NYSE PILLAR DEPTH FEED - CLIENT SPECIFICATION

NYSE

NYSE American

NYSE National

NYSE Arca

NYSE Texas

Version	Date
1.6	October 23, 2025

PREFACE

DOCUMENT HISTORY

VERSION NO.	DATE	CHANGE DESCRIPTION
1.0	5/13/2024	Initial spec publication for NYSE Pillar Depth Feed
1.1	7/25/2024	Added Appendix C: Scenarios Updated section 1.3.2 Control Message Types and section 1.3 to account for new feed start time of 2:00am ET
1.2	11/15/2024	Replace Regulatory Imbalance language with Significant Imbalance language throughout document and imbalance message (msg type 105) structure. Remove significant imbalance indicator from imbalance message (msg type 105) and replace with reserved field Corrected length of update count field in Delta Message (msg type 115)
1.3	3/28/2025	Rebranded NYSE Chicago to NYSE Texas
1.4	5/17/2025	Updated Appendix A: Information on Auctions to reflect NYSE Texas auctions
1.5	8/20/2025	Added Market ID field to imbalance message (msg type 105)
1.6	10/23/2025	Removed Auction information sections and added references to the NYSE Group Pillar Equities Functional Differences document. Added information about upcoming change to do imbalance calculations at reference price to Imbalance Message and updated

VERSION NO.	DATE	CHANGE DESCRIPTION
		descriptions to refer to NYSE Group Pillar Equities Functional Differences document.

REFERENCE MATERIAL

The following lists the associated documents, which either should be read in conjunction with this document or which provide other relevant information for the user:

- ICE Global Network
- NYSE Symbology
- IP Addresses

CONTACT INFORMATION

Service Desk

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FURTHER INFORMATION

For additional information about the product, visit the NYSE Pillar Depth Product Page.

For updated capacity figures, visit the Market Data capacity page.

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1. NYSE Pillar Depth Feed

1.1 OVERVIEW

The NYSE Pillar Depth Feed is a frequency-based market data product that provides a consolidated view of the ten best bid and ten best offer price points across NYSE Group's combined limit order books for all securities traded on the NYSE Group equities markets (NYSE, NYSE American, NYSE Arca, NYSE Texas, and NYSE National). The NYSE Pillar Depth Feed also includes imbalance data from each of NYSE Group's listing venues as well as security status updates (e.g., session transitions and trading halts).

See the Multiple Markets Common Client Specification for details on Time Reference and Symbol Index Mapping messages, and Order ID and Price field formats.

1.2 CONTROL MESSAGE TYPES USED IN THE FEED

See the Multiple Markets Common Client Specification for details on all control messages.

MSG TYPE	DESCRIPTION	PUBLISHER CHANNELS	REQUEST CHANNEL	REFRESH CHANNELS
1	Sequence Number Reset	x		x
3	Symbol Index Mapping	x		x
10	Retransmission Request		client	
11	Request Response		server	
12	Heartbeat Response		client	
13	Symbol Index Mapping Request		client	
15	Refresh Request		client	
31	Message Unavailable		server	
32	Symbol Clear	x		
34	Security Status Message	x		x
35	Refresh Header Message			x

1.3 MESSAGE PUBLICATION TIMES

Scheduled trading session times on normal and early-close days for all NYSE markets can be found here.

1.3.1 NYSE Pillar Depth Feed Message Types and Hours

Hours are for guidelines use only (e.g. publication times for NYSE Tape A are not exactly at 4:00pm ET, rather when the stock is closed).

MSG TYPE	DESCRIPTION	HOURS
115	Delta Message	**Markets may be included in delta messages during the following hours:** **NYSE Arca** 4:00am – 8:00pm **NYSE American** 7:00am – 8:00pm **NYSE Texas** 7:00am – 8:00pm **NYSE National** 7:00am – 8:00pm **NYSE Tape A** ~9:30am – 4:00pm **NYSE Tape B & C** 7:00am – 4:00pm
105	Imbalance Message	**See Appendix A**

1.3.2 Control Message Types

The initial publication of messages occurs shortly after feed start time. For the exact timing on each market, refer to the Common Client Specification, section “Proprietary Data - Production Hours.”

