Order Type Guide

WHO WE ARE

EDGX

- Maker/Taker pricing model
- High rebates for liquidity providers

EDGA

- Low-cost exchange
- Taker/Maker pricing model
- Rebates for liquidity takers

TRADING HOURS

- **All Sessions Order**
  - 8:00 a.m. to 8:00 p.m.
- **Pre-Market Order**
  - 8:00 to 9:30 a.m.
  - Orders designated Pre-Market remain active until 4:00 p.m. and can be entered after start of Regular Session
- **Regular Session Order** (default)
  - 9:30 a.m. to 4:00 p.m.
  - Day orders designated for regular trading hours will await the opening on EDGA and EDGX, which may occur later than 9:30 a.m.
- **Post-Market Order**
  - 4:00 to 8:00 p.m.
  - Orders designated Post-Market also participate in Regular Session if entered prior to 4:00 p.m.

WHAT IS AN ORDER TYPE?

- An order type is used to communicate specific trading instructions for a particular order

- Many order types are standard across all markets, but some are unique only to Direct Edge

MARKET VS. LIMIT

- **Market Orders** - Orders to buy or sell a specified quantity immediately at the best available price
- **Limit Orders** - Orders to buy or sell a specified quantity at a specified price or better

ROUTABLE VS. NON-ROUTABLE

- **Routable Orders** - If the best available price is displayed on another exchange, these orders will be routed away (Default behavior)

- **Non-Routable Orders**
  - **Book Only – Always eligible to remove liquidity upon arrival**
  - **Post Only – Seek rebates for adding and generally unwilling to remove liquidity unless they receive price improvement**

- **Non-routable by Design**
  - **MidPoint Match**
  - **Midpoint Peg**
  - **Route Peg**
  - **Primary and Market Peg**
  - **Intermarket Sweep Orders**

DISPLAYED VS. NON-DISPLAYED

- **Displayed Orders** – Default behavior of orders that are posted to the book

- **Non-Displayed Orders**
  - **MidPoint Match Orders (EDGX Only)**
  - **Midpoint Peg Orders (EDGA Only)**
  - **Route Peg Orders**
  - **Non-displayed portion of Reserve Orders**
  - **Hidden Orders**
    - Explicitly designated as non-displayed using Display Field = N

TIME-IN-FORCE

- **Day Orders** - Default that enables orders to trade during the regular trading session with option to extend to pre- or post-market sessions

- **IOC Orders** - Immediate Or Cancel (immediately execute as much as you can; the remainder is canceled)

- **FOK Orders** - Fill Or Kill Orders (fill the order in its entirety upon arrival or cancel it completely)

- **Good Til Time** - Allow an expiration time to be specified, meaning that the order will be canceled if not executed when the expiration time is reached

AGGRESSIVE/ SUPERAGGRESSIVE

Orders placed on the order book remain on the order book until executed or canceled, except when either the Aggressive or Superaggressive order qualifier is selected.

- **Aggressive** - An order qualifier designating that an order on our book be routed to an away market if the away market crosses the limit price of the order on our book

- **Superaggressive** - An order qualifier designating that an order on our book be routed to an away market if the away market locks or crosses the limit price of the order on our book

EXECUTION PRIORITY

1. **Price** – Better-priced limit orders execute ahead of limit orders with worse prices

2. **Displayed** – Displayed orders on the book have priority over non-displayed orders at the same price level

3. **Non-Displayed Orders**
   - **MidPoint Match Orders (EDGX only)**
   - **Non-displayed limit orders and the non-displayed portion of Reserve Orders**
   - **Discretionary Orders within their discretionary range**

4. **Time** – Earlier-arriving orders execute ahead of later-arriving orders when their price and priority are the same

EXAMPLE:
A BASIC LIMIT ORDER
(With Default Characteristics)

- ***Buy 500 Shares of XYZ at $22.54***
- Default characteristics of this order:
  - **Eligible to execute during regular trading day**
  - **Routable if it can execute upon arrival but the best price is elsewhere**
  - **It is a Displayed Order:**
    - You will see it on the Direct Edge book feed, if it's not immediately executed
    - Incorporated into SIP aggregate bid, if it's at the exchange's best bid price
  - **Will not execute at a price higher than $22.54**
  - **Will not execute more than 500 shares, but could execute fewer shares**
  - **Its execution can occur in pieces**
  - **Its execution can occur at different times**

OVERVIEW OF ORDER TYPES

- Stop Orders
- Reserve Orders
- Pegged Orders
- Route Peg Orders
- Midpoint Peg Orders

- MidPoint Match Orders
- Discretionary Orders
- MidPoint Discretionary Orders
- Intermarket Sweep Orders
- Hidden Orders

STOP ORDERS

Stop Orders

- Order will activate and become a Market Order when a consolidated trade occurs at the order's specified stop price

Stop Limit Orders

- When a consolidated trade occurs at the stop price, the order then becomes a Limit Order at its specified limit price

