505236338 12/13/2018

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HGST TECHNOLOGIES SANTA ANA, INC.	04/10/2018

RECEIVING PARTY DATA

Name: WESTERN DIGITAL TECHNOLOGIES, INC.	
Street Address: 5601 GREAT OAKS PARKWAY	
City:	SAN JOSE
State/Country:	CALIFORNIA
Postal Code:	95119

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16216904

CORRESPONDENCE DATA

Fax Number: (714)830-0700

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

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Email: Iori.tillman@morganlewis.com, WDMLProsecution@morganlewis.com

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ATTORNEY DOCKET NUMBER:	122203-5814
NAME OF SUBMITTER:	SOYEON PAK (KAREN) LAUB, REG. # 39,266
SIGNATURE:	/Soyeon Pak (Karen) Laub/
DATE SIGNED:	12/13/2018

Total Attachments: 8

source=122203-5814_WD_Assignment#page1.tif source=122203-5814_WD_Assignment#page2.tif source=122203-5814_WD_Assignment#page3.tif source=122203-5814_WD_Assignment#page4.tif

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PATENT 505236338 REEL: 047772 FRAME: 0595

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> PATENT REEL: 047772 FRAME: 0596

ASSIGNMENT

WHEREAS, **HGST Technologies Santa Ana, Inc.** ("Assignor"), a California corporation, having an address at 3355 Michelson Drive, Suite 100, Irvine, California 92612 U.S.A., is desirous of assigning all patents, patent applications and inventions that Assignor owns, including the patents, patent applications and inventions listed in the attached Patent Schedules I and II (collectively, the "Patents"); and

WHEREAS, **Western Digital Technologies, Inc.** ("Assignee"), a Delaware corporation, having an address at 5601 Great Oaks Parkway, San Jose, California 95119 U.S.A., is desirous of acquiring the entire rights, title and interests in and to the Patents.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, this assignment is hereby entered into as follows:

Assignor agrees to and does hereby assign, transfer and grant to Assignee, its legal representatives, successors, and assigns, the entire rights, title and interests in and to the Patents worldwide whether existed in the past, exist now or come into existence later, including all United States ("U.S."), non-U.S. and regional patents and patent applications worldwide (i) that claim priority, directly or indirectly, from any of the Patents, (ii) from which any of the Patents claims priority, directly or indirectly, or (iii) that claim any common priority, directly or indirectly, with any of the Patents, including all inventions in any of the foregoing, including all applications, international applications, regional applications, national applications, national stage applications, provisional applications, non-provisional applications, continuations, continuations-inpart, divisionals, substitutes, reexaminations, inter partes review applications, post grant review applications, covered business method applications, reissues, and extensions of any of the foregoing, including all patents, registrations, certificates, governmental grants, and renewals of any of the foregoing, including all rights to claim priority, file applications, and obtain grants, renewals and extensions in connection with any of the foregoing, including all rights to assert, defend and recover title in connection with any of the foregoing, and including all rights to sue and recover for any past, present and future infringement, misappropriation, violation, damages, lost profits, royalties, and payments in connection with any of the foregoing, in each case, as may have existed in the past, exist now or come into existence in the future throughout the world. Assignee accepts all of such rights, title and interests assigned herein.

Assignor does hereby agree with said assignee that Assignor will, without further or additional consideration, execute such additional assignments and other writings and do such additional acts as said assignee may deem necessary or desirable to perfect said assignee's enjoyment of this assignment or to carry out the purposes of this assignment. The words "include" and "including," and variations thereof, will not be deemed to be terms of limitation, but rather will be deemed to be followed by the word "without limitation."

Assignor authorizes and requests all Letters Patent and certificates based on any of the Patents (including the foregoing patents, patent applications, and inventions) to be issued to Assignee, its legal representatives, successors, and assigns, in accordance with the terms of this assignment.

IN WITNESS WHEREOF, Assignor has executed this assignment as of the date written below.

HGST Technologies Santa Ana, Inc.