2. Delta Message – Msg Type 115

The Delta Message is published each time there is a change to the aggregate limit-order book quantity across the ten best price points on the buy and/or sell side for NYSE Group. If no changes occurred for a given symbol since the last publication, no Delta Message is generated. If the volume field for a particular market ID at a particular price is updated to zero (0), the quantity should be removed as an active price point for that particular Market ID. For more information regarding how price points may be zeroed out in bulk, see the UpdateCount and Market ID fields.

Delta Messages that span multiple packets must be processed as one complete message. If a Delta message spans multiple packets and one of the packets is lost, the whole message should be considered lost.

FIELD NAME	OFFSET	SIZE (BYTES)	FORMAT	DESCRIPTION
Msg Size	0	2	Binary	Size of the message: Varied based on repeating/sub-repeating groups contained in the message
Msg Type	2	2	Binary	The type of message: 115– Delta Message
SourceTime	4	4	Binary	The time when this msg was generated in the order book, in secs since 1/1/1970 00:00:00 UTC
SourceTimeNS	8	4	Binary	The nanosecond offset from the Source Time
SymbolIndex	12	4	Binary	The ID of the symbol in the Symbol Index msg
SymbolSeqNum	16	4	Binary	The sequence number of this message in the set of all messages for this symbol
UpdateCount	20	1	Binary	Indicates the number of times* the following group fields will be repeated in the message: • Price • Side • Participants *If this field is zero (0), all price points should be considered zero for this symbol and no repeating group information will follow.
The fields below marked with ">" represent a specific price point and can repeat in a message				
>Price	0	4	Binary	The order price. Use with the Price Scale from the symbol-mapping index.
>Side	4	1	ASCII	The side of the book (Buy/Sell). Valid values: • 'B' – Buy • 'S' – Sell

FIELD NAME	OFFSET	SIZE (BYTES)	FORMAT	DESCRIPTION
>Participants	5	1	Binary	Indicates the number of times the following fields will be repeated for a given price/side grouping: • Market ID • Number of Orders • Volume This field will be set to 0 when a price level is zeroed out for all exchanges and sub-repeating group fields will not be provided
The fields below marked with ">>" represent exchange specific information at a price point and can repeat in a message				
>>Market ID	0	2	Binary	Value values: 1- NYSE 3- NYSE Arca 9- NYSE American 10- NYSE National 11- NYSE Texas
>>Number of Orders	2	2	Binary	Number of orders at a price point for the specified exchange
>>Volume	4	4	Binary	Total interest quantity in shares at a price point for the specified exchange

3. Imbalance Message – Msg Type 105

Imbalance messages are published once a second during auctions to update price and volume information. If there is no change to the calculated fields, no message will be generated. See Information on Auctions for details on the auction process in the NYSE, Arca and American markets.

FIELD NAME	OFFSET	SIZE	FORMAT	DESCRIPTION	NYSE	AMERICAN	ARCA	TEXAS
Msg Size	0	2	Binary	Size of the message: 75 bytes	Yes	Yes	Yes	Yes
Msg Type	2	2	Binary	This field identifies the type of message. 105 – Imbalance Message	Yes	Yes	Yes	Yes
SourceTime	4	4	Binary	The time when this msg was generated in the order book, in secs since 1/1/1970 00:00:00 UTC	Yes	Yes	Yes	Yes
SourceTimeNS	8	4	Binary	The nanosecond offset from the Source Time	Yes	Yes	Yes	Yes
SymbolIndex	12	4	Binary	The ID of the symbol in the Symbol Index msg	Yes	Yes	Yes	Yes
SymbolSeqNum	16	4	Binary	The sequence number of this message in the set of all messages for this symbol	Yes	Yes	Yes	Yes
ReferencePrice	20	4	Binary	The price at which imbalances are calculated* For more information, see item 48 and 49 in the NYSE Group Pillar Equities Functional Differences Document	Yes	Yes	Yes	Yes
PairedQty	24	4	Binary	Number of shares paired at the Reference Price*. For more information, see item 50 in the NYSE Group Pillar Equities Functional Differences Document	Yes	Yes	Yes	Yes

