

Bull Session

Some news you should know about your Ex

in this issue

LISTED TRADING FOCUS
NEW TRADING PLATFORM
ORDER TYPES
ORDER PROCESSING
ORDER ROUTING

what's new?

ARCAEX IS PLEASED TO
INTRODUCE THE NEW MARKET
SHARE ALERT FOR LISTED
STOCKS. SIGN UP TO RECEIVE
EMAIL ALERTS FOR STOCKS WITH
A MARKET SHARE OF 10% OR
MORE. SEE PAGE 7 FOR DETAILS.

contact

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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

Taking Listed Trading to a New Level

Last year the Archipelago ExchangeSM (ArcaEx[®]) was launched with the trading of NYSE[®], AMEX[®] and PCX[®] listed names. Since that time, ArcaEx has proven to be a fairer, more efficient way to trade listed stocks. Next month we will take the trading of listed stocks on ArcaEx to a higher level. The existing listed trading platform will be moved to the same technology platform used for the trading of OTC stocks on ArcaEx. As a part of this move, we will be implementing changes to some of the listed functionality as well. So what do you need to do to prepare for this change? Not much beyond reading this notice. The change will be a seamless one in terms of how you connect and interact with ArcaEx. You may also want to preview the new platform once the test symbol is available and see the performance improvements and functionality changes first hand in advance of the move. Please note that this information is specific to the processing of listed stocks and ETFs on ArcaEx. Information on the processing of OTC stocks can be found at www.archipelago.com.

Performance Enhancements

Today ArcaEx operates a Windows-based platform in the trading of listed stocks and a Unix-based platform for the trading of OTC stocks. All listed stocks will be transitioned to the Unix-based platform in the coming months. The enhanced system will run on SunFire[™] servers. The performance, speed and reliability of the listed platform will be the same performance, speed and reliability you now experience when trading OTC stocks on ArcaEx. In addition to the hardware changes, software changes will also be made to improve functionality and create efficiencies. These changes will improve all of the major metrics impacting capacity and order processing. The number of individual orders per second will be increased by as much as 10 times the existing levels. Acknowledgement times, order execution and cancellation times will be as much as 4 times faster than the current listed system.

Entire System Processing Metrics:

- 10,000 orders per second
- 60 million orders per day capacity
- 20 million trades per day

Transition Schedule

Later this month, we plan to introduce the new platform for listed securities beginning with a test symbol. A test symbol is being provided to allow you to test functionality and will appear in vendor quote feeds. The use of a test symbol is not designed for capacity testing. If you would like to do any capacity testing, please contact fix@archipelago.com.

Proposed Symbol Transition Grouping Schedule:

Listed Symbols	Proposed Date
Industry Test Symbol – M.TEST	Week of 12/15/03
Ten Low Volume ETFs Symbols: ELV, IGM, ILF, IWS, IWW, IXJ, IYE, IYK, IYY, WMH	December 2003
All Other ETFs except QQQ, SPY & DIA	December 2003
QQQ, SPY & DIA	January 2004
Single Stock Symbols A- Z	January 2004

Schedule Summary:

December 2003 to early
January 2004 - All ETFs

January 2004 - Single
Stock Names

Final notification for each transfer will be provided prior to the actual date and is subject to Securities Exchange Commission approval. The entire move is scheduled to be completed by the end of January 2004.

Listed Order Types

A key feature of ArcaEx is the ability to replicate the activity on the trading floor electronically. ArcaEx's diverse order types are designed to help you implement simple or sophisticated and passive or proactive strategies in your search for liquidity. The following table provides a description of the ArcaEx order types that will be available on the new listed platform on day one.

