

ANATOMY OF A TRADE

NASDAQ's state-of-the-art SuperMontage platform is providing investors with

Technology is playing a crucial role in NASDAQ's efforts to improve and modernize the market in a way that benefits all participants. With SuperMontage, NASDAQ introduced a whole new market structure and state-of-the-art technology trading platform – upgrading capacity threefold, while reducing costs by 20 percent. Some of SuperMontage's advantages are perhaps best illustrated by looking at the anatomy of a NASDAQ trade from different viewpoints (as illustrated, right).

Systems and network improvements have enabled NASDAQ to dramatically increase speed and capacity – the system can now handle more than 10,000 transactions per second. As Steve Randich, NASDAQ's chief information officer, explains, the key behind this speed is the integration of quotes, order book and execution processing. "Speed equals certainty," said Randich in a recent presentation to the Security Industries Association. "Certainty that investors will get the price they see."

For example, NASDAQ orders execute in about 2.1 seconds across all market centers, while orders for comparable floor-traded stocks average 17.2 seconds per execution. The gains are so significant that NASDAQ actively markets its InterMarket system (an electronic marketplace comprising multiple broker-dealers and ECNs that quote and trade securities listed on the NYSE and Amex) for exchange-listed securities.

Step-by-step trading advantages

NASDAQ technology delivers key advantages at each stage of the trading process.

- Rapid response to buy or sell orders.
- Lower costs because spreads are narrower.
- Better prices for both traders and investors.

Taken together, this represents a big win for investors and other market participants – in addition to speed, liquidity is up, spreads are down and volatility is unchanged. Randich highlights the significant gains made in capacity and reliability issues. "It is important to understand the relationship between capacity, responsiveness and reliability," he says. "I am happy to report today that we are fast, reliable and have ample headroom."

NASDAQ's customers agree. They report that transaction response times are less than one-tenth of a second even at market open, when 7,000 transactions per second along with 4,000 simultaneous trade executions are often recorded. Meanwhile, uptime is at a historical high and capacity issues that were once weekly occurrences are now non-existent.

NASDAQ's IT team tests SuperMontage to more than 11,000 transactions a second every Sunday, ensuring that the system has plenty of proven headroom if trading volumes continue to pick up again as market sentiment improves.

NASDAQ is continuing to enhance SuperMontage by adding such features as pegged orders (which allow the price of a buy or sell order to be pegged to the NASDAQ inside, and be guaranteed an execution within the NASDAQ inside), discretionary orders and summary orders – a liquidity enhancer designed to move NASDAQ to be even more order driven rather than its heritage as a quote-driven market. ■

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ANATOMY OF TRADE | RAPID-RESPONSE COMMUNICATION AND EXECUTION



PORTFOLIO MANAGER

1 Portfolio manager calls trader to buy 500,000 shares of ABCD company

| Level | Bid Price | Total Depth | Ask Price | Total Depth |
|-------|-----------|-------------|-----------|-------------|
| 1st | 19.98 | 56 | 19.99 | 15 |
| 2nd | 19.97 | 58 | 20.00 | 83 |
| 3rd | 19.96 | 82 | 20.01 | 108 |
| 4th | 19.95 | 51 | 20.02 | 38 |
| 5th | 19.94 | 81 | 20.03 | 59 |

| Order Type | Bid Price | Bid Size | Order Type | Ask Price | Ask Size |
|------------|-----------|----------|------------|-----------|----------|
| EVRC | 19.98 | 10 | PIPR | 19.99 | 10 |
| PRCD | 19.98 | 11 | SATZ* | 19.99 | 5 |
| SLZ* | 19.96 | 10 | CHSP | 20.00 | 1 |
| SALE | 19.96 | 10 | CHSN | 20.00 | 10 |
| SHW* | 19.96 | 10 | | | |

TOTAL VIEW

ECN



INDIVIDUAL INVESTOR

1 Investor decides to sell 200 shares of ABCD company and places order with online broker

NASDAQ.COM



| Level | Bid Price | Total Depth | Ask Price | Total Depth |
|-------|-----------|-------------|-----------|-------------|
| 1st | 19.98 | 61 | 19.99 | 15 |
| 2nd | 19.97 | 58 | 20.00 | 83 |
| 3rd | 19.96 | 82 | 20.01 | 108 |
| 4th | 19.95 | 51 | 20.02 | 38 |
| 5th | 19.94 | 81 | 20.03 | 59 |

DEPTH VIEW

enhanced performance at all key points of the trading process.

