

## PATENT ASSIGNMENT COVER SHEET

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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>
GURPREET SINGH BHASIN	09/21/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	VISA INTERNATIONAL SERVICE ASSOCIATION
<b>Street Address:</b>	P.O. BOX 8999
<b>City:</b>	SAN FRANCISCO
<b>State/Country:</b>	CALIFORNIA
<b>Postal Code:</b>	94128
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16050917
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(312)464-3111
<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>	3124643100
<b>Email:</b>	CHPATENT@LOEB.COM
<b>Correspondent Name:</b>	LOEB & LOEB LLP
<b>Address Line 1:</b>	321 NORTH CLARK STREET
<b>Address Line 2:</b>	SUITE 2300
<b>Address Line 4:</b>	CHICAGO, ILLINOIS 60654
<b>ATTORNEY DOCKET NUMBER:</b>	2944US01/090426-30988
<b>NAME OF SUBMITTER:</b>	ANDREW R. SMITH
<b>SIGNATURE:</b>	/Andrew R. Smith, Reg. No. 62,162/
<b>DATE SIGNED:</b>	11/13/2018
<b>Total Attachments: 4</b>	
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WHEN RECORDED RETURN TO:  
Loeb & Loeb LLP  
312 N. Clark Street, Suite 2300  
Chicago  
Illinois  
60654  
United States of America

PATENT APPLICATION  
Docket No.:  
2944US01

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ASSIGNMENT

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I/We the undersigned, hereinafter collectively referred to as "Assignor", have made an invention entitled

SYSTEM AND METHOD FOR DETERMINING REAL-TIME OPTIMAL ITEM PRICING

Said invention is disclosed in a United States patent application (the "Application") which:

- Is executed concurrently herewith for filing in the United States Patent and Trademark Office and has been assigned Application Serial No. \_\_\_\_\_ with a filing date of \_\_\_\_\_  
Said invention is disclosed in a patent application (the "Application").
- Was previously filed in the United States Patent and Trademark Office on 31-Jul-2018 as Application Serial No. 16/050,917  
Said invention is disclosed in a patent application (the "Application").
- Is a United States National Application of PCT International Application No. \_\_\_\_\_ filed \_\_\_\_\_  
Said invention is disclosed in a patent application (the "Application").

(The attorneys of Loeb & Loeb LLP  
are hereby authorized to insert the serial number and filing date when known)

The Assignee, Visa International Service Association  
a corporation of the State of Delaware  
having a principal place of business at  
P.O. Box 8999, San Francisco, CA, 94128, United States of America

desires to secure the entire right, title and interest in said invention and the patent application filed thereon.

For good and valuable consideration, the sufficiency of which is acknowledged, I hereby assign and transfer and/or have assigned and transferred to Assignee: my entire right, title, and interest in, to, and under the Application, including all priority rights for other countries arising therefrom and the right to claim priority to the Application, all inventions or discoveries therein disclosed, and any and all Letters Patent of the United States, European Patent Office and of all other countries, which may be granted for such inventions or discoveries, or any of them, all such inventions or discoveries and all rights in such Application including any and all provisionals, substitutions, divisions, and continuations thereof, and to all Letters Patent that may be granted for said inventions and discoveries, and in and to all extensions, supplementary protection certificates, reexaminations, renewals, and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment to the full end of the term or terms for which such Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I shall execute all papers necessary in connection with the Application in the United States Patent and Trademark Office, European Patent Office, any other patent offices, and under the Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, any reexamination of any of such applications, and any patent term extensions or supplementary protection certificates of any such applications and also to execute separate assignments in connection with such applications as the Assignee may deem necessary or expedient. I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.


I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

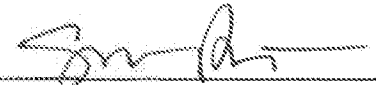
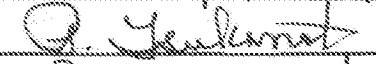
I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full rights to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith. I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

Acknowledgment of this Assignment is made by/on behalf of the Assignee:

Assignee: Visa International Service Association,  
Place of Business: P.O. Box 8999, San Francisco, CA, 94128, United States of  
America

Signature:  Date: 10/10/2012  
Timothy Bedard, Vice President


Witness:

Signature:   
Print Name: SANJAY PATHIYAL  
Signature:   
Print Name: P. Tsukamoto


This assignment and agreement shall be binding upon Assignor's heirs and legal representatives.


Inventor 1 Name:

<sup>SINGH</sup>  
Gurpreet Bhasin (GURPREET SINGH BHASIN)

Inventor's signature:  Date: 9/21/2018

Witness

Signature:   
Print Name: ANIMIKH SEN

Signature:   
Print Name: Shih-Kang Chang