PROGRAMMERS DEVELOPMENT SPECIFICATIONS

Programmer’s Guide to File and Content for Trades File
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Change Notice

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 12, 2016</td>
<td>V1.0</td>
<td>Initial Document</td>
</tr>
<tr>
<td>March 11, 2016</td>
<td>V1.1</td>
<td>Field TransactTime format updated</td>
</tr>
<tr>
<td>April 15, 2016</td>
<td>V1.2</td>
<td>Field EntryLegPriceNear added</td>
</tr>
<tr>
<td>February 26, 2018</td>
<td>V1.3</td>
<td>Added support for Block Spread</td>
</tr>
</tbody>
</table>
1.0 Introduction
OneChicago publishes content that can be downloaded from the public FTP server located at: https://ftp.onechicago.com.

This document describes the Trades File, which contains the current trading day’s executions in all exchange listed instruments.

1.1 File Cycle

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Each business day excluding holidays.</td>
<td>08:00 - 17:30 ET Updated every 10 Minutes</td>
</tr>
</tbody>
</table>

1.2 File Name
TRADES.YYYYMMDD.csv

2.0 Connectivity

3.0 File Overview
The file is comma separated value (CSV) with column headers in the first row.

3.1 Location
### 3.2 Field Names and Definitions

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Field Type</th>
<th>Length</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPSecID</td>
<td>int</td>
<td>20</td>
<td>Exchange assigned instrument identifier.</td>
</tr>
<tr>
<td>Symbol</td>
<td>string</td>
<td>6</td>
<td>Exchange assigned listing symbol.</td>
</tr>
</tbody>
</table>
| SecuritySubType    | string     | 2      | S = SSF  
B = Block  
E = EFP  
BS = Block Calendar Spread  
SS = Calendar Spread                             |
| MaturityDate       | string     | 8      | YYYYMMDD                                                              |
| MaturityDateBack   | string     | 8      | YYYYMMDD                                                              |
| EntryType          | int        | 1      | 4 = Trade  
5 = Trade Bust                                                        |
| EntryPrice         | double     | double | The executed trade price                                             |
| EntrySize          | double     | double | The executed trade size (number of contracts)                         |
| ReferenceID        | int        | 15     | Exchange assigned identifier for referencing a specific trade event. |
| EntryRate          | double     | double | Applicable for SecuritySubType: S, E, BS, SS  
The implied rate expressed as a decimal, derived at the time of the transaction.  
Default value is 0 for non-applicable records |
| TransactTime       | string     |        | UTC time of transaction. YYY-MM-DD HH:MM:SS.ssssss                   |
| NetChangePx               | double | double | Applicable for SecuritySubType: S and B  
|-------------------------|--------|--------|-------------------------------------------  
|                         |        |        | Change in price based off of prior trading day’s settlement.  
|                         |        |        | Default value is 0 for non-applicable records  

| EntryLegPriceNear      | double | double | Applicable for SecuritySubType: E, BS, and SS  
|------------------------|--------|--------|-------------------------------------------  
|                        |        |        | The executed trade price of the near term leg  
|                        |        |        | Default value is 0 for non-applicable records  

### 3.3 Sample

MPSecID, Symbol, SecuritySubType, MaturityDate, MaturityDateBack, EntryType, EntryPrice, EntrySize, ReferenceID, EntryRate, TransactTime, NetChangePx, EntryLegPriceNear  
10537412160520000000, LB1D, B, 20160520, 00000000, 4, 77.504600, 13.000000, 3101833000002, -0.210290, 2016-04-12 12:55:00.032774, 77.5046, 0  
10537412160520000000, LB1D, B, 20160520, 00000000, 4, 77.093400, 19.000000, 3101833000004, -0.259004, 2016-04-12 12:56:46.354114, 77.0934, 0  
10279712160520000000, TEVA1D, B, 20160520, 00000000, 4, 56.019300, 18.000000, 3101833000006, 0.016677, 2016-04-12 13:01:53.977002, 56.0193, 0  
10498111160916000000, DIA1D, S, 20160916, 00000000, 4, 175.900000, 1.000000, 3002833000001, -0.009379, 2016-04-12 13:32:37.062122, 175.9, 0  
10498111160916000000, DIA1D, S, 20160916, 00000000, 4, 176.290000, 2.000000, 3002833000002, 0.007164, 2016-04-12 13:32:53.158815, 176.29, 0  
10293911160617000000, ANF1D, S, 20160617, 00000000, 4, 27.740000, 1.000000, 3002833000003, -0.009774, 2016-04-12 13:33:41.251651, 27.74, 0  
10560211160916000000, HLT1D, S, 20160916, 00000000, 4, 22.750000, 3.000000, 3003833000001, 0.01122, 2016-04-12 13:36:10.031260, 22.75, 0  
10416621160415160520, USO1D, SS, 20160415, 20160520, 4, 0.009000, 1000.000000, 3003833000002, 0.008993, 2016-04-12 13:42:11.849886, 0.010498  
10581621160415160520, CHK1D, SS, 20160415, 20160520, 4, -0.044000, 500.000000, 3002833000004, -0.082579, 2016-04-12 13:48:26.393866, 0.5468  
10417912160415000000, XME1D, B, 20160415, 00000000, 4, 21.546600, 174.000000, 3101833000008, 0.033429, 2016-04-12 13:49:08.050202, 21.5466, 0  
10448811160617000000, COP1D, S, 20160617, 00000000, 4, 42.150000, 2.000000, 3002833000005, -0.079910, 2016-04-12 13:58:11.165524, 42.15, 0