Table 1: Listed Order Types Immediately Available

AVAILABLE 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
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
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 display quantity of 2000 shares with a	All

Eligible Order Types on Day 1:

- Market
- Limit
- Reserve
- Random Reserve
- Discretionary
- Passive Discretionary
- PNP
- IOC
- Market Peg
- Primary Peg
- Midpoint Cross
- IOC Cross
- NOW
- Auction Only-MOA
- Primary Only
- Q

	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. A discretionary price can be used in combination with a reserve order.	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 executed against the Book but cannot trade through the NBBO. A discretionary price can be used in combination with a reserve order.	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 executed is canceled.	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. A PNP order that would lock or cross the market is cancelled.	All
Primary (Basic) Peg	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
Market Peg	A buy order pegs to the offer or sell order is pegged to the bid. Market pegs must be entered with an offset (see Basic Pegging with an Offset section) to avoid locking the market. Market pegs will never be routed outside the ArcaEx book.	Core
Midpoint Cross	A two-sided order with both a buy and sell component that trades at the midpoint of the NBBO.	All

Order Options:

Order types that do not route outside of ArcaEx

- PNP
- IOC
- IOC Cross
- Midpoint Cross
- Q Order

Order types that contain non-displayed price or size components

- Reserve
- Random Reserve
- Discretionary
- Passive Discretionary

Order Types for Clean Crosses

- Midpoint Cross
- IOC Cross

IOC Cross	A two-sided order with both a buy and sell component combined that trades at a price specified by the user. An IOC cross will not interact with the ArcaEx Book or outside markets and will be rejected if order interaction would occur.	All
NOW Order™	A limited price order that is executed in whole or in part that will be routed to one or more NOW Recipients (automated execution venue) for immediate execution if the order cannot be executed on ArcaEx. Orders are immediately canceled if not executed at the quoted price or better	All
Auction Only MOA	A market order that is specifically designated for participation in the Market Order Auction.	Market Order Auction
Primary Only	A market order that is to be routed as a market order to the primary market for participation in the primary market opening or re-opening process. A primary only order entered after the primary market opens is processed as a normal market order.	Until 10:00 am ET
Q Order	An order submitted to ArcaEx by an ArcaEx Registered Market Maker.	Core

Order Example 1:

NBBO 50 to 50.05

ArcaEx Book
Bid 50.00
Offer 50.06

Midpoint Cross 10,000 shares

Order is executed at 50.025 (midpoint of the NBBO)

Note: Midpoint Crosses may be executed in a sub penny increment.

Order Example 2:

Bids:
ArcaEx 20 for 1000
NYSE 20 for 700
CSE 20 for 500
NAS 20 for 500
PHX 20 for 300
INET 20 for 500

NOW Order to sell 5000 at \$20

2500 shares are executed at \$20 against the auto-ex market centers ArcaEx, CSE, NAS and INET. The balance of the order is cancelled.

NOW Order™ can be used to immediately sweep all electronic markets quickly.

In the coming months we will continue to add order types to ArcaEx including stop orders. As order types are added, notification will be provided to all ETP Holders.

Table 2: Future Listed Order Types

FUTURE ORDER TYPE	DESCRIPTION	ELIGIBLE SESSIONS
Inside Limit	<i>Marketable order:</i> Marketable limit orders are matched with the ArcaEx Book or routed 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. <i>Non-marketable order:</i> Non-marketable limit orders are posted to the ArcaEx Book.	All
Stop	A stop order to buy becomes a market order when a transaction in the security occurs at or above the stop price. A stop order to sell becomes a market order when a transaction in the security occurs at or below the stop price.	Core
Stop Limit	A stop limit order to buy becomes a limit order when a	Core

	transaction in the security occurs at or above the stop price. A stop limit order to sell becomes a limit order when a transaction in the security occurs at or below the stop price.	
Tracking	An order with a price that tracks the national best bid or offer. This order is not displayed. A tracking order will be assigned trades on a price/time rotating basis.	Core
Cross	A two-sided order with both a buy and sell component that trades at a price specified by the user. Cross orders must satisfy the displayed orders in the book or in the market before matching the remaining balance as a cross.	All
PNP Cross	A two-sided order with both a buy and sell component that trades at a price specified by the user. A PNP cross will not be routed out but will interact with the ArcaEx Book.	All
Cross and Post	A two-sided order with both a buy and sell component that trades at a price specified by the user. Cross orders must satisfy the displayed orders in the Book or in the market before matching the remaining balance as a cross. Any residual balance is posted to the ArcaEx Book.	All
All or None	A limit order, which is to be executed in its entirety or not at all.	All

