPR2017-02058	8,581,991	Google, Lenovo	1-3, 10-14 and 21	Google, Huawei, Lenovo, Motorola			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2017-02059	8,581,991	Google, Lenovo	22, 23, 25, 27-29, 32, 33 and 35-38	Google, Huawei, Lenovo, Motorola			1
IPR2015-00180	8,601,154	Google	1-4, 6-11, 13-17, 19-21, 24, 27 and 29-34	Google, YouTube	Yes		1
IPR2015-00807	8,612,515	Google, HTC	1, 2, 6, 10, 11, 18-20, 23, 26, 28-30, 38 and 39	Google, HTC, LG, Motorola	Yes		1
IPR2018-00461	8,624,550	LG	1-18	LG	pending (Jul-2018)		
IPR2015-00343	8,640,179	Google	1-3, 6-14, 18, 19, 21-27 and 29-37	Google, YouTube	Yes		1
IPR2015-00348	8,656,441	Google	1-3, 6-14, 18, 19, 21-27, 29 and 30	Google, YouTube	Yes		1
IPR2017-01652	8,661,094	Google	1-16	Google	not instituted - merits	1	1
IPR2017-01653	8,661,094	Google	1-16	Google		1	1
IPR2015-01748	8,700,312	Google	1-16	Google			1
IPR2017-00914	8,713,466	Google	1-26	Google			1
IPR2017-02080	8,724,622	Google	3-23	Google, Huawei, Motorola			1
IPR2017-02081	8,724,622	Google	1, 2 and 24-39	Google, Huawei, Motorola			1
IPR2017-00911	8,745,149	Google	1-17	Google		1	1
IPR2017-00912	8,745,149	Google	1-17	Google		1	1
IPR2018-01102	8,811,952	Google	26-28 and 30	Google			1
IPR2017-02055	8,947,542	Google, Lenovo	1, 2, 10, 11, 19 and 20	Google, Huawei, Lenovo, Motorola			1
IPR2017-02067	8,995,433	Google	1-27	Google, Huawei, Motorola			1
IPR2017-02057	9,197,806	Google, Lenovo	1-3, 5-13 and 16	Google, Huawei, Lenovo, Motorola			1
IPR2018-01050	9,247,019	Google	1-3, 5, 11, 12, 16, 19 and 20	Google			1
IPR2018-01118	9,325,600	Google	7, 11 and 12	Google			1
IPR2018-01116	9,351,254	Google	1-15 and 28-33	Google		1	1
IPR2018-01117	9,351,254	Google	1-15 and 28-33	Google		1	1
IPR2018-01103	9,386,433	Google	1-30	Google	pending (Jul-2018)	1	1
IPR2018-01104	9,386,433	Google	1-30	Google		1	1
IPR2018-01080	9,408,055	Google	1, 2, 5-7, 14, 15, 17, 21-25, 27, 28, 30, 32-34, 36, 37, 40-43, 45, 49 and 54	Google, Huawei, LG			1
IPR2018-01094	9,444,812	Google	1-17	Google		1	1
IPR2018-01095	9,444,812	Google	1-17	Google		1	1
IPR2018-01081	9,445,251	Google	1, 2, 4-6, 8, 10, 12, 22-24, 27, 29, 31, 32 and 35	Google, Huawei, LG		1	1
IPR2018-01083	9,445,251	Google	1, 2, 4-6, 8, 10, 12, 22-24, 27, 29, 31, 32 and 35	Google, Huawei, LG		1	1
IPR2018-01082	9,445,251	Google	13-19 and 21	Google, Huawei, LG		1	1
IPR2018-01084	9,445,251	Google	13-19 and 21	Google, Huawei, LG		1	1
IPR2018-01085	9,467,838	Google	1, 4-6, 10-12, 14, 15, 17-20, 37-40 and 54	Google, Huawei, LG		1	1
IPR2018-01087	9,467,838	Google	1, 4-7, 10-12, 14, 15, 17-20 and 54	Google, Huawei, LG		1	1
IPR2018-01088	9,467,838	Google	22-27, 34, 37-40 and 44-47	Google, Huawei, LG		1	1
IPR2018-01086	9,467,838	Google	7, 22-27, 34 and 44-47	Google, Huawei, LG		1	1
IPR2018-01051	9,516,127	Google	10-23	Google			1
IPR2018-01052	9,516,127	Google	33, 35, 38, 41, 42, 44, 45 and 48	Google			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally duplicative petitions	Tally where Google is petitioner or RPI
IPR2018-01047	9,516,129	Google	1-11, 13, 14, 17-27, 29, 30, 34 and 35	Google		1	1
IPR2018-01048	9,516,129	Google	1-11, 13, 14, 17-27, 29, 30, 34 and 35	Google		1	1
IPR2017-01656	9,528,843	Google	1, 2, 5, 7, 10 and 11	Google, HTC, Huawei, ZTE		1	1
IPR2017-01677	9,528,843	Google	1, 2, 5, 7, 10 and 11	Google, HTC, Huawei, ZTE		1	1
IPR2018-01049	9,553,816	Google	9-16	Google		1	1
IPR2018-01101	9,553,816	Google	9-16	Google		1	1
IPR2018-00944	9,632,503	Google	1-6, 8, 9, 15, 20 and 28	Google		1	1
IPR2018-00946	9,632,503	Google	1-6, 8, 9, 15, 20 and 28	Google		1	1
IPR2018-00945	9,643,706	Google	1, 9, 10, 13, 14, 24, 25, 28 and 29	Google, Alphabet, Inc., Loon, Inc.		1	1
IPR2018-00947	9,643,706	Google	1, 9, 10, 13, 14, 24, 25, 28 and 29	Google, Alphabet, Inc., Loon, Inc.		1	1
IPR2017-00389	RE43,564	Google	1-7	Google, Acer, Asus		1	1
IPR2017-00388	RE43,564	Google	1, 9, 10, 13, 14, 24, 25, 28 and 29	Google, Acer, Asus		1	1
IPR2015-00789	RE44,550	Google	1, 2, 4, 7, 17, 18, 25, 27, 31, 33, 41, 42, 76, 79 and 84	Google		1	1
IPR2015-00788	RE44,550	Google	1-3, 14, 18, 25, 27-30, 32, 34, 35, 39, 43, 46, 48, 51-53, 58, 61, 63, and 83	Google		1	1
IPR2017-00386	RE44,913	Google	1 and 3-16	Google, Acer, Asus		1	1
IPR2017-00387	RE44,913	Google	1-5, 9 and 13	Google, Acer, Asus		1	1
						73	189
						TOTAL duplicative petitions	Total with Google as petitioner or RPI
						Google duplicative %	38.62433862

Section 3:

LG

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where LG is petitioner or RPI
IPR2016-00923	5,812,789	Apple		Apple	Yes		
IPR2016-00847	5,812,789	LG, HTC	1, 3-6, 11 and 13	LG, HTC	Yes		1
IPR2016-00664	5,812,789	ZTE		ZTE			
IPR2016-01203	5,850,482	Apple		Apple	Yes		
IPR2017-00683	5,850,482	LG	1-3, 5-14, 16, 17, 22-26, 28 and 29	LG			1
IPR2015-00328	5,898,849	LG	1 and 14	LG			1
IPR2015-01978	5,946,634	LG	1-4, 6, 7, 20, 22, 23 and 25	LG			1
IPR2016-00924	5,960,464	Apple		Apple	Yes		
IPR2016-00848	5,960,464	LG, HTC	1-4, 7-13, 16-24, 32-36 and 40	LG, HTC	Yes		1
IPR2016-00665	5,960,464	ZTE		ZTE			
IPR2015-01400	6,009,469	Avaya, Cisco		Avaya, Cisco	Yes		
IPR2015-00198	6,009,469	LG, Hulu, Toshiba, Vizio	1-3, 5, 6, 9, 10, 14, 17 and 18	LG, Hulu, Toshiba, Vizio	Yes	1	1
IPR2015-01015	6,009,469	LG, Toshiba, Vizio	1-3, 5, 6, 9, 10, 14, 17 and 18	LG, Toshiba, Vizio	not instituted - procedural	1	1
IPR2014-01386	6,012,103	LG	14-16, 18-20 and 23-27	LG			1
IPR2017-01700	6,095,661	LG	34 and 36	LG			1
IPR2015-00335	6,108,686	LG	1, 2, 20, 23, 29 and 30	LG	Yes		1
IPR2014-00717	6,108,686	Samsung		Samsung	Yes		
IPR2015-01398	6,108,704	Avaya, Cisco		Avaya, Cisco	Yes		
IPR2015-00209	6,108,704	LG, Hulu, Toshiba, Vizio	1, 11, 12, 14, 16, 19, 22, 23 and 27	LG, Hulu, Toshiba, Vizio	Yes	1	1
IPR2015-01017	6,108,704	LG, Toshiba, Vizio	1, 11, 12, 14, 16, 22, 23, 27, 30 and 31	LG, Toshiba, Vizio	not instituted - procedural	1	1
IPR2015-01406	6,108,704	Verizon		Verizon	Yes		
IPR2015-01397	6,131,121	Avaya, Cisco		Avaya, Cisco	Yes		
IPR2015-00196	6,131,121	LG, Hulu, Toshiba, Vizio	3, 4 and 6-14	LG, Hulu, Toshiba, Vizio	Yes	1	1
IPR2015-01014	6,131,121	LG, Toshiba, Vizio	6, 8, 10, 11, 13 and 14	LG, Toshiba, Vizio	not instituted - procedural	1	1
IPR2015-01407	6,131,121	Verizon		Verizon	Yes		
IPR2016-01522	6,151,493	LG, Google	1-6 and 8-10	LG, Google	Yes		1
IPR2018-00551	6,212,662	LG	1-4	LG	pending (Jul-2018)	1	1
IPR2018-00553	6,212,662	LG	1-4	LG		1	1
IPR2018-00554	6,212,662	LG	1-4	LG		1	1
IPR2016-00045	6,233,518	Google	45 and 46	LG, Google, HTC, Motorola, Samsung	Yes		1
IPR2014-01396	6,249,825	LG	1-3, 5, 7, 10-13 and 15-20	LG			1
IPR2015-00329	6,266,715	LG	1, 10, 13, 22, 24 and 25	LG			1
IPR2014-01135	6,377,804	LG, HTC, NEC, Pantech, ZTE	1-12	LG, HTC, NEC, Pantech, ZTE	Yes		1
IPR2018-00644	6,415,227	LG, Google	1-3, 6 and 7	LG, Google			1
IPR2017-00443	6,470,399	LG, Huawei, ZTE	1-8, 10, 11 and 13-15	LG, Huawei, ZTE			1
IPR2017-01744	6,488,390	LG	19	LG			1
IPR2014-01405	6,493,770	LG	1-3, 5, 7, 10-13 and 15-20	LG			1
IPR2015-00937	6,513,088	LG	3 and 4	LG			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where LG is petitioner or RPI
IPR2016-00022	6,532,413	Google	64, 77 and 79	LG, Google, HTC, Motorola Mobility	Yes		1
IPR2015-00938	6,549,970	LG	22	LG			1
IPR2015-00336	6,618,593	LG	1, 4, 7, 10 and 13-21	LG	Yes		1
IPR2014-00735	6,618,593	Samsung		Samsung	Yes		
IPR2015-00939	6,639,588	LG	1	LG			1
IPR2014-00959	6,700,551	LG	1-3 and 5	LG			1
IPR2015-01642	6,721,110	LG	40-45, 47 and 48	LG	Yes		1
IPR2015-00322	6,784,879	LG	17, 20, 21 and 24	LG			1
IPR2015-01644	6,785,065	LG	1-9	LG	Yes		1
IPR2018-00646	6,792,353	LG, Google	1-3 and 36	LG, Google			1
IPR2014-01318	6,810,019	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE	11-13	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE			1