FIELD NAME	OFFSET	SIZE	FORMAT	DESCRIPTION	NYSE	AMERICAN	ARCA	TEXAS
TotalImbalanceQty	28	4	Binary	The total imbalance quantity at the Reference Price*.	Yes	Yes	Yes	Yes
MarketImbalanceQty	32	4	Binary	The total market order imbalance quantity at the Reference Price*.	No	Yes	Yes	Yes
AuctionTime	36	2	Binary	Projected Auction Time (hhmm)	Yes	Yes	Yes	Yes
AuctionType	38	1	ASCII	• 'O' – Early Opening Auction • 'M' – Core Opening Auction • 'H' – Reopening Auction (Halt resume) • 'C' – Closing Auction • 'P' – Extreme Closing Imbalance • 'R' – Significant Closing Imbalance	 M H C P R	O M H C	O M H C	O M H C
ImbalanceSide	39	1	ASCII	The side of the TotalImbalanceQty • 'B' – Buy side • 'S' – Sell side • ' ' - (space or 0x20) – No imbalance	B S ' '	B S ' '	B S ' '	B S ' '
ContinuousBook ClearingPrice	40	4	Binary	The price closest to the reference price where the imbalance is 0. For more information, see item 51 in the NYSE Group Pillar Equities Functional Differences Document	Yes	Yes	Yes	Yes

FIELD NAME	OFFSET	SIZE	FORMAT	DESCRIPTION	NYSE	AMERICAN	ARCA	TEXAS
AuctionInterest ClearingPrice	44	4	Binary	The price at which auction only interest would trade. For more information, see item 52 in the NYSE Group Pillar Equities Functional Differences Document	Yes	Yes	Yes	Yes
SSRFilingPrice	48	4	Binary	For NYSE non-Significant imbalances, if a Sell Short Restriction is in effect, the price at which Sell Short interest will be filed.	Yes	No	No	No
IndicativeMatchPrice	52	4	Binary	The best price at which the maximum volume of shares is executable in the applicable auction, subject to Auction Collars. For more information, see item 48 in the NYSE Group Pillar Equities Functional Differences Document	No	Yes	Yes	Yes
UpperCollar	56	4	Binary	Upper boundary for the Indicative Match Price. For more information, see item 10 in the NYSE Group Pillar Equities Functional Differences Document	No	Yes	Yes	Yes
LowerCollar	60	4	Binary	Lower boundary for the Indicative Match Price. For more information, see item 10 in the NYSE Group Pillar Equities Functional Differences Document	No	Yes	Yes	Yes

FIELD NAME	OFFSET	SIZE	FORMAT	DESCRIPTION	NYSE	AMERICAN	ARCA	TEXAS
AuctionStatus	64	1	Binary	Indicates whether the auction will run • 0 - Will run as always for Open and Close • 1 - Will run, interest exists inside or at the collars or is fully paired off • 2 – Will not run because there is an imbalance through the collars • 3 – Will not run, will transition to the Closing Auction instead	0 3	0 1 2 3	0 1 2 3	0 1 2 3
FreezeStatus	65	1	Binary	Indicates an Imbalance Freeze for the auction. For more information, see item 1 in the NYSE Group Pillar Equities Functional Differences Document. • 0 - Imbalance freeze not in effect • 1 - Imbalance freeze is in effect	0 1	0 1	0 1	0 1
NumExtensions	66	1	Binary	The number of times a halt period has been extended	No	Yes	Yes	Yes
Unpaired Qty	67	4	Binary	The number of unpaired shares priced at or better than the Reference Price.	Yes	No	No	No

FIELD NAME	OFFSET	SIZE	FORMAT	DESCRIPTION	NYSE	AMERICAN	ARCA	TEXAS
Unpaired Side	71	1	ASCII	The side of the Unpaired Qty • 'B' - buy side • 'S' - sell side • ' ' - (space or 0x20) - not applicable	B S ' '	' '	' '	' '
Reserved	72	1	ASCII	Reserved for future use				
Market ID	73	2	Binary	Valid values: 1- NYSE 3- NYSE Arca 9- NYSE American 10- NYSE National 11- NYSE Texas	1	9	3	11

*calculations at indicative match price will move to calculations at reference price on 11/10/25 for American, 11/13/25 for Arca, 11/20/25 for Texas

APPENDIX A: Product IDs

Refresh and Retransmission Request messages must specify a Product ID. The correct product ID for the NYSE Pillar Depth Feed:

EXCHANGE	PRODUCT ID	DESCRIPTION
NYSE Group	27	Depth/Imbalance Data

APPENDIX C: Scenarios

Below examples show only two markets for simplicity though same can be extended to 5 markets (NYSE, Arca, Texas, American, National). The input to Pillar Depth is NYSE AggLite for each of the 5 underlying equities markets.

