502567316 11/13/2013

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2613129

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ION TORRENT SYSTEMS INCORPORATED	11/12/2010

RECEIVING PARTY DATA

Name:	LIFE TECHNOLOGIES CORPORATION
Street Address:	5791 VAN ALLEN WAY
City:	CARLSBAD
State/Country:	CALIFORNIA
Postal Code:	92008

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14033934

CORRESPONDENCE DATA

Fax Number:

Email: LifetechDocket@system.foundationip.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: DAVID SCHELL

Address Line 1: 5791 VAN ALLEN WAY

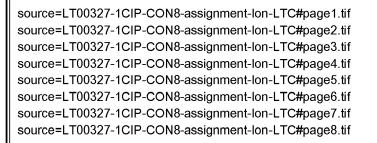
Address Line 2: LIFE TECHNOLOGIES CORPORATION
Address Line 4: CARLSBAD, CALIFORNIA 92008

ATTORNEY DOCKET NUMBER:	LT00327.1 CIP CON 8
NAME OF SUBMITTER:	ELIZABETH MORGAN
Signature:	/Elizabeth Morgan/
Date:	11/13/2013

Total Attachments: 8

PATENT REEL: 031591 FRAME: 0668

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PATENT REEL: 031591 FRAME: 0669

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 abovementioned 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 grated, 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

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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.

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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 /2, 20/0

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 AMPLIFICAION	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

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PATENT REEL: 031591 FRAME: 0673

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

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	INTERACTIONS USING FET		:
	ARRAYS		
LT00327 PCT	METHODS AND APPARATUS		
200027101	FOR DETECTING MOLECULAR	PCT/US2009/003797	06/26/2009
	INTERACTIONS USING FET	101/002000//005/5/	G G 123 G 123 G G 5
	ARRAYS		
LT00328 D		29/325,007	09/24/2008
	BOTTLE	D602785	9
LT00329 D		29/325,009	09/24/2008
	CONTAINER	D602784	
LT00330 D	CANDELLO EL IDAD	29/325,010	09/24/2008
	SIPPER TUBE	D595990	
LT00331 D	OVERATE TW HAVE	29/325,011	09/24/2008
	SIPPER TUBE	D596440	
LT00332 GB	METHODS AND APPARATUS		
	FOR MEASURING ANALYTES	0811656.8	06/25/2008
	USING LARGE SCALE FET		
	ARRAYS		
LT00332 GB 2	METHODS AND APPARATUS		
	FOR MEASURING ANALYTES	0811657.6	06/25/2008
	USING LARGE SCALE FET		
	ARRAYS		
LT00332 PCT	METHODS AND APPARATUS		
	FOR MEASURING ANALYTES	PCT/US2009/003766	06/25/2009
	USING LARGE SCALE FET		
	ARRAYS		
LT00333 PRO	METHOD FOR SEQUENCING		
	INDIVIDUAL CONCATENATED,	61/188,544	08/08/2008
	IMMOBILIZED DNA	01/100,544	00/00/2000
kananani ka	MOLECULES UNDER TENSION		**************
LT00333 PRO 2	METHOD FOR SEQUENCING		
	INDIVIDUAL CONCATENATED,	61/191,930	09/12/2008
	IMMOBILIZED DNA	01/1/1,550	07/12/2000
	MOLECULES UNDER TENSION		
LT00333 PRO 4	METHOD FOR SEQUENCING		
	INDIVIDUAL CONCATENATED,	61/194,422	09/26/2008
	IMMOBILIZED DNA	01/15/19 (2020	05/20:2000
	MOLECULES UNDER TENSION		
LT00333 PRO 4	METHOD FOR SEQUENCING		
	INDIVIDUAL NUCLEIC ACIDS	61/197,588	10/29/2008
	UNDER TENSION		
LT00333	METHOD FOR SEQUENCING		
	INDIVIDUAL CONCATENATED,	12/319,140	12/31/2008
	IMMOBILIZED NUCLEIC ACIDS		
	UNDER TENSION		

