

## PATENT ASSIGNMENT COVER SHEET

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EPAS ID: PAT3989231

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	ION TORRENT SYSTEMS INCORPORATED	11/12/2010
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	LIFE TECHNOLOGIES CORPORATION	
<b>Street Address:</b>	5823 NEWTON DRIVE	
<b>City:</b>	CARLSBAD	
<b>State/Country:</b>	CALIFORNIA	
<b>Postal Code:</b>	92008	
<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	14291372
<b>CORRESPONDENCE DATA</b>		
<b>Fax Number:</b>	(760)476-6048	
<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>	760-603-7200	
<b>Email:</b>	lifetechdocket@system.foundationip.com	
<b>Correspondent Name:</b>	JOHN SCHELL	
<b>Address Line 1:</b>	5823 NEWTON DRIVE	
<b>Address Line 4:</b>	CARLSBAD, CALIFORNIA 92008	
<b>ATTORNEY DOCKET NUMBER:</b>	LT00336.1 CIP CON 4	
<b>NAME OF SUBMITTER:</b>	MARY K. CHACON	
<b>SIGNATURE:</b>	/Mary K. Chacon/	
<b>DATE SIGNED:</b>	08/02/2016	
<b>Total Attachments: 8</b>		
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## ASSIGNMENT

This ASSIGNMENT is between ION TORRENT SYSTEMS INCORPORATED, a Delaware corporation with a place of business at 5791 Van Allen Way, Carlsbad, CA 92008, and LIFE TECHNOLOGIES CORPORATION, a Delaware corporation having a place of business at 5791 Van Allen Way, Carlsbad, CA 92008.

WHEREAS, ION TORRENT SYSTEMS INCORPORATED is the owner of the entire right, title and interest to the inventions described in the United States Patent Applications, and United States Patents obtained therefor and thereon, listed in Attachment 1 hereto;

AND WHEREAS, LIFE TECHNOLOGIES CORPORATION desires to acquire from ION TORRENT SYSTEMS INCORPORATED the entire right, title and interest in and to said inventions and said applications for Letters Patent of the United States, and in and to any Letters Patent or Patents, United States or foreign, to be obtained therefor and thereon;

NOW, THEREFORE, for valuable consideration received, the receipt of which is hereby acknowledged, the said assignors have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto the assignee, its successors, legal representatives and assigns, the entire right, title and interest in and to the above-mentioned inventions, applications for Letters Patent, and any and all Letters Patent or Patents in the United States of America and all foreign countries which may be granted therefore and thereon, and in and to any and all divisions, continuations, and continuations-in-part of said application, or reissues or extensions of said Letters Patent or Patents, and all rights under the International Union for the Protection of Industrial Property, the same to be held and enjoyed by the said assignee, for its own use and behoof and the use and behoof of its successors, legal representatives and assigns, to the full end of the term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the assignors, had this sale and assignment not been made.

AND for the same consideration, the said assignors hereby covenant and agree to and with the assignee, its successors, legal representatives and assigns, that, at the time of execution and delivery of these presents, the said assignors are the sole and lawful owners of the entire right, title and interest in and to the said inventions and the application for

Letters Patent above-mentioned, and that the same are unencumbered and that the said assignors have good and full right and lawful authority to sell and convey the same in the manner herein set forth.

AND for the same consideration, the said assignors hereby covenant and agree to and with the said assignee, its successors, legal representatives and assigns, that the said assignors will, whenever counsel of the said assignee, or the counsel of its successors, legal representatives and assigns, shall advise that any proceeding in connection with said inventions, or said application for Letters Patent, or any proceeding in connection with Letters Patent for said inventions in any country, including interference proceedings, is lawful and desirable, or that any division, continuation or continuation-in-part of any application for Letters Patent or any reissue or extension of any Letters Patent, to be obtained thereon, is lawful and desirable, sign all papers and documents, take all lawful oaths, and do all acts necessary or required to be done for the procurement, maintenance, enforcement and defense of Letters Patent for said inventions, without charge to said assignee, its successors, legal representatives and assigns, but at the cost and expense of the said assignee, its successors, legal representatives and assigns.

AND the said assignors hereby request the Commissioner of Patents to issue said Letters Patent of the United States to the said assignee as the assignee of said inventions and the Letters Patent to be issued thereon for the sole use and behoof of the said assignee, its successors, legal representatives and assigns.

IN WITNESS WHEREOF, ION TORRENT SYSTEMS INCORPORATED has caused this Assignment to be executed by a duly authorized representative thereof.