RESERVE ORDERS
(Iceberg Orders)

- A limit order that has both displayed and non-displayed components
- The displayed component has displayed order priority
- The reserve portion has non-displayed order priority
  - **Reserve portion is available for immediate execution if the opposite side order size exceeds the displayed quantity on the book**
- Displayed order quantity will be replenished when it is depleted to less than one round lot
  - **Fixed or Random Replenishment**

EXAMPLE: RESERVE ORDER
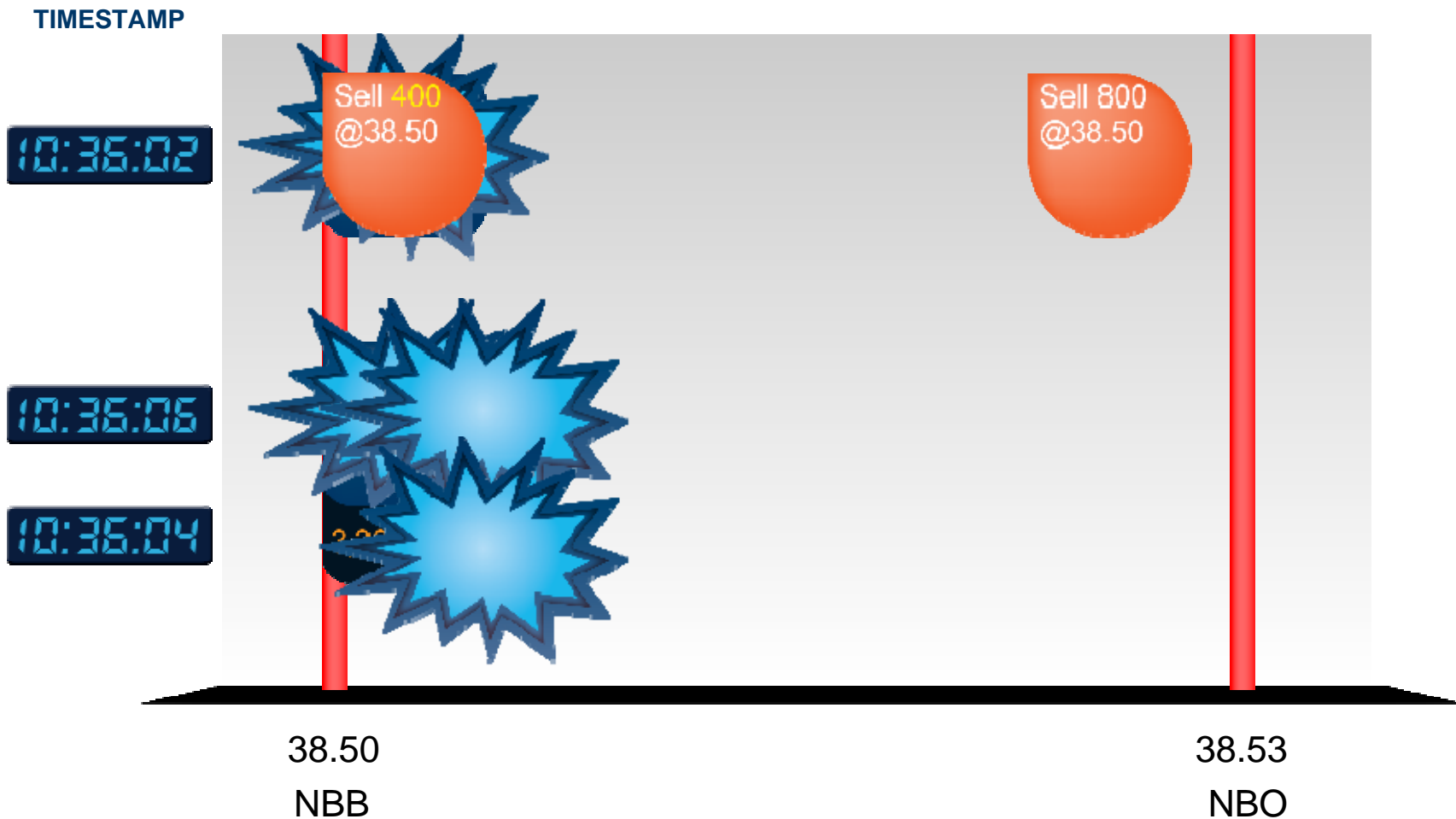
PEG ORDERS

## Track the NBBO and move as it moves

Primary Peg Orders

- Pegged to the NBBO on the same side of the market
- Buy orders are pegged to the bid, with or without an offset
- Sell orders are pegged to the offer, with or without an offset

Market (Reverse) Peg Orders

- Pegged to the NBBO on the opposite side of the market
- Must contain an offset to be priced less aggressively than NBO for buy orders and the NBB for sell orders