LT00333 PCT	METHODS FOR SEQUENCING INDIVIDUAL NUCLEIC ACIDS	PCT/US2009/004546	08/07/2009
	UNDER TENSION		
LT000334 PRO	METHODS AND APPARATUS		
	FOR MAKING MONODISPERSE	61/252,276	10/16/2009
	POLYMER PARTICLES		
LT00335 PRO	BUFFERLESS PROTEINS FOR	61/308,863	02/26/2010
	PH-BASED DNA SEQUENCING	01/500,005	02/20/2010
LT00336 PRO	FLUIDICS SYSTEM FOR		
	SEQUENTIAL DELIVERY OF	61/291,627	12/31/2009
F 1910 A 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	REAGENTS		
LT00336.1 CIP	FLUIDICS SYSTEM FOR		0.7.10.1.10.0.10
	SEQUENTIAL DELIVERY OF	12/785,667	05/24/2010
Tarana a caraca	REAGENTS		
LT00336 PCT	FLUIDICS SYSTEM FOR	75C1077CTO 20 1 0 /0.0 1 5 4 57	£/32/3313
	SEQUENTIAL DELIVERY OF	PCT/US2010/001547	5/27/2010
LT00337 PRO	REAGENTS		
LIUUSS/PKO	SCAFFOLDED NUCLEIC ACID		
	POLYMER PARTICLES AND METHODS OF MAKING AND	61/263,734	11/23/2009
	USING		
LT00337 PRO 2	SCAFFOLDED NUCLEIC ACID		
L/10033/11XO 2	POLYMER PARTICLES AND		
	METHODS OF MAKING AND	61/291,788	12/31/2009
	USING		
LT00337 PRO 3	SCAFFOLDED NUCLEIC ACID		
	POLYMER PARTICLES AND	21 /B 0 T B 0 B	0.2 (20.0 2.0
	METHODS OF MAKING AND	61/297,203	01/21/2010
	USING		
LT00337.1 CIP	SCAFFOLDED NUCLEIC ACID		
	POLYMER PARTICLES AND	10/70E £0E	05/24/2010
	METHODS OF MAKING AND	12/785,685	
	USING		
LT00337 PCT	SCAFFOLDED NUCLEIC ACID		
	POLYMER PARTICLES AND	PCT/US2010/001549	5/27/2010
	METHODS OF MAKING AND	101/002010/001347	3/23/2010
***************************************	USING		
	METHODS AND APPARATUS	61/242,369	09/14/2009
LT00338 PRO	FOR MEASURING ANALYTES	(37.20.723,5.55	
LT00338 PCT	METHODS AND APPARATUS	PCT/US10/01543	05/27/2010
TOTALANA TOTALA	FOR MEASURING ANALYTES		
LT00339 PRO	METHOD OF MAKING SOLID	61/264,949	11/30/2009
TOTOGO 40 PATACA	PHASE AMPLICONS		
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		
APPARATUS AND METHODS		
FOR PERFORMING	10/2000	05/04/0010
ELECTROCHEMICAL	12/785,716	05/24/2010
REACTIONS		
APPARATUS AND METHODS		
FOR PERFORMING	DOTEST 10 10 10 1 5 5 2	06/07/0010
ELECTROCHEMICAL	PC1/US10/01553	05/27/2010
REACTIONS		
ENRICHED POPULATIONS OF	C1 (300 B0E	00/07/0010
SOLID PHASE AMPLICONS	61/380,705	09/07/2010
BUFFERLESS PROTEINS FOR pH	C1/200 200	04/01/0010
BALANCED DNA SEQUENCING	61/320,308	04/01/2010
IMMOBILIZED BUFFER		
PARTICLES AND USES	61/359,790	06/29/2010
THEREOF		
SOLID PHASE AMPLICONS		
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AMPLIFICATION		
ALTERNATIVE NUCLEOTIDE		
FLOWS IN SEQUENCING-BY-	61/354,173	06/11/2010
SYNTHESIS METHODS		
IMPROVEMENTS IN	(1/260 402	06/30/2010
CHEMICALLY-SENSITIVE	01/300,493	00/30/2010
TRANSISTOR ARRAYS		
METHOD AND APPARATUS FOR	(1/2/0 405	07/01/2010
TESTING ISFET ARRAYS	01/300,493	07/01/2010
CHARGE COUPLED SENSOR	61/361,403	07/03/2010
METHOD AND APPARATUS FOR	TWITT I TO LO (ADDAC	00/15/0010
MEASURING ANALYTES	PC1/US10/48833	09/15/2010
PIXEL DESIGN AND SENSOR	(3)365 337	07/10/2010
ARCHITECTURE	01/303,327	07/19/2010
	ELECTROCHEMICAL REACTIONS APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS ENRICHED POPULATIONS OF SOLID PHASE AMPLICONS BUFFERLESS PROTEINS FOR pH BALANCED DNA SEQUENCING IMMOBILIZED BUFFER PARTICLES AND USES THEREOF SOLID PHASE AMPLICONS USING ISOTHERMAL AMPLIFICATION ALTERNATIVE NUCLEOTIDE FLOWS IN SEQUENCING-BY- SYNTHESIS METHODS IMPROVEMENTS IN CHEMICALLY-SENSITIVE TRANSISTOR ARRAYS METHOD AND APPARATUS FOR TESTING ISFET ARRAYS CHARGE COUPLED SENSOR METHOD AND APPARATUS FOR MEASURING ANALYTES PIXEL DESIGN AND SENSOR	ELECTROCHEMICAL REACTIONS APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS APPARATUS AND METHODS FOR PERFORMING ELECTROCHEMICAL REACTIONS ENRICHED POPULATIONS OF SOLID PHASE AMPLICONS BUFFERLESS PROTEINS FOR pH BALANCED DNA SEQUENCING IMMOBILIZED BUFFER PARTICLES AND USES THEREOF SOLID PHASE AMPLICONS USING ISOTHERMAL AMPLIFICATION ALTERNATIVE NUCLEOTIDE FLOWS IN SEQUENCING-BY- SYNTHESIS METHODS IMPROVEMENTS IN CHEMICALLY-SENSITIVE TRANSISTOR ARRAYS METHOD AND APPARATUS FOR TESTING ISFET ARRAYS CHARGE COUPLED SENSOR METHOD AND APPARATUS FOR MEASURING ANALYTES PIXEL DESIGN AND SENSOR 61/365,327