Order Types Planned for Later Phases:

- Inside Limit
- Stop
- Stop Limit
- Tracking
- Cross
- PNP Cross
- Cross and Post
- All or None

The ability to add a trade modifier so that your order is a Good-till-Cancel (GTC) is planned for implementation in 2004.

Listed Order Processing

ArcaEx maintains an electronic file of orders, called the ArcaEx BookSM, through which orders are displayed and matched throughout the trading day. As part of the price discovery process in the Opening Session, ArcaEx conducts two single-price auctions: the Opening Auction, at 8:00 a.m. ET, and the Market Order Auction, at 9:30 a.m. 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 not priced. ArcaEx calculates and continually disseminates three pieces of information: the indicative match price; the indicative match volume; and the imbalance during the opening session. After the Market Order Auction is run, the core trading session begins. On the new trading platform, listed orders will be processed in the same order that OTC orders are processed on ArcaEx. An order will take the following steps:

The ArcaBookSM Data Feed:

A new data service utilizing a proprietary protocol specifically designed for the high-speed dissemination of real-time order book information and auction data such as the indicative match price and volume.

1. Display Order Process – Market orders or marketable limit orders are instantly matched with the Book orders that represent the best price in the market. Non-marketable limit orders are posted to the Book.
2. Working Order Process – Orders can be matched with Discretionary or Reserve orders.
3. Routing – If the best price is not available on ArcaEx, the order can be automatically routed to another market center using our smart order routing algorithm.

Limit orders are ranked and maintained in each process based on order type. For example, a limit order is stored in the Display Order Process and the displayed portion of a reserve order is ranked in the Display Order Process, while its reserve portion is filed in the Working Order Process. Strict price-time priority is used for displayed interest, such that at each price level, orders are processed within the ArcaEx Book using price-time priority and routed outside the Book when necessary to obtain a better price.

The new platform will not include the Directed Process, and the Tracking Process will be temporarily removed until the tracking order becomes available on ArcaEx in early 2004. There is no change to the way listed short sales are processed on ArcaEx with all short sale orders subject to the tick test rules related to exchange-listed stocks.

Routing in the Listed Market Place

Since our inception, Archipelago has used a best execution model that routes orders to the best available price in the market. With seven years of experience we have learned that it takes more than a line to any given market place to maximize the value of outbound routing and truly make a routing tool “smart”. Because our SmartBook[®] routing algorithm is embedded in our matching engine, your order can be routed more quickly, has the added benefit of reacting immediately to quote updates continuously streaming into the matching process and can participate against liquidity from reserve and discretionary orders. Because we read the quotes and the books of other market participants, we have created a virtual consolidated book that connects to all major liquidity pools.

Intermarket rules for listed trading are designed to prohibit participants displaying a quote in the National Market System (NMS) from trading through better prices displayed in the NMS. Though these rules provide for a linkage to the NYSE, AMEX, Regional Exchanges and Nasdaq's[®] InterMarket through the Intermarket Trading System (ITS), using ITS isn't necessarily the best or only solution in the search for the best price. Additionally, to reach listed liquidity, ArcaEx uses a number of routes including ITS, multiple DOT connections, CAES to Nasdaq Intermarket dealers and direct links to ECNs. Our SmartBook routing algorithm uses historical data and trends to determine how quickly various market participants respond and how likely the market place will execute orders. Additionally, as non-traditional listed trading venues begin to gain market share, ignoring these non-traditional routing choices limits your search for the best price.

