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NYSE Operations

August 10, 2012

TO: All Members and Member Organizations

SUBJECT: NYSE Cash Equities Market – Matching Engine Upgrade
Universal Trade Platform (UTP) to replace NYSE Display Book® (DBK)

ROUTE TO: Business Leaders, Technology and Operations Officers

Overview:

Continuing our drive to streamline and integrate trading systems across our global equities and derivatives markets for the benefit of our customers, NYSE Euronext will introduce the new Universal Trading Platform (UTP) for our U.S.-based NYSE and NYSE MKT cash equities markets. UTP replaces the NYSE's matching engine, Display Book (DBK®), and supporting database Super Display Book (SDBK) UTP provides a core standardized matching engine technology platform across all NYSE Euronext markets and is already in place at NYSE ARCA, NYSE Euronext Cash, NYSE Liffe, and NYSE Amex and ARCA Options. With UTP, clients can expect lower latency and higher throughput. In addition, it provides the flexibility to offer new order types and services in a more timely fashion in the future. Separate notices will communicate those additions in 2013.

Migration to UTP is targeted to begin at the end of the 3rd Quarter on a symbol basis and does not require Members to make any systemic changes in support of this effort. Customers may optionally take advantage of a new Minimum Trade Size order type and should be aware of the following enhancements to order, report and cancel processing.

Pre-Opening Processing Changes:

Currently, OPG interest only cancels after the opening trade or the first round lot is printed to the tape after opening on a quote. In UTP, all OPG interest will be canceled once a stock has opened regardless of whether the stock was opened on a trade or a quote. OPG interest will continue to be accepted during trading halts and VTPs for the reopening trade. However, if the stock re-opens on a quote, all OPG interest will be automatically canceled.

If a stock is not yet open, a zero-display DOT reserve order will receive a reject message (rather than canceled as is done today) with the reject description "Rej - Symbol Not Open, ZD DotResv".

Summary of Order Processing Changes:

The NYSE's matching engine momentarily queues all order messages to allow the DMM to price the opening or re-opening trade. That momentary queuing of order messages is known as 'the freeze'. Order acknowledgements will not be immediately returned while a stock is frozen, indicating that an order has not been placed on the order book and is not eligible to participate in either the opening or re-opening trade. As an exception, however, IOC, ISO and SOC orders will have order acknowledgements returned and immediately followed by a UROUT message.

Summary of Cancel Processing Changes:

Cancel processing will remain unchanged for all pre-opening, opening delay, regular trading and trading halt scenarios (Multiple cancel, partial cancel or cancel with replacement messages received prior to the original cancel message acknowledgement will continue to be rejected). However, in the event a stock is frozen as described above, cancel processing will be modified as follows:

- a. If a cancel balance, partial cancel or cancel/replacement message is received against an acknowledged order, the cancel message will be placed in the freeze queue without being acknowledged.
- b. If a cancel balance message is received against an unacknowledged order in the freeze queue, we will acknowledge the order, acknowledge the cancel request and immediately return a UROUT message for the balance.
- c. If a partial cancel message is received against an unacknowledged order in the freeze queue, we will hold (not acknowledge) the receipt of the partial cancel request until the freeze is lifted and messages are processed in the order they were received.
- d. If a cancel/replacement message is received against an unacknowledged order in the freeze queue, we will hold (not acknowledge) the receipt of the cancel/replacement request until the freeze is lifted and messages are processed in the order they were received.

In short, only cancel balance messages will be processed against orders awaiting acknowledgement while in the freeze queue.

Trading Halt Processing Changes:

If a stock is in a trading halt, an incoming IOC or SOC order type will be rejected (rather than canceled as is done today). Customers will receive the reject description "Rej - ISO/SOC Symbol Halted" if an order has been received.

Report Processing Changes:

The Exchange will begin phasing out the legacy omnibus accounts of TOD and LOC and instead all reports and report drop copies will be returned with the contra clearing firm "ANON". For further information regarding UTP comparison changes, please refer to the NYSE Comparison Update – Anonymity Indicator (PT Notice #178) dated March 12, 2012.