ION TORRENT SYSTEMS INCORPORATED

Date: Nov 12, 2010

By:



Name: Alan W. Hammond

Title: Vice President, Intellectual Property

SIGNATURE of Applicant or Assignee of Record

LIFE TECHNOLOGIES CORPORATION

Date: Nov 12, 2010

By:



Name: Alan W. Hammond

Title: Chief Intellectual Property Counsel

## ATTACHMENT 1

Docket No.	Title	Application No.	Filing Date
LT00365 PRO	METHODS AND COMPOSITIONS FOR NUCLEIC ACID LIBRARY PREPARATION, EXON SELECTION, AND AMPLIFICATION	61/011,576	01/21/2008
LT00325 PRO	VERY LARGE SCALE TRANSISTOR ARRAYS FOR DNA SEQUENCING	60/870,073	12/14/2006
LT00325 PRO 2	HYBRID FLUIDIC/ELECTRONIC SYSTEM	60/948,748	07/10/2007
LT00325 PRO 3	ION CONCENTRATION-BASED METHODS AND APPARATUS EMPLOYING LARGE SCALE ISFET ARRAYS	60/956,324	08/16/2007
LT00325	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	12/002,291	12/14/2007
LT00325.1 CIP	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	12/002,781	12/17/2007
LT00325.2 CON	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	12/691,923	01/22/2010
LT00325.3 DIV	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	12/721,458	03/10/2010
LT00325 PCT	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	PCT/US2007/025721	12/14/2007
LT00325 AU	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	2007334393	12/14/2007
LT00325 CA	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	2672315	12/14/2007

LT00325 CN	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	200780051353.2	12/14/2007
LT00325 EP	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	07867780.4	12/14/2007
LT00325 IN	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	2594/KOLNP/2009	12/14/2007
LT00325 JP	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	2009-541416	12/14/2007
LT00325 SG	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	200903992-6	12/14/2007
LT00325 GB	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	0911039.6	12/14/2007
LT00326 PRO	METHOD AND APPARATUS FOR RAPID NUCLEIC ACID SEQUENCING	61/196,953	10/22/2008
LT00326 PRO 2	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	61/198,222	11/04/2008
LT00326 PRO 3	METHOD AND APPARATUS FOR RAPID NUCLEIC ACID SEQUENCING	61/205,626	01/22/2009
LT00326	METHODS AND APPARATUS FOR MEASURING ANALYTES	12/474,897	05/29/2009
LT00326.1	METHODS AND APPARATUS FOR MEASURING ANALYTES	12/475,311	05/29/2009
LT00326 PCT	INTEGRATED SENSOR ARRAYS FOR BIOLOGICAL AND CHEMICAL ANALYSIS	PCT/US2009/005745	10/22/2009
LT00327 PRO	METHODS AND APPARATUS FOR DETECTING MOLECULAR INTERACTIONS USING FET ARRAYS	61/133,204	06/26/2008
LT00327.1 CIP	METHODS AND APPARATUS	12/492,844	06/26/2009

	FOR DETECTING MOLECULAR INTERACTIONS USING FET ARRAYS		
LT00327 PCT	METHODS AND APPARATUS FOR DETECTING MOLECULAR INTERACTIONS USING FET ARRAYS	PCT/US2009/003797	06/26/2009
LT00328 D	BOTTLE	29/325,007 D602785	09/24/2008
LT00329 D	CONTAINER	29/325,009 D602784	09/24/2008
LT00330 D	SIPPER TUBE	29/325,010 D595990	09/24/2008
LT00331 D	SIPPER TUBE	29/325,011 D596440	09/24/2008
LT00332 GB	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	0811656.8	06/25/2008
LT00332 GB 2	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	0811657.6	06/25/2008
LT00332 PCT	METHODS AND APPARATUS FOR MEASURING ANALYTES USING LARGE SCALE FET ARRAYS	PCT/US2009/003766	06/25/2009
LT00333 PRO	METHOD FOR SEQUENCING INDIVIDUAL CONCATENATED, IMMOBILIZED DNA MOLECULES UNDER TENSION	61/188,544	08/08/2008
LT00333 PRO 2	METHOD FOR SEQUENCING INDIVIDUAL CONCATENATED, IMMOBILIZED DNA MOLECULES UNDER TENSION	61/191,930	09/12/2008
LT00333 PRO 4	METHOD FOR SEQUENCING INDIVIDUAL CONCATENATED, IMMOBILIZED DNA MOLECULES UNDER TENSION	61/194,422	09/26/2008
LT00333 PRO 4	METHOD FOR SEQUENCING INDIVIDUAL NUCLEIC ACIDS UNDER TENSION	61/197,588	10/29/2008
LT00333	METHOD FOR SEQUENCING INDIVIDUAL CONCATENATED, IMMOBILIZED NUCLEIC ACIDS UNDER TENSION	12/319,140	12/31/2008