IPR2014-01131	6,819,923	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE	11, 13 and 14	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE			1
IPR2015-00323	6,889,332	LG	9, 10 and 13-17	LG			1
IPR2017-00415	6,895,449	LG, Huawei, ZTE	1-10, 12, 13 and 15-18	LG, Huawei, ZTE	settlement	1	1
IPR2017-00448	6,895,449	LG, Huawei, ZTE	1-10, 12, 13 and 15-18	LG, Huawei, ZTE		1	1
IPR2015-00324	6,895,520	LG	16-18 and 20-23	LG	Yes		1
IPR2015-00326	6,897,871	LG	1-3, 5, 6, 8-11, 13, 15, 17, 18 and 20	LG	Yes	1	1
IPR2015-00327	6,897,871	LG	1-3, 5, 6, 8-11, 13, 15, 17, 18 and 20	LG		1	1
IPR2015-01714	7,072,667	LG, Google	1-15	LG, Google	Yes	1	1
IPR2015-01715	7,072,667	LG, Google	1-15	LG, Google	Yes	1	1
IPR2015-00940	7,089,342	LG	14 and 15	LG			1
IPR2015-01620	7,095,945	LG	21	LG	not instituted - procedural	1	1
IPR2015-00321	7,095,945	LG	18 and 21	LG	Yes	1	1
IPR2016-01516	7,149,511	LG	1-12 and 58-67	LG			1
IPR2015-01874	7,151,802	LG	1-3, 8-11, 16, 25-27, 32-35, 40, 49-50 and 52-53	LG			1
IPR2014-01132	7,215,962	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE	1-4, 11-15 and 20	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE			1
IPR2014-01133	7,218,923	LG, HTC, NEC, Pantech, ZTE	1-5, 8, 9, 24-26, 31, 33, 39 and 40	LG, HTC, NEC, Pantech, ZTE	Yes		1
IPR2018-00495	7,239,111	LG	1-3, 6-8, 12, 14 and 16-18	LG			1
IPR2015-01875	7,260,521	LG	1, 2, 5-8, 10, 11, 14, 15, 17, 28, 29, 32, 33, 35, 37, 38, 41, 42, 44, 55, 56, 59, 60 and 62	LG			1
IPR2015-00159	7,296,121	Apple, Amazon, HTC, Samsung		Apple, Amazon, HTC, Samsung	Yes		
IPR2015-00163	7,296,121	Apple, Amazon, HTC, Samsung		Apple, Amazon, HTC, Samsung	Yes		
IPR2015-01376	7,296,121	LG, Sony	1-3, 8, 11, 12 and 15-25	LG, Sony	Yes	1	1
IPR2015-01353	7,296,121	LG, Sony	4-6, 11, 12 and 19-24	LG, Sony	Yes	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where LG is petitioner or RPI
IPR2014-01097	7,300,194	LG	1, 4-6, 16, 22, 23, 27, 28 and 31	LG	adverse judgment	1	1
IPR2015-00490	7,300,194	LG	1, 4-6, 16, 22, 23, 27, 28 and 31	LG	Yes	1	1
IPR2017-01675	7,310,104	LG	1, 10, 11, 16, 17 and 22	LG			1
IPR2015-01500	7,321,368	LG, HTC, Samsung	1-3, 5, 7, 13-15, 17-21 and 23-25	LG, HTC, Samsung	Yes		1
IPR2015-00330	7,327,369	LG	1 and 2	LG	Yes		1
IPR2017-01544	7,342,967	LG	1-5	LG			1
IPR2015-00404	7,365,871	LG, Microsoft, Nokia	1-8 and 12-15	LG, Microsoft, Nokia, Sony, Sharp		1	1
IPR2015-00402	7,365,871	Sony	1-8 and 12-15	LG, Microsoft, Nokia, Sony, Sharp	settlement	1	1
IPR2015-01659	7,367,037	LG	1, 5, 8-11, 15-18 and 22	LG	Yes		1
IPR2014-01362	7,384,177	LG	1-3, 5-7, 9, 10, 13-15, 19, 21 and 23-27	LG	Yes	1	1
IPR2015-00489	7,384,177	LG	1-3, 5-7, 9, 10, 13-15, 19, 21 and 23-27	LG	Yes	1	1
IPR2015-00495	7,404,660	LG	1, 3, 10, 16, 17, 25, 28, 33 and 34	LG	not instituted - procedural	1	1
IPR2015-00487	7,404,660	LG	1, 3, 5, 10, 13, 16, 17, 25-29 and 33-35	LG	Yes	1	1
IPR2015-01717	7,404,660	LG	1, 3, 5, 10, 13, 16, 17, 25-29 and 33-35	LG	Yes	1	1
IPR2015-00506	7,434,973	LG	1-5	LG	Yes	1	1
IPR2015-01666	7,434,973	LG	1-5	LG	Yes	1	1
IPR2015-00497	7,434,974	LG	1, 3-5, 7-11, 13 and 17	LG			1
IPR2015-00942	7,475,180	LG	14-20, 23, 24, 28 and 29	LG			1
IPR2014-01096	7,537,370	LG	1, 4, 8, 13, 15, 27, 29 and 47	LG	Yes	1	1
IPR2015-00493	7,537,370	LG	1, 4, 8, 13, 15, 27, 29 and 47	LG	Yes	1	1
IPR2015-01502	7,542,045	LG, HTC, Samsung	1, 2, 4-7, 9, 10, 12, 13 and 15-17	LG, HTC, Samsung	Yes		1
IPR2017-01637	7,590,059	LG	11-30	LG			1
IPR2017-01670	7,633,506	LG	1-9	LG			1
IPR2015-00408	7,643,168	LG, Microsoft, Nokia	1-31	LG, Microsoft, Nokia, Sony, Sharp		1	1
IPR2015-00401	7,643,168	Sony	1-31	LG, Microsoft, Nokia, Sony, Sharp		1	1
IPR2014-00964	7,665,664	LG	13 and 29	LG			1
IPR2015-00325	7,742,053	LG	1, 2 and 5-7	LG	Yes		1
IPR2015-01501	7,777,753	LG, HTC, Samsung	1-4	LG, HTC, Samsung	Yes		1
IPR2018-00676	7,791,319	LG	1-5 and 9-20	LG	pending (Jul-2018)	1	1
IPR2018-00677	7,791,319	LG	1-5 and 9-20	LG		1	1
IPR2017-01671	7,796,133	LG	1-13 and 40	LG			1
IPR2018-00493	7,834,586	LG	8-13	LG			1
IPR2018-00683	7,893,655	LG	3, 5, 6, 8, 10 and 11	LG			1
IPR2015-00492	7,914,196	LG	1-25	LG			1
IPR2014-01134	7,941,174	LG, Dell, HTC, NEC, Pantech, ZTE	1, 6, 9, 14, 18 and 19	LG, Dell, HTC, NEC, Pantech, ZTE	Yes		1
IPR2014-00209	7,953,390	LG, HTC, Samsung	16, 19 and 20	LG, HTC, Samsung	Yes	1	1
IPR2014-00212	7,953,390	LG, HTC, Samsung	16, 19 and 20	LG, HTC, Samsung	adverse judgment	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where LG is petitioner or RPI
IPR2018-00559	7,995,091	LG	1-12	LG			1
IPR2018-00678	7,999,514	LG	1-9 and 13-20	LG			1
IPR2014-01342	8,004,497	LG	1-4	LG			1
IPR2015-00337	8,028,323	LG	1-5, 10, 11, 13, 14 and 16-18	LG			1
IPR2014-00709	8,028,323	Samsung	1-5, 10, 11, 13, 14 and 16-18	Samsung			
IPR2015-00340	8,045,952	LG	1-4, 9-12 and 14	LG			1
IPR2014-00740	8,045,952	Samsung		Samsung			
IPR2015-00334	8,050,652	LG	1, 3, 4, 6, 7, 10, 11, 13, 42, 44, 45, 47-50, 52 and 55	LG			1
IPR2014-00737	8,050,652	Samsung		Samsung			
IPR2015-01494	8,054,315	LG, HTC, Samsung	1-4, 8-12, 14, 15, 19 and 20	LG, HTC, Samsung			1
IPR2014-01136	8,055,820	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE	1, 2, 4, 6-10, 12, 13, 15, 17-21, 23 and 24	LG, Amazon, Dell, HTC, NEC, Pantech, ZTE			1
IPR2014-01302	8,059,015	LG	1, 2, 4-7, 13, 15, 17-19, 21 and 22	LG			1
IPR2017-01593	8,068,171	LG	1-8	LG			1
IPR2016-00986	8,165,049	LG	15	LG	not instituted - procedural	1	1
IPR2015-01986	8,165,049	LG	11-15, 17 and 28-31	LG	Yes	1	1
IPR2015-00339	8,214,873	LG	1, 2, 5-8, 15-19, 22, 23, 25-27, 30, 31, 34-37 and 44-46	LG			1
IPR2014-00723	8,214,873	Samsung		Samsung			
IPR2015-00496	8,215,816	LG	1-4	LG			1
IPR2015-00338	8,230,099	LG	1 and 10-12	LG			1
IPR2014-00711	8,230,099	Samsung		Samsung			
IPR2018-00508	8,232,766	LG	1-24	LG			1
IPR2017-01624	8,284,844	LG	1-14	LG	not instituted - merits	1	1
IPR2018-00477	8,284,844	LG	1-14	LG		1	1
IPR2016-00178	8,385,966	LG	1-17	LG			1
IPR2015-01984	8,434,020	LG	1, 2, 5-8, 10, 11, 13 and 16	LG	Yes		1
IPR2015-01983	8,498,671	LG	1- 5, 7-12, 15 and 16	LG	Yes		1
IPR2016-01211	8,504,746	Canon, Fujifilm, JVC, Nikon, Olympus, Panasonic, Samsung		Canon, Fujifilm, JVC, Nikon, Olympus, Panasonic, Samsung	Yes		
IPR2017-00678	8,504,746	LG	1-12, 14, 15, 17-21, 23-31, 34 and 35	LG			1
IPR2014-01343	8,519,973	LG	1-8, 11, 12 and 14-20	LG			1
IPR2018-00460	8,624,550	LG	1-18	LG	not instituted - procedural	1	1
IPR2018-00461	8,624,550	LG	1-18	LG		1	1
IPR2018-00111	8,624,550	Samsung, ZTE		Samsung, ZTE			
IPR2015-01503	8,681,164	LG, HTC, Samsung	1, 6-12 and 17	LG, HTC, Samsung			1
IPR2015-01985	8,713,476	LG	1, 4-6, 8, 9, 20, 26, 27 and 29	LG	Yes		1
IPR2017-01667	8,724,622	Facebook, WhatsApp		Facebook, WhatsApp			

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where LG is petitioner or RPI
IPR2017-02090	8,724,622	LG, Huawei	3, 6-8, 10, 11, 13-23, 27-35, 38 and 39	LG, Huawei			1
IPR2017-01225	8,760,454	LG	2-11	LG			1
IPR2018-00674	8,787,924	LG	1, 2, 5-9 and 12-20	LG			1
IPR2015-01988	8,792,398	LG	10, 11 and 13	LG	yes		1
IPR2016-00197	8,848,556	LG	13-15 and 21-23	LG	not instituted - merits	1	1
IPR2016-00711	8,848,556	LG	5-8, 13-16 and 21-24	LG		1	1
IPR2018-00709	8,867,351	LG	1, 3-7 and 9-12	LG	pending (Jul-2018)	1	1
IPR2018-00710	8,867,351	LG	1, 3-7 and 9-12	LG		1	1
IPR2016-00195	8,868,060	LG	1, 3, 7, 9 and 15	LG			1
IPR2016-01225	8,966,144	Canon, Fujifilm, JVC, Nikon, Olympus, Panasonic, Samsung		Canon, Fujifilm, JVC, Nikon, Olympus, Panasonic, Samsung	Yes		
IPR2017-00672	8,966,144	LG	1-36, 38-56, 58-65, 67-74 and 77-87	LG			1
IPR2017-01427	8,995,433	Facebook, WhatsApp		Facebook, WhatsApp			
IPR2017-01428	8,995,433	Facebook, WhatsApp		Facebook, WhatsApp			
