



Market Information System
FLEX Connection Specifications
Realtime Message (Full)

Ver.DS.17.3

Applicable from April 1, 2021.

Tokyo Stock Exchange

[Terms and Conditions of Use]

Before using this document, users are required to read and agree to the terms and conditions below.

1. All rights, including those to intellectual property concerning these connection specifications, belong to Tokyo Stock Exchange (hereinafter referred to as "TSE").
2. These connection specifications shall not be duplicated, modified or provided to a third party, in whole or part, without prior written consent from TSE.
3. These connection specifications shall be used only for the purpose of system development necessary to obtain distributed information.
4. TSE reserves the right to change the descriptions in these connection specifications due to system modifications. Costs related to such changes incurred by the user shall be borne by the user.
5. TSE shall not be liable for any losses or damages incurred directly or indirectly to the User arising from the use of these connection specifications or misunderstanding with regard to this translation.
6. User that connects to the market information system and uses FLEX service ("FLEX User") shall follow the specifications described in these connection specifications.
7. FLEX User shall not take any action that adversely affects the stable operation of the market information system, violates or is likely to violate the laws and regulations, or inconvenience or cause damage to other users. In such cases, TSE shall deem such actions attributable to the FLEX User, and shall reserve the right to restrict or suspend the connection between the FLEX User's system and the market information system. In such cases, TSE shall not be liable for any damages or losses caused by the restriction or suspension.
8. FLEX User, if applicable, shall enter into the necessary agreements with each exchange for receiving information from the exchange.
9. TSE shall reserve the right to provide the exchange(s) with each FLEX User's join status for multicast groups that contain information from the exchange(s).

Inquiries on these connection specifications: Tokyo Stock Exchange (Service Desk)

TEL : +81-50-3822-8882 MAIL : arrowhead@jpx.co.jp

FLEX Connection Specification (Full)		Revision History	
No.	Release date	Revision No.	Remarks
1	2019.11.05	Ver.DS.17.0	Newly created. There is no change from Ver.TS.16.3.
2	2020.02.28	Ver.DS.17.1	No change
3	2021.02.01	Ver.DS.17.2	Minor changes
4	2021.04.01	Ver.DS.17.3	No change
			Sheet No.
			1/1
IT development, Tokyo Stock Exchange			

FLEX Connection Specification (Full)				
Modification	Ver.DS.17.0	Document History		
No.	Subject	Description	Page	Type
1	Newly Created			
			Sheet No.	1/1
	IT Development, Tokyo Stock Exchange			

FLEX Connection Specification (Full)				
Modification	Ver.DS.17.1	Document History		
No.	Subject	Description	Page	Type
1	No change			
			Sheet No.	1/1
	IT Development, Tokyo Stock Exchange			

FLEX Connection Specification (Full)				
Modification	Ver.DS.17.2	Document History		
No.	Subject	Description	Page	Type
1	Issue Realtime Message	Modified the description in Medium Classification of Stock-related to refer to "Common Items".	From 2-3 to 2-4	MODIFY
			Sheet No.	1/1
IT Development, Tokyo Stock Exchange				

FLEX Connection Specification (Full)				
Modification	Ver.DS.17.3	Document History		
No.	Subject	Description	Page	Type
1	No change			
			Sheet No.	1/1
	IT Development, Tokyo Stock Exchange			

~ Table of contents ~

1. OUTLINE	1-1
1.1. Purpose.....	1-1
1.2. About FLEX Full	1-1
2. USER DATA SECTION	2-1
2.1. Definition of Tags.....	2-1
2.1.1. Basic Tag Format	2-1
2.1.2. Output Conditions for Tags	2-1
2.2. List of Tags Used for Different Message Types.....	2-2
2.2.1. Issue Realtime Message.....	2-2
2.2.2. Control Message.....	2-2
2.3. List of Issue Classification Codes/Applicable Tags	2-3
2.3.1. Issue Realtime Message – new	2-3
2.3.2. Issue Realtime Message – Refreshment.....	2-4
2.3.3. Control Message.....	2-5
2.4. Information Concerning Individual Tags	2-6
NO: Update No.	2-7
ST: Status Information.	2-9
1P: Current Price	2-12
VL: Trading Volume	2-14
VA: Turnover.....	2-16
QS: Ask Quote.....	2-18
QB: Bid Quote	2-21
SC: Sell Order Effective only during the Closing Auction	2-24
BC: Buy Order Effective only during the Closing Auction	2-27
LC: Control	2-30
3. APPENDIX	3-1