EXAMPLE: PRIMARY PEG

Buy 500 Shares @ 60.44

Offset .02

| 60.40 | 60.42 | 60.44 | 60.47 | 60.50 |
| NBB | NBB | NBB | NBB | NBO |
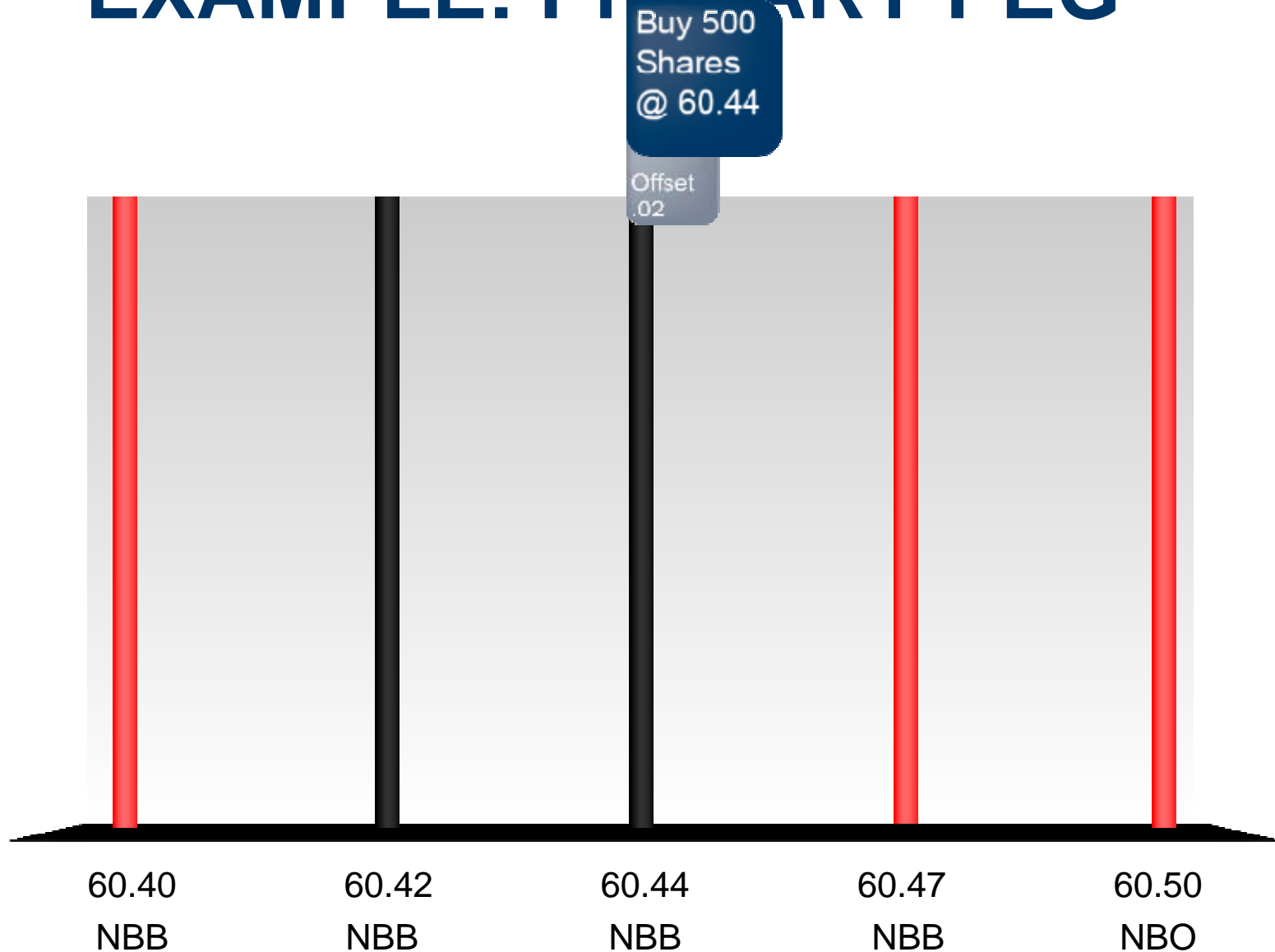
ROUTE PEG ORDERS

- Non-displayed pegged limit orders
- Interact only with orders being routed to another destination
- Interact only with contra orders with an original size less than or equal to the Route Peg's original order size
- Only eligible to execute in regular trading session
- Buy orders are pegged to the NBB
- Sell orders are pegged to the NBO
- Will not execute in locked or crossed markets

