Form PTO-1595 (Rev. 07/05)	U.S. DEPARTMENT OF COMMERCE
<u>OMB No. 0651-0027 (exp. 6/30/2008)</u> 04 - U	01-2010 United States Patent and Trademark Office
To the Director of the U.S. Patent and	593424
1. Name of conveying party(ies)	2. Name and address of receiving party(ies)
Zakaryae Fathi James E. Clayton MAR 2 9 2010	Name: Microelectrnics Assembly technologies, Inc.
MARLO	O Internal Address:
Additional name(s) of conveying party(ies) attacked	
Additional name(s) of conveying party(les) attached trached to the second secon	Street Address: 104 T. W. Alexander Dr.
Execution Date(s) March 22, 2010	
Assignment Merger	
Security Agreement Change of Nam	City: Research Triangle Park
Joint Research Agreement	State: NC
Government Interest Assignment	
Executive Order 9424, Confirmatory License	Country: USA Zip:27709
Other	Additional name(s) & address(es) attached? Yes No
	This document is being filed together with a new application.
A. Patent Application No.(s)	B. Patent No.(s)
12/317,753	
12/317,754 12/317,757	
12/317,757 12/317,890 12/317 892	
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12/317,757 12/317,890 12/317 892 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf	6. Total number of applications and patents involved: 5
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12/317,757 12/317,890 12/317 892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address:	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 200 Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed None required (government interest not affecting title) 8. Payment Information
12/317,757 12/317,890 12/317 892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$_200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card
12/317,757 12/317,890 12/317 892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge State: TN Zip:37830	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$_200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card Last 4 Numbers Expiration Date
12/317,757 12/317,890 12/317 892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge State: TN Zip:37830 Phone Number: 865-483-8798	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$_200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card
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12/317,757 12/317,890 12/317,892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge State: TN Zip:37830 Phone Number: 865-483-8798 Fax Number:	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card Last 4 Numbers Expiration Date b. Deposit Account Number Authorized User Name 90000004 12317753 81 FC:8021
12/317,757 12/317,890 12/317,892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge State: TN Zip:37830 Phone Number: 865-483-8798 Fax Number: Email Address: rilauf@bellsouth.net	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account ✓ Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card Last 4 Numbers Expiration Date b. Deposit Account Number Authorized User Name 90900094 12317753 81 FC: 8021
12/317,757 12/317,890 12/317 892 Additional numbe 5. Name and address to whom correspondence concerning document should be mailed: Name:Robert J. Lauf Internal Address: Street Address: 998 W. Outer Dr. City: Oak Ridge State: TN Zip:37830 Phone Number: 865-483-8798 Fax Number: Email Address: rilauf@bellsouth.net 9. Signature: W.A. W.M.	6. Total number of applications and patents involved: 5 7. Total fee (37 CFR 1.21(h) & 3.41) \$ 200 Authorized to be charged by credit card Authorized to be charged by credit card Authorized to be charged to deposit account ✓ Enclosed None required (government interest not affecting title) 8. Payment Information a. Credit Card Last 4 Numbers Expiration Date b. Deposit Account Number Authorized User Name 90900094 12317753 81 FC: 8021

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to: Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

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ASSIGNMENT

WHEREAS, I the below-named inventor whose residence and post office are as stated below, have invented certain new and useful improvements in electronic modules represented by the following U.S. Patent Application(s):

12/317,753 "Thin Multichip Flex-Module" Clayton et al. 12/317,754 "Thin Multichip Flex-Module" Clayton et al. 12/317,757 "Thin Multichip Flex-Module" Clayton et al. 12/317,890 "Thin Multichip Flex-Module" Clayton et al. 12/317,892 "Thin Multichip Flex-Module" Clayton et al.

(hereinafter referred to as "Subject Invention") for which applications for United States Letters Patent have been executed by me, and

WHEREAS, MICROELECTRONICS ASSEMBLY TECHNOLOGIES, INC., a corporation in the State of North Carolina, having an office at 104 T.W. Alexander Drive, Research Triangle Park, NC 27709, hereinafter referred to as "ASSIGNEE," is desirous of acquiring the entire right, title and interest of the undersigned in the Subject Invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries.

NOW, THEREFORE, in accordance with the terms of my employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby assign to ASSIGNEE my entire right, title and interest in the Subject Invention to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefor on the Subject Invention.

I hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, I hereby agree to communicate to said ASSIGNEE or its representatives any facts known to me respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all

1

PATENT REEL: 024173 FRAME: 0281 rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

I further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on me, my heirs, legal representatives, and assigns.

Full name of inventor:		
Signature:		Date: <u>March 22, 2010</u>
Residence: 2505 Happy	Lane, Raleigh, NC 27614	
Post Office Address:	2505 Happy Lane, Raleigl	n, N C 27614
State of North Carolina)	

)

County of Wake

On this <u>22</u> day of <u>MavM</u>, 20<u>10</u>, before me, a Notary Public in and for the County and State aforesaid, appeared INVENTOR to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

My Comm, Exp. Feb. 1, 2011 **Notary Public** FE COUN SEAL My Commission Expires: 2-1-2011

ASSIGNMENT

WHEREAS, I the below-named inventor whose residence and post office are as stated below, have invented certain new and useful improvements in electronic modules represented by the following U.S. Patent Application(s):

12/317,753 "Thin Multichip Flex-Module" Clayton et al. 12/317,754 "Thin Multichip Flex-Module" Clayton et al. 12/317,757 "Thin Multichip Flex-Module" Clayton et al. 12/317,890 "Thin Multichip Flex-Module" Clayton et al. 12/317,892 "Thin Multichip Flex-Module" Clayton et al.

(hereinafter referred to as "Subject Invention") for which applications for United States Letters Patent have been executed by me, and

WHEREAS, MICROELECTRONICS ASSEMBLY TECHNOLOGIES, INC., a corporation in the State of North Carolina, having an office at 104 T.W. Alexander Drive, Research Triangle Park, NC 27709, hereinafter referred to as "ASSIGNEE," is desirous of acquiring the entire right, title and interest of the undersigned in the Subject Invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries.

NOW, THEREFORE, in accordance with the terms of my employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby assign to ASSIGNEE my entire right, title and interest in the Subject Invention to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or applications therefor on the Subject Invention.

I hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, I hereby agree to communicate to said ASSIGNEE or its representatives any facts known to me respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all

1

PATENT REEL: 024173 FRAME: 0283 rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

I further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on me, my heirs, legal representatives, and assigns.

Full name of inventor:	Zakarvae Fathi			
Signature:		Date:	3-22-	2010
Residence: 2409 Dur	nn Road, Raleigh, NC 2	7614		
Post Office Address:	2409 Dunn Road, Ra	aleigh, NC 2	7614	

State of North Carolina County of <u>Valae</u>

On this 22^{N} day of <u>March</u>, 20<u>10</u>, before me, a Notary Public in and for the County and State aforesaid, appeared INVENTOR to me personally known to be the same person whose name is subscribed to the foregoing instrument, and acknowledged that he executed said instrument as his free and voluntary act and for the uses and purposes therein expressed.

WITNESS my hand and seal the day and year last above given.

My Comm. Exp. Feb. 1, 2011 SEAL COUNTY, N. **Notary Public** My Commission Expires: 2-1-2011