

# Bull Session

Some news you should know about your Ex

in this issue

ARCAEX TRADING OTC STOCKS  
INTEGRATION SCHEDULE  
OPENING AUCTIONS  
ORDER TYPES

what's new?

THE ARCHIPELAGO EXCHANGE IS NOW TRADING TEST SYMBOLS THAT REPRESENT NASDAQ LISTED STOCKS. MORE INFORMATION ABOUT MOCK TRADING AND USING TEST SYMBOLS IS AVAILABLE BELOW.

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questions?

QUESTIONS ABOUT THESE ENHANCEMENTS OR OTHER INQUIRIES CAN BE DIRECTED TO THE ARCHIPELAGO TRADING DESK AT 888.513.9873 OR TO YOUR SALES REPRESENTATIVE

## Launch of NASDAQ-listed Symbols on ArcaEx

Last March the Archipelago Exchange (ArcaEx) was launched with the trading of NYSE, AMEX and PCX listed names. Since that time, we have been actively preparing for the launch of NASDAQ® listed stocks on ArcaEx. If you traded NASDAQ names on the Archipelago ECN, you may be asking yourself what this means to you or why it's significant? The good news is that the speed, anonymity, transparency and best execution model used by the ARCA ECN are all built into the Archipelago Exchange. Some of the changes or differences you will be seeing are highlighted below along with the innovations ArcaEx brings to the market, like single-price opening auctions and advanced order types. Please note that this notice is specific to the processing of NASDAQ stocks on ArcaEx. Information on the processing of listed stocks can be found at [www.archipelago.com](http://www.archipelago.com).

### What is the integration schedule for NASDAQ stocks?

On Thursday, January 23, 2003, ArcaEx began trading test symbols that represent NASDAQ-listed securities under the Unlisted Trading Privileges (UTP) Plan beginning with the test symbol ZWZZT. An additional test stock - "ZXZZT" - was added the week of January 27<sup>th</sup>. ArcaEx is planning to implement NASDAQ securities in phases. ZOMX will be the first stock to begin trading on ArcaEx and is currently scheduled to be transitioned to the ArcaEx platform on Friday, February 14, 2003. Similar to the way the ARCA and RediBook order books were combined, stocks are currently scheduled to be migrated to ArcaEx in six alphabetical phases:

Test Symbols:

ZWZZT  
ZXZZT

You can now see these symbols in the UQDF and NQDS feeds.

Nasdaq Symbols	Phase-In Date
One symbol Zomax Inc. (ZOMX)	2/14/03
All NASDAQ symbols starting with Z	3/14/03
All NASDAQ symbols starting with T-Y	TBD
All NASDAQ symbols starting with N -S	TBD
All NASDAQ symbols starting with I - M	TBD
All NASDAQ symbols starting with A - H	TBD

Notification for each migration will be provided prior to the actual date. The entire conversion is scheduled to be completed by the end of the first quarter.

## ***Can I participate in testing or see how the system works in advance of the launch?***

Absolutely! There is a test environment that is available between the hours of 1 p.m. and 6 p.m. ET. For a test connection, contact [fix@tradedearca.com](mailto:fix@tradedearca.com) or [realtick@tradedearca.com](mailto:realtick@tradedearca.com) depending on your front end. During the week of February 3rd, we will gradually begin rolling out client access to test symbols for functionality testing and will be notifying clients of availability.

We will also be conducting periodic mock trading sessions. A mock trading session will be held on Saturday, February 8<sup>th</sup> and include NSCC<sup>®</sup> output reports (see below). The RIO reports listed below will be available on Monday, February 11<sup>th</sup> to firms participating in this session:

- RIO Trade Activity Blotter #124
- RIO Trade Activity File a/k/a End Of Day MRO #125
- RIO Intra-day MRO #3125 (Only for clients currently set up to receive this report)

To receive these reports from NSCC, clients must notify SIAC (NSCC's Test Line (212) 855-5630) by Tuesday, February 4<sup>th</sup> to arrange to receive these reports. Please contact your Archipelago Sales Representative if you plan on participating in this session or want to learn more about participating in these mock trading sessions.

