

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT7120329

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	RELEASE OF SECURITY INTEREST
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JEFFERIES FINANCE LLC	01/13/2022
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	VIRTU ITG SOFTWARE SOLUTIONS LLC
<b>Street Address:</b>	1663 BROADWAY, 41ST FLOOR
<b>City:</b>	NEW YORK
<b>State/Country:</b>	NEW YORK
<b>Postal Code:</b>	10019
<b>PROPERTY NUMBERS Total: 108</b>	
<b>Property Type</b>	<b>Number</b>
Patent Number:	7162447
Patent Number:	7308428
Patent Number:	7337137
Patent Number:	7356500
Patent Number:	7430533
Patent Number:	7428506
Patent Number:	7533048
Patent Number:	7539636
Patent Number:	7565313
Patent Number:	7613647
Patent Number:	7680722
Patent Number:	7680715
Patent Number:	7680718
Patent Number:	7685052
Patent Number:	7752099
Patent Number:	7778919
Patent Number:	7814000
Patent Number:	7853510
Patent Number:	7865425
Patent Number:	7877318

Property Type	Number
Patent Number:	7882015
Patent Number:	7904365
Patent Number:	7908206
Patent Number:	7908205
Patent Number:	7917425
Patent Number:	7974906
Patent Number:	7983982
Patent Number:	7996261
Patent Number:	8001033
Patent Number:	8010438
Patent Number:	8015094
Patent Number:	8019670
Patent Number:	8032441
Patent Number:	8041628
Patent Number:	8069106
Patent Number:	8082204
Patent Number:	8095456
Patent Number:	8103579
Patent Number:	8108295
Patent Number:	8121933
Patent Number:	8140416
Patent Number:	8140427
Patent Number:	8165954
Patent Number:	8190510
Patent Number:	8200566
Patent Number:	8229834
Patent Number:	8239302
Patent Number:	8260696
Patent Number:	8266045
Patent Number:	8271366
Patent Number:	8306900
Patent Number:	8306904
Patent Number:	8306906
Patent Number:	8341067
Patent Number:	8359253
Patent Number:	8407127
Patent Number:	8412619
Patent Number:	8412621

Property Type	Number
Patent Number:	8429054
Patent Number:	8442902
Patent Number:	8447649
Patent Number:	8521637
Patent Number:	8533100
Patent Number:	8577772
Patent Number:	8635144
Patent Number:	8635141
Patent Number:	8635147
Patent Number:	8660925
Patent Number:	8706608
Patent Number:	8725619
Patent Number:	8732071
Patent Number:	8738502
Patent Number:	8744952
Patent Number:	8751363
Patent Number:	8775298
Patent Number:	8788399
Patent Number:	8812383
Patent Number:	9619839
Patent Number:	9767514
Patent Number:	9799073
Patent Number:	9978102
Patent Number:	10140656
Application Number:	11311885
Application Number:	11976433
Application Number:	12180129
Application Number:	12471185
Application Number:	12876929
Application Number:	13022420
Application Number:	13185929
Application Number:	15220978
Application Number:	13668566
Application Number:	13840862
Application Number:	13867760
Application Number:	14010394
Application Number:	14070808
Application Number:	14160212

Property Type	Number
Application Number:	14286496
Application Number:	14282833
Application Number:	14299821
Application Number:	14334777
Application Number:	62722573
Application Number:	15707652
Application Number:	15790539
Application Number:	15916974
Application Number:	15732753
Application Number:	15948430
Application Number:	15970445
Application Number:	15980380

#### CORRESPONDENCE DATA

##### Fax Number:

*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.*

Phone: 2127013365

Email: ecarrera@cahill.com

Correspondent Name: ELAINE CARRERA, SENIOR PARALEGAL

Address Line 1: 32 OLD SLIP

Address Line 2: C/O CAHILL GORDON & REINDEL LLP

Address Line 4: NEW YORK, NEW YORK 10005

ATTORNEY DOCKET NUMBER: 57320.1942

NAME OF SUBMITTER: ELAINE CARRERA

SIGNATURE: /Elaine Carrera/

DATE SIGNED: 01/13/2022

#### Total Attachments: 10

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## RELEASE OF SECURITY INTEREST IN PATENTS

This RELEASE OF SECURITY INTEREST IN PATENTS (this “Release”), dated as of January 13, 2022 (the “Effective Date”), is made by Jefferies Finance LLC, as administrative agent and collateral agent (in such capacities, the “Administrative Agent”), in favor of Virtu ITG Software Solutions LLC, a Delaware limited liability company (the “Grantor”).

