

Universal Trading Platform News 04

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Calendar

One-to-one meetings with MMBA and co-located clients started on 18 August 2008.

The goal of these meetings is to update customers on the programme, to help them define their connectivity solutions and to answer pending questions.

The roll-out of UTP customer connectivity was initiated for cash customers in July 2008 when order forms were circulated to clients. Customers that have submitted their orders for SFTI Managed Connections are being processed and are forecast for delivery in late Q4 of this year.

For more details and information on one-to-one meetings, please contact your local account manager.

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Editorial

Dear client,

Thank you to all our customers for attending this summer's global consultations and one-to-one meetings in such large numbers in order to validate the migration options for the new Universal Trading Platform. Feedback gained from these sessions has enabled us to adapt our stock symbol migration strategy from the current trading engine to the new Universal Trading Platform.

The European cash markets' migration strategy has been defined taking into account a large set of dependencies, namely regarding:

- Regulation (i.e. all the instruments within an instrument type should be migrated together).
- Business:
 - all the instruments within a market segment should be migrated at the same time to ensure a level playing field for the issuers, and
 - the migration of stock symbols should not require any order cancellation
 - products from the same asset class must be migrated at the same time.

Given this, we plan to migrate the order books in two stages:

- All bond order books will be migrated first, target date being 8 December 2008.
- ETFs and equities order books will be migrated second, target date being in Q1 2009 (proposed date 19 January 2008).

A detailed migration schedule will be communicated in the coming weeks to confirm the migration calendar.

It is clear from our discussions that clients appreciate having a migration strategy that does not require any order cancellation. They are also appreciative of the migration schedule and are well aware of the Universal Trading Platform's latency advantages as described in the following pages.

Anthony Attia, Executive Director - Head of Universal Trading Platform Programme

Caroline Guillaud, Project Director - Universal Trading Platform Programme

Fundamental drivers of the Universal Trading Platform Programme.

A complex, far-reaching strategic Programme, the Universal Trading Platform weaves together well-recognised, best-of-breed systems from across the NYSE Euronext Group to create an integrated trading platform that will deliver outstanding value to our clients. Essentially, the programme is not only about technology but about meeting our customers' business goals. Business teams are at the heart of every project decision, ensuring that the platform will be right for every product we offer, every country we operate in, and every client we serve.

To meet this challenging goal, project teams began to assemble in February 2008, armed with a total commitment to building the future of our company and avidly sharing their knowledge across country and functional borders.

The goal: a new platform which will see speeds at least double across all of our markets – with dramatic increases in some locations. At the same time, throughput capacity will more than triple, from 30,000 orders per second to 100,000 for European Cash markets, for instance.

Beyond speed and volume, the changes will mean that each customer will be able to receive market data and have the potential to deal in products right across our markets. Innovations in one market can rapidly be migrated globally, and functionality that was previously only available in one site will now be accessible everywhere much more easily.

The new Universal Trading Platform is a key to maintaining NYSE Euronext's market leadership. The exchange environment has long been intensely competitive in North America and is rapidly becoming ever more so in Europe. NYSE Euronext's Universal Trading Platform will provide customers with a powerful advantage to meet their customer needs.

Part 1: Enriched functionalities...

...New order types provided by the Universal Trading Platform for European Cash Markets

The European Cash Market model will remain the same for equities, bonds and trackers: it will be an order-driven market, will provide pre- and post-trade transparency and will be MiFID compliant and anonymous. However, the Programme has been driven with an objective to provide enriched functionalities by developing new order types.

More detailed information on new order types will be available in specific memos to be published in the coming weeks.

1. PEG Orders

Definition

A PEG order is a limit order to buy or sell a stated amount of a security at a displayed price set to track the current bid or offer of the Euronext central order book. The order may be assigned a limit price to prevent the PEG order from following the reference price past a certain limit.

The associated price of each PEG order that is updated will be assigned a new entry time with priority.

PEG Order Behaviour

- Peg orders are valid only in the continuous phase. At the end of the trading session, the PEG order is cancelled
- Peg orders act as limit orders and so have the same qualifiers (minimum quantity, disclosed quantity, etc.)
- In the event of an empty order book the PEG order is automatically rejected
- With executable incoming orders, the Peg order can be updated only if the new best limit is displayed in the order book (after the transaction)
- The Peg order is displayed on the order book at the best limit price.