EXAMPLE:
ROUTE PEG ORDER

Route Peg Buy
800 Shares
@18.64

Displayed Orders

Non-Displayed Orders

Route Peg Orders

18.59	18.60		18.62	18.64
	NBB		NBO	
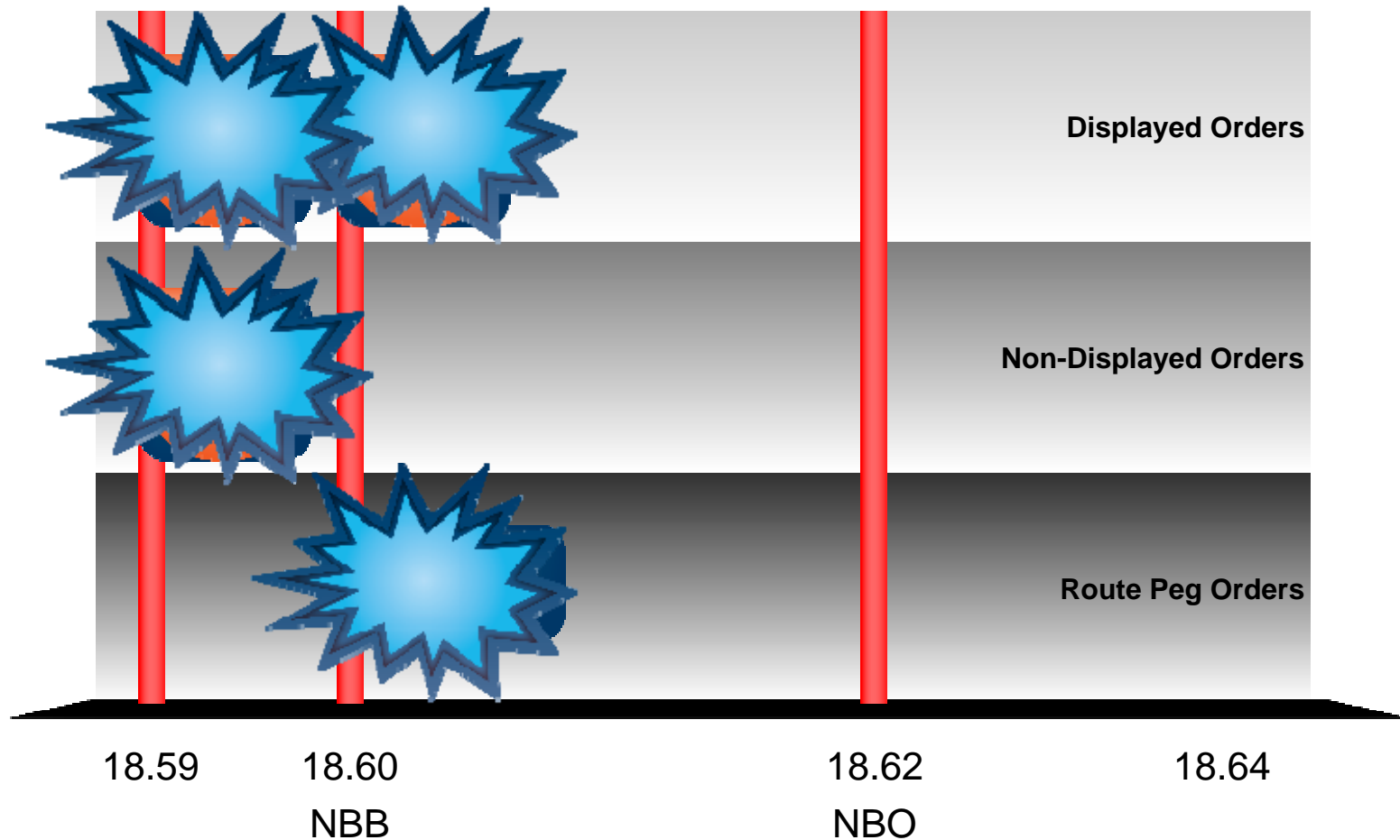
MIDPOINT PEG ORDERS (EDGA ONLY)

- Type of Peg Order that floats at the NBBO midpoint
- Priority is the same as other non-displayed orders
- Can be entered as a Market Order, meaning they float at the midpoint without a boundary price
- Can be entered as a Limit Order, which also floats at the midpoint, but will not execute when the midpoint is outside of the Limit price boundary

MIDPOINT PEG ORDERS (EDGA ONLY)

- Can execute at the midpoint of the NBBO, or at prices better than the midpoint
  - **Executions at prices better than the midpoint can occur**
    - Upon arrival against Hidden orders priced better than the midpoint
    - When moving from one NBBO midpoint to another and a non-displayed contra order is positioned between them
- No executions in locked or crossed markets
- Minimum Execution Quantities can be specified
- Non-routable
- Can receive ½ cent executions in stocks trading above $1

MIDPOINT MATCH (MPM) ORDERS (EDGX ONLY)

- Non-displayed
- Execute only at the midpoint of the NBBO
- Can be entered as Market or Limit orders
- No executions in locked or crossed markets
- Minimum order size is one round lot
- No offsets allowed
- Minimum Execution Quantities can be specified
- Non-routable
- Cannot be marked as Post Only
- Can receive ½ cent executions in stocks trading above $1

MIDPOINT MATCH ORDERS

http://revolutionproductions.wistia.com/medias/pm8oxo9usn

DISCRETIONARY ORDERS

- Have both a displayed price and a non-displayed discretionary range

- The discretionary offset creates a more aggressive non-displayed price range in which the order can execute