Assumptions (applied on a per side basis):

- Pillar Depth feed is 1 second output feed
- UpdateCount = Number of price levels with updates
- Pillar Depth publishes only delta updates which occurred during the last second
- Maximum number of price levels is 10
- Minimum number of participants at any top 10 price level is 1
- Maximum number of participants at any top 10 price level is 5
- If numParticipants is 0 on a price level, it means the price level has been deleted from top 10
- Delta Message contains 0 or more active price levels followed by 0 or more deleted price levels (as appropriate)

- The max price levels in a Delta Message can be 40 (10 new buy, 10 new sell, 10 deleted buy, 10 deleted sell)
- The price values are shown in decimals just for illustration (they are unsigned 32 types)

A packet containing Delta Messages will have max. possible size = 1073 bytes.

The worst-case scenario is when all top 10 buy/sell levels are replaced by new top levels.

$$\boldsymbol{TotalMsgSize} = Message\ FixedPortion + Size\ of\ All\ price\ points$$

(Note: the UpdateCount field provides number of price points)

$$\boldsymbol{Size\ of\ each\ price\ point} = sizeof(price\ point\ Fixed\ Portion) + numParticipants * sizeof(Participant)$$

1.1 Scenario 1 - Following is the new state of the Book in the last second. Pillar Depth Delta Message will contain 2 price points with 2 participants each.

ARCA				
#Orders	Buy	Price	Sell	#Orders
		32.33	200	2
3	300	32.00		

NYSE				
#Orders	Buy	Price	Sell	#Orders
		32.33	220	2
3	320	32.00		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	61
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	2
PricePoint1		price	uint32_t	4	32.00
		side	char	1	B
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	3
		Volume	uint32_t	4	300
	participant2	mkt id	uint16_t	2	1

		numOrders	uint16_t	2	3
		Volume	uint32_t	4	320
PricePoint2		price	uint32_t	4	32.33
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	220

1.2 Scenario 2 - In Arca, 300 share execution @32. No change in NYSE.

ARCA				
#Orders	Buy	Price	Sell	#Orders
		32.33	200	2
~~3~~	~~300~~	~~32.00~~		

NYSE (current book state)				
#Orders	Buy	Price	Sell	#Orders
		32.33	220	2
3	320	32.00		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	31
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	1
PricePoint1		price	uint32_t	4	32.00
		side	char	1	B
		numParticipants	uint8_t	1	1
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	0
		Volume	uint32_t	4	0

1.3 Scenario 3 - In NYSE, 320 share execution @32. No change in ARCA. This will result in removing price point @32.

ARCA (current book state)				
#Orders	Buy	Price	Sell	#Orders
		32.33	200	2

NYSE (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.33	220	2
~~3~~	~~320~~	~~32.00~~		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	23
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	1
PricePoint1		price	uint32_t	4	32.00
		side	char	1	B
		numParticipants	uint8_t	1	0

1.4 Scenario 4 - A bunch of new orders added in ARCA at various price levels. A bunch of new orders added in NYSE at various price levels. This will result in adding new price levels.

ARCA (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.37	100	1
		32.36	200	2
		32.35	100	1
		32.34	200	2
		32.33	200	2
		32.32	100	1
		32.31	200	2
		32.30	100	1
2	200	31.99		
1	100	31.98		
3	300	31.97		

1	100	31.96		
2	200	31.95		

NYSE (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.37	200	2
		32.36	100	1
		32.35	200	2
		32.34	200	2
		32.33	220	2
		32.32	200	2
		32.31	100	1
		32.30	200	2
1	100	31.99		
2	200	31.98		
1	100	31.97		
3	300	31.96		
2	200	31.95		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	281
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	12
PricePoint1		price	uint32_t	4	31.99
		side	char	1	B
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
PricePoint2		price	uint32_t	4	31.98
		side	char	1	B
		numParticipants	uint8_t	1	2

	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint3		price	uint32_t	4	31.97
		side	char	1	B
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	3
		Volume	uint32_t	4	300
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
PricePoint4		price	uint32_t	4	31.96
		side	char	1	B
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	3
		Volume	uint32_t	4	300
PricePoint5		price	uint32_t	4	31.95
		side	char	1	B
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint6		price	uint32_t	4	32.30
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2

		Volume	uint32_t	4	200
PricePoint7		price	uint32_t	4	32.31
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
PricePoint8		price	uint32_t	4	32.32
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint9		price	uint32_t	4	32.34
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint10		price	uint32_t	4	32.35
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint11		price	uint32_t	4	32.36
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3

		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
PricePoint12		price	uint32_t	4	32.37
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant2	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200

1.5 Scenario 5 - ARCA added 3 sell side orders. No change in NYSE. The new price level 32.41 is at 11th position, so it will not be published.