IPR2017-02087	8,995,433	LG	1-8	LG			1
IPR2017-02088	8,995,433	LG, Huawei	9-12, 14-17, 25 and 26	LG, Huawei			1
IPR2018-00558	9,014,667	LG	31, 33 and 35	LG			1
IPR2017-01806	9,119,266	LG	9	LG			1
IPR2017-01038	9,189,437	LG	1-45	LG	Yes		1
IPR2016-01733	9,189,437	Samsung		Samsung	Yes		
IPR2018-00704	9,226,320	LG	1, 3, 4, 8-10, 12, 15-17, 20, 21, 25, 27 and 30	LG	pending (Jul-2018)	1	1
IPR2018-00705	9,226,320	LG	1, 3, 4, 8-10, 12, 15-17, 20, 21, 25, 27 and 30	LG		1	1
IPR2018-00673	9,497,743	LG	1-4 and 6-9	LG			1
IPR2017-01226	9,582,846	LG	1-8	LG			1
IPR2015-01653	RE43,106	LG	7-19	LG	Yes		1
IPR2016-01678	RE43,106	LG	38-54	LG			1
IPR2016-01677	RE43,106	LG	4-6, 20-27, 36 and 37	LG	Yes		1
IPR2015-01987	RE44,828	LG	16-28	LG			1
						50	144
						Total Duplicative Petitions	Total with LG is petitioner or RPI
						LG duplicative %	34.72222222

Section 4:

Microsoft

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2016-01576	5,754,946	Microsoft	1, 2, 4 and 7-9	Microsoft	settlement	1	1
IPR2016-01581	5,754,946	Microsoft	1, 2, 4 and 7-9	Microsoft		1	1
IPR2016-01179	5,850,482	Microsoft, Samsung	1-3, 5, 6, 12-14, 16, 17 and 28	Microsoft, Samsung	yes		1
IPR2015-00484	5,894,554	Microsoft	12, 20-31, 33, 35-45, 47 and 49	Microsoft	pending (Jul-2018)	1	1
IPR2015-00483	5,894,554	Microsoft	12-19, 32, 34, 46 and 48	Microsoft	Yes	1	1
IPR2015-00258	5,944,786	Microsoft	1-10	Microsoft			1
IPR2014-00574	6,151,604	Microsoft	1, 2, 6, 7, 11-13, 31, 32, 36, 37 and 41-43	Microsoft		1	1
IPR2013-00562	6,151,604	Microsoft	1-15 and 31-45	Microsoft	Yes	1	1
IPR2014-00575	6,151,604	Microsoft	16-18, 24-29, 46-48 and 54-59	Microsoft		1	1
IPR2013-00563	6,151,604	Microsoft	16-30 and 46-60	Microsoft	Yes	1	1
IPR2014-00576	6,163,775	Microsoft	1, 2, 6, 7, 11, 12, 15, 31, 32, 36, 37, 41, 42 and 45	Microsoft		1	1
IPR2013-00559	6,163,775	Microsoft	1-15 and 31-45	Microsoft	Yes	1	1
IPR2013-00561	6,163,775	Microsoft	16, 24-30, 46 and 54-60	Microsoft	Yes	1	1
IPR2014-00577	6,163,775	Microsoft	16-18, 24-29, 46-48 and 54-59	Microsoft		1	1
IPR2013-00560	6,163,775	Microsoft	17-23 and 47-53	Microsoft	Yes		1
IPR2015-00494	6,199,076	Microsoft	1-17	Microsoft			1
IPR2015-00486	6,415,335	Microsoft	30, 32, 33, 35-43, 45, 46, 48-55, 65, 69, 80 and 84	Microsoft	pending (Jul-2018)	1	1
IPR2015-00485	6,415,335	Microsoft	30-40, 43-53 and 56-85	Microsoft	Yes	1	1
IPR2014-00558	6,502,135	Microsoft	1, 3, 4, 7, 8, 10, 12 and 13	Microsoft			1
IPR2017-00890	6,522,695	Microsoft, HTC	14, 15 and 17	Microsoft, HTC			1
IPR2018-00734	6,523,061	Microsoft	1-18	Microsoft			1
IPR2017-01614	6,604,101	Microsoft	1-28	Microsoft			1
IPR2014-00738	6,628,314	Google	11-22	Google	Yes		
IPR2014-00039	6,628,314	Microsoft	11-22	Microsoft	Yes		1
IPR2018-00023	6,690,387	Microsoft	1-12	Microsoft	pending (Jul-2018)	1	1
IPR2018-00024	6,690,387	Microsoft	1-12	Microsoft		1	1
IPR2013-00292	6,724,403	Microsoft	1-21	Microsoft	Yes	1	1
IPR2014-00271	6,724,403	Microsoft	1, 3-5, 7-13, 17-28, 30-33, 35-37, 40-43 and 46-50	Microsoft		1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2013-00295	6,724,403	Microsoft	1-3, 5-8, 11-17, 19-22, 25, 27-28, 30, 32, 34, 37-40, 43-47 and 50-52	Microsoft	Yes	1	1
IPR2013-00293	6,724,403	Microsoft	22-45	Microsoft	Yes	1	1
IPR2013-00294	6,724,403	Microsoft	46-52	Microsoft	Yes	1	1
IPR2016-01300	6,731,309	Microsoft	1-3	Microsoft			1
IPR2018-00791	6,742,021	Microsoft	1, 15, 18, 20, 22, 23, 27, 40, 41, 46, 59, 60, 65, 68, 70, 72, 85, 86, 90, 103, 104, 109, 122 and 123	Microsoft			1
IPR2018-00794	6,742,021	Microsoft	2-4, 14, 16, 17, 19, 21, 24, 26, 28-30, 43-45, 47-49, 61, 63, 64, 66, 67, 69, 71, 73-75, 87, 89, 91-93, 106-108, 110-112, 124 and 126	Microsoft			1
IPR2018-00792	6,742,021	Microsoft	5-7, 25, 31-33, 42, 50-52, 62, 76-78, 88, 94-96, 105, 113-115, 125 and 127-132	Microsoft			1
IPR2018-00793	6,742,021	Microsoft	8-13, 34-39, 53-58, 79-84, 97-102 and 116-121	Microsoft			1
IPR2012-00026	6,757,717	Microsoft	1, 3, 10-12, 14 and 22-24	Microsoft	Yes	1	1
IPR2017-00261	6,757,717	Microsoft	15-17, 19-21 and 25-27	Microsoft			1
IPR2013-00109	6,757,717	Microsoft	6, 7, 9, 11, 12 and 14	Microsoft	Yes	1	1
IPR2014-00040	6,771,290	Microsoft	1-3	Microsoft	Yes		1
IPR2014-00745	6,856,687	Microsoft	1 and 29	Microsoft			1
IPR2014-01568	6,985,748	Microsoft	1, 3-6, 9-14 and 17-19	Microsoft			1
IPR2017-01325	6,997,882	Microsoft	8	Microsoft			1
IPR2016-00404	7,079,864	Microsoft	1, 12, 13, 15, 23 and 24	Microsoft	Yes		1
IPR2015-01432	7,139,794	Microsoft	1 and 2	Microsoft	Yes		1
IPR2018-00025	7,184,064	Microsoft	1-9	Microsoft	not instituted - merits	1	1
IPR2018-00026	7,184,064	Microsoft	1-9	Microsoft		1	1
IPR2014-00401	7,188,180	Microsoft	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Microsoft	not instituted - procedural	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2014-00405	7,188,180	Microsoft	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Microsoft	not instituted - procedural	1	1
IPR2014-01418	7,188,180	Microsoft	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Microsoft		1	1
IPR2014-01421	7,188,180	Microsoft	1, 4, 6, 10, 12-15, 17, 20, 22, 26, 28-31, 33, 35 and 37	Microsoft		1	1
IPR2016-00663	7,215,752	Microsoft	1, 5, 7, 9, 12 and 21	Microsoft			1
IPR2015-00011	7,218,923	Microsoft	24, 26 and 32	Microsoft			1
IPR2015-01928	7,265,494	Microsoft	1, 3 and 20	Microsoft	Yes	1	1
IPR2015-01025	7,265,494	Microsoft, Nokia	1, 3, 5, 12-14, 18, 20, 29, 30, 34 and 35	Microsoft, Nokia	not instituted - merits	1	1
IPR2015-01149	7,329,970	Microsoft, Nokia	1, 3-5, 10-14, 19, 48, 49, 51 and 52	Microsoft, Nokia	Yes		1
IPR2015-00404	7,365,871	Microsoft, LG	1-8 and 12-15	Microsoft, LG, Nokia, Sony, Sharp		1	1
IPR2015-00402	7,365,871	Sony	1-8 and 12-15	Microsoft, LG, Nokia, Sony, Sharp		1	1
IPR2014-00612	7,418,504	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft	not instituted	1	1
IPR2014-00613	7,418,504	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft		1	1
IPR2014-00614	7,418,504	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft		1	1
IPR2014-00610	7,490,151	Microsoft	1, 2, 6-8 and 12-14	Microsoft			1
IPR2015-01148	7,498,749	Microsoft, Nokia	1, 2, 5-7, 14, 15, 21 and 23	Microsoft, Nokia	Yes		1
IPR2015-00048	7,502,470	Microsoft	1-33	Microsoft	settlement	1	1
IPR2015-00049	7,502,470	Microsoft	1-33	Microsoft		1	1
IPR2015-00501	7,509,178	Microsoft	1-29	Microsoft		1	1
IPR2015-00500	7,509,178	Microsoft	1-11, 13-15, 28 and 29	Microsoft		1	1
IPR2017-01613	7,516,154	Microsoft	1-12	Microsoft			1
IPR2017-00447	7,529,806	Google	1-7 and 9-13	Acer, ASUS, ASUSTeK, Google			
IPR2017-01754	7,529,806	Microsoft	1-16	Microsoft			1
IPR2017-00898	7,552,124	Microsoft, Samsung, ZTE	1-10	Microsoft, Samsung, ZTE			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2016-00223	7,590,752	Microsoft	1-16	Microsoft			1
IPR2015-00408	7,643,168	Microsoft, LG	1-31	Microsoft, LG, Nokia, Sony, Sharp		1	1
IPR2015-00401	7,643,168	Sony	1-31	Microsoft, LG, Nokia, Sony, Sharp		1	1
IPR2016-01277	7,746,916	HTC, Samsung, ZTE	1-10	HTC, Samsung, ZTE	Yes		
IPR2016-01280	7,746,916	HTC, Samsung, ZTE	1-10	HTC, Samsung, ZTE	Yes		
IPR2016-01208	7,746,916	Microsoft, Apple, Nokia	1-10	Microsoft, Apple, Nokia	Yes	1	1
IPR2016-01209	7,746,916	Microsoft, Apple, Nokia	1-10	Microsoft, Apple, Nokia	Yes	1	1
IPR2016-01310	7,768,965	HTC, Samsung, ZTE	1-3, 8 and 9	HTC, Samsung, ZTE	Yes		
IPR2016-01177	7,768,965	Microsoft, Apple, Nokia	1-3, 8 and 9	Microsoft, Apple, Nokia	Yes		1
IPR2016-00158	7,772,781	Microsoft	1-3, 7, 8, 10, 17 and 22	Microsoft		1	1
IPR2015-01024	7,772,781	Microsoft, Nokia	1-3, 7, 8, 10, 17 and 22	Microsoft, Nokia	not instituted - merits	1	1
IPR2016-00224	7,779,138	Microsoft, HTC	1-38	Microsoft, HTC			1