## ***A single price opening auction for NASDAQ stocks?***

Yes. As part of the price discovery process in the Opening Session, ArcaEx will conduct two single-price auctions: the Opening Auction, at 8:00 am ET, and the Market Order Auction, at 9:30 am ET. Both are single-price Dutch auctions that match buy and sell orders at the price that maximizes the amount of tradable stock; the primary difference between the two is that the Market Order Auction will allow Market Orders, which require special accommodations because they are unpriced. For complete information on opening auctions visit: [http://www.tradedearca.com/exchange/open\\_auction.asp](http://www.tradedearca.com/exchange/open_auction.asp). To see a demonstration of the opening auction please contact your Archipelago Sales Representative.

## ***What order types will ArcaEx support for NASDAQ-listed stocks?***

One of the innovations ArcaEx brings to the market is the diverse order types being made available for the first time in an exchange environment. Order types that offer traders the flexibility to choose speed over price or to use passive or proactive strategies in their search for liquidity. The following table provides a description of the ArcaEx order types that will be available for NASDAQ names. Those denoted with an asterisk (\*) will be available on ArcaEx pending SEC approval. All other order types are already approved order types on ArcaEx and will be immediately available.

### *Mock Trading*

Saturday, 2/8/2003.  
This session will include NSCC RIO output report availability.

Opening Auction:  
8:00 a.m. ET

Market Order Auction:  
9:30 a.m. ET

ORDER TYPE	DESCRIPTION	ELIGIBLE SESSIONS
Market	An order to buy or sell that is to be executed at the best price obtainable.	Market Order Auction; Core
Limit	An order to buy or sell at a specified price or better; a "marketable" limit order is a limit order to buy/sell at or above/below the consolidated best offer/bid for the security.	All
Inside Limit*	<p><b>Marketable order:</b> Marketable limit orders are matched with the ArcaEx Book or preferred to Market Participants at the inside only. Order is price improved, if available. Any residual volume will not be routed to the next price level until all quotes at the current best bid or offer are exhausted.</p> <p><b>Non-marketable order:</b> Non-marketable limit orders are posted to the ArcaEx Book.</p>	All
Immediate or Cancel (IOC)	A market or limit order that is to be executed in whole or in part as soon as such order is received, and the portion not so executed is to be treated as canceled.	All
Reserve	A reserve order that replenishes the order display size as executions are received, up to the total reserve. Away markets are routed at their quoted size when hitting the bid or taking the offer.	All
Sweep Reserve	A reserve order that replenishes the order display size as executions are received, up to the total reserve. Away market participants will be routed for the <u>total</u> reserve size, using SmartBook's routing algorithm, when hitting the bid or taking the offer.	All
Random Reserve*	A reserve order that replenishes the order display size, using a random reserve delta as executions are received, up to the total reserve. The user defines the original display quantity and a random reserve value which will be used to determine the show quantity within a defined range each time it is replenished. For example, a	All

*Eligible Order Types for NASDAQ launch:*

- Market
- Limit
- IOC
- Reserve
- Sweep Reserve
- Discretionary
- PNP

*Order Types Pending SEC approval:*

- Inside Limit
- Random Reserve
- Passive Discretionary
- Discretion Limit
- Pegged

These order types will be rejected until they are approved. Notification will be provided upon approval.