Customers will receive multiple reports for a single print/trade. For example, a single 1000 share Buy order trades against two 500 share Sell orders. The Buy side order originator will receive 2 reports, one for each for 500 shares rather than a report for 1000 shares.

Customers will have the ability to subscribe to a new optional service on a mnemonic basis that will return Cumulative Executed Quantity and Average price on report and report corrections for an order.

- a. For Binary Customers, if subscribed the CumQty and AvgPx fields will only be supported in the X.1 Verbose message format.
- b. For FIX customers, if subscribed, the CumQty will be returned in FIX Tag 14 and the AvgPx will be returned in Fix Tag 6.

For FIX customers, UTP will return both SendingTime <Tag 52> and TransactTime <Tag 60> in GMT Time format. Today, we are returning SendingTime <Tag 52> in GMT format and TransactTime <Tag 60> in local time.

Expanded Activity ID:

UTP will continue to support both the expanded activity id format and the legacy 3-part activity ID format for the duration of the UTP symbol migration. Customers who have not yet migrated to the new expanded activity format are strongly urged to begin system preparations to migrate as the legacy 3-part activity ID will be retired shortly after completion of the UTP platform migration.

New Minimum Trade Size IOC Order Type:

Once migration to UTP is complete, customers may optionally designate a minimum trade size (up to the size of the order) for orders with a time-in-force of immediate or cancel (IOC). Unless designated 'Do Not Route', an order may route to another market if necessary, but only if the minimum trade size can be executed on the NYSE/NYSE MKT. If the Minimum Trade Size quantity cannot be guaranteed, the order will automatically be canceled back to the customer without executing. Executions may occur at different prices as long as the total quantity executed is greater than or equal to the orders designated Minimum Trade Size.

UTP will accept incoming orders with a new minimum trade size (MTS) designation as long as the order contains a Time-In-Force of "IOC" (Immediate or Cancel). UTP will reject any incoming MTS interest:

- a. With a Time-In-Force other than IOC;
- b. If the symbol is not open for trading;

- c. If auto-execution is suspended or
- d. If the symbol has not yet migrated to the new UTP trade platform.

The following message types will require changes in order to take advantage of the new Minimum Trade Size IOC Order type:

FIX Messages	Binary Messages
"D" – New Order	"D.2" – New Order
"G" – Cancel with Replacement	"G.2" – Cancel with Replacement

FIX Tag/Name	Binary Field Name	Description	Req.	Valid Values
MinQty <110>	Minimum Trade Size	Guaranteed minimum trade size of an execution	N	Numeric greater than zero. In Fix, zero indicative of no minimum trade size. In Binary, value of zero must also be accompanied by the Status Indicator field.
N/A No FIX Tag Equivalent	Status Indicator	Each bit position of the Status Indicator field will be used as a flag to indicate zero is valid value for an assigned field (supports 32 flag indicators).	C	Bit 0 = Zero Offset Price. Bit 1 = Zero Minimum Trade Size Bit 2 – 32 = Reserved for future use.

The new MTS tag/field will be returned to customers currently subscribed to Order Drop Copy services. The MTS tag/field will not be returned on any order acknowledgements, execution reports or UROUT messages.

Merged Order Log Changes in support of Minimum Trade Size:

The Minimum Trade Size field exists on the Broker Badge Merged Order Log Output for e-Quote Orders (Record Type 1C) today. To support the changes for an IOC Order with a Minimum Trade Size a new Minimum Trade Size field has been added to the 1A record in position 230-239 (currently filler) for all Merged Order Log outputs:

- Clearing Firm – Product ID 06200564
- Entering Firm – Product ID 06200527
- Badge – Product ID 06200574
- Agency – Product ID 06200578

Field Name	Position Start-End	Format (Length)	Field Value
MINIMUM TRADE SIZE	230-239	9(9)	Minimum Trade Size required to execute the Order

User Acceptance Testing:

It is anticipated that the User Acceptance Testing environment will be available early in the 3rd Quarter.

Contact Information:

For any business questions concerning this notice, please contact your NYSE Relationship Manager or:

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