Name: Michael C. Ray

Title: Director

By

Date_4[10][8

DM_US 89884879-2.069985.0010 PATENT REEL: 048772 FRAME: 0597

Patent Schedule

(Attached)

DM_US 89884879-2.069985.0010

PATENT REEL: 046772 FRAME: 0592

Patent Schedule I

Juris dicti on	Application No.	Filing Date	Patent No. (if applicable)	Issue Date (if applicable)	Publication No.	Publication Date (if applicable)
TW	99104472	Feb 11, 2010	1428922	Mar 1, 2014	201106371	Feb 16, 2011
TW	102147779	Feb 11, 2010	1529738	Apr 11, 2016	201419300	May 16, 2014
US	08/408,552	Mar 21, 1995	5,514,907	May 7, 1996		
US	08/510,376	Aug 2, 1995	5,555,209	Sep 10, 1996		
US	09/063,513	Apr 21, 1998	6,154,788	Nov 28, 2000		
US	09/064,348	Apr 22, 1998	RE36,916	Oct 17, 2000		
US	09/501,189	Feb 10, 2000	6,757,291	Jun 29, 2004		
US	09/631,849	Aug 3, 2000	6,535,518	Mar 18, 2003		
US	09/702,276	Oct 30, 2000	6,442,625	Aug 27, 2002		
US	10/032,149	Dec 20, 2001			2002-0091965	Jul 11, 2002
US	10/032,332	Dec 20, 2001	7,107,480	Sep 12, 2006		
US	10/063,278	Apr 8, 2002	7,035,993	Apr 25, 2006	2003-0135688	Jul 17, 2003
US	10/127,343	Apr 19, 2002	6,762,487	Jul 13, 2004	2002-0163786	Nov 7, 2002
US	10/157,749	May 28, 2002			2003-0040166	Feb 27, 2003
US	10/172,853	Jun 13, 2002			2002-0154645	Oct 24, 2002
US	10/211,947	Aug 2, 2002	6,728,794	Apr 27, 2004	2003-0046455	Mar 6, 2003
US	10/448,881	May 30, 2003			2004-0042323	Mar 4, 2004
US	10/793,826	Mar 8, 2004	6,981,071	Dec 27, 2005	2004-0199675	Oct 7, 2004
US	10/853,865	May 25, 2004	7,057,270	Jun 6, 2006	2004-0212071	Oct 28, 2004
US	10/863,210	Jun 9, 2004	7,194,596	May 20, 2007	2005-0278479	Dec 15, 2005
US	10/912,114	Aug 6, 2004	7,020,019	Mar 28, 2006	2005-0259469	Nov 24, 2005
US	10/943,483	Sep 17, 2004	8,065,492	Nov 22, 2011	2005-0044454	Feb 24, 2005
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US	11/332,197	Jan 17, 2006	7,180,777	Feb 20, 2007	2006-0133178	Jun 22, 2006
US	11/352,654	Feb 13, 2006	7,743,277	Jun 22, 2010	2006-0181948	Aug 17, 2006
US	11/358,043	Feb 22, 2006	7,376,034	May 20, 2008	2007-0140020	Jun 21, 2007
US	11/358,673	Feb 21, 2006	7,904,636	Mar 8, 2011	2006-143426	Jun 29, 2006
US	11/404,464	Apr 13, 2006			2006-0255444	Nov 16, 2006
US	11/436,845	May 18, 2006	8,245,000	Aug 14, 2012	2006-0265605	Nov 23, 2006
US	11/493,958	Jul 26, 2006	7,269,755	Sep 11, 2007	2007-0006013	Jan 4, 2007
US	11/494,986	Jul 28, 2006	7,409,590	Sep 5, 2008	2006-0265624	Nov 23, 2006
US	11/520,014	Sep 13, 2006	8,464,073	Jun 11, 2013	2008-0065905	Mar 13, 2008
US	11/527,040	Sep 26, 2006			2007-0226452	Sep 27, 2007
US	11/582,462	Oct 18, 2006	7,594,067	Sep 22, 2009	2007-0094440	Apr 26, 2007
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US	11/978,176	Oct 26, 2007	7,765,339	Jul 27, 2010	2008-0140945	Jun 12, 2008
US	11/978,177	Oct 26, 2007	7,958,280	Jun 7, 2011	2008-0140883	Jun 12, 2008

