

*Not just set and forget*

## Trading inside the box

**T**rade execution has come a long way in a short time. Barely 10 years ago, traders had to call their brokers and speak to them one-on-one to place orders.

Then came the ability to enter trades using a touch-tone phone, followed by e-mail. Finally, in the waning moments of the 20<sup>th</sup> century, traders were able to send orders directly into the market from their computers, the approach many still use today.

The next wave may be what is called “black-box” trading, a mechanism whereby a system or strategy is programmed into a computer and all trades, exits, stops, etc., are executed automatically.

Black-box trading is not a new idea. Large institutions that partake in “program trading” — a concept that accounts for more than 50 percent of the New York Stock Exchange’s daily volume — are doing nothing more than black-box trading with a different name.

However, black-box trading has been slow to catch on from a retail standpoint, although, for years some firms have offered services through which brokers “babysit” systems for their clients — entering trades generated by mechanical systems. Many discretionary traders rely heavily on making decisions based on changing market conditions and need to be in control of their trades at all times.

And while others rely on a more automated approach, they are loathe to completely give control of their trading to a computer.

Nonetheless, black-box trading is gaining popularity at various firms across the country. In the first of a two-part series, we look at a New York firm that is using black-box trading quite extensively, both on the retail side and in its proprietary trading firm.

Schonfeld Trading has long been one of the largest proprietary trading firms in the country, and its retail arm has been in business for several years. The prop side, though, is now run by Trillium

Trading, a broker/dealer that also provides the black-box technology.

All of the prop traders are trading via a black box, and retail traders also have the option. Schonfeld and Trillium have been using the black box for equities for a few years, but only recently added futures trading.

Trillium’s HuBB technology provides



a direct hub to the major stock exchanges and ECNs, and it just hooked up with the Chicago Mercantile Exchange. It is also the program all the black-box trading goes through.

Between the retail and prop side, HuBB trades more than 50 million shares a day on approximately 15-20 million unique messages (i.e., quotes and trades).

The big difference between prop trading and retail trading is how the traders are funded. The retail clients trade with their own money, keep all their profits and are responsible for all losses. The prop traders are funded to some extent by Trillium; as a result, they are not entirely responsible for losses, but they must also share a percentage of their profits.

“On the one hand, we are offering the

proper infrastructure for a quantitative trading group who wants to fully automate their strategy, and we offer that with service, networking, software and pricing,” says Lee Maschler, Trillium CEO. “On the flipside, we do a lot of funding, hiring and looking on the street for the right strategies we are trying to implement. So maybe we’ll take two traders with a very good idea, fund them, and allow them to use the HuBB as any retail person would, but we have a more intimate relationship with them.”

Maschler says a hedge fund with a strategy that has already been implemented and traded and is looking to automate its trading would be a typical retail client.

However, Maschler says there is a bit of a misconception regarding black-box trading. While some traders dream of turning their trading over to a computer and spending the day on the beach, he says that is far from reality.

“It’s a lot more work than many people expect,” Maschler says. “The work only begins when they start automating their strategy. But instead of sitting and waiting for a particular moment in time and reacting on that manually, the automated traders are spending a lot of their time evaluating the effectiveness of their strategy and trying to figure out ways they can optimize it in terms of speed, slippage, or performance.

“Unfortunately for the automated trader, that takes up a lot more time than just sitting and waiting for the stock to go up 10 cents so they can sell. It’s a double-edged sword.”

Of course, as the market changes, it’s likely a strategy that worked for the past several months will no longer be effective. So, traders need to monitor their results and change the system accordingly.

However, besides the trading mechanism, HuBB can also perform some back-office functions that help Trillium get a handle on regulatory and supervisory functions.

“We have to comply with things like

the short-sale rule and retail buying power," Maschler says. "We handle that in our software. We also have rules and limits on the prop side, such as buying power and maximum amount in one position or any one sector.

"Those are built into our system, but the person trading has some responsibility, too. If it's a prop trader and they are told the most they can lose is \$5,000, I would expect that person to pay attention before they lose the full amount and they have to be turned off. There is that middle check I do that monitors the maximum limit someone can lose, but there are more specific checks the trader is monitoring in a real-time fashion."

Trillium added futures trading to its repertoire partly because of customer demand, but also because of the new electronic opportunities available in futures.

"We evaluated the access the CME offered, and it's very good," says Paul Famighetti, Trillium's director of program trading. "They have exclusively electronic access via Globex, and their market data is completely disseminated in an easy-to-integrate way so that we were able to offer a similar service to what we provide in the equities market.

"And as more executions have become electronic, the CME did a great job of incentivizing their pit and open outcry groups to participate in the E-mini by providing them with really good access and tons of liquidity. So you see good quality executions, good system performance, and deep liquidity discovery."

Still, the term black box has different connotations for different people. While some traders jump at the chance to trade an automated system, some are put off by the thought of having immediate control over their trades taken away.

However, Maschler says, that's a misconception. Traders using the black-box method actually have *more* control than other traders do.

"There is a lot of education we're doing out there, especially to some of the hedge funds," he says. "As you get to more of a developer-centric approach to trading, one of the things that happens is you get more ability to have a) control of your trades and b) insight into a lot of post-trade analysis that can help you optimize the system."

Maschler believes mainstream use of

black-box systems is inevitable.

"We've seen in the last five years a significant investment across all firms into some kind of algorithmic trading just because of the fragmentation on Nasdaq," Maschler says. "Everybody has a router that figures out the different pools of liquidity and the most intelligent way to route across them so the trader only has to hit one button. That is a classic program trade, just a very simple and straight-forward one that people can digest.

"There are going to be other regulatory changes that precipitate [more black-box trading]. Or, people are going to

realize how much power they have just with their simple routers and how they can optimize that, and it's going to extend itself very much toward a more automated approach, where the trader is doing more directing and less entering orders.

"We're obviously bullish on this type of trading, but that doesn't mean we're bearish on the trader. It's just that we're going to have to give them better and better tools as we go so they can stay competitive."

Next month, we'll look at how black-box trading is used at other firms. ☺

### Trying to compete with the big boys

## Archipelago increases its options

**O**n the surface, the Archipelago Exchange's purchase of the Pacific Stock Exchange isn't exactly earth-shattering news.

After all, the two firms had worked together since 2000, when Archipelago, then an ECN, reached an agreement with

4 volume-wise among the six U.S. options exchanges with about 11 percent of total volume. The PacEx has seen business increase since the inception of its PCX+ electronic trading system in early 2004, and Archipelago will increase the exchange's reliance on an electronic platform.

"There is a growing demand for electronic options marketplaces, and we recognize the value in offering clients options trading," says Archipelago CEO Gerald Putnam. "To enter into a new business, it's easier for us to go with a firm we have been familiar with for several years.

"We have the resources to be in a building mode and be aggressive."

Putnam said he hopes the deal, which is valued at almost \$51 million, will close in the first half of 2005, although he would not guarantee anything.

PacEx chairman and CEO Phil DeFeo says the deal will allow the exchange to continue its goal of increased electronic trading.

"In order to compete in the options business, we believe we need a floor-independent, electronic marketplace," DeFeo says. "This transaction allows us to realize that vision over time."

DeFeo says, though, that there's no guarantee the trading floor will go away



the PacEx in order to expedite its exchange application. And, the price of Archipelago's stock has increased more than 75 percent since its IPO in August 2004, putting the company in a solid position to be an acquirer.

However, the deal, which is still subject to SEC approval, puts Archipelago in a position shared only by the American Stock Exchange — a stock exchange that also trades options.

Archipelago will take over the PacEx's options business, which is currently No.

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