

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
MOSTAFA EL GAMAL	12/06/2018
NIRANJAY RAVINDRAN	12/06/2018
JAMES FITZPATRICK	12/11/2018
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:	16912588
CORRESPONDENCE DATA	
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ATTORNEY DOCKET NUMBER:	122203-5889
NAME OF SUBMITTER:	SOYEON PAK (KAREN) LAUB, REG. # 39,266
SIGNATURE:	/Soyeon Pak (Karen) Laub/
DATE SIGNED:	07/24/2020
Total Attachments: 4	
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ASSIGNMENT

WHEREAS I/We, the undersigned, have made a certain invention as set forth in a patent application, entitled MULTI-LEVEL CELL PROGRAMMING USING OPTIMIZED MULTIPHASE MAPPING WITH BALANCED GRAY CODE, filed on December 13, 2018, and identified by United States Patent Application No. 16/219,825, and I/We, the undersigned, authorize and request the practitioners appointed in said application to insert the filing date and application number of said application, when known;

AND WHEREAS, Western Digital Technologies, Inc. (the "Entity"), a corporation of Delaware and having an address of 5601 Great Oaks Parkway, San Jose, California 95119, is desirous of acquiring the entire rights, title and interests in and to said invention and in and to any and all Letters Patent and certificates of the United States, foreign countries and all regions worldwide which may be obtained therefor;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I/We, the undersigned, do hereby sell, assign, transfer and set over unto the Entity, its legal representatives, successors, and assigns, the entire rights, title and interests in and to said application and said invention worldwide, including any applications worldwide based in whole or in part on said application and/or said invention as well as the right to apply for any such applications worldwide, including any international and foreign applications filed or to be filed under any international or foreign patent law or treaty (including the Patent Cooperation Treaty, the European Patent Convention, the Paris Convention for the Protection of Industrial Property, and all other treaties of like purposes, including the rights to all benefits thereunder), including any provisional, non-provisional, continuation, continuation-in-part, divisional, reissue, re-examination, inter partes review, post grant review, covered business method, national stage, regional stage and extension applications filed or to be filed based in whole or in part on said application and/or said invention, including any applications to/from which said application directly or indirectly claims priority, including the right to claim priority to/from said application, said invention, and any of the foregoing applications, and in and to any and all patents and certificates of the United States, foreign countries and all regions worldwide which issued or may be issued based in whole or in part on said application, said invention and/or any of the foregoing applications, including the right to enforce such patents and certificates, including the right to sue for injunctions and recover damages and attorney fees for past, present and future infringements;

UPON SAID CONSIDERATION, I/We, the undersigned, hereby agree with said assignee that I/We, the undersigned, will not execute any writing or do any act whatsoever conflicting with these presents, and that I/We, the undersigned, will, at any time upon request, without further or additional consideration but at the expense of said assignee, 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, and render all necessary assistance in preparing provisional applications, in making application for and obtaining original, non-provisional, continuation, continuation-in-part, divisional, reissue, re-examination, inter partes review, post grant review, covered business method, national stage, regional stage and extension Letters Patent and certificates of the United States and/or of any and all foreign countries and regions based in whole or in part on said application and/or said invention, and in enforcing any rights or choses in action accruing as a result of such applications, patents or certificates, by giving testimony in any proceedings or transactions involving such applications, patents or certificates, and by executing preliminary statements and other affidavits, it being understood that the foregoing covenant and agreement shall bind, and inure to the benefit of heirs, executors, administrators, assigns and legal representatives of said assignor and assignee;

Docket No.: 122203-5791

AND I/We, the undersigned, authorize and request all Letters Patent and certificates based on said application and/or said invention to be issued to the Entity, its legal representatives, successors or assigns, as the sole owner of the entire rights, title and interests in and to said patents, said certificates and said invention hereby assigned.

Undersigned:

12-06-2018
Date

Mostafa El gamal
Name: Mostafa EL GAMAL
Address: Worcester, Massachusetts

Date

Name: Niranjay RAVINDRAN
Address: Rochester, Minnesota

Date

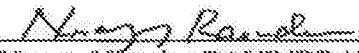
Name: Jim FITZPATRICK
Address: Sudbury, Massachusetts

Docket No.: 122203-5791

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Undersigned:

Date Name: Mostafa EL GAMAL
Address: Worcester, Massachusetts

12/6/2018
Date 
Name: Niranjay RAVINDRAN
Address: Rochester, Minnesota

Date Name: Jim FITZPATRICK
Address: Sudbury, Massachusetts

Docket No.: 122203-5791

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Undersigned:

Date

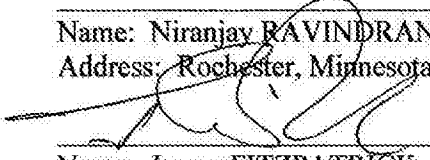
Name: Mostafa EL GAMAL
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Date

Name: Niranjay RAVINDRAN
Address: Rochester, Minnesota

12/14/18

Date



Name: James FITZPATRICK
Address: Laguna Niguel, California