IPR2015-01150	7,781,980	Microsoft, Nokia	1, 3-5 and 32	Microsoft, Nokia	Yes		1
IPR2016-01185	7,809,373	Microsoft, Apple, Nokia	15-21 and 23-25	Microsoft, Apple, Nokia			1
IPR2016-01347	7,809,373	Samsung, ZTE	1-10, 12, 13, 15-21 and 23-25	Samsung, ZTE			
IPR2016-01083	7,827,483	Microsoft	1-4, 6, 7, 10-12 and 14	Microsoft	not instituted - merits	1	1
IPR2016-01084	7,827,483	Microsoft	1-4, 6, 7, 10-12 and 14	Microsoft		1	1
IPR2016-00669	7,844,041	Microsoft	1, 4, 5 and 7	Microsoft	Yes		1
IPR2016-01228	7,881,236	Microsoft, Apple, Nokia	1-10 and 12-13	Microsoft, Apple, Nokia	Yes	1	1
IPR2016-01229	7,881,236	Microsoft, Apple, Nokia	1-10 and 12-13	Microsoft, Apple, Nokia	Yes	1	1
IPR2017-01141	7,885,981	Microsoft	1-6	Microsoft	not instituted - merits	1	1
IPR2017-01142	7,885,981	Microsoft	1-6	Microsoft		1	1
IPR2015-01434	7,908,343	Microsoft	1-20	Microsoft	not instituted - merits	1	1
IPR2016-00448	7,908,343	Microsoft	1-20	Microsoft	Yes	1	1
IPR2016-00957	7,921,211	Black Swamp IP	1, 2, 5, 6, 15, 16, 23, 27, 36, 37, 39, 40, 47, 51 and 60	Black Swamp IP	Yes		

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2014-00615	7,921,211	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft	settlement	1	1
IPR2014-00616	7,921,211	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft		1	1
IPR2014-00618	7,921,211	Microsoft	1, 2, 6, 14-17, 19-23, 26- 41, 43-47 and 50-60	Microsoft		1	1
IPR2014-00403	7,987,274	Microsoft	1-5, 7, 8, 10, 12, 13, 15, 17 and 18	Microsoft	Yes	1	1
IPR2014-00404	7,987,274	Microsoft	1-5, 7, 8, 10, 12, 15 and 17	Microsoft	Yes	1	1
IPR2015-01147	7,994,726	Microsoft, Nokia	1, 3-10, 19-21 and 25-30	Microsoft, Nokia	Yes		1
IPR2015-01023	8,035,623	Microsoft, Nokia	24, 30 and 31	Microsoft, Nokia	Yes		1
IPR2016-00225	8,099,513	Microsoft, HTC	1-46	Microsoft, HTC			1
IPR2015-01053	8,144,182	Microsoft	1, 4 and 5	Microsoft		1	1
IPR2014-01459	8,144,182	Microsoft	1, 4, 5 and 69-74	Microsoft	Yes	1	1
IPR2015-01052	8,144,182	Microsoft	13-16, 33, 34, 46 and 82-86	Microsoft		1	1
IPR2014-01457	8,144,182	Microsoft	6, 13-16, 24-29, 31-37, 41, 46 and 82-86	Microsoft	Yes	1	1
IPR2014-01458	8,144,182	Microsoft	6-8, 12, 17-23, 38-42, 44-46, 50, 52 and 53	Microsoft	Yes	1	1
IPR2015-01054	8,144,182	Microsoft	72 and 73	Microsoft		1	1
IPR2016-00758	8,218,481	HTC, ZTE	1-4, 6, 8-11 and 13	HTC, ZTE	Yes		
IPR2017-00068	8,218,481	Microsoft, Apple, Nokia	1-4, 6, 8-11 and 13	Microsoft, Apple, Nokia	Yes	1	1
IPR2017-00927	8,218,481	Microsoft, Apple, Nokia	1-4, 6, 8-11 and 13	Microsoft, Apple, Nokia	Yes	1	1
IPR2016-00981	8,218,481	Microsoft, Apple, Nokia	1-4, 6, 8-11, 13, 15 and 16	Microsoft, Apple, Nokia	Yes	1	1
IPR2017-00106	8,218,481	Samsung	1-4, 6, 8-11 and 13	Samsung	Yes		
IPR2016-01342	8,218,481	Samsung, ZTE	1-4, 6, 8-11 and 13	Samsung, ZTE	Yes		
IPR2016-01349	8,218,481	ZTE	1-4, 6, 8-11, 13, 15 and 16	ZTE	Yes		
IPR2015-01151	8,288,952	Microsoft, Nokia	1-4, 14, 16, 17, 19, 22-24, 26, 27 and 38-40	Microsoft, Nokia	Yes		1
IPR2015-00074	8,380,244	Microsoft	1-8, 14-16, 19-29, 36-38 and 41-44	Microsoft			1
IPR2014-00525	8,380,244	ZTE	1-8, 14-16, 19-29, 36-38 and 41-44	ZTE	Yes		

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2016-01067	8,407,356	Microsoft	1-37	Microsoft	Yes	1	1
IPR2017-00605	8,407,356	Microsoft	1-9, 12, 14-28, 31 and 33-37	Microsoft	settlement	1	1
IPR2016-01141	8,458,245	Microsoft	1-58	Microsoft	Yes	1	1
IPR2017-00669	8,458,245	Microsoft	1-15, 17 and 18	Microsoft	settlement	1	1
IPR2016-01146	8,473,552	Microsoft	1-58	Microsoft		1	1
IPR2016-01137	8,473,552	Microsoft	1-17, 50-53, 58 and 64	Microsoft	not instituted - merits	1	1
IPR2017-00603	8,473,552	Microsoft	1-59 and 64	Microsoft	settlement	1	1
IPR2016-01138	8,473,552	Microsoft	18-49, 54-57 and 59-63	Microsoft		1	1
IPR2016-01147	8,473,552	Microsoft	59-64	Microsoft		1	1
IPR2015-00095	8,475,174	Microsoft	1, 2, 16-18, 22, 37-42, 48, 55 and 56	Microsoft	Yes		1
IPR2015-00193	8,483,729	Microsoft	1-3	Microsoft			1
IPR2015-00096	8,538,320	Microsoft	1-3, 9-11, 16-21, 24-32, 35, 40-44, 48-50, 53, 57-63 and 73	Microsoft			1
IPR2015-00097	8,538,321	Microsoft	1-5, 11-13, 24-28, 34-37, 39, 44 and 52	Microsoft	Yes		1
IPR2018-00277	8,543,819	Microsoft	1-3 and 5-11	Microsoft			1
IPR2015-00194	8,682,362	Microsoft	1-25	Microsoft			1
IPR2016-01155	8,694,657	Microsoft	1, 2, 18, 27, 35, 43, 51, 65, 79, 93, 100, 108, 114, 126, 138, 150, 156, 168, 170, 172, 176, 178, 180, 182-190, 202, 208, 214, 220, 226, 238, 250, 262, 268, 274, 280, 292, 304, 316, 322, 328, 334, 336, 340, 342, 344, 346, 348, 350, 352-354, 362, 366, 370, 374, 378, 386, 394, 402, 406, 410, 414, 422, 430, 438, 442, 450, 452, 454, 456, 458, 460, 462, 464-466, 476, 481, 486, 491, 496, 505, 515, 525, 530, 535, 545, 555, 565, 570, 580, 582, 584, 586, 588, 590, 592, 594, 596-598, 606-607, 615-617, 619, 621, 622, 624-626, 628, 630, 632-634, 636, 638, 640-642, 644, 646, 648-671	Microsoft	Yes	1	1
IPR2017-00656	8,694,657	Microsoft	189, 334, 342, 348, 465, 580, 584 and 592	Microsoft		1	1
IPR2017-00606	8,694,657	Microsoft	203, 209, 215, 221, 477, 482, 487 and 492	Microsoft	settlement		1
IPR2016-01085	8,700,996	Microsoft	1, 3, 6, 8, 13, 14, 20, 22, 24 and 28	Microsoft	not instituted - merits	1	1
IPR2016-01086	8,700,996	Microsoft	1, 3, 6, 8, 13, 14, 20, 22, 24 and 28	Microsoft		1	1
IPR2017-01052	8,848,892	Microsoft	1-10	Microsoft			1
IPR2018-00070	8,913,898	Alcatel-Lucent, Ciena Corporation, Coriant, Infinera Corporation, Fujitsu, Huawei Technologies	1-25	Alcatel-Lucent, Ciena Corporation, Coriant, Infinera Corporation, Fujitsu, Nokia, Huawei Technologies			
IPR2015-01435	8,924,506	Microsoft	1-21	Microsoft	not instituted - merits	1	1
IPR2016-00449	8,924,506	Microsoft	1-21	Microsoft	Yes	1	1
IPR2016-01897	9,253,239	Microsoft	1-25	Microsoft			1
IPR2018-00279	9,436,809	Microsoft	1-4, 6, 9, 11, 14, 34-37, 41, 43, 46, 49, 52-55 and 58-60	Microsoft			1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Microsoft is petitioner or RPI
IPR2017-01411	9,531,657	Microsoft	1-12	Microsoft			1
IPR2017-01817	9,635,136	Microsoft	1-27	Microsoft			1
IPR2017-01616	9,641,644	Microsoft	1-65	Microsoft			1
IPR2017-01818	9,641,645	Microsoft	1-36	Microsoft			1
IPR2018-00185	RE43,564	Microsoft	1-7	Microsoft			1
IPR2017-00386	RE44,913	Google	1 and 3-16	Acer, ASUS, ASUSTek, Google			
IPR2017-01766	RE44,913	Microsoft	1 and 3-16	Microsoft			1
						TOTAL duplicative petitions	TOTAL with Microsoft as petitioner or RPI
						83	139
						Microsoft duplicative percentage (%)	59.71223022

Section 5:

Samsung

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2013-00384	5,530,874	Samsung	1-4, 6-9, 21-27, 29 and 30	Samsung	settlement		1
IPR2016-00739	5,591,678	Samsung	1-18	Samsung	adverse judgment	1	1
IPR2016-00962	5,591,678	Samsung	1-18	Samsung	Yes	1	1
IPR2016-00209	5,591,678	Sony	1-18	Sony	Yes		
IPR2014-01493	5,652,084	Samsung	1-16	Samsung	Yes		1
IPR2014-01030	5,652,084	Taiwan Semiconductor Manufacturing Company	1-16	Taiwan Semiconductor Manufacturing Company	Yes		
IPR2015-01726	5,659,891	Samsung	1-5	Samsung	settlement	1	1
IPR2015-01727	5,659,891	Samsung	1-5	Samsung	not instituted - merits	1	1
IPR2013-00592	5,686,738	Samsung	1-21	Samsung	settlement		1
IPR2017-00392	5,711,849	GlobalFoundries, Intel, Micron	1-29	GlobalFoundries, Intel, Micron	pending (Jun-2018)		
IPR2017-00406	5,711,849	GlobalFoundries, Intel, Micron	1-29	GlobalFoundries, Intel, Micron	pending (Jun-2018)		
IPR2017-01747	5,711,849	Samsung	1-29	Samsung	pending (Jun-2018)	1	1
IPR2017-01748	5,711,849	Samsung	1-29	Samsung	pending (Jun-2018)	1	1
IPR2017-00040	5,761,112	Samsung	1-11	Samsung	Yes		1
IPR2016-00908	5,796,183	Samsung	37-41, 43, 45, 47, 48, 61-67, 69, 83-86, 88, 90, 91, 94, 96,	Samsung	Yes		1
IPR2015-01944	5,812,789	Samsung	1, 3-6, 11 and 13	Samsung	settlement		1
