

<b>PATENT ASSIGNMENT COVER SHEET</b>
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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
AHMED HOSNY	11/10/2016
PETER GROARKE	11/10/2016
<b>RECEIVING PARTY DATA</b>	
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<b>City:</b>	PURCHASE
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10577
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15349129
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<b>ATTORNEY DOCKET NUMBER:</b>	21652-00674
<b>NAME OF SUBMITTER:</b>	DANIEL M. FITZGERALD
<b>SIGNATURE:</b>	/Daniel M. Fitzgerald/
<b>DATE SIGNED:</b>	11/11/2016
<b>Total Attachments: 4</b>	
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WORLDWIDE ASSIGNMENT

WHEREAS, WE,

**Alimed Hosny**, a citizen of **Egypt**, having a residence address at  
**49 Littlewood, Belarmine Stepside, Dublin, Ireland, 18**

**Peter Groarke**, a citizen of **Ireland**, having a residence address at  
**7 Mount Eagle Rise, Dublin, Ireland, 18**

(hereinafter "**ASSIGNORS**"), have made an invention entitled "**SYSTEMS AND METHODS OF IMPROVED ELECTRONIC MESSAGING**" as set forth and described in U.S. Application No. 15/349,129, filed 11/11/2016; International Application No. \_\_\_\_\_, filed \_\_\_\_\_; United States Provisional Application No. \_\_\_\_\_, filed \_\_\_\_\_; and

WHEREAS, **MASTERCARD INTERNATIONAL INCORPORATED** (hereinafter "**ASSIGNEE**"), having its principal place of business at **2000 Purchase Street, Purchase, NY 10577**, is desirous of acquiring the whole right, title and interest in and to said application for Letters Patent, and any continuations, divisions, extensions, substitutions, reissues and reexaminations thereof;

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN, BE IT KNOWN, that I, the said **ASSIGNORS**, for and in consideration of valuable considerations unto us moving from said **ASSIGNEE**, at or before the ensealing and delivery of these presents, the receipt and sufficiency of which is hereby acknowledged, have sold, assigned, transferred and conveyed and by these presents do sell, assign, transfer and convey, unto said **ASSIGNEE**, its successors and assigns, the entire right, title and interest in and to the said invention entitled "**SYSTEMS AND METHODS OF IMPROVED ELECTRONIC MESSAGING**" and any and all improvements thereto, and in and to said application and any division, continuation or continuation-in-part thereof, and in and to any Letters Patent of the United States which may be issued on any of said applications, and any reissues thereof, and in and to any and all applications for Letters Patent filed in foreign countries for said invention or improvements including all priority rights, and any and all Letters Patent which may be granted in foreign countries therefor, and in and to any other applications based in whole or in part on any of the foregoing, TO HAVE AND TO HOLD THE SAME to the full end of the term or terms for which any and all said Letters Patent may be granted;

AND WE, the said **ASSIGNORS**, do hereby authorize and request the Commissioner of Patents and Trademarks to issue the said Letters Patent of the United States to said **ASSIGNEE**, as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said **ASSIGNEE**, its successors and assigns;

AND WE, the said **ASSIGNORS**, for the considerations aforesaid, do hereby covenant and agree to and with said **ASSIGNEE**, its successors and assigns, that we have the full power to make this assignment, and that the rights assigned are not encumbered by any grant, license or

right heretofore given, and that we, our executors or administrators, shall and will do all lawful acts and things and make, execute and deliver without further compensation, any and all other instruments in writing, further applications, papers, affidavits, powers of attorney, assignments, and other documents which, in the opinion of counsel for said ASSIGNEE, its successors and assigns, may be required or necessary more effectively to secure to and vest in said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to said invention and improvements, applications, Letters Patent, rights, titles, benefits, privileges, and advantages hereby sold, assigned, transferred and conveyed, and that we will sign any applications for reissue which may be desired by the owner of the patent or patents which may be issued for the said invention or improvements.

AND WE, the said ASSIGNORS, hereby authorize and request the attorneys of ARMSTRONG TEASDALE LLP to insert in the spaces provided above the title of the invention, filing date, application number, and attorney's docket number of said application when known.

IN WITNESS WHEREOF, I, the said ASSIGNOR have executed this Assignment this  
10<sup>th</sup> day of November, 2016.

Ahmed Hosny  
Ahmed Hosny

[Signature]  
Witness Signature  
Jo Ann Gynard  
Witness Name

IN WITNESS WHEREOF, I, the said ASSIGNOR have executed this Assignment this  
10<sup>th</sup> day of NOVEMBER, 2016.

Peter Groarke  
Peter Groarke

Sam Coffey  
Witness Signature

SAM COFFEY  
Witness Name