- A posted discretionary order will trade at the best possible price, either at its displayed price or within the eligible discretionary range

- Can be marked as routable, Book Only, or Post Only, and are routed based on their displayed price only

- Discretionary Order Priority
  - **The displayed portion of the order has equal priority with all other displayed orders at the same price**
  - **Prices within the discretionary range receive discretionary priority**

MIDPOINT DISCRETIONARY ORDERS (MDO) (EDGA ONLY)

- Unique Direct Edge order type
- Blends characteristics of Displayed, Pegged, Midpoint, and Discretionary orders
- Used to extend price range to access midpoint liquidity
- Interacts with two types of inbound orders
  - **Opposite side midpoint order interest**
  - **Opposite side orders priced more aggressively than the midpoint**
- Displayed and pegged to the prevailing NBB (for buy orders) or NBO (for sell orders) with a non-displayed, discretionary range that can extend to the midpoint of the NBBO, depending on the order's limit price
  - Can receive ½ cent executions in stocks trading above $1
- Only eligible to execute during regular trading hours

EXAMPLE: MDO
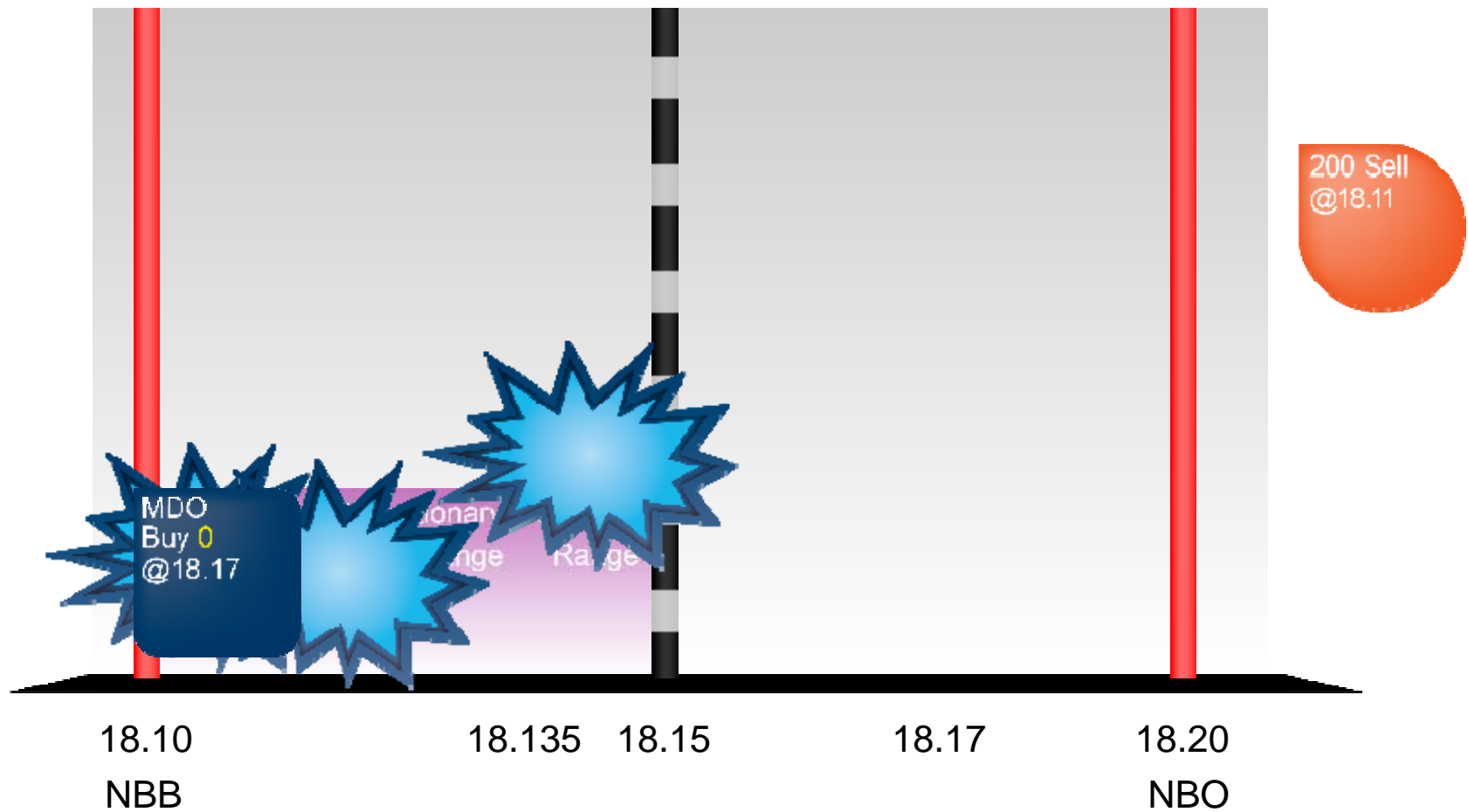
INTERMARKET SWEEP ORDERS (ISO)