IPR2016-01179	5,850,482	Samsung, Microsoft	1-3, 5, 6, 12-14, 16, 17 and 28	Samsung, Microsoft	Yes		1
IPR2015-00849	5,902,347	Samsung, Apple, Google	5-10	Samsung, Apple, Google	Yes	1	1
IPR2015-00851	5,902,347	Samsung, Apple, Google	5-10	Samsung, Apple, Google	Yes	1	1
IPR2015-01724	5,915,210	Samsung	1, 7, 8, 10, 15-17 and 19	Samsung	settlement	1	1
IPR2015-01725	5,915,210	Samsung	1, 7, 8, 10, 15-17 and 19	Samsung	not instituted - merits	1	1
IPR2014-00532	5,959,633	Samsung, Google	1-4, 6, 8-11, 13 and 15	Samsung, Google	Yes		1
IPR2015-01946	5,960,464	Samsung	1-4, 7-13, 16-24, 32-36 and 40	Samsung	settlement		1
IPR2015-01007	6,009,469	AVAYA, Cisco	1-3, 5, 6, 9, 10, 14, 17 and 18	AVAYA, Cisco	Yes		
IPR2014-01367	6,009,469	Samsung	1-3, 5, 6, 9, 10, 14, 17 and 18	Samsung	Yes		1
IPR2017-00391	6,017,221	GlobalFoundries, Intel, Micron	1-7	GlobalFoundries, Intel, Micron	Yes		
IPR2017-01746	6,017,221	Samsung	1-7	Samsung	Yes		1
IPR2017-00033	6,020,259	Samsung	1-10	Samsung	not instituted - merits	1	1
IPR2017-00035	6,020,259	Samsung	1-10	Samsung	not instituted - merits	1	1
IPR2015-00466	6,030,893	Samsung	1-28	Samsung	Yes	1	1
IPR2015-00467	6,030,893	Samsung	1-28	Samsung	Yes	1	1
IPR2017-02115	6,033,809	Samsung	2-8, 10-12, 14, 15 and 17-24	Samsung	not instituted - procedural		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2018-01265	6,054,336	Samsung	1-3	Samsung	pending (Jun-2018)		1
IPR2014-00533	6,057,854	Samsung, Google	1-3, 5, 7, 10-12, 14, 16, 19, 44, 54-57, 59, 61-66, 68-69	Samsung, Google	Yes		1
IPR2017-01412	6,069,507	Samsung	10, 11, 13 and 15	Samsung	pending (Jun-2018)	1	1
IPR2017-01413	6,069,507	Samsung	10, 11, 13 and 15	Samsung	pending (Jun-2018)	1	1
IPR2017-00036	6,088,270	Samsung	1-19, 30-32 and 34-39	Samsung	Yes		1
IPR2013-00610	6,095,661	Samsung	1, 2, 4, 6-13, 15, 17-31, 33, 34, 36-38, 40-49, 51 and 52	Samsung	adverse judgment	1	1
IPR2014-00590	6,095,661	Samsung	27, 28, 31, 33, 34, 36-38, 42, 44, 45, 47, 49, 51, 52	Samsung	adverse judgment	1	1
IPR2014-00205	6,101,162	Toshiba Samsung Storage Korea Corporation	1-22	Toshiba Samsung Storage Korea Corporation	Yes		1
IPR2015-00335	6,108,686	LG	1, 2, 20, 23, 29 and 30	LG	Yes		
IPR2014-00717	6,108,686	Samsung	1, 2, 20, 23, 29 and 30	Samsung	Yes		1
IPR2015-01011	6,108,704	AVAYA, Cisco	1, 11, 12, 14, 16, 22, 23, 27,	AVAYA, Cisco	Yes		
IPR2014-01366	6,108,704	Samsung	1, 11, 12, 14, 16, 22, 23, 27,	Samsung	Yes		1
IPR2015-01006	6,131,121	AVAYA, Cisco	6, 8, 10, 11, 13 and 14	AVAYA, Cisco	Yes		
IPR2014-01368	6,131,121	Samsung	6, 8, 10, 11, 13 and 14	Samsung	Yes		1
IPR2015-00460	6,146,997	Samsung	1-14	Samsung	Yes		1
IPR2015-00459	6,150,244	Samsung	1-20	Samsung	Yes		1
IPR2016-01522	6,151,493	Google, LG	1-6 and 8-10	Google, LG	Yes		
IPR2017-01017	6,151,493	Samsung, Huawei Device USA	1-6 and 8-10	Samsung, Huawei Device USA	pending (Jun-2018)		1
IPR2017-01416	6,172,554	Samsung	1-3, 14-16, 22 and 28-36	Samsung	pending (Jun-2018)		1
IPR2017-00038	6,195,302	Samsung	1-6 and 10-12	Samsung	Yes	1	1
IPR2017-00039	6,195,302	Samsung	1-6, 10-12 and 14-18	Samsung	Yes	1	1
IPR2015-01028	6,198,488	Samsung	1 and 20	Samsung	settlement		1
IPR2017-01414	6,208,574	Samsung	1-3 and 30-37	Samsung	pending (Jun-2018)		1
IPR2017-01415	6,208,574	Samsung	4-18 and 21-27	Samsung	pending (Jun-2018)		1
IPR2016-00392	6,212,662	Samsung	1-4	Samsung, SmartThings	settlement		1
IPR2016-01524	6,233,389	Samsung	31 and 61	Samsung	settlement	1	1
IPR2016-01712	6,233,389	Samsung	31 and 61	Samsung	settlement	1	1
IPR2016-00045	6,233,518	Google	45 and 46	Samsung, Google, HTC, LG, Motorola	Yes		1
IPR2017-02021	6,243,315	Samsung	1-20	Samsung	pending (Jun-2018)		1
IPR2015-01231	6,271,884	Samsung	1-6, 14 and 17-19	Samsung	not instituted - merits		1
IPR2016-01810	6,307,629	Samsung, AMS AG, AMS-TAOS USA	1-2, 7, 30 and 98	Samsung, AMS AG, AMS-TAOS USA	settlement		1
IPR2014-00452	6,323,853	Google, Motorola	1-79	Google, Motorola	Yes		
IPR2014-01518	6,323,853	Samsung	1-79	Samsung	Yes		1
IPR2015-01523	6,366,130	Samsung	1-3, 5-7 and 9	Samsung	not instituted - merits	1	1
IPR2015-01524	6,366,130	Samsung	1-3, 5-7 and 9	Samsung	Yes	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2017-01808	6,470,399	Samsung, Olympus	1-3, 5, 6, 11, 14 and 15	Samsung, Olympus	pending (Jun-2018)		1
IPR2017-00714	6,470,399	ZTE	1-3, 5, 6, 11, 14 and 15	ZTE	Yes		
IPR2014-00204	6,477,126	Toshiba Samsung Storage Korea Corporation	1-4, 6-11 and 13-19	Samsung, Toshiba, Toshiba Samsung Storage Korea Corporation	Yes		1
IPR2013-00611	6,488,390	Samsung	1-6, 9-16 and 19-39	Samsung	adverse judgment		1
IPR2016-01804	6,490,038	Samsung, AMS AG, AMS-TAOS USA	126, 127, 132, 135-137, 140 and 141	Samsung, AMS AG, AMS-TAOS USA	settlement		1
IPR2018-01263	6,512,298	Samsung	1-6 and 8-13	Samsung	pending (Jun-2018)		1
IPR2016-00022	6,532,413	Google	64, 77 and 79	Samsung, Google, HTC, LG, Motorola	Yes		1
IPR2016-01878	6,542,078	Samsung	1-10	Samsung, SmartThings	settlement	1	1
IPR2016-01879	6,542,078	Samsung	1-10	Samsung, SmartThings	settlement	1	1
IPR2014-00534	6,552,732	Samsung, Google	1-5, 8, 9, 12, 36, 42	Samsung, Google	Yes		1
IPR2017-01418	6,559,044	Samsung	1-23	Samsung	pending (Jun-2018)		1
IPR2017-01419	6,562,714	Samsung	1-5, 7-13 and 16	Samsung	pending (Jun-2018)		1
IPR2018-01266	6,566,167	Samsung	1-12	Samsung	pending (Jun-2018)		1
IPR2015-00336	6,618,593	LG	1, 4, 7, 10 and 13-21	LG	Yes		
IPR2014-00735	6,618,593	Samsung	1, 4, 7, 10 and 13-21	Samsung	Yes		1
IPR2015-01070	6,690,372	Samsung	1-6, 9-16 and 19-25	Samsung	settlement		1
IPR2017-00037	6,699,789	Samsung	1-6, 8-15 and 17-20	Samsung	Yes		1
IPR2017-01190	6,717,518	Samsung	39	Samsung	pending (Jun-2018)		1
IPR2014-00044	6,771,290	Samsung	2, 3	Samsung	Yes		1
IPR2016-00782	6,784,552	Samsung	1-12	Samsung	Yes		1
IPR2018-00466	6,784,557	Samsung	1-8	Samsung	pending (Jun-2018)		1
IPR2013-00236	6,791,298	Samsung	1, 4-10, 13, 14, 17 and 18	Samsung	adverse judgment		1
IPR2013-00213	6,791,298	Texas Instruments	1 and 4-18	Texas Instruments	adverse judgment		
IPR2018-01267	6,825,554	Samsung	1-5	Samsung	pending (Jun-2018)		1
IPR2016-01882	6,828,909	Samsung	1-4, 9, 11-13, 19-21, 23 and	Samsung, SmartThings	settlement	1	1
IPR2016-01881	6,828,909	Samsung	15, 24 and 26-29	Samsung, SmartThings	settlement	1	1
IPR2015-01233	6,836,290	Samsung	1 and 10	Samsung	Yes		1
IPR2017-00032	6,849,897	Samsung	1-4, 6 and 7	Samsung	Yes		1
IPR2018-01264	6,852,616	Samsung	1-6 and 8-9	Samsung	pending (Jun-2018)		1
IPR2017-01046	6,885,055	Samsung, GlobalFoundries, Qualcomm	1-6, 11, 12 and 14-17	Samsung, GlobalFoundries, Qualcomm	not instituted - merits	1	1
IPR2018-00266	6,885,055	Samsung, GlobalFoundries, Qualcomm	1-6, 11, 12 and 14-17	Samsung, GlobalFoundries, Qualcomm	not instituted - procedural	1	1
IPR2017-01047	6,885,055	Samsung, GlobalFoundries, Qualcomm	7, 9, 10, 13 and 19	Samsung, GlobalFoundries, Qualcomm	not instituted - merits	1	1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2018-00267	6,885,055	Samsung, GlobalFoundries, Qualcomm	7, 9, 10, 13 and 19	Samsung, GlobalFoundries, Qualcomm	not instituted - procedural	1	1
IPR2018-00410	6,895,449	Samsung, Canon, Nikon, Sanyo	1-10, 12, 13 and 15-18	Samsung, Canon, Nikon, Sanyo	not instituted - procedural		1
IPR2016-01819	6,915,955	Samsung, AMS AG, AMS-TAOS USA	1, 5, 7, 10, 11, 18 and 19	Samsung, AMS AG, AMS-TAOS USA	settlement		1
IPR2017-02116	6,927,001	Samsung	1-3, 9 and 10	Samsung	not instituted - merits		1
IPR2017-00539	6,936,851	Samsung	1, 2 and 15-18	Samsung	not instituted - merits	1	1
IPR2017-00540	6,936,851	Samsung	1, 2 and 15-18	Samsung	not instituted - merits	1	1
IPR2018-00605	6,936,936	Samsung	1-3, 6, 7, 9-12, 84-86, 89 and	Samsung	pending (Jun-2018)		1
