

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT4048081

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
LOVE SINGHAL	09/12/2016
MAHESH IYER	09/12/2016
SAURABH ADYA	09/12/2016
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ALTERA CORPORATION
<b>Street Address:</b>	101 INNOVATION DRIVE
<b>City:</b>	SAN JOSE
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	95134
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
Application Number:	15262939
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(217)377-2500
<i>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.</i>	
<b>Phone:</b>	217-377-2500
<b>Email:</b>	lawrence.cho@ip-practice.com
<b>Correspondent Name:</b>	LAWRENCE M. CHO
<b>Address Line 1:</b>	P. O. BOX 2144
<b>Address Line 4:</b>	CHAMPAIGN, ILLINOIS 61825
<b>ATTORNEY DOCKET NUMBER:</b>	ALT.P163 (A05220)
<b>NAME OF SUBMITTER:</b>	LAWRENCE M. CHO
<b>SIGNATURE:</b>	/Lawrence M. Cho/
<b>DATE SIGNED:</b>	09/12/2016
<b>Total Attachments: 2</b>	
source=ALT_P163_A05220_Assignment#page1.tif	
source=ALT_P163_A05220_Assignment#page2.tif	

ASSIGNMENT

In consideration of good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, **Love Singhal, Mahesh Iyer, and Saurabh Adya**, the undersigned Assignors, believing to be the original, first and sole or joint inventors of any and all new and useful improvements disclosed in the application for the United States patent entitled, "**Method and Apparatus for Performing Large Scale Consensus Based Clustering**", hereby sell, assign, and transfer to **Altera Corporation** a Delaware corporation, having a principal place of business at 101 Innovation Drive, San Jose, CA 95134, ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the same patent application which has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below.

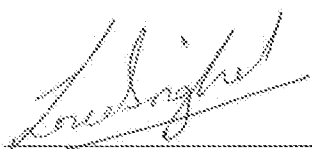
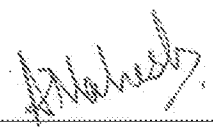
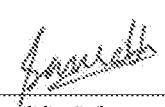
The undersigned further sell, assign, and transfer to Assignee said application and all provisional applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application; and the right to file foreign applications directly in the name of the Assignee and to claim for any such foreign applications any priority rights to which such applications are entitled under international conventions, treaties or otherwise.

The undersigned further agree that said Assignee may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title to said improvements, and all applications for patents and all patents on said improvements, in said Assignee, its successors, assigns, and legal representatives.

The undersigned covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

The undersigned hereby authorize and request the Officials of the United States Patent and Trademark Office and any and all foreign Patent Offices to issue any and all Letters Patents, when granted, to said Assignee as the assignee of the entire right, title and interest in and to the same, for the sole use of said Assignee, its successors and assigns, to the full end of the term for which said Letters Patents may be granted.

The undersigned hereby grant to Lawrence M. Cho, Attorney for Applicant, located at P.O. Box 2144 Champaign, IL, 61825, the power to insert on this document any further identification necessary or desirable to comply with the rules of the United States Patent and Trademark Office for recordation of this Assignment.

<b>Each Inventor/Assignor: Please Sign and Date Below:</b>		<b>Please also list date you signed the accompanying DECLARATION if Assignment is executed with a new filing:</b>	
<u>9/12</u> , 20 <u>16</u> Date	<u></u> Love Singhal		_____, 20____ Date
<u>09/12</u> , 20 <u>16</u> Date	<u></u> Mahesh Iyer		_____, 20____ Date
<u>9/12</u> , 20 <u>16</u> Date	<u></u> Saurabh Adya		_____, 20____ Date