

The tables below describe changes that will be in effect when the FINRA ORF technical migration commences on June 2, 2014.

**Summary of TDDS Changes:**

| Function                                 | TDDS Messages and Process<br>(Through May 30, 2014)   | TDDS Messages and Process v2.0<br>(Beginning June 2, 2014)  |                           |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
|--|---|---|---------------------------|---------------------------|-------------------|-------------------|---------------|-------|-------------|-----------------|-----------------|-------|--------------|---|-----------------|---------------------------|------|-------------------|---------------|------------|-------|--------------|-----------------|------------|-------|--------------|
| Bandwidth                                | <ul style="list-style-type: none"><li>500Kbps</li></ul>   | <ul style="list-style-type: none"><li>800Kbps</li></ul>   |                           |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Ports/IP Addresses<br>(Production)       | <table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>224.3.0.6</td><td>55360</td><td>206.200.5.6</td></tr><tr><td>Secondary Group</td><td>224.3.0.16</td><td>55361</td><td>206.200.6.16</td></tr></table> | Multicast Group   | Class D Multicast Address | Port                      | Source IP Address | Primary Group     | 224.3.0.6     | 55360 | 206.200.5.6 | Secondary Group | 224.3.0.16      | 55361 | 206.200.6.16 | <table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>224.3.0.10</td><td>55378</td><td>206.200.5.10</td></tr><tr><td>Secondary Group</td><td>224.3.0.20</td><td>55379</td><td>206.200.6.20</td></tr></table> | Multicast Group | Class D Multicast Address | Port | Source IP Address | Primary Group | 224.3.0.10 | 55378 | 206.200.5.10 | Secondary Group | 224.3.0.20 | 55379 | 206.200.6.20 |
| Multicast Group                          | Class D Multicast Address   | Port  | Source IP Address         |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Primary Group                            | 224.3.0.6   | 55360   | 206.200.5.6               |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Secondary Group                          | 224.3.0.16  | 55361   | 206.200.6.16              |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Multicast Group                          | Class D Multicast Address   | Port  | Source IP Address         |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Primary Group                            | 224.3.0.10  | 55378   | 206.200.5.10              |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Secondary Group                          | 224.3.0.20  | 55379   | 206.200.6.20              |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Ports/IP Addresses<br>(Test Environment) | N/A   | <table><tr><th>Multicast Group</th><th>Class D Multicast Address</th><th>Port</th><th>Source IP Address</th></tr><tr><td>Primary Group</td><td>TBD</td><td>TBD</td><td>TBD</td></tr><tr><td>Secondary Group</td><td>TBD</td><td>TBD</td><td>TBD</td></tr></table> | Multicast Group           | Class D Multicast Address | Port              | Source IP Address | Primary Group | TBD   | TBD         | TBD             | Secondary Group | TBD   | TBD          | TBD   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Multicast Group                          | Class D Multicast Address   | Port  | Source IP Address         |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Primary Group                            | TBD   | TBD   | TBD                       |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Secondary Group                          | TBD   | TBD   | TBD                       |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |
| Message Header                           | <ul style="list-style-type: none"><li>Message Header Length is 22 bytes</li><li>Date/Time field requires ASCII</li></ul>  | <ul style="list-style-type: none"><li>Message Header Length increased to 32 bytes</li></ul>   |                           |                           |                   |                   |               |       |             |                 |                 |       |              |   |                 |                           |      |                   |               |            |       |              |                 |            |       |              |

|                           |  |   |
|---------------------------|--|---|
|                           | <p>conversion</p> <ul style="list-style-type: none"> <li>• Market Center Originator is one byte</li> </ul> | <ul style="list-style-type: none"> <li>• Date/Time field is numeric</li> <li>• Time includes milliseconds</li> <li>• Market Center Originator increased to two bytes</li> </ul>   |
| Trade Report (Short Form) | <ul style="list-style-type: none"> <li>• Category T, Type 1</li> </ul>                                     | <ul style="list-style-type: none"> <li>• Category T, Type 5; No format changes employed for this message</li> <li>• Format will be used if specific trade conditions are met and if trade was executed and reported on current trading day</li> </ul> |

| Function                 | TDDS Messages and Process<br>(Through May 30, 2014)  | TDDS Messages and Process<br>(Beginning June 2, 2014)  |
|--------------------------|--|--|
| Trade Report (Long Form) | <ul style="list-style-type: none"> <li>• Category T, Type 2</li> <li>• Current day transactions only</li> <li>• Security Symbol 11 bytes</li> <li>• One sale condition field is employed</li> <li>• Trade volume field is 9 bytes</li> <li>• Trade price field is 10 bytes</li> </ul>        | <ul style="list-style-type: none"> <li>• Category T, Type 6</li> <li>• Current day and T-3 as-of trades will be disseminated via the Long Form message</li> <li>• Format includes 17-byte Execution Date/Time in the message format</li> <li>• Security Symbol increased to 14 bytes</li> <li>• Four sale condition fields are employed to denote the possibility of multiple trade conditions for the transaction</li> <li>• Trade volume field decreased to 8 bytes</li> <li>• Trade price field increased to 12 bytes</li> </ul>  |
| Trade Cancel             | <ul style="list-style-type: none"> <li>• Category T, Type 3</li> <li>• Current day transaction cancels only</li> <li>• Security Symbol 11 bytes</li> <li>• One sale condition field is employed</li> <li>• Trade volume field is 9 bytes</li> <li>• Trade price field is 10 bytes</li> </ul> | <ul style="list-style-type: none"> <li>• Category T, Type 7</li> <li>• Current day and T-3 as-of cancel transactions will be disseminated via the Trade Cancel message</li> <li>• Format includes Original Dissemination Date and Original Message Sequence Number to distinguish trades being canceled from a previous day</li> <li>• Format includes 17-byte Execution Date/Time in the message format</li> <li>• Security Symbol increased to 14 bytes</li> <li>• Four sale condition fields are employed to denote the possibility of multiple trade conditions for the transaction</li> <li>• Trade volume field decreased to 8 bytes</li> <li>• Trade price field increased to 12 bytes</li> </ul> |