- Created as part of Reg NMS in 2007
- Allows the exchange to immediately execute ISOs against orders on the book without checking protected quotes on other markets
- Order originator takes responsibility for sending orders directly to the other market centers to clear protected orders
- Can be either an IOC Order or Day Orders (Day ISO)

DAY ISO

- Day ISOs can be posted on the Exchange book when locking or crossing away markets

  - **Day ISOs sent by members must adhere to the Reg NMS requirement to sweep other protected markets to ensure no intentional locking or crossing**

  - **Day ISOs remove contra liquidity on the book of the market to which they are sent, with the remainder posted to the book**

  - **Post Only Day ISOs will not remove contra liquidity on the receiving exchange**

    - Will not be posted at their limit price if displayed contra liquidity is present

DAY ISO

- Day ISO Priority
  - **A Day ISO will receive top priority at its limit price if it is responsible for clearing the locking price and creating a new NBB or NBO**
    - Re-priced and pegged orders are positioned on the book behind that Day ISO at the newly established price point
    - Subsequent Day ISOs at the same price receive standard arrival time priority and positioning behind re-priced and pegged orders that were already on the book

HIDDEN ORDERS

- Specifically designated not to display any order quantity
- Can execute at prices that are better than the NBBO
- Permitted to be placed on the exchange book at prices that lock with opposite-side displayed or non-displayed orders
- Not permitted to be placed on the book at prices that cross opposite side orders on the book or on away markets
- May be re-priced to avoid crossing other orders

HIDDEN ORDERS

http://revolution-productions.wistia.com/medias/t2jsmu94lx

HIDDEN ORDERS (EDGX)

- Hidden orders can be Routable, Post Only or Book Only orders

- Hidden orders resting on the order book receive a rebate when not price-improved

- Aggressive Hidden Order Definition
  - **Buy orders with limit price higher than the midpoint**
  - **Sell orders with limit price lower than the midpoint**

- Aggressive Hidden orders are re-priced to midpoint with discretion to their locking price
  - **Aggressive Hidden orders priced at the midpoint execute there against orders crossing the spread, receiving both price improvement and the hidden rebate**
  - **Aggressive Hidden orders can also execute against contra midpoint-eligible orders**
    - Receive the advantage of exposure to all midpoint liquidity
    - Receive price improvement that exceeds the sum of the midpoint fee and foregone rebate when executing against midpoint eligible orders

HIDDEN ORDERS (EDGA)

- Hidden Orders are initially priced at their limit price, provided the price is within the NBBO

- Aggressively priced Displayed Post Only orders may cause resting Hidden Orders to be re-priced

- Hidden Orders can receive price improvement if contra-side liquidity necessitates pricing them less aggressively than their limit price

- Post Only Hidden Orders are not supported in EDGA

- Hidden Orders in EDGA pay the Hidden order fee

RE-PRICING OPTIONS

- Under Reg NMS, stock exchanges must avoid posting and displaying orders that intentionally lock or cross protected market center quotes

- Re-pricing options apply to Post Only Orders and to the non-executed portion of Book Only Orders

- Enables Members to control how their orders will behave in circumstances when, upon arrival, they would otherwise lock or cross other orders

- Cancel Back
- Single Re-Price
- Price Adjust
- Hide Not Slide

CANCEL BACK

- If an order's limit price locks or crosses the market upon arrival, the order will be immediately canceled back to the Member

SINGLE RE-PRICE

- If an order locks or crosses the market upon arrival, the order will be displayed and priced one Minimum Price Variation (MPV) away from the locking price
- This is a one-time re-pricing

PRICE ADJUST

- Default re-pricing option on EDGX

- If at the time of entry, an order locks or crosses the market, the order will be displayed and priced one MPV away from the locking price