WHEREAS, pursuant to that certain Collateral Agreement, dated as of March 1, 2019, by and among the Administrative Agent, the Grantor and certain other parties thereto (as amended, amended and restated, or otherwise modified from time to time, the “Collateral Agreement”), the Grantor granted to the Administrative Agent, in its capacity as Administrative Agent, a security interest in and to certain collateral;

WHEREAS, pursuant to the Collateral Agreement, the Grantor executed and delivered a Patent Security Agreement, dated as of March 1, 2019 (the “Patent Security Agreement”), for recordal with the United States Patent and Trademark Office;

WHEREAS, the Patent Security Agreement was recorded with the United States Patent and Trademark Office on March 4, 2019 at Reel/Frame 048490/0359;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Administrative Agent hereby agrees as follows:

1. Defined Terms. All capitalized terms used, but not otherwise defined herein, shall have the respective meanings ascribed in or otherwise referenced in the Collateral Agreement or the Patent Security Agreement, as applicable.

2. Release. The Administrative Agent, without representation or warranty of any kind, hereby releases, discharges, terminates and cancels all of its security interest in and to the Patent Collateral, including the patents and patent applications set forth Schedule I attached hereto, arising under the Collateral Agreement and the Patent Security Agreement. If and to the extent that the Administrative Agent has acquired any right, title or interest in and to the Patent Collateral under the Patent Security Agreement, the Administrative Agent, without representation or warranty of any kind, hereby re-transfers, re-conveys and re-assigns such right, title or interest to the Grantor.

3. Termination. The Administrative Agent, without representation or warranty of any kind, terminates and cancels the Patent Security Agreement.

4. Further Assurances. The Administrative Agent agrees to take all further actions, and provide to the Grantor and its successors, assigns or other legal representatives, all such cooperation and assistance (including, without limitation, the execution and delivery of any and all documents or other instruments), reasonably requested by the Grantor, at the Grantor’s sole cost and expense, to more fully and effectively effectuate the purposes of this Release.

5. Governing Law. This Release shall be governed exclusively under the laws of the State of New York, without regard to conflicts of law or choice of law principles.

IN WITNESS WHEREOF, the Administrative Agent has caused this Release to be executed by its duly authorized representative as of the Effective Date:

**JEFFERIES FINANCE LLC,**  
acting in its capacity as Administrative Agent for  
the Lenders

By: Paul Chisholm  
Name: Paul Chisholm  
Title: Managing Director

*[SIGNATURE PAGE TO PATENT RELEASE]*

**PATENT**  
**REEL: 058746 FRAME: 0804**

**SCHEDULE I****U.S. PATENTS AND PATENT APPLICATIONS**

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND SYSTEM FOR OBTAINING A DISCOVERED PRICE	7,162,447
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR DISPLAYING MARKET INFORMATION	7,308,428
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	INVESTMENT PORTFOLIO OPTIMIZATION SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT	7,337,137
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,356,500
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	AUTOMATED BATCH AUCTIONS IN CONJUNCTION WITH CONTINUOUS FINANCIAL MARKETS	7,430,533
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,428,506
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FAIR VALUE MODEL BASED SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR VALUING FOREIGN-BASED SECURITIES IN A MUTUAL FUND	7,533,048
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING TRANSACTION COSTS RELATED TO TRADING A SECURITY	7,539,636
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND SYSTEM FOR MANAGING DISTRIBUTED TRADING DATA	7,565,313
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR EXECUTING STRATEGY SECURITY TRADING	7,613,647
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	DYNAMIC AGGRESSIVE/PASSIVE PEGGED TRADING	7,680,722
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHODS FOR PROVIDING ANONYMOUS REQUESTS FOR QUOTES FOR FINANCIAL INSTRUMENTS	7,680,715
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR GENERATING REAL-TIME INDICATORS IN A TRADING LIST OR PORTFOLIO	7,680,718

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	CONFIDENTIAL BLOCK TRADING SYSTEM AND METHOD	7,685,052
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FACTOR RISK MODEL BASED SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR GENERATING RISK FORECASTS	7,752,099
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR MANAGING DISTRIBUTED TRADING DATA	7,778,919
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,814,000
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND SYSTEM FOR MULTIPLE PORTFOLIO OPTIMIZATION	7,853,510
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,865,425
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,877,318
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	BLOCK TRADING SYSTEM AND METHOD PROVIDING PRICE IMPROVEMENT TO AGGRESSIVE ORDERS	7,882,015
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MINIMIZING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	7,904,365
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,908,206
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,908,205
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	7,917,425
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING AND OPTIMIZING TRANSACTION COSTS	7,974,906
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR EXECUTING STRATEGY SECURITY TRADING	7,983,982



