Smart Order Router (SOR)

Smart order routing (SOR) is a process used in trading applications to execute incoming liquidity into liquidity providers following routing rules. The routing rules usually follow business needs like best execution or internalization.

This new microstructure created an environment that was advantageous to the person who was faster. Since there were alot of different ECNs, and they were all located at different geographical locations, the person who was able to send his orders the fastest to that location would then have priority in that queue (remember if too people have an order at the same price, the person who came first has priority to get filled first).

The new ECN pricing scheme also created opportunity to make ALMOST risk free money by buying a stock on an ECN that paid you to add liquidity and then selling instantly back the shares on another ECN that either paid you or charged you less then the original ECN you bought on.

Latency

Delay between a trading decision and it's implementation

- NYSE pre-1980: 2 minutes
- NYSE 1980: 20 seconds
- NYSE 2007: 100s of milliseconds
- NYSE Arca 2009: 1 millisecond
- Now: in the nanoseconds

Why latency is important?

- You want the most recent information to make your trading decision
- Competitive advantage/disadvantage (the first guy makes the profits)
- Time priority rules in microstructure
- Minimizing Transaction cost
- Typical high frequency trading profits: $0.001 - $0.002