ARCA (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.41	200	2
		32.39	100	1
		32.38	200	2
		32.37	100	1
		32.36	200	2
		32.35	100	1
		32.34	200	2
		32.33	200	2
		32.32	100	1
		32.31	200	2
		32.30	100	1
2	200	31.99		
1	100	31.98		
3	300	31.97		
1	100	31.96		
2	200	31.95		

NYSE (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.37	200	2

		32.36	100	1
		32.35	200	2
		32.34	200	2
		32.33	220	3
		32.32	200	2
		32.31	100	1
		32.30	200	2
1	100	31.99		
2	200	31.98		
1	100	31.97		
3	300	31.96		
2	200	31.95		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	45
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	2
PricePoint1		price	uint32_t	4	32.38
		side	char	1	S
		numParticipants	uint8_t	1	1
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint2		price	uint32_t	4	32.39
		side	char	1	S
		numParticipants	uint8_t	1	1
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100

1.6 Scenario 6 - Both ARCA and NYSE executed their corresponding shares @32.30. Price level 32.30 is removed. This event will be published. Price level 32.41 which was at 11th position before this event, moves up in top 10, so it will be published.

ARCA (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.41	200	2
		32.39	100	1
		32.38	200	2
		32.37	100	1
		32.36	200	2
		32.35	100	1
		32.34	200	2
		32.33	200	2
		32.32	100	1
		32.31	200	2
		~~32.30~~	~~100~~	~~1~~
2	200	31.99		
1	100	31.98		
3	300	31.97		
1	100	31.96		
2	200	31.95		

NYSE (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.37	200	2
		32.36	100	1
		32.35	200	2
		32.34	200	2
		32.33	220	3
		32.32	200	2
		32.31	100	1
		~~32.30~~	~~200~~	~~2~~
1	100	31.99		
2	200	31.98		
1	100	31.97		
3	300	31.96		
2	200	31.95		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	37

Fixed Portion Of Message		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	2
PricePoint1		price	uint32_t	4	23.41
		side	char	1	S
		numParticipants	uint8_t	1	1
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	2
		Volume	uint32_t	4	200
PricePoint2		price	uint32_t	4	32.30
		side	char	1	S
		numParticipants	uint8_t	1	0

1.7 Scenario 7 - Both ARCA and NYSE entered order sell @32.40. This order creates a new price level in top 10. Price level 32.41 which was at 10th position before this event, moves out of top 10, so it will be deleted.

ARCA (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.41	200	2
		32.40	100	1
		32.39	100	1
		32.38	200	2
		32.37	100	1
		32.36	200	2
		32.35	100	1
		32.34	200	2
		32.33	200	2
		32.32	100	1
		32.31	200	2
2	200	31.99		
1	100	31.98		
3	300	31.97		
1	100	31.96		
2	200	31.95		

NYSE (new book state)				
#Orders	Buy	Price	Sell	#Orders
		32.40	400	4

		32.37	200	2
		32.36	100	1
		32.35	200	2
		32.34	200	2
		32.33	220	3
		32.32	200	2
		32.31	100	1
1	100	31.99		
2	200	31.98		
1	100	31.97		
3	300	31.96		
2	200	31.95		

Delta Message will be as follows:

		Field	Type	Bytes	Sample Output
Packet Header		PktHeader		16	
Fixed Portion Of Message		MsgType	uint16_t	2	115
		MsgSize	uint16_t	2	45
		sourceTime	uint32_t	4	1234
		sourceTimeNS	uint32_t	4	5678
		symbolIndex	uint32_t	4	1
		updateCount	uint8_t	1	2
PricePoint1		price	uint32_t	4	32.40
		side	char	1	S
		numParticipants	uint8_t	1	2
	participant1	mkt id	uint16_t	2	3
		numOrders	uint16_t	2	1
		Volume	uint32_t	4	100
	participant1	mkt id	uint16_t	2	1
		numOrders	uint16_t	2	4
		Volume	uint32_t	4	400
PricePoint2		price	uint32_t	4	32.41
		side	char	1	S
		numParticipants	uint8_t	1	0