Examples

1. Initial order book

	Buy		Sell		
Order 1	200	10.5	10.9	130	Order A
Order 2	150	PEG ->10.5	10.9	350	Order B
Order 3	70	PEG -> 10.5	11	275	Order C
Order 4	125	10.5			

2. A new order enters the market

- Order 5: buy at €10.80 for 200 shares
⇒ PEG orders' price is updated

	Buy		Sell		
Order 5	200	10.8	10.9	130	Order A
Order 2	150	PEG -> 10.8	10.9	350	Order B
Order 3	70	PEG -> 10.8	11	275	Order C
Order 1	200	10.5			
Order 4	125	10.5			

3. A new order enters the market

- Order 6: buy at €10.90 for 100 shares ⇒ trade with order A
⇒ No remaining quantity on the buy side, so PEG order price is unchanged

	Buy		Sell		
Order 5	200	10.8	10.9	30	Order A
Order 2	150	PEG (10.8)	10.9	350	Order B
Order 3	70	PEG (10.8)	11	275	Order C
Order 1	200	10.5			
Order 4	125	10.5			

4. A new order enters the market

- Order D: sell at €10.80 for 250 shares ⇒ trades with order 5 and with part of the PEG order 2
⇒ Price of remaining PEG order quantity is updated
⇒ PEG orders lose their time priority

	Buy		Sell		
Order 1	200	10.5	10.9	30	Order A
Order 3	125	10.5	10.9	350	Order B
Order 2	100	PEG -> 10.5	11	275	Order C
Order 3	70	PEG -> 10.5			

2. Discretionary orders (subject to regulatory approval)

Definition

The discretionary order is a limit order to buy or sell a stated amount of a security. The order will be displayed in the order book at a price specified by the member to be the publicly displayed price and is eligible for execution at an undisplayed price (the "discretionary price").

Order Behaviour

- Discretionary order will be displayed in the order book at a price specified by the member to be the publicly displayed price but the order can be submitted to the opposite side of the order book for execution at the discretionary price
- During auction, only the displayed price is taken into account for price determination and the priority of order execution
- During the continuous phase, the discretionary price is not taken into account for determining the priority for order execution. The eligibility for execution at the discretionary price presumes the existence of an opposite order with the same or a better displayed price
- Displayed price always takes precedence on discretion price.

Part 1: Enriched functionalities...(contd.)

Examples

- The initial order book contains 3 orders
 - Order 1: buy limit at €10.5 for 100 shares
 - Order 2: buy limit at €10 for 50 shares
 - Order 3 (discretionary): buy limit at €9 (undisplayed at €10.4) for 70 shares.

	Buy		Sell		
Order 1	100	10.5			
Order 2	50	10			
Order 3	70	9 (10.4)			

- The following trades occur
 - Order 4 with Order 1 for 100 shares at €10.50
 - Order 4 with Order 2 for 50 shares at €10
 The price priority is based on the displayed price ⇒ order 2 is executed before order 3.

- The following trade occurs
 - Order 4 with Order 3 at €10 for 20 shares
 - The price is determined by the sell order.

- A new order enters the market
 - Order 4: sell at €10 for 170 shares.

	Buy		Sell		
Order 1	100	10.5	10	170	Order 4
Order 2	50	10			
Order 3	70	9 (10.4)			

- Resulting order book
 - Order 3 (discretionary): buy €9 (undisplayed at €10.40), 70 shares remaining
 - Order 4: sell at €10, 20 shares remaining.

	Buy		Sell		
Order 3	70	9 (10.4)	10	20	Order 4

3. Non persistent orders

Definition

A non persistent order benefits from a new time validity qualifier which will be available for all order types. It indicates how long the order will remain active before it is executed or expires. A non persistent (or Good Till Time – GTT) will be valid until its expiration time or lead time specified by the broker at the order entry.

Order Behaviour

Non persistent orders are only valid during the continuous phase of the current trading day.

Two types of expiration times can be specified:

- in number of seconds from the order entry: the order is valid for x seconds
- until a certain time: the order is valid until X:XX in the current trading day, time to be specified in the trading engine zone time.