IPR2018-00606	6,936,936	Samsung	13-15, 18, 19, 21, 22, 24, 51-	Samsung	pending (Jun-2018)		1
IPR2018-00607	6,936,936	Samsung	25-29, 32, 33, 35, 36, 63, 64	Samsung	pending (Jun-2018)		1
IPR2014-00078	6,953,703	Samsung	1-17	Samsung	settlement		1
IPR2018-00798	6,954,001	Samsung	1-18	Samsung	pending (Jun-2018)	1	1
IPR2018-00799	6,954,001	Samsung	1-4, 6-13 and 15-18	Samsung	pending (Jun-2018)	1	1
IPR2017-00336	6,959,293	Samsung	1, 18, 19, 22 and 29	Samsung	Yes		1
IPR2017-01189	6,959,293	Samsung	2-17, 20, 21 and 23-28	Samsung	not instituted - merits		1
IPR2015-01029	6,992,667	Samsung	1-29	Samsung	settlement		1
IPR2014-00013	7,015,868	Samsung	1, 26, 32, 33 and 35	Samsung			1
IPR2015-01198	7,015,913	Samsung	5-10, 12-20 and 24-27	Samsung	settlement		1
IPR2015-01446	7,016,648	Samsung, Apple	1, 2, 6, 7, 9, 10, 12-16, 21-24,	Samsung, Apple	Yes	1	1
IPR2015-01445	7,016,648	Samsung, Apple	1-3, 5-7, 9, 13-17, 19, 21-23,	Samsung, Apple	Yes	1	1
IPR2015-01270	7,038,685	Samsung	1-5, 7-19, 21-23, 25-30, 34-36, 38 and 41-43	Samsung	not instituted - procedural		1
IPR2015-01444	7,039,033	Samsung, Apple	1, 4-7, 12, 14, 15, 22, 23, 25, 28, 34, 39, 40, 42, 46	Samsung, Apple	Yes		1
IPR2015-01232	7,092,029	Samsung	1, 6, 7, 14 and 16	Samsung	Yes		1
IPR2016-01792	7,110,096	Samsung, AMS AG, AMS-TAOS USA	1, 3 and 11	Samsung, AMS AG, AMS-TAOS USA	not instituted - merits		1
IPR2016-01818	7,113,283	Samsung, AMS AG, AMS-TAOS USA	1, 3, 21-24 and 27	Samsung, AMS AG, AMS-TAOS USA	settlement		1
IPR2014-00008	7,123,208	Samsung	1, 7, 10, 11 and 12	Samsung			1
IPR2016-00616	7,149,511	Samsung, Apple	1-10 and 58-65	Samsung, Apple	Yes	1	1
IPR2016-00622	7,149,511	Samsung, Apple	1-10, 19-22, 58-65 and 68-71	Samsung, Apple	Yes	1	1
IPR2013-00190	7,167,731	Samsung	1-25	Samsung	settlement		1
IPR2016-00393	7,193,239	Samsung, Micron Technology, SK Hynix	1, 10-13, 18-20, 46, 47, 60-63, 67, 70-73 and 77	Samsung, Micron Technology, SK Hynix	Yes	1	1
IPR2016-00388	7,193,239	Samsung, Micron Technology, SK Hynix	1, 10-13, 18-20, 60-63, 67, 70-73 and 77	Samsung, Micron Technology, SK Hynix	Yes	1	1
IPR2015-00862	7,202,843	Samsung, Sony	1-3	Samsung, Sony	not instituted - merits		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2015-00863	7,202,843	Samsung, Sony	4-9	Samsung, Sony	Yes		1
IPR2015-01314	7,209,140	Samsung	1-10 and 12-14	Samsung	not instituted - procedural		1
IPR2015-01927	7,218,923	Samsung	1, 4, 24, 26 and 32	Samsung	settlement		1
IPR2018-00276	7,239,111	Samsung, ZTE	1-3, 6-8, 12 and 14-18	Samsung, ZTE	pending (Jun-2018)		1
IPR2015-01442	7,295,532	Samsung, Apple	1, 4, 5, 7-10, 12, 14-16, 23	Samsung, Apple	not instituted - merits	1	1
IPR2015-01443	7,295,532	Samsung, Apple	1, 4, 5, 7-10, 12, 14-16, 23	Samsung, Apple	Yes	1	1
IPR2015-01376	7,296,121	LG, Sony	1-3, 8, 11, 12 and 15-25	LG, Sony	Yes		
IPR2015-01353	7,296,121	LG, Sony	4-6, 11, 12 and 19-24	LG, Sony	Yes		
IPR2015-00159	7,296,121	Samsung, Amazon, Apple, HTC	1-3, 8 and 11-25	Samsung, Amazon, Apple, HTC	Yes	1	1
IPR2015-00161	7,296,121	Samsung, Amazon, Apple, HTC	1-3, 8, 9, 11 and 14-25	Samsung, Amazon, Apple, HTC	not instituted - merits	1	1
IPR2015-00163	7,296,121	Samsung, Amazon, Apple, HTC	1-6, 8-12, 15-25	Samsung, Amazon, Apple, HTC	Yes	1	1
IPR2015-00172	7,296,121	Samsung, Amazon, Apple, HTC	1-9, 11, 12 and 16-24	Samsung, Amazon, Apple, HTC	not instituted - merits	1	1
IPR2015-01500	7,321,368	Samsung, HTC, LG	1-3, 5, 7, 13-15, 17-21 and 23-	Samsung, HTC, LG	Yes		1
IPR2018-00555	7,346,313	Samsung	1-6 and 38-43	Samsung	pending (Jun-2018)		1
IPR2018-00557	7,346,313	Samsung	22, 26-37, 59 and 63-74	Samsung	pending (Jun-2018)		1
IPR2018-00556	7,346,313	Samsung	7, 11-21, 44 and 48-58	Samsung	pending (Jun-2018)		1
IPR2014-00987	7,365,871	HTC	1-8 and 12-15	HTC	settlement		
IPR2015-00612	7,365,871	Samsung	1-15	Samsung	not instituted - merits	1	1
IPR2015-00610	7,365,871	Samsung	9-11	Samsung	settlement	1	1
IPR2015-00541	7,365,871	Samsung	1-8 and 12-15	Samsung	pending (Jun-2018)	1	1
IPR2017-01417	7,375,027	Samsung	1-10	Samsung	pending (Jun-2018)		1
IPR2014-00012	7,394,432	Samsung	1 and 6	Samsung			1
IPR2014-00011	7,397,431	Samsung	1, 12-14 and 30	Samsung			1
IPR2016-01793	7,397,541	Samsung, AMS AG, AMS-TAOS USA	1, 3 and 11	Samsung, AMS AG, AMS-TAOS USA	not instituted - merits		1
IPR2015-00887	7,420,550	Samsung, Sony	1-5	Samsung, Sony	Yes		1
IPR2016-00691	7,474,004	Samsung, Micron Technology, SK Hynix	1 and 20-23	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2014-01144	7,496,854	Samsung	1-12 and 36-49	Samsung	not instituted - procedural		1
IPR2014-01143	7,496,854	Samsung	19, 20, 22-26, 28-30, 57, 58, 60-74, 76-78, 85 and 96	Samsung	not instituted - procedural		1
IPR2016-00395	7,504,732	Samsung, Micron Technology, SK Hynix	1, 10, 11, 13 and 14	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-01802	7,535,890	Samsung	1-6, 9, 14, 15, 17-20, 23, 40-43, 51-54 and 57	Samsung	pending (Jun-2018)		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2015-01502	7,542,045	Samsung, HTC, LG	1, 2, 4-7, 9, 10, 12, 13 and 15-	Samsung, HTC, LG	Yes		1
IPR2017-00898	7,552,124	Samsung, Microsoft, ZTE	1-10	Samsung, Microsoft, ZTE	adverse judgment		1
IPR2016-01552	7,558,472	Samsung	1, 12-16, 20, 22, 23, 30 and	Samsung	settlement	1	1
IPR2016-01553	7,558,472	Samsung	1, 12-16, 20, 22, 23, 30 and	Samsung	settlement	1	1
IPR2015-00414	7,643,168	Apple	1-31	Apple	Yes		
IPR2014-00989	7,643,168	HTC	1-6, 8, 10, 11, 13-18, 21-29	HTC	settlement		
IPR2015-00611	7,643,168	Samsung	1-31	Samsung	settlement	1	1
IPR2015-00543	7,643,168	Samsung	1-6, 8, 10, 11, 13-18, 21-29	Samsung	pending (Jun-2018)	1	1
IPR2015-00607	7,643,168	Samsung	19 and 20	Samsung	settlement	1	1
IPR2017-00355	7,650,015	Samsung	6	Samsung	settlement		1
IPR2017-01231	7,650,015	Samsung	1-5 and 7	Samsung	settlement		1
IPR2018-00426	7,701,173	Samsung	1-12	Samsung	pending (Jun-2018)		1
IPR2016-01208	7,746,916	Apple, Microsoft	1-10	Apple, Microsoft	Yes		
IPR2016-01209	7,746,916	Apple, Microsoft	1-10	Apple, Microsoft	Yes		
IPR2016-01277	7,746,916	Samsung, HTC, ZTE	1-10	Samsung, HTC, ZTE	Yes	1	1
IPR2016-01280	7,746,916	Samsung, HTC, ZTE	1-10	Samsung, HTC, ZTE	Yes	1	1
IPR2017-00288	7,747,217	Samsung	1-5, 7-9, 11, 30-32 and 38	Samsung	settlement		1
IPR2017-00289	7,752,649	Samsung	1-3, 7, 8, 11, 13, 26-29, 39, 41, 42, 45, 48-51, 62-64, 67, 78, 82-84, 88, 90-94 and 97	Samsung	settlement	1	1
IPR2017-00290	7,752,649	Samsung	1-3, 7, 8, 11, 13, 26-29, 39, 41, 42, 45, 48-51, 62-64, 67, 78, 82-84, 88, 90-94 and 97	Samsung	settlement	1	1
IPR2017-00291	7,752,650	Samsung	1, 2, 4, 18, 32 and 33	Samsung	settlement		1
IPR2015-00583	7,762,665	Samsung	1-6, 8-13, 15, 16 and 18-20	Samsung	Yes		1
IPR2015-00806	7,765,482	Google, HTC	12, 13, 16, 18, 19, 21-25, 35-38, 40-42, 44-46 and 49	Google, HTC, LG, Motorola	Yes		
IPR2016-00029	7,765,482	Samsung	12, 13, 16, 18, 19, 21-25, 35-38, 40-42, 44-46 and 49	Samsung	Yes		1
IPR2016-01177	7,768,965	Apple, Microsoft	1-3, 8 and 9	Apple, Microsoft	Yes		
IPR2016-01310	7,768,965	Samsung, HTC, ZTE	1-3, 8 and 9	Samsung, HTC, ZTE	Yes		1
IPR2015-01501	7,777,753	Samsung, HTC, LG	1-4, 7-10 and 12	Samsung, HTC, LG	Yes		1
IPR2018-00621	7,791,319	Samsung	1 and 12-20	Samsung	pending (Jun-2018)		1
IPR2016-01347	7,809,373	Samsung, ZTE	1-10, 12, 13, 15-21 and 23-25	Samsung, ZTE	not instituted - merits		1
IPR2018-00274	7,834,586	Samsung, ZTE	8-13	Samsung, ZTE	pending (Jun-2018)		1
IPR2014-00718	7,835,689	Samsung	9 and 10	Samsung	adverse judgment		1
IPR2017-00292	7,856,649	Samsung	9 and 10	Samsung	settlement		1
IPR2016-00757	7,881,236	HTC, ZTE	1-10, 12 and 13	HTC, ZTE	Yes		
IPR2016-01345	7,881,236	Samsung	1-10, 12 and 13	Samsung	Yes		1
IPR2018-00425	7,893,655	Samsung, ZTE	1-11	Samsung, ZTE	pending (Jul-2018)		1