Juris dicti			Patent No. (if	Issue Date (if	Publication No.	Publication Date (if
on	Application No.	Filing Date	applicable)	applicable)	(if applicable)	applicable)
US	11/978,215	Oct 26, 2007	7,822,887	Oct 26, 2010	2008-0140919	Jun 12, 2008
US	12/122,637	May 16, 2008	7,619,941	Nov 17, 2009	2008-0253199	Oct 16, 2008
US	12/129,634	May 29, 2008			2008-0228895	Sep 18, 2008
US	12/141,002	Jun 17, 2008	7,711,892	May 4, 2010	2008-0250223	Oct 9, 2008
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US	12/369,027	Feb 11, 2009	7,830,732	Nov 9, 2010	2010-0202239	Aug 12, 2010
US	12/369,032	Feb 11, 2009			2010-0205349	Aug 12, 2010
US	12/369,040	Feb 11, 2009	7,990,797	Aug 2, 2011	2010-0202237	Aug 12, 2010
US	12/369,046	Feb 11, 2009	8,977,831	Mar 10, 2015	2010-0205348	Aug 12, 2010
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US	12/384,933	Apr 11, 2009			2009-0201732	Aug 13, 2009
US	12/464,856	May 12, 2009			2009-0327804	Dec 31, 2009
US	12/492,103	Jun 25, 2009	8,572,308	Oct 29, 2013	2010-0042901	Feb 18, 2010
US	12/492,104	Jun 25, 2009	9,311,006	Apr 12, 2016	2009-0327589	Dec 31, 2009
US	12/492,107	Jun 25, 2009	8,347,138	Jan 1, 2013	2009-0327840	Dec 31, 2009
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US	12/492,110	Jun 25, 2009			2012-0239853	Sep 20, 2012
US	12/492,112	Jun 25, 2009	8,762,622	Jun 24, 2014	2009-0327590	Dec 31, 2009
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US	12/508,528	Jul 23, 2009	8,275,981	Sep 25, 2012	2011-0022829	Jan 27, 2011
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US	12/511,991	Jul 29, 2009	8,510,497	Aug 13, 2013	2011-0029717	Feb 3, 2011
US	12/511,994	Jul 29, 2009	8,266,481	Sep 11, 2012	2011-0029808	Feb 3, 2011
US	12/542,626	Aug 17, 2009	7,962,687	Jun 14, 2011	2009-0300276	Dec 3, 2009
US	12/574,235	Oct 6, 2009	7,894,288	Feb 22, 2011	2010-0023714	Jan 28, 2010
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US	12/779,003	May 12, 2010	8,806,144	Aug 12, 2014	2012-0239854	Sep 20, 2012
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US	12/842,919	Jul 23, 2010	8,370,544	Feb 5, 2013	2012-0260009	Oct 11, 2012
US	12/842,930	Jul 23, 2010	8,514,565	Aug 20, 2013	2012-0236489	Sep 20, 2012
US	12/842,950	Jul 23, 2010	8,566,511	Oct 22, 2013	2012-0239855	Sep 20, 2012
US	13/044,464	Mar 9, 2011	8,819,503	Aug 26, 2014	2012-0239991	Sep 20, 2012
US	13/076,340	Mar 30, 2011	8,737,136	May 27, 2014	2012-0236656	Sep 20, 2012