4. Market On Close

Definition

A Market On Close (MOC) order is an order that can be submitted at any time during the trading day (call, continuous trading, etc) but will only be activated during the closing phases.

Order Behaviour

- A Market On Close order can be entered throughout the trading day but is processed during the closing auction only
- It takes part in the closing auction and the unfilled remaining quantity is cancelled immediately after the completion of the closing auction
- Once activated, a Market On Close order is considered as a market order that is executable at any price.

Definition: Trading Day Phases

A trading day will be a sequence of phases.

The Universal Trading Platform will conduct three types of phases:

- ⇒ Call: when received by the Universal Trading Platform, orders are accumulated in the book without being executed
- ⇒ Continuous trading: when received by the Universal Trading Platform, orders may trade immediately
- ⇒ Auction: orders may not be entered nor cancelled or modified. The Universal Trading Platform matches orders already accumulated in the book.

Part 2: Speed as an ultimate goal...

Within the Universal Trading Platform Programme, NYSE Euronext has gathered experts from across the group in order to develop and deliver a platform supported by state-of-the-art technology.

Our customers will benefit from a compelling competitive tool providing enriched and flexible functionalities, high throughput and capacity and essential latency improvement. We will first focus below on expected latency improvements on the European cash markets.

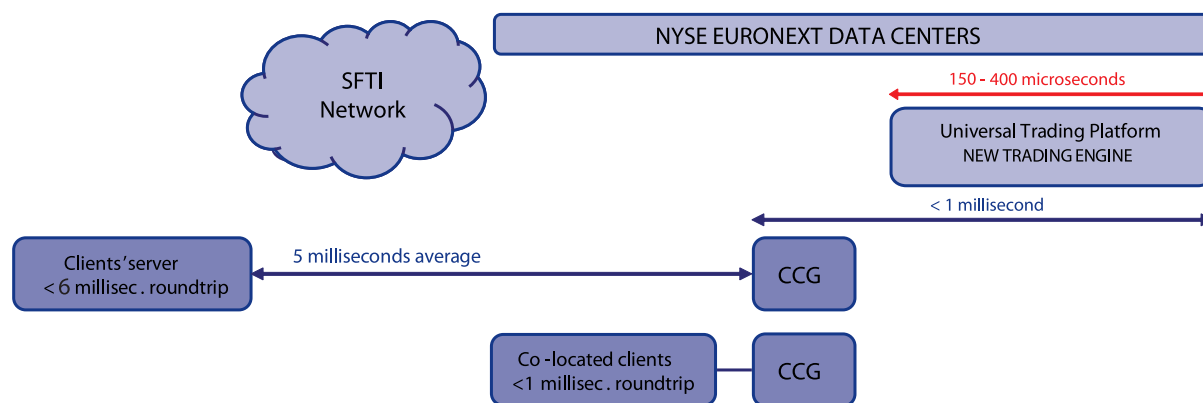
- Thanks to NYSE Euronext upgrades made over the past 2 years, the current architecture for the European cash markets can support the search for low latency within the trading environment. Three customer access solutions have been designed to meet evolutive trading patterns. The roundtrip time of the NSC trading engine, below 2 milliseconds, coupled with the transit time in the gateways and the network, provides members with an overall order roundtrip latency around 50 milliseconds on average for CAPI/MAPI customers. This is further reduced to less than 10 or 15 milliseconds with co-location and MMBA solutions.

...From now on, let us talk in microseconds with the Universal Trading Platform

The internal roundtrip time of our new trading engine is between 150 and 400 microseconds.

With the migration of access solutions and order books to the new trading platform, the whole set of components will provide a new standard in terms of latency:

- Ultra low latency has been a requirement to develop the new Common Customer Gateways, which will be hosted in our data centres in order to minimise transit time for order processing. Overall roundtrip time from CCG to the trading host will be under 1 millisecond.
- Secure Financial Transaction Infrastructure® (SFTI®) Europe has been designed to offer ultra low latency across the backbone as one of its key benefits.
- Complete latency, including network transit time to customer premises will thus be below 6 milliseconds for all customers and even reduced to less than 1 millisecond for co-located members.



Drastic decrease of

- 88% for current CAP/MAP
- 60% for current MMBA
- 90% for current co-location

For more details and information on the Universal Trading Platform Programme, please contact your local account manager.

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