<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	systems and methods for increasing participation of liquidity providers on crossing system	7,996,261
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR GENERATING REAL-TIME INDICATORS IN A TRADING LIST OR PORTFOLIO	8,001,033
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	8,010,438
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FAIR VALUE MODEL BASED SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR VALUING FOREIGN-BASED SECURITIES IN A MUTUAL FUND	8,015,094
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FACTOR RISK MODEL BASED SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR GENERATING RISK FORECASTS	8,019,670
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MANAGING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	8,032,441
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	8,041,628
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	BLOCK TRADING SYSTEM AND METHOD PROVIDING PRICE IMPROVEMENT TO AGGRESSIVE ORDERS	8,069,106
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR TRADING A TRADE LIST IN FINANCIAL MARKETS	8,082,204
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	BLOCK TRADING SYSTEM AND METHOD PROVIDING PRICE IMPROVEMENT TO AGGRESSIVE ORDERS	8,095,456
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS REGARDING TARGETED DISSEMINATION	8,103,579
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	DYNAMIC AGGRESSIVE/PASSIVE PEGGED TRADING	8,108,295
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD AND PROGRAM FOR PREVENTING GAMING IN A TRADING SYSTEM	8,121,933
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	ALGORITHMIC TRADING SYSTEM AND METHOD	8,140,416

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS, METHODS AND COMPUTER PROGRAM PRODUCTS FOR ADAPTIVE TRANSACTION COST ESTIMATION	8,140,427
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	BLOCK TRADING SYSTEM AND METHOD PROVIDING PRICE IMPROVEMENT TO AGGRESSIVE ORDERS	8,165,954
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING AND OPTIMIZING TRANSACTION COSTS	8,190,510
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FAIR VALUE MODEL BASED SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR VALUING FOREIGN-BASED SECURITIES IN A MUTUAL FUND	8,200,566
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD AND PROGRAM FOR AGENCY COST ESTIMATION	8,229,834
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MINIMIZING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	8,239,302
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND SYSTEM FOR PROVIDING AGGREGATION OF TRADING ON MULTIPLE ALTERNATIVE TRADING SYSTEMS	8,260,696
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHODS AND SYSTEM FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	8,266,045
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR PROVIDING HIGH PERFORMANCE COMPLIANCE SERVICES USING PRE-CALCULATED RULE EVALUATION	8,271,366
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR EXECUTING A BUY OR SELL ORDER	8,306,900
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS RELATED TO LIQUIDITY AGGREGATION	8,306,904
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR TRADING A TRADE LIST IN FINANCIAL MARKETS	8,306,906
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	APPARATUS AND METHOD FOR TRADE AGGREGATION OF TRADE ALLOCATIONS AND SETTLEMENTS	8,341,067
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR PROVIDING ANONYMOUS REQUESTS FOR QUOTES FOR FINANCIAL INSTRUMENTS	8,359,253

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FAIR VALUE MODEL BASED SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR VALUING FOREIGN-BASED SECURITIES IN A MUTUAL FUND	8,407,127
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS REGARDING TARGETED DISSEMINATION	8,412,619
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING AND OPTIMIZING TRANSACTION COSTS	8,412,621
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MANAGING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	8,429,054
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD AND PROGRAM FOR PREVENTING GAMING IN A TRADING SYSTEM	8,442,902
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR INCREASING PARTICIPATION OF LIQUIDITY PROVIDERS ON CROSSING SYSTEM	8,447,649
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS, METHODS, AND COMPUTER PROGRAM PRODUCTS FOR PROVIDING REAL TIME ANALYTIC WIDGETS IN A FINANCIAL TRADING SYSTEM	8,521,637
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	AUTOMATED BATCH AUCTIONS IN CONJUNCTION WITH CONTINUOUS FINANCIAL MARKETS	8,533,100
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR GENERATING LIQUIDITY	8,577,772
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	CONFIDENTIAL BLOCK TRADING SYSTEM AND METHOD	8,635,144
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND SYSTEM FOR MULTIPLE PORTFOLIO OPTIMIZATION	8,635,141
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD AND PROGRAM FOR AGENCY COST ESTIMATION	8,635,147
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	ALGORITHMIC TRADING SYSTEM AND METHOD	8,660,925
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	DYNAMIC AGGRESSIVE/PASSIVE PEGGED TRADING	8,706,608