ArcaEx Order Processing Timeline

7:30 a.m. ET

Limit orders can be entered and queued until the Limit Order Auction

8:00 a.m. to 9:30 a.m. ET
Opening Session

8:00 a.m. ET
Limit Order Auction

9:28 – 9:30 a.m. ET
Auction Freeze

9:30 a.m. ET
Market Order Auction

9:30 a.m. to 4:00 p.m. ET
Core Trading Session

4:00 to 8:00 p.m. ET
Extended Hours

When making routing decisions, SmartBook routing looks at the following factors if there are multiple markets at the best price – speed, certainty and quoted size. The most likely venue to find speed and certainty are the electronic market places, so the highest priority is given to auto-execution destinations like ECNs, the National (formerly Cincinnati) Stock Exchange (CSE) and Nasdaq InterMarket. By routing an order to an electronic marketplace you can be assured of a fast fill or an immediate out if the order is canceled.

ArcaEx uses the following routing options when the best price is not available in the ArcaEx Book:

1. *Direct Connections to ECNs*

Direct connections to ECNs provide one of the fastest most effective ways to reach the liquidity of alternative markets with a median response time of less than 1 second.

2. *DOT/PERS*

When routing to the NYSE or AMEX, DOT or PERS may be used in certain circumstances. By using multiple connections the response times across various lines can be monitored and included or excluded from our routing arsenal.

3. *ITS*

ITS has never been known for its speed or efficiency. That said it does provide a mechanism to reach the best price at many markets including the primary markets. ITS rules allow market centers to send 30 second commitments and response times can vary dramatically across exchanges. As an ITS participant we can also complain to other market centers when our quotes are traded through (see Whiner below).

4. *ITS/CAES*

Routing to CAES Market Makers provides a fast and efficient mechanism with median response times of approximately 2 seconds.

As an electronic market we deploy electronic tools even in the ITS complaint process. Whiner is an automated trading tool developed by ArcaEx that sends a message to an ITS linked market when a trade-through of an ArcaEx/PCX[®] quote has occurred. Whiner gives ArcaEx an aggressive and proactive way to report trade-through violations. Today this automated complaint program notifies the offending party that a trade-through has occurred, and on the new platform we will be offering ways to provide our clients with the same notification at the time the trade-through occurs.

A Case for Trade Through Reform

Though all of the changes we are making substantially improve our listed trading platform, the existing trade through rule still forces ArcaEx to be slowed down to the pace of its slowest competitors. In 1997 the Order Handling Rules led to competition that transformed the OTC marketplace. That same competition can only be achieved in the listed market place with trade through reform. Though many would argue that the trade through rules protect investors, one need look no farther than the pilot

Size Matters:

ArcaEx Quotation Stats
Average Depth
Nov. 3 - 7, 2003

DIA	8,300 shares
HEC	32,400 shares
LU	14,000 shares
NT	8,500 shares
QQQ	32,100 shares
SPY	13,800 shares

Market Share Alerts:

If you want to be notified when listed single-stock names have a market share of 10% or more on ArcaEx, sign up for our new Market Share Alerts.

To receive real-time email alerts throughout the day subscribe at marketsharealert@archipelago.com