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|--|--|---|
|  |  | <ul style="list-style-type: none"><li>• Currency field eliminated from Summary portion of message</li></ul> |
|--|--|---|

| Function               | TDDS Messages and Process<br>(Through May 30, 2014)  | TDDS Messages and Process v2.0<br>(Beginning June 2, 2014)   |
|------------------------|--|--|
| Trade Correction       | <ul style="list-style-type: none"> <li>• Category T, Type 4</li> <li>• Current day transaction corrections only</li> <li>• Security Symbol 11 bytes</li> <li>• One sale condition field is employed</li> <li>• Trade volume field is 9 bytes</li> <li>• Trade price field is 10 bytes</li> </ul> | <ul style="list-style-type: none"> <li>• Category T, Type 8</li> <li>• Current day and T-3 as-of trade correction transactions will be disseminated via the Trade Correction message</li> <li>• Format includes Original Dissemination Date and Original Message Sequence Number to distinguish trades being corrected from a previous day</li> <li>• Format includes 17-byte Execution Date/Time in the message format</li> <li>• Security Symbol increased to 14 bytes</li> <li>• Four sale condition fields are employed in original and corrected trade message portion to denote the possibility of multiple trade conditions for the transaction</li> <li>• Trade volume field decreased to 8 bytes</li> <li>• Trade price field increased to 12 bytes</li> <li>• Currency field eliminated from Summary portion of message</li> </ul> |
| Trade Summary          | <ul style="list-style-type: none"> <li>• Category A, Type 1</li> <li>• Security Symbol 11 bytes</li> </ul>   | <ul style="list-style-type: none"> <li>• Category A, Type 2</li> <li>• Security Symbol increased to 14 bytes</li> </ul>  |
| General Administrative | <ul style="list-style-type: none"> <li>• Category A, Type A</li> <li>• Fixed format text message of 300 byte character maximum</li> </ul>  | <ul style="list-style-type: none"> <li>• Category A, Type A; No format changes required for this message</li> </ul>  |
| Security Trade Halt    | N/A  | <ul style="list-style-type: none"> <li>• Category A, Type H</li> <li>• Halt and Resume trading action for individual securities</li> </ul>   |

|  |     |   |
|--|-----|---|
|  |     | <ul style="list-style-type: none"> <li>• Message formats includes Action; Security Symbol; Date/Time; Reason Code</li> </ul>  |
| Security Trade Halts (Pre - Open Spin) | N/A | <ul style="list-style-type: none"> <li>• Category A, Type H</li> <li>• Trading Halt pre-open spin for individual securities which remain in a halted state from a previous day</li> <li>• Message format includes Action; Security Symbol; Date/Time; Reason Code</li> <li>• Trading Halt Spin takes place at 7:30 a.m. ET</li> </ul> |

| Function                                   | TDDS Messages and Process<br>(Through May 30, 2014)  | TDDS Messages and Process v2.0<br>(Beginning June 2, 2014)  |
|--|--|---|
| Trade Halt<br>(Extraordinary Market Event) | N/A  | <ul style="list-style-type: none"> <li>• Category A, Type M</li> <li>• Extraordinary Market Event halt and resume trading action (for all securities)</li> <li>• Message format includes Action; Date/Time; Reason Code</li> </ul>  |
| Trade Halt (Market Wide Circuit Breaker)   | N/A  | <ul style="list-style-type: none"> <li>• Category A, Type M</li> <li>• Market Wide Circuit Breaker halt and resume trading action (for all securities)</li> <li>• Message format includes Action; Date/Time; Reason Code</li> </ul>   |
| Test Cycle Control Messages                | Category C, Type M; Category C, Type N   | Discontinued these messages   |
| Control Messages                           | These control messages disseminate “Q” as the Market Center Originator <ul style="list-style-type: none"> <li>• Category C, Type O - Market Open</li> <li>• Category C, Type C - Market Closed</li> <li>• Category C, Type X - End of Trade Reporting</li> </ul> | The following control messages will disseminate both U <u>and</u> u as the Market Center Originator <ul style="list-style-type: none"> <li>• Category C, Type O - Market Open</li> <li>• Category C, Type C - Market Closed</li> <li>• Category C, Type X - End of Trade Reporting</li> </ul> |

**Summary of BBDS Changes:**

| <b>Function</b>                        | <b>BBDS<br/>(Through May 30, 2014)</b>  | <b>BBDS<br/>(Beginning June 2, 2014)</b>  |
|--|---|---|
| EMC Halt/Resume                        | <ul style="list-style-type: none"><li>• Category C, Type A (Halt)</li><li>• Category C, Type B (Resume)</li><li>• Used for emergency market events affecting all securities</li></ul> | <ul style="list-style-type: none"><li>• Process eliminated on this feed</li><li>• Firms must process TDDS to receive the EMC data</li></ul>               |
| Use of Other OTC Equity Identifier (u) | <ul style="list-style-type: none"><li>• Market Center Originator Code - Used in Trading Action Messages</li></ul>   | <ul style="list-style-type: none"><li>• Will no longer be supported</li><li>• Firms must process TDDS to receive the Other OTC Equity halt data</li></ul> |