LT00333 PCT	METHODS FOR SEQUENCING INDIVIDUAL NUCLEIC ACIDS UNDER TENSION	PCT/US2009/004546	08/07/2009
LT000334 PRO	METHODS AND APPARATUS FOR MAKING MONODISPERSE POLYMER PARTICLES	61/252,276	10/16/2009
LT00335 PRO	BUFFERLESS PROTEINS FOR PH-BASED DNA SEQUENCING	61/308,863	02/26/2010
LT00336 PRO	FLUIDICS SYSTEM FOR SEQUENTIAL DELIVERY OF REAGENTS	61/291,627	12/31/2009
LT00336.1 CIP	FLUIDICS SYSTEM FOR SEQUENTIAL DELIVERY OF REAGENTS	12/785,667	05/24/2010
LT00336 PCT	FLUIDICS SYSTEM FOR SEQUENTIAL DELIVERY OF REAGENTS	PCT/US2010/001547	5/27/2010
LT00337 PRO	SCAFFOLDED NUCLEIC ACID POLYMER PARTICLES AND METHODS OF MAKING AND USING	61/263,734	11/23/2009
LT00337 PRO 2	SCAFFOLDED NUCLEIC ACID POLYMER PARTICLES AND METHODS OF MAKING AND USING	61/291,788	12/31/2009
LT00337 PRO 3	SCAFFOLDED NUCLEIC ACID POLYMER PARTICLES AND METHODS OF MAKING AND USING	61/297,203	01/21/2010
LT00337.1 CIP	SCAFFOLDED NUCLEIC ACID POLYMER PARTICLES AND METHODS OF MAKING AND USING	12/785,685	05/24/2010
LT00337 PCT	SCAFFOLDED NUCLEIC ACID POLYMER PARTICLES AND METHODS OF MAKING AND USING	PCT/US2010/001549	5/27/2010
LT00338 PRO	METHODS AND APPARATUS FOR MEASURING ANALYTES	61/242,369	09/14/2009
LT00338 PCT	METHODS AND APPARATUS FOR MEASURING ANALYTES	PCT/US10/01543	05/27/2010
LT00339 PRO	METHOD OF MAKING SOLID PHASE AMPLICONS	61/264,949	11/30/2009
LT00340 PRO	FLUIDICS INTERFACE SYSTEM	61/293,048	01/07/2010
LT00340 PRO 2	FLUIDICS INTERFACE SYSTEM	61/374,602	08/17/2010
LT00341 PRO	APPARATUS AND METHODS	61/306,924	02/22/2010

	FOR PERFORMING ELECTROCHEMICAL REACTIONS		
LT00341.1 CIP	APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS	12/785,716	05/24/2010
LT00341 PCT	APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS	PCT/US10/01553	05/27/2010
LT00342 PRO	ENRICHED POPULATIONS OF SOLID PHASE AMPLICONS	61/380,705	09/07/2010
LT00343 PRO	BUFFERLESS PROTEINS FOR pH BALANCED DNA SEQUENCING	61/320,308	04/01/2010
LT00344 PRO	IMMOBILIZED BUFFER PARTICLES AND USES THEREOF	61/359,790	06/29/2010
LT00345 PRO	SOLID PHASE AMPLICONS USING ISOTHERMAL AMPLIFICATION	61/361,072	07/02/2010
LT00346 PRO	ALTERNATIVE NUCLEOTIDE FLOWS IN SEQUENCING-BY- SYNTHESIS METHODS	61/354,173	06/11/2010
LT00348 PRO	IMPROVEMENTS IN CHEMICALLY-SENSITIVE TRANSISTOR ARRAYS	61/360,493	06/30/2010
LT00348 PRO 2	METHOD AND APPARATUS FOR TESTING ISFET ARRAYS	61/360,495	07/01/2010
LT0349 PRO	CHARGE COUPLED SENSOR	61/361,403	07/03/2010
LT00353 PCT	METHOD AND APPARATUS FOR MEASURING ANALYTES	PCT/US10/48835	09/15/2010
LT00354 PRO	PIXEL DESIGN AND SENSOR ARCHITECTURE	61/365,327	07/19/2010