

**CONSOLIDATED AUDIT TRAIL (“CAT”)
CLOCK SYNCHRONIZATION CERTIFICATION
BY**

**TO
PARTICIPANTS OF THE CAT NMS PLAN**

_____, 2018

**CLOCK SYNCHRONIZATION CERTIFICATION
BY**

_____ hereby acknowledges that it is a member of the following national securities exchange(s) and/or national securities association(s) (please select all that apply):

- | | | |
|---|--|--|
| <input type="checkbox"/> BOX Options Exchange LLC | <input type="checkbox"/> Financial Industry Regulatory Authority, Inc. | <input type="checkbox"/> NASDAQ PHLX LLC |
| <input type="checkbox"/> Cboe BYX Exchange, Inc. | <input type="checkbox"/> Investors Exchange LLC | <input type="checkbox"/> The NASDAQ Stock Market LLC |
| <input type="checkbox"/> Cboe BZX Exchange, Inc. | <input type="checkbox"/> Miami International Securities Exchange LLC | <input type="checkbox"/> New York Stock Exchange LLC |
| <input type="checkbox"/> Cboe C2 Exchange, Inc. | <input type="checkbox"/> MIAX PEARL, LLC | <input type="checkbox"/> NYSE American LLC |
| <input type="checkbox"/> Cboe EDGA Exchange, Inc. | <input type="checkbox"/> NASDAQ BX, Inc. | <input type="checkbox"/> NYSE Arca, Inc. |
| <input type="checkbox"/> Cboe EDGX Exchange, Inc. | <input type="checkbox"/> NASDAQ GEMX, LLC | <input type="checkbox"/> NYSE National, Inc. |
| <input type="checkbox"/> Cboe Exchange, Inc. | <input type="checkbox"/> NASDAQ ISE, LLC | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Chicago Stock Exchange, Inc. | <input type="checkbox"/> NASDAQ MRX, LLC | |

To achieve compliance with the clock synchronization requirements of the CAT compliance rule, including any interpretive or exemptive guidance applicable to such rule, of each national securities exchange and/or national securities association identified above (the “Clock Synchronization Requirement”), the undersigned, who is duly authorized to execute this certification on behalf of _____, hereby certifies that _____ has:

(1) _____ synchronized its Business Clocks, other than such Business Clocks used solely for Manual Order Events or used solely for the time of allocation on Allocation Reports, at a minimum to within a fifty (50) millisecond tolerance of the time maintained by the National Institute of Standards and Technology, and maintains such synchronization; and

(2) _____ synchronized (A) its Business Clocks used solely for Manual Order Events and (B) its Business Clocks used solely for the time of allocation on Allocation Reports at a minimum to within a one second tolerance of the time maintained by the National Institute of Standards and Technology, and maintains such synchronization.

Capitalized terms are defined as set forth in the CAT compliance rule series of each national securities exchange and national securities association.

EXECUTED as of the date first written above.

By: _____

Name: _____

Title: _____