	display quantity of 2000 shares with a random reserve value of 200 will randomly display orders at 1800, 1900, 2000, 2100 or 2200 shares. Setting the random reserve value to zero will display random sizes within 20% of the original display quantity. Away markets are routed at their quoted size when hitting the bid or taking the offer. A random reserve with a display amount of 500 shares or less and a random reserve delta that is unspecified or set to zero will be handled as a regular reserve.	
Discretionary	An order with two price components: (1) display price and (2) discretionary price and is displayed at your specified price, not your discretionary price. When a bid or offer appears at or within your discretionary price range, your order will be matched in ArcaEx or proactively routed externally at the quoted price.	All
Passive Discretionary*	The order is displayed at your specified price, not your discretionary price. Order will only be routed out at the displayed price. When a bid or offer appears in the ArcaEx Book at or within your discretionary price range it will be <u>executed against the Book even if the Book order is outside the NBBO</u> . A discretionary price can be used in combination with a reserve order.	All
Discretion Limit*	An order that is displayed at your specified price, not your discretionary price along with a share quantity minimum requirement for routing discretionary prices outside the ArcaEx Book. When a <u>bid or offer appears on an away market at or above your share quantity minimum</u> , your order will be routed to that market participant at their quoted price using SmartBook logic. NBBO price protection does not apply to these orders.	All
PNP (Post No Preference)	A limit order to buy or sell that is to be executed in whole or in part on ArcaEx and the portion not executed is posted in the Book, without routing any portion of the order to another market center. PNP orders in Nasdaq stocks can trade through the NBBO.	All

*Order Types 'Coming Soon' to ArcaEx for NASDAQ-listed names:*

- Cross
- Midpoint Cross
- NOW
- Stop
- Stop limit
- Tracking

The above-referenced order types are currently available on ArcaEx for listed names only. Notification will be provided as they become available in NASDAQ-listed stocks.

Pegged*	An order with a price that will track the national best bid or offer. Pegged orders may also make use of offsets from the same side Bid/Offer or offsets from the contra side (peg buy offset from offer) The order is displayed in the ArcaEx Book.	Core
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In the coming months we will continue to add order types to ArcaEx including stop and cross orders. As order types are added, notification will be provided to all ETP Holders.

### **How are short sales processed in NASDAQ-listed stocks?**

On ArcaEx all participants are treated equally. Orders in NASDAQ stocks are not subject to the bid test as long as the order is matched in the ArcaEx Book. Short sales that are routed outside the ArcaEx Book will be subject to the short sale rules of the away market. Limit Orders will be matched internally down to the limit price of the order and potentially outside the National Best Bid (NBB) if routing the order to an away market would not satisfy the away market short sale rule. In a down bid market when the NBB quote is from an away market with a bid test, Market Orders will be posted to the ArcaEx Book at the NBB until they are eligible to trade at the NBB or better.

*Short Sale Example:*

NBBO: 20 to 20.05 on a down bid

MPID1 Bid: 1000 @ 20  
ArcaEx Bid: 1000 @19.90

Order entered on ArcaEx to Sell Short 500 @19.90

Order is executed on ArcaEx: 500 @19.90

### **How does ArcaEx process NASDAQ orders?**

The processing of orders on ArcaEx closely resembles the processing of orders on the ARCA ECN. If we can't find the best price on ArcaEx, we'll look for it elsewhere — wherever it is across the market — using our smart order routing. Unlike other markets, we connect to both traditional and alternative pools of liquidity. Orders are matched using the following process:

*NASDAQ Order Processing in ArcaEx:*

1. Display Process: Non-marketable limit orders are displayed on a strict price-time priority basis. Incoming marketable orders match against the ArcaEx limit order Book first.
2. Working Process: Orders that cannot be matched against the ArcaEx Book are then eligible for matching with non-displayed ArcaEx interest—such as the non-displayed portions of reserve orders, and discretionary orders.
3. Routing Process: ArcaEx makes intelligent routing decisions, in terms of target trading venue and the amount routed, when an order is routed away from ArcaEx. Orders can be routed to SuperMontage, the Alternative Display Facility (ADF), ECNs and other UTP Exchanges.