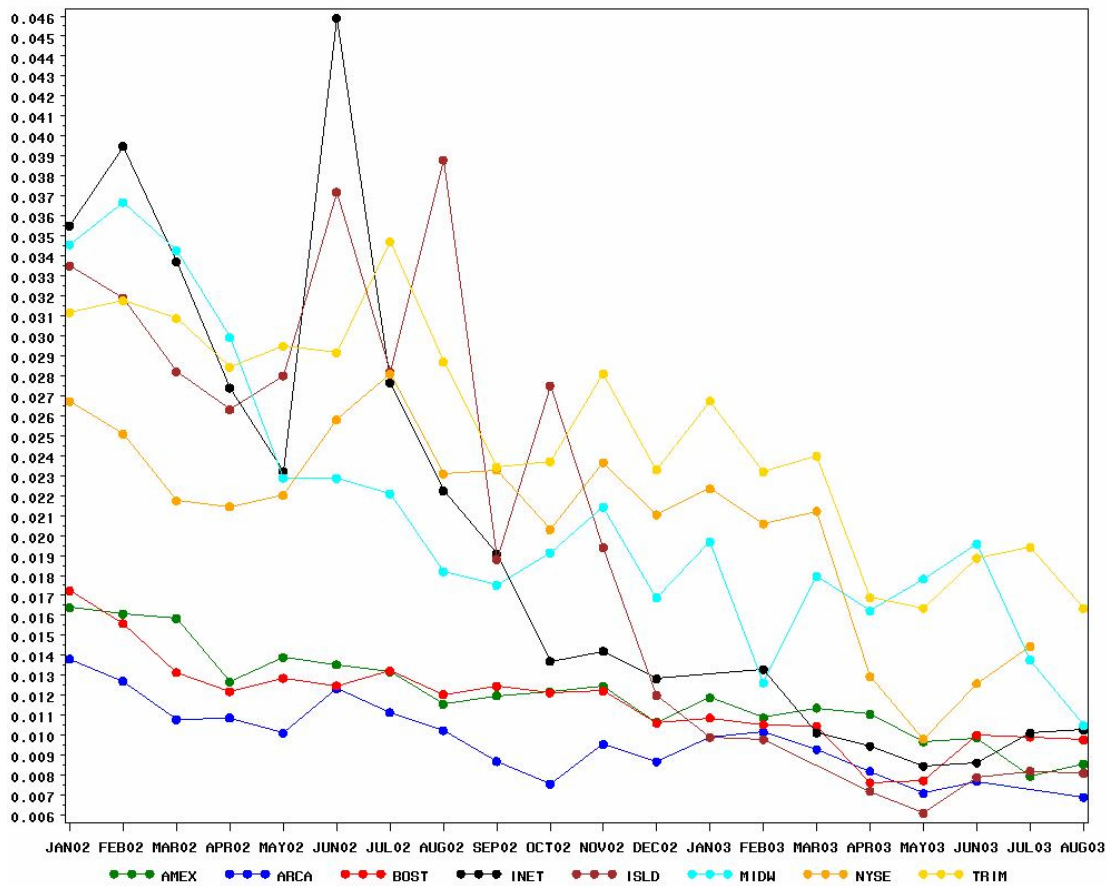
To receive 3 intra-day email alerts (10:15 a.m., 1:15 p.m. and 3:15 p.m. ET) subscribe at marketshareupdate@archipelago.com

program introduced for three active Exchange Traded Funds (ETFs) – QQQ, SPY and DIA – to see that it actually has the opposite effect. This pilot allows for a three cent trade through exemption for these actively traded products and has led to better quoted spreads and lower effective spreads due to increased competition.

An analysis of execution quality data for these three symbols clearly shows that the effective spread has been reduced since the launch of the pilot in October 2002 (check date). You can see from the graph below that the effective spread in QQQ has gone down dramatically in every major market analyzed.

Effective Spread for QQQ

11ac1-5 Data for 500-1999 Share Marketable Orders



What is an Effective Spread?

The difference between the price at which a transaction occurs and the midpoint of the quoted spread at the time the order is received.

Future Enhancements for Listed Processing:

Attributed Quote – ETP Holder can choose to have ETPID displayed on orders.

Program Trading Flags – Ability to pass certain capacity flags via DOT

Closing Auction – Single price closing auction

Post Trade Anonymity - Extending anonymity to the clearing process

Stays tuned for additional announcements on these features or contact your ArcaEx Sales Rep. to learn more.

These ETFs are scheduled to be traded on ArcaEx's new platform on January 2, 2004. Come take advantage of a faster, more robust trading platform, and in the case of QQQ, SPY and DIA, one where competition is allowed to thrive.