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	FAIR VALUE MODEL BASED SYSTEM, METHOD AND COMPUTER PROGRAM PRODUCT FOR VALUING FOREIGN-BASED SECURITIES IN A MUTUAL FUND	8,725,619
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS REGARDING TARGETED DISSEMINATION	8,732,071
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	ELECTRONIC TRADING SYSTEM AND METHOD THAT PROVIDE REAL-TIME TRADE ANALYSIS	8,738,502
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD AND APPARATUS FOR IMPROVED ELECTRONIC TRADING	8,744,952
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR EXECUTING STRATEGY SECURITY TRADING	8,751,363
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHODS AND SYSTEMS FOR DIRECTING AND EXECUTING CERTIFIED TRADING INTERESTS	8,775,298
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR TRADING A TRADE LIST IN FINANCIAL MARKETS	8,788,399
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	APPARATUS AND METHOD FOR TRADE AGGREGATION OF TRADE ALLOCATIONS AND SETTLEMENTS	8,812,383
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR VIEWING AND TRADING FUTURES	9,619,839
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	APPARATUS AND METHOD FOR TRADE AGGREGATION OF TRADE ALLOCATIONS AND SETTLEMENTS	9,767,514
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR ELECTRONIC TRADING	9,799,073
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	APPARATUS AND METHOD FOR TRADE AGGREGATION OF TRADE ALLOCATIONS AND SETTLEMENTS	9,978,102
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	CONFIDENTIAL BLOCK TRADING SYSTEM AND METHOD	10,140,656
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	TRADING SYSTEM, METHOD, AND APPARATUS WITH CENTRAL COUNTERPARTY CLEARING	11/311,885
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR POST-TRADE TRANSACTION COST ESTIMATION OF TRANSACTION COSTS	11/976,433

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS, METHODS AND COMPUTER PROGRAM PRODUCTS FOR CREATING A TURNOVER EFFICIENT FRONTIER FOR AN INVESTMENT PORTFOLIO	12/180,129
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING TRANSACTION COSTS RELATED TO TRADING A SECURITY	12/471,185
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR EVALUATING SECURITY TRADING TRANSACTION COSTS	12/876,929
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR PROVIDING ACCESS TO FINANCIAL TRADING SERVICES	13/022,420
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR GENERATING REAL-TIME INDICATORS IN A TRADING LIST OR PORTFOLIO	13/185,929
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MINIMIZING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	15/220,978
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM, METHOD, AND COMPUTER PROGRAM PRODUCT FOR EXECUTING A BUY OR SELL ORDER	13/668,566
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR ESTIMATING AND OPTIMIZING TRANSACTION COSTS	13/840,862
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	MANAGING SECURITY HOLDINGS RISK DURING PORTFOLIO TRADING	13/867,760
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Systems, Methods, And Computer Program products For Providing Real Time Analytic Widgets In A Financial Trading System	14/010,394
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR GENERATING LIQUIDITY	14/070,808
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	METHOD FOR AGENCY COST ESTIMATION	14/160,212
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	ELECTRONIC TRADING SYSTEM AND METHOD THAT PROVIDE REAL-TIME TRADE ANALYTICS	14/286,496
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS REGARDING TARGETED DISSEMINATION	14/282,833
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEM AND METHOD FOR EXECUTING STRATEGY EQUITY TRADING	14/299,821

<b>Owner</b>	<b>Title</b>	<b>Registration/ Application No.</b>
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS FOR TRADING A TRADE LIST IN FINANCIAL MARKETS	14/334,777
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	SYSTEMS AND METHODS OF OPTIMAL COMPUTER TRANSACTION EXECUTION	62/722,573
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Apparatus and method for trade aggregation of trade allocations and settlements	15707652
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Systems and methods for electronic trading	15790539
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	System and method for allocating electronic trade orders among a plurality of electronic Trade venues	15916974
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	System and methods for providing anonymous requests for quotes for financial instruments	15732753
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Systems, methods and computer program products for adaptive transaction cost estimation	15948430
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Fair value model for futures	15970445
Virtu ITG Software Solutions LLC (f/k/a ITG Software Solutions, Inc.)	Apparatus and method for trade aggregation of trade allocations and settlements	15980380