1. Display
2. Working
3. Routing

### **Will ArcaEx participate in SuperMontage?**

No. The ARCA ECN participation in SuperMontage was always a temporary one. With ArcaEx we can now provide a true and *separate* competitive alternative to NASDAQ. The ability to operate under our own rule set and reduce or eliminate many of the fees we pay as a NASDAQ participant were contributing factors in the

creation of ArcaEx. That said, as a part of ArcaEx’s best execution model, we will continue to access SuperMontage when we search for the best price. Our ability to access all pools of liquidity including those represented in the Alternative Display Facility (ADF), on other Exchanges, and in SuperMontage is one of the differentiating features ArcaEx brings to the market.

## What happens to the “ARCA” MPID?

ArcaEx sends quotes to the NASDAQ Security Industry Processor (SIP) which currently provides two data feeds, one permanent, and one temporary, that will display the ArcaEx quotes and trades. Early next year, NASDAQ will be replaced as the SIP but the permanent feed will continue to be supported.

**UQDF-UTDF:** The primary and permanent data feed is UQDF (quotes) and UTDF (trades). Our quotes and trades are broadcast to vendors as “P”. Vendors will use their own display methodology for these quotes and trades.

**NQDS – NTDS:** The existing and soon to be discontinued data feed for Exchanges is NQDS (quotes) and NTDS (trades). Our quotes and trades are broadcast to vendors as “ARCX”. Vendors will pass this on as “ARCX”. This will go away within the next several months.

It is important to note that as symbols are moved from the ECN to the ArcaEx platform, you will no longer see the “ARCA” Market Participant Identifier (MPID) on Nasdaq Level 2 screens or feeds.

## Will the Archipelago Book still be disseminated in NASDAQ stocks?

Archipelago believes that openness and transparency breeds stronger markets. ArcaEx will begin disseminating a new, enhanced data feed for NASDAQ symbols called ARCABook in addition to the FIX Book feed currently provided. ARCABook not only includes ArcaEx order data it will also include opening auction information for the Opening and Market Order Auctions. As NASDAQ stocks are migrated to ArcaEx, they will also be migrated to the new ARCABook feed. Initially, only NASDAQ names will be available in this feed. A test environment for ARCABook is now available. Contact [fix@tradedearca.com](mailto:fix@tradedearca.com) if you require the ARCABook specifications, have questions or want to set up testing.

## What about the NASDAQ trading platform? What changes or improvements will I see?

The ArcaEx trading system for NASDAQ stocks has been re-engineered offering a more robust and reliable platform capable of handling more throughput and capacity offering faster client access and executions. Initial test results are producing substantial improvements in acknowledgment (ack) times with an increase three to five times above ECN throughput in the number of orders per second.

## RealTick® Display of “ARCX”:

ARCHIP	416.90	400	10:53:28
ARCX	416.90	400	11:12:16
BTRD	416.90	800	13:37:00
NFSC	416.40	100	12:58:33
MSCO	416.30	100	13:13:11
MLCO	416.09	900	11:10:35

## Introducing ARCABook

An enhanced data feed is now available for NASDAQ symbols. Features of the new Book include:

- Book and auction data
- Exchange code differentiation
- Easier recovery
- Windows test tool
- Easy to determine message types

## ***What do you need to do to connect to ArcaEx?***

Your existing connectivity (FIX, RealTick® or other third party vendor) to Archipelago will allow you to send orders to ArcaEx. It is important to note that broker-dealers that are not approved PCXE Equity Trading Permit (ETP) holders will need to be introduced to ArcaEx through an approved ETP holder.

## ***What is an ETP holder?***

With the introduction of ArcaEx, the PCXE simplified its membership rules to more accurately reflect the change from a traditional trading floor environment to an electronic one. Any registered broker-dealer who wishes to be a participant must become an Equity Trading Permit (ETP) Holder by obtaining an ETP from the Pacific Exchange (PCX). Institutions can gain direct access to ArcaEx through a sponsorship with an approved ETP Holder. For more information about becoming an ETP holder, you may visit the Archipelago website at <http://www.archipelago.com/exchange/participant.asp>.