3.1. Sending Divided Messages.....	3-1
3.2. Tag Information and State of Order Book.....	3-3
3.2.1. From Order Input to Execution.....	3-6
3.2.2. Special Quote	3-10
3.2.3. Trading Halt when Special Quote is Displayed	3-13
3.2.4. Opening the Market	3-14
3.2.5. Matching Sign when Special Quote is Displayed.....	3-16
3.2.6. Sequential Trade Quote	3-18
3.2.7. Closing the Market (Execution at the Closing).....	3-28
3.2.8. Closing the Market (No Execution at the Closing)	3-30
3.3. Setting Example for Flag Indicating the Middle of the Book and Buying-Up/Selling-Down.....	3-31
3.3.1. Quote before Opening	3-31
3.3.2. During ZARABA (Selling-Down).....	3-35
3.3.3. During ZARABA (Buying-Up).....	3-39
3.4. Setting method of unit flag	3-43
3.5. Sending Status information	3-46
3.5.1. Timing of Status Information	3-46
3.5.2. Sending Status Information for Trading Halt / Release of Trading Halt.....	3-46

1. OUTLINE

1.1. Purpose

This document contains information on the variety and formats of messages concerning stock/CB for TSE Market Information System FLEX (Full, Full (WB)).

1.2. About FLEX Full

FLEX Full is the service to send market information about all orders on the book, and each updated price information is sent.

The message specifications and contents of FLEX Full (WB) and FLEX Full are the same.

2. USER DATA SECTION

The user data section is edited by combining different tags.

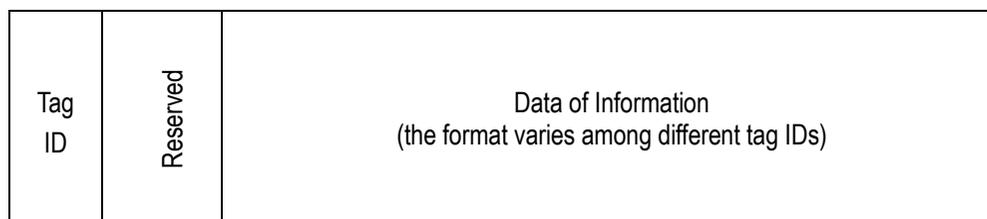
2.1. Definition of Tags

Tags are used as a means of outputting information. Different tags are used for different information classifications; the same tag will never be used in different messages. When information to be newly output occurs, a tag may be newly set for such information. Therefore, each user must be in such specification that allows the operator to determine specific tags to be used and to receive and dispose of such tags if the operator considers it appropriate.

2.1.1. Basic Tag Format

Each tag has its own format. For the formats of different tags, refer to “2.4 Information Concerning Individual Tags”.

The following diagram shows the basic format of tags.



- * Tag ID are numbered using 1 to 9 and A to Z.
- * “Reserved” is Space (2bytes), but Reserved field is not added to NO tag.

2.1.2. Output Conditions for Tags

For output conditions for each tag, refer to 2.4 Information Concerning Individual Tags.

2.2. List of Tags Used for Different Message Types

2.2.1. Issue Realtime Message

Item No.	Tag ID	Name	Description
1	NO	Update No	Update No
2	ST	Status Information	Status Information
3	1P	Current Price	Current Price Information
4	VL	Trading Volume	Information concerning cumulative Trading Volume for the relevant day.
5	VA	Turnover	Information concerning cumulative Turnover for the relevant day.
6	QS	Ask Quote	Ask Quotes Information
7	QB	Bid Quote	Bid Quotes Information
8	SC	Sell Order Effective only during the Closing Auction	Sell Orders Effective only