IPR2013-00572	7,899,492	Samsung	23, 24, 26 and 33	Samsung	not instituted - merits		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2014-00721	7,917,082	Samsung	1 and 11	Samsung	adverse judgment		1
IPR2014-01142	7,917,843	Samsung	1, 2, 8, 14-17, 20, 21, 23, 24, 30, 36-39, 42 and 43	Samsung	not instituted - procedural		1
IPR2014-00209	7,953,390	Samsung, HTC, LG	16, 19 and 20	Samsung, HTC, LG	Yes	1	1
IPR2014-00212	7,953,390	Samsung, HTC, LG	16, 19 and 20	Samsung, HTC, LG	adverse judgment	1	1
IPR2018-00985	7,966,146	Samsung	22 and 23	Samsung	pending (Jul-2018)		1
IPR2016-00206	7,973,773	Samsung	15, 17, 21, 22, 30 and 34	Samsung	settlement		1
IPR2018-00622	7,999,514	Samsung	1 and 17-20	Samsung	pending (Jul-2018)		1
IPR2016-00207	8,013,843	Samsung	11 and 20	Samsung	settlement		1
IPR2014-00514	8,023,580	Samsung	1, 2, 4, 5, 10, 13, 19-22, 49, 52, 54, 57-59, 61, 62, 66, 70 and	Samsung	not instituted - merits	1	1
IPR2014-00518	8,023,580	Samsung	1, 2, 4, 5, 10, 13, 19-22, 49, 52, 54, 57-59, 61, 62, 66, 70 and	Samsung	Yes	1	1
IPR2015-00114	8,023,580	Samsung	2, 19, 49, 52, 53 and 59	Samsung	not instituted - procedural	1	1
IPR2015-00118	8,023,580	Samsung	23, 25, 29, 30 and 41	Samsung	not instituted - procedural	1	1
IPR2014-00515	8,023,580	Samsung	23, 25, 29, 30, 32, 34, 38, 40, 41, 43, 44 and 47	Samsung	not instituted - merits	1	1
IPR2014-00519	8,023,580	Samsung	23, 25, 29, 30, 32, 34, 38, 40, 41, 43, 44 and 47	Samsung	Yes	1	1
IPR2014-00709	8,028,323	Samsung	1-5, 10, 11, 13, 14 and 16-18	Samsung	adverse judgment		1
IPR2016-00389	8,035,233	Samsung, Micron Technology, SK Hynix	22, 31, 33 and 34	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2014-00740	8,045,952	Samsung	1-4, 9-12 and 14	Samsung	adverse judgment		1
IPR2015-00334	8,050,652	LG	1, 3, 4, 6, 7, 10, 11, 13, 42, 44, 45, 47-50, 52 and 55	LG	adverse judgment		
IPR2014-00737	8,050,652	Samsung	1, 3, 4, 6, 7, 10, 11, 13, 42, 44, 45, 47-50, 52 and 55	Samsung	adverse judgment		1
IPR2013-00573	8,050,711	Samsung	16 and 18	Samsung	not instituted - merits		1
IPR2015-01494	8,054,315	Samsung, HTC, LG	1-4, 8-12, 14, 15, 19 and 20	Samsung, HTC, LG	not instituted - merits		1
IPR2016-00202	8,068,100	Samsung	31	Samsung	settlement		1
IPR2016-00205	8,072,440	Samsung	5, 7, 8, 11, 26, 27, 29 and 31	Samsung	settlement		1
IPR2015-00584	8,096,660	Samsung	1-6, 8-16, 18, 19 and 21	Samsung	Yes		1
IPR2013-00571	8,135,398	Samsung	15, 57, 58 and 60-63	Samsung	adverse judgment	1	1
IPR2014-00557	8,135,398	Samsung	58 and 63	Samsung	adverse judgment	1	1
IPR2013-00569	8,145,268	Samsung	21, 22, 25 and 27-29	Samsung	Yes		1
IPR2014-00582	8,149,124	Samsung	1-21	Samsung	settlement		1
IPR2017-01799	8,199,747	Samsung	1-3, 12 and 13	Samsung	pending (Jul-2018)		1
IPR2014-00723	8,214,873	Samsung	1, 2, 5-8, 15-19, 22, 23, 25-27, 30, 31, 34-37 and 44-46	Samsung	adverse judgment		1
IPR2017-00068	8,218,481	Apple, Microsoft	1-4, 6, 8-11 and 13	Apple, Microsoft	Yes		

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2017-00927	8,218,481	Apple, Microsoft	1-4, 6, 8-11 and 13	Apple, Microsoft	Yes		
IPR2016-00981	8,218,481	Apple, Microsoft	1-4, 6, 8-11, 13, 15 and 16	Apple, Microsoft	Yes		
IPR2016-00758	8,218,481	HTC, ZTE	1-4, 6, 8-11 and 13	ZTE, HTC	Yes		
IPR2017-00106	8,218,481	Samsung	1-4, 6, 8-11 and 13	Samsung	Yes	1	1
IPR2016-01342	8,218,481	Samsung, ZTE	1-4, 6, 8-11 and 13	Samsung, ZTE	Yes	1	1
IPR2016-01349	8,218,481	ZTE	1-4, 6, 8-11, 13, 15 and 16	ZTE	Yes		
IPR2018-01262	8,223,117	Samsung	1, 2, 4-7, 9, 13-16 and 18-20	Samsung	pending (Jul-2018)		1
IPR2013-00570	8,224,381	Samsung	19, 20, 22, 26, 30, 32-35, 37-40, 43, 44, 46 and 47	Samsung	Yes		1
IPR2014-00711	8,230,099	Samsung	1 and 10-12	Samsung	adverse judgment		1
IPR2018-00214	8,232,766	Samsung, ZTE	1-24	Samsung, ZTE	pending (Jul-2018)	1	1
IPR2018-00215	8,232,766	Samsung, ZTE	1-24	Samsung, ZTE	pending (Jul-2018)	1	1
IPR2017-01800	8,243,723	Samsung	1-3	Samsung	pending (Jul-2018)		1
IPR2014-00214	8,306,993	Samsung	1, 2, 4-10, 12-18 and 20-24	Samsung	not instituted - merits		1
IPR2015-00603	8,322,856	Samsung	1-5, 7, 10, 11, 13, 14, 16, 17, 19-21 and 23-30	Samsung	Yes		1
IPR2014-00407	8,359,007	Samsung, HTC, LG	1, 2, 5-8 and 10	Samsung, HTC, LG	Yes	1	1
IPR2014-00408	8,359,007	Samsung, HTC, LG	1, 2, 5-8 and 10	Samsung, HTC, LG	adverse judgment	1	1
IPR2017-01472	8,369,278	Samsung	1, 2 and 6-9	Samsung	pending (Jul-2018)		1
IPR2018-00986	8,370,106	Samsung	1-20	Samsung	pending (Jul-2018)		1
IPR2016-00394	8,410,617	Samsung, Micron Technology, SK Hynix	36 and 51	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-01471	8,412,197	Samsung	1, 2, 5-9 and 13-15	Samsung	pending (Jul-2018)		1
IPR2015-00555	8,457,228	Samsung	21	Samsung	not instituted - procedural	1	1
IPR2014-00889	8,457,228	Samsung	1-3, 5 and 10-21	Samsung	not instituted - merits	1	1
IPR2014-00892	8,457,228	Samsung	1-3, 5 and 10-21	Samsung	Yes	1	1
IPR2014-00890	8,457,228	Samsung	22, 23 and 25	Samsung	not instituted - merits	1	1
IPR2014-00893	8,457,228	Samsung	22, 23 and 25	Samsung	Yes	1	1
IPR2014-00891	8,457,228	Samsung	26-29, 31, 36-41, 43 and 47-	Samsung	not instituted - merits	1	1
IPR2014-00895	8,457,228	Samsung	26-29, 31, 36-41, 43 and 47-	Samsung	Yes	1	1
IPR2016-01554	8,457,476	Samsung	1, 6-11, 13 and 14	Samsung	settlement	1	1
IPR2016-01555	8,457,476	Samsung	1, 6-11, 13 and 14	Samsung	settlement	1	1
IPR2014-00588	8,466,795	Samsung	1-22	Samsung	settlement		1
IPR2014-00589	8,466,795	Samsung	23-33	Samsung	settlement		1
IPR2016-01787	8,472,012	Samsung, AMS AG, AMS-TAOS USA	1-4, 7-9, 12, 13, 18 and 19	Samsung, AMS AG, AMS-TAOS USA	not instituted - merits		1
IPR2017-01483	8,483,166	Samsung	1-5 and 12-16	Samsung	pending (Jul-2018)		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2016-01224	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1, 19, 20, 21, 24 and 26-28	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	not instituted - merits	1	1
IPR2016-01200	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1, 6, 15, 17, 18, 31 and 34	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01211	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-12, 14, 15, 17-21, 23-31, 34 and 35	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01206	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-18, 23, 25, 29-31, 34 and 35	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	not instituted - merits	1	1
IPR2016-01223	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-25, 27-30, 33 and 35	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	not instituted - merits	1	1
IPR2016-01213	8,504,746	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-3, 6-10, 15, 17-21, 24, 25, 29, 31 and 34	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2014-01181	8,532,641	Samsung	1-3 and 5-14	Samsung	Yes	1	1
IPR2014-01182	8,532,641	Samsung	1-3 and 5-14	Samsung	Yes	1	1
IPR2014-01184	8,532,641	Samsung	1-3 and 5-14	Samsung	Yes	1	1
IPR2015-00821	8,532,641	Samsung	1-3, 5-7, 9 and 10	Samsung	not instituted - procedural	1	1
IPR2015-00820	8,532,641	Samsung	1-3, 5-7, 9-10 and 12	Samsung	not instituted - procedural	1	1
IPR2018-00620	8,541,983	Samsung	1-5, 9, 11-13, 18 and 20-26	Samsung	pending (Jul-2018)		1
IPR2018-00110	8,624,550	Samsung, ZTE	1-18	Samsung, ZTE	not instituted - merits	1	1
IPR2018-00111	8,624,550	Samsung, ZTE	1-18	Samsung, ZTE	pending (Jul-2018)	1	1
IPR2016-00390	8,629,542	Samsung, Micron Technology, SK Hynix	1-3, 30, 31, 33, 40, 41 and 44	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-01474	8,639,246	Samsung	1-20	Samsung	pending (Jul-2018)		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2017-01188	8,650,591	Samsung	1-4, 8 and 11	Samsung	pending (Jul-2018)		1