- If market conditions subsequently allow the order to be displayed at the original locking price, it will be displayed and moved to that price
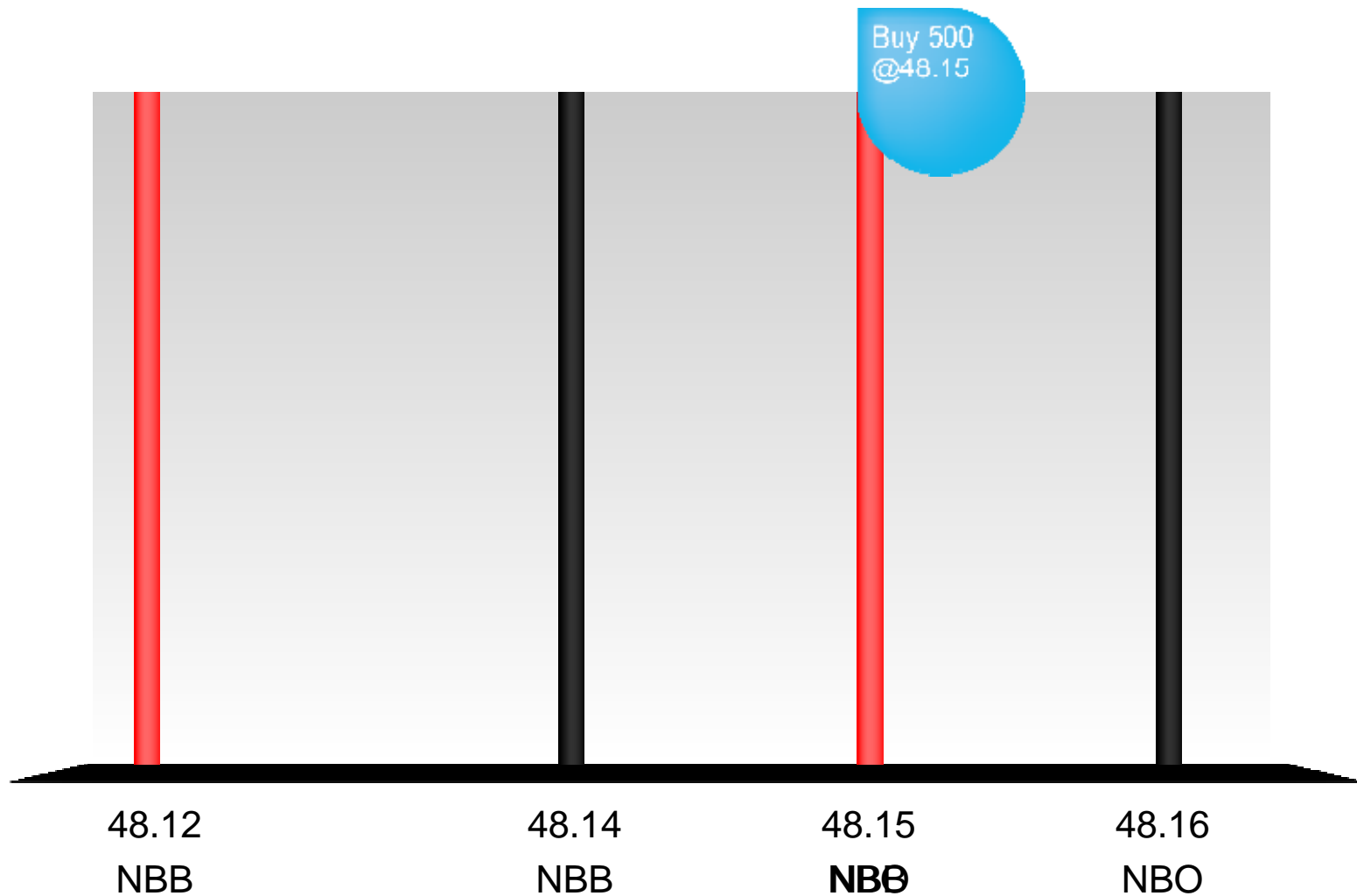
HIDE NOT SLIDE (EDGX)

- Displayed one MPV away from the locking price if an order locks or crosses the market

- When NBBO spread is wider than one MPV, Hide Not Slide orders narrow the spread to one MPV

- Priced at the NBBO midpoint with discretion to the locking price, provided no contra displayed interest is present at the locking price

- Receive execution priority over all non-displayed mid-point eligible orders when positioned at the NBBO midpoint

- If the locking price clears, the order will be moved to and displayed at the original locking price ahead of other orders

  - **The single exception is an arriving Day ISO that enables the locking price to be displayed on EDGX, and as a result gains priority over Hide Not Slide orders.**

HIDE NOT SLIDE (EDGX)

- When re-priced to the midpoint
  - **Orders have priority over other order types at the midpoint**
  - **Orders are eligible to execute against orders crossing the spread**
  - **Orders are eligible to execute against all contra mid-point eligible orders**

- At the locking price
  - **Hide Not Slide orders have discretion to the locking price provided there is no contra displayed interest there**
  - **Will execute at the locking price only when the contra order limit price equals the locking price**
  - **Will receive full rebate when executed at the locking price**

- Upon Arrival
  - **Hide Not Slide orders will execute at prices inside of the NBBO when the contra price is better than the locking price**
    - Results in price improvement that exceeds sum of remove fee and foregone rebate
      - If NBBO spread is one cent midpoint fee is charged
      - If spread exceeds one cent full remove fee is charged

HIDE NOT SLIDE (EDGX)

- If executed against other orders when priced at the NBBO mid-point, Hide Not Slide orders incur the MPM fee.