## ***Are there any differences in the way NASDAQ stocks will be cleared on ArcaEx?***

Yes. Once a trade has been executed, records will be sent to SIAC/National Securities Clearing Corporation (NSCC) for clearance and settlement. Trades will no longer be submitted via ACT, QSR or Correspondent Clearing. All trading activity will be transmitted to SIAC/NSCC via computer as "locked in" transactions; meaning a computer has already matched the details of the trades from buyer and seller. Trades executed will be routed to NSCC for settlement via the Regional Interface Operation (RIO). Additionally, it is necessary for clearing firms to become PCXE Equity Trading Permit (ETP) holders to clear trades on behalf of Exchange Participants.

Detailed information and report samples are available at [www.tradearca.com/exchange/clearing.asp](http://www.tradearca.com/exchange/clearing.asp). Additionally, there is a weekly conference call to discuss ArcaEx clearing and operational changes relating to the migration of NASDAQ-listed stocks to the exchange platform that takes place every Monday at 4:00 p.m. E.T. The dial-in number is 1-888-246-3369 (Domestic) and 1-706-643-1853 (International). This call will continue to occur throughout early February as necessary.

## ***What are the hours of operation?***

Currently NASDAQ-listed stocks trade from 7:30 a.m. to 8:00 p.m. ET on the ARCA ECN. The hours of operation for ArcaEx are 8:00 a.m. to 8:00 p.m. E.T. You can begin to enter orders on ArcaEx at 7:30 a.m. ET however these orders will not be matched until the ArcaEx Opening Auction is run at 8:00 a.m. ET. The 8:00 a.m. ET opening time is consistent with the rules for ArcaEx as approved by the Securities and Exchange Commission (SEC). We will continue to evaluate and consider an earlier open for ArcaEx and would be interested in hearing your thoughts on extended trading hours.

### *RIO Testing Available:*

A mock trading session will be held on Saturday, February 8<sup>th</sup> and include NSCC output reports. The RIO reports listed below will be available on Monday, February 11<sup>th</sup> to firms participating in this session.

### ArcaEx Operations Timeline (all Eastern Time):

7:30 a.m.	Limit orders can be entered and will be queued
8:00 a.m.	Opening Auction
8:00 a.m. to 9:30 a.m.	Opening Session
9:30 a.m.	Market Order Auction
9:30 a.m. to 4:00 p.m.	Core Trading
4:00 to 8:00 p.m.	Extended Hours

### ***What are the transaction fees?***

The ArcaEx transaction schedule for NASDAQ-listed names has been submitted to the SEC. The schedule for transactions is the same for listed and NASDAQ stocks:

<i>Round lot</i> orders residing in the ArcaEx Book that execute against inbound marketable orders	<b>\$0.002</b> per share <u>credit</u>
<i>Round lot</i> orders that take liquidity from the ArcaEx Book:	<b>\$0.003</b> per share
<i>Round lot</i> orders routed outside the ArcaEx Book and are executed by another market center or participant:	<b>\$0.004</b> per share

### *Liquidity Provider Rebates:*

\$0.002 per share credit for executions against orders residing in the ArcaEx Book

and

25% Tape Rebate (pending SEC approval)

Additionally, we have proposed a 25% Tape Rebate to liquidity providers in NASDAQ-listed stocks. This rebate is pending SEC approval and will not be immediately applicable to transactions in NASDAQ names.

### ***Is that it?***

For this notice yes, for NASDAQ names trading on ArcaEx this is just the beginning. Visit [www.archipelago.com](http://www.archipelago.com) for any updated information about the launch of ArcaEx for NASDAQ-listed stocks. Additional questions can also be directed to your Sales Representative. Additionally, we will continue to provide clients with information on the migration via email. If you wish to receive future notices via email, please send your request to [arcaclientservices@archipelago.com](mailto:arcaclientservices@archipelago.com).