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Electronic Trading

PDQ Details Auction Model for High-Speed Electronic Equity Trading

CHICAGO-BASED PDQ Enterprises has introduced an alternative trading system (ATS) for high speed electronic equity trading that is based on an auction model and the concept of an 'electronic algorithmic crowd'. The model includes a 20 millisecond order pause designed to increase liquidity discovery and price improvement as the 'crowd' competes for orders.

Early trading on the PDQ ATS started in the spring of 2009, but the platform has since been developed by the PDQ team and has reached a critical mass. The company claims it touches 100 million trades a day, filling 35% to 45%, a fill rate that exceeds the 5% to 8% fill rate of dark pools, but falls short of the 70% to 80% achieved by lit markets – a fact that is not omitted from PDQ's growth plans.

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The trading venue is powered by an algorithm hosting facility and response mechanism developed by PDQ and designed to emulate the interaction of traditional pit floor brokers, while retaining the anonymity and confidentiality of a dark pool. When an order is received by the auction model it is paused for 20 milliseconds.

In that time, algos respond with



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Keith Ross, CEO of PDQ Enterprises – PDQ stands for Procedure Derived Quotes – describes PDQ ATS as 'the market's first auction model for high speed, electronic equity trading'. "As the high frequency trading market has expanded at an increasingly rapid pace, the predominant thought has been that faster is better," he says. "PDQ's in-

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their most competitive quotes to build a mini book where responses can be prioritised on a price and time basis, rather than a first to respond, first to trade basis, although customers can choose which approach to take order by order. At the end of the pause, the trade is matched against the newly created book.


The electronic algorithmic crowd concept allows liquidity seeking firms to discover contra-side liquidity and assemble block interest from multiple firms simultaneously by asking the electronic version of 'what is the market'. Rather than holding an order book of resting liquidity as dark pools do, PDQ ATS allows its liquidity providers to respond to order flow with their proprietary algo trading procedures, generating competition for order flow.

The platform is colocated alongside high frequency traders at a data centre in Weehawken, New Jersey and operates close to a number of exchanges. If trades are not filled on the PDQ platform, customers can route them over low latency connections to more than 50 dark pools, before they are routed to the lit NYSE Arca market.

"We are not just selling speed, the 20 millisecond pause give us time

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to get everything done,” says Ross. Early users of the auction technology are firms seeking liquidity, such as day traders and some agency brokers. The platform is experiencing limited retail flow and modest institutional flow, although Ross suggests institutional type traders are currently under represented in the user community.

“As we develop, we think we can benefit nearly all market participants,” he says. “Many feel disadvantaged by high frequency traders, but the auction process reverses the

advantage. Two years ago, it took us a couple of visits to clients for them to get to grips with the auction idea. Now, they catch on quickly and embrace the idea, but question whether it fills their trading style. In terms of market construct, I haven’t heard any negatives.”

PDQ was founded in 2003 by ex-NYSE chief technology officer Christopher Keith, who was joined by Ross in 2005 when he left his role as CEO of Getco’s electronic trading group.

“Chris thought the idea of ag-

gregating an electronic algorithmic crowd of automated market makers would be of interest to exchanges,” says Ross. “When I joined, I thought we should build a platform using the technology for customers and that is what we have done. If we get this right in the US, then we may extend our reach into Europe and then Asia Pacific.” The company is privately owned, with eight staff located in headquarters just outside Chicago and an office in New York. According to Ross, it will be profitable by the end of this year.

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