- Will pay a fee if the price improvement on the transaction exceeds the sum of the foregone rebate and removal fee in the following circumstances:

  o **When price improved upon arrival at prices between the NBBO**
 o **When priced at the midpoint of the NBBO**

HIDE NOT SLIDE (EDGX)

http://revolution-productions.wistia.com/medias/5p6yphvn70

HIDE NOT SLIDE (EDGA)

- Default re-pricing option on EDGA

- If an order locks or crosses the market, the order will be ranked at the locking price and displayed one MPV away from the locking price

  o **When NBBO spread is wider than one MPV, Hide Not Slide orders narrow the spread to one MPV**

- If no contra displayed interest exists at the locking price, the order will be eligible to execute at the locking price and has price priority over other same-side orders in the system

- If contra displayed interest exists, the order can execute one MPV better than the locking price, with execution priority based on its time priority relative to all other displayed orders at that price

- If the locking price clears, the order will be both ranked and displayed at the original locking price
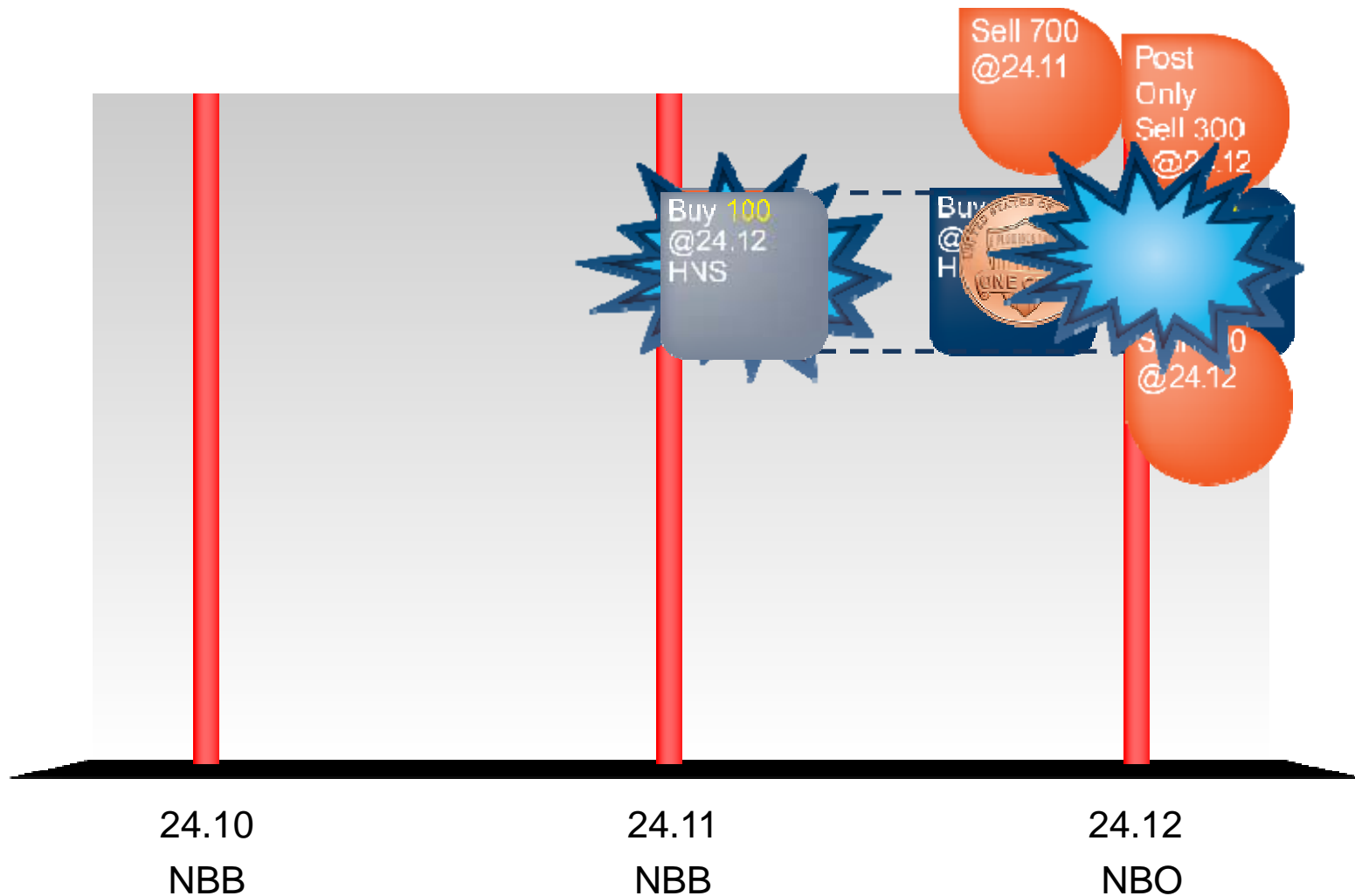
REPRICED ORDERS & PRIORITY AT CLEARED LOCKING PRICE

- 1st Priority
  - **A Day ISO order receives top priority at the locking price if, and only if, upon arrival it is responsible for setting the new NBB or NBO**
- 2nd Priority
  - **Hide Not Slide orders in time priority**
- 3rd Priority
  - **Price Adjust orders re-priced one MPV away from the locking price, in time priority**

THANK YOU

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