Juris dicti on	Application No.	Filing Date	Patent No. (if	Issue Date (if applicable)	Publication No.	Publication Date (if applicable)
US	13/118,137	May 27, 2011	8,656,263	Feb 18, 2014	2012-0240006	Sep 20, 2012
US	13/176,727	Jul 5, 2011	8,605,501	Dec 10, 2013	2012-0246651	Sep 20, 2012
US	13/177,482	Jul 6, 2011	8,656,256	Feb 18, 2014	2012-0230031	Sep 20, 2012
US	13/177,518	Jul 6, 2011	8,737,141	May 27, 2014	2012-0240012	Sep 20, 2012
US	13/179,466	Jul 8, 2011	8,644,099	Feb 4, 2014	2012-0239976	Sep 20, 2012
US	13/253,029	Oct 4, 2011	8,848,438	Sep 30, 2014	2012-0236641	Sep 20, 2012
US	13/277,876	Oct 20, 2011	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	30000, 202.	2012-0240007	Sep 20, 2012
US	13/289,966	Nov 4, 2011	8,437,190	May 7, 2013	2012-0236643	Sep 20, 2012
US	13/303,870	Nov 23, 2011		, .,	2012-0137054	May 31, 2012
US	13/343,684	Jan 4, 2012	8,566,667	Oct 22, 2013	2013-0031438	Jan 31, 2013
US	13/365,232	Feb 2, 2012	8,364,888	Jan 29, 2013	2012-0254515	Oct 4, 2012
US	13/407,095	Feb 28, 2012	8,271,723	Sep 18, 2012	2012-0226851	Sep 6, 2012
US	13/420,849	Mar 15, 2012	8,379,457	Feb 19, 2013		Jop 5, 2012
US	13/420,970	Mar 15, 2012	9,543,035	Jan 10, 2017	2013-0124931	
US	13/441,049	Apr 6, 2012			2012-0198136	Aug 2, 2012
US	13/475,668	May 18, 2012	8,402,206	Mar 19, 2013	2012-0297125	Nov 22, 2012
US	13/482,865	May 29, 2012	8,612,719	Dec 17, 2013	2013-0024644	Jan 24, 2013
US	13/525,009	Jun 15, 2012	8,527,849	Sep 3, 2013	2013-0047052	Feb 21, 2013
US	13/526,446	Jun 18, 2012	8,347,200	Jan 1, 2013		
US	13/530,026	Jun 21, 2012	9,087,599	Jul 21, 2015	2012-0257454	Oct 11, 2012
US	13/532,718	Jun 25, 2012	9,377,960	Jun 28, 2016	2012-0324150	Dec 20, 2012
US	13/553,707	Jul 19, 2012	8,484,519	Jul 9, 2013	2013-0047044	Feb 21, 2013
US	13/555,050	Jul 20, 2012	8,677,092	Mar 18, 2014	2012-0290776	Nov 15, 2012
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US	13/559,535	Jul 26, 2012			2013-0031301	Jan 31, 2013
US	13/584,698	Aug 13, 2012			2013-0047045	Feb 21, 2013
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US	13/590,123	Aug 20, 2012			2012-0317406	Dec 13, 2012
US	13/597,158	Aug 28, 2012	8,453,021	May 28, 2013	2012-0324299	Dec 20, 2012
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US	13/714,590	Dec 14, 2012	8,994,133	Mar 31, 2015	2013-0191581	Jul 25, 2013
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US	13/725,943	Dec 21, 2012	9,117,529	Aug 25, 2015	2013-0163328	Jun 27, 2013

Juris						Publication
dicti			Patent No. (if	Issue Date (if	Publication No.	Date (if
on	Application No.	Filing Date	applicable)	applicable)	(if applicable)	applicable)
US	13/728,944	Dec 27, 2012	8,484,547	Jul 9, 2013	2013-0117625	May 9, 2013
US	13/733,835	Jan 3, 2013	0.000.400	1111 0015	2013-0124792	May 16, 2013
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US	13/762,524	Feb 8, 2013	8,578,085	Nov 5, 2013	2013-0159611	Jun 20, 2013
US	13/764,649	Feb 11, 2013	8,954,820	Feb 10, 2015	2013-0212451	Aug 15, 2013
US	13/775,070	Feb 22, 2013	9,047,955	Jun 2, 2015	2013-0176784	Jul 11, 2013
US	13/776,590	Feb 25, 2013	9,195,586	Nov 24, 2015	2013-0227200	Aug 29, 2013
US	13/842,101	Mar 15, 2013	9,223,373	Dec 29, 2015	2013-0254562	Sep 26, 2013
US	13/843,218	Mar 15, 2013	9,378,132	Jun 28, 2016	2013-0254467	Sep 26, 2013
US	13/843,225	Mar 15, 2013	9,136,011	Sep 15, 2015	2013-0290612	Oct 31, 2013
US	13/853,989	Mar 29, 2013	8,713,381	Apr 29, 2014	2013-0227362	Aug 29, 2013
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US	14/457,077	Aug 11, 2014	9,223,702	Dec 29, 2015	2014-0351498	Nov 27, 2014
US	14/500,904	Sep 29, 2014	9,047,984	Jun 2, 2015	2015-0016187	Jan 15, 2015
US	14/607,039	Jan 27, 2015	9,319,069	Apr 19, 2016	2015-0143194	May 21, 2015
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US	14/657,780	Mar 13, 2015	9,379,073	Jun 28, 2016	2015-0187712	Jul 2, 2015
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US	15/156,267	May 16, 2016			2016-0335206	Nov 17, 2016
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US	15/882,937	Jan 29, 2018				
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Juris dicti			Patent No. (if	Issue Date (if	Publication No.	Publication Date (if
on	Application No.	Filing Date	applicable)	applicable)	(if applicable)	applicable)
US	60/257,760	Dec 22, 2000				
US	60/259,597	Dec 22, 2000				
US	60/285,089	Apr 19, 2001				
US	60/293,766	May 25, 2001				
US	60/294,389	May 29, 2001				
US	60/384,885	May 31, 2002				
US	60/573,281	May 21, 2004				
US	60/652,960	Feb 14, 2005				
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