IPR2016-00386	8,653,672	Samsung, Micron Technology, SK Hynix	17, 18, 22, 84, 95, 129-132, 143-146, 151 and 152	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-00101	8,654,855	Samsung	1-5	Samsung	not instituted - merits	1	1
IPR2017-00102	8,654,855	Samsung	1-5	Samsung	not instituted - merits	1	1
IPR2018-00011	8,654,855	Samsung	1-5	Samsung	pending (Jul-2018)	1	1
IPR2018-00012	8,654,855	Samsung	1-5	Samsung	pending (Jul-2018)	1	1
IPR2015-00604	8,672,482	Samsung	1-5, 7, 10, 11, 13, 14, 16, 17, 19-21 and 23-42	Samsung	Yes		1
IPR2017-00293	8,675,775	Samsung	2-6, 11-13, 17 and 18	Samsung	settlement		1
IPR2015-01503	8,681,164	Samsung, HTC, LG	1, 6-12 and 17	Samsung, HTC, LG	not instituted - merits		1
IPR2017-00295	8,711,885	Samsung	1, 102, 105 and 106	Samsung	settlement		1
IPR2017-00294	8,711,885	Samsung	9, 10, 12, 14, 15, 17, 21, 23	Samsung	settlement		1
IPR2015-00054	8,712,471	Samsung	1, 4-7, 11-15, 21-25, 28-35	Samsung	adverse judgment		1
IPR2016-00653	8,717,303	Samsung	20, 33, 35 and 36	Samsung	Yes		1
IPR2017-01798	8,724,622	Samsung	14-17, 19, 24-26, 28-31 and	Samsung	pending (Jul-2018)		1
IPR2017-01797	8,724,622	Samsung	3, 4, 6-8, 10-13, 18, 21-23, 27, 32, 34, 35, 38 and 39	Samsung	pending (Jul-2018)		1
IPR2016-00652	8,743,076	Samsung	1 and 4-6	Samsung	Yes		1
IPR2018-00093	8,774,279	Samsung	1-5	Samsung	pending (Jul-2018)	1	1
IPR2018-00095	8,774,279	Samsung	1-5	Samsung	pending (Jul-2018)	1	1
IPR2016-01788	8,786,844	Samsung, AMS AG, AMS-TAOS USA	1-4, 7-13, 18 and 19	Samsung, AMS AG, AMS-TAOS USA	not instituted - merits		1
IPR2017-01305	8,791,581	Samsung	1, 5, 12, 36, 54, 78, 113, 116,	Samsung	not instituted - merits		1
IPR2016-00391	8,796,862	Samsung, Micron Technology, SK Hynix	30, 34, 36, 135-138 and 147	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-01228	8,805,001	Samsung	5-13	Samsung	settlement		1
IPR2017-00347	8,805,001	Samsung	1-4	Samsung	settlement		1
IPR2018-01114	8,811,952	Samsung	1, 2, 6 and 9	Samsung	pending (Jul-2018)		1
IPR2018-01113	8,811,952	Samsung	26-30	Samsung	pending (Jul-2018)		1
IPR2017-01487	8,812,848	Samsung	1, 3-5, 7-9, 11-13, 15 and 16	Samsung	pending (Jul-2018)		1
IPR2016-00387	8,841,778	Samsung, Micron Technology, SK Hynix	1, 2, 8, 14, 31, 32, 44, 46 and 52-54	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2016-00654	8,866,785	Samsung	1 and 5-7	Samsung	Yes		1
IPR2016-00655	8,878,810	Samsung	1, 3-5 and 10	Samsung	Yes		1
IPR2017-01473	8,885,583	Samsung	3, 4 and 7	Samsung	pending (Jul-2018)		1
IPR2017-01465	8,885,587	Samsung	3-5 and 9-11	Samsung	not instituted - merits		1
IPR2016-00808	8,886,772	Samsung	1, 2 and 8-16	Samsung	not instituted - merits		1
IPR2016-00708	8,907,499	Samsung, Micron Technology, SK Hynix	1 and 49	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2016-00770	8,907,499	Samsung, Micron Technology, SK Hynix	12, 13, 24, 36-38, 53, 83, 86, 87 and 132	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2017-00099	8,917,772	Samsung	1-7	Samsung	Yes		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2017-00100	8,917,772	Samsung	8 and 9	Samsung	Yes		1
IPR2016-00687	8,928,119	Samsung, Micron Technology, SK Hynix	1, 7, 17, 18 and 33	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2016-00786	8,933,570	Samsung, Micron Technology, SK Hynix	58, 60, 61 and 67	Samsung, Micron Technology, SK Hynix	Yes		1
IPR2016-01202	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1, 2, 4, 5, 8, 13-20, 27-38, 42-48, 52, 71-74 and 84-86	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	not instituted - merits	1	1
IPR2016-01214	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1, 2-8, 13-17, 19, 27-29, 31-39, 42-48, 52-55, 59, 61, 78-81 and 83-87	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01222	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-3, 6, 7, 9-12, 21-26, 39-41, 49-51, 53-70 and 75-83	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	not instituted - merits	1	1
IPR2016-01225	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-36, 38-56, 58-65, 67-74 and 77-87	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01212	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-6, 8, 10, 13-16, 22, 27-40, 42-49, 52-55, 59-65, 77 and 80-87	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01199	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	1-8, 10, 14-20, 22, 26, 28-29, 38, 52, 56, 57, 59-65, 67, 71-74, 77-80, 84, 86 and 87	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2016-01216	8,966,144	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	7, 9, 11, 12, 17-21, 23-26, 41, 50, 51, 56-58, 66-76, 78 and 79	Samsung, Canon, FUJIFILM, JVC Kenwood, Nikon, Olympus, Panasonic	Yes	1	1
IPR2017-01218	8,983,134	Samsung	3-6	Samsung	pending (Jul-2018)		1
IPR2017-00353	8,983,134	Samsung	1 and 2	Samsung	Yes		1
IPR2017-00357	8,989,445	Samsung	1, 4, 6, 9, 18, 24, 25 and 27	Samsung	settlement		1
IPR2017-01212	8,989,445	Samsung	2, 3, 5, 7, 8, 10-17, 19-23, 26	Samsung	settlement	1	1
IPR2017-01217	8,989,445	Samsung	2, 3, 5, 7, 8, 10-17, 19-23, 26	Samsung	settlement	1	1
IPR2017-01801	8,995,433	Samsung	1-5, 7-12, 14-17, 25 and 26	Samsung	pending (Jul-2018)		1
IPR2017-01475	8,996,003	Samsung	1-20	Samsung	pending (Jul-2018)		1
IPR2016-01087	9,014,667	Samsung	31, 33 and 35	Samsung, SmartThings	settlement		1
IPR2018-00092	9,025,668	Samsung	1-3	Samsung	pending (Jul-2018)	1	1
IPR2018-00094	9,025,668	Samsung	1-3	Samsung	pending (Jul-2018)	1	1
IPR2018-00696	9,113,163	Samsung	1-6	Samsung	pending (Jul-2018)		1
IPR2017-01038	9,189,437	LG	1-45	LG	Yes		
IPR2016-01733	9,189,437	Samsung	1-45	Samsung	Yes		1

Case #	Patent #	Petitioner	Claims Attacked	RPI	Final Written Decision?	Tally of duplicative petitions	Tally where Samsung is petitioner or RPI
IPR2018-00697	9,191,673	Samsung	1-7	Samsung	pending (Jul-2018)		1
IPR2018-00698	9,197,896	Samsung	1-5	Samsung	pending (Jul-2018)		1
IPR2018-01120	9,247,019	Samsung	1-3, 5-7, 11-13, 15, 16, 19 and	Samsung	pending (Jul-2018)		1
IPR2018-01122	9,325,600	Samsung	1, 5-7, 11 and 12	Samsung	pending (Jul-2018)		1
IPR2018-01124	9,351,254	Samsung	1-16 and 28-33	Samsung	pending (Jul-2018)	1	1
IPR2018-01125	9,351,254	Samsung	1-16 and 28-33	Samsung	pending (Jul-2018)	1	1
IPR2018-01106	9,516,127	Samsung	1-24, 26-33, 35-42 and 44-50	Samsung	pending (Jul-2018)	1	1
IPR2018-01108	9,516,127	Samsung	1-30, 32-38, 40-48 and 50	Samsung	pending (Jul-2018)	1	1
IPR2018-01126	9,516,129	Samsung	1-36	Samsung	pending (Jul-2018)		1
IPR2018-01127	9,553,816	Samsung	1-16	Samsung	pending (Jul-2018)		1
IPR2018-00611	9,742,033	Samsung	1-16	Samsung	pending (Jul-2018)		1
IPR2017-00279	RE40,264	GlobalFoundries, Intel, Micron	13-26, 64 and 65	GlobalFoundries, Intel, Micron	pending (Jul-2018)		
IPR2017-00280	RE40,264	GlobalFoundries, Intel, Micron	27-36, 51-55, 66, 68 and 69	GlobalFoundries, Intel, Micron	pending (Jul-2018)		
IPR2017-00281	RE40,264	GlobalFoundries, Intel, Micron	37-50 and 67	GlobalFoundries, Intel, Micron	pending (Jul-2018)		
IPR2017-00282	RE40,264	GlobalFoundries, Intel, Micron	56-63, 70 and 71	GlobalFoundries, Intel, Micron	pending (Jul-2018)		
IPR2016-01510	RE40,264	Samsung	13-26, 64 and 65	Samsung	not instituted - merits	1	1
IPR2017-01749	RE40,264	Samsung	13-26, 64 and 65	Samsung	pending (Jul-2018)	1	1
IPR2016-01512	RE40,264	Samsung	27, 31, 32, 34, 37, 40, 41, 44, 47, 48 and 50	Samsung	Yes	1	1
IPR2017-01750	RE40,264	Samsung	27-36, 51-55, 66, 68 and 69	Samsung	pending (Jul-2018)	1	1
IPR2017-01751	RE40,264	Samsung	37-50 and 67	Samsung	pending (Jul-2018)		1
IPR2017-01752	RE40,264	Samsung	56-63, 70 and 71	Samsung	pending (Jul-2018)		1
						123	319
						TOTAL duplicative petitions	TOTAL with Samsung as petitioner or RPI
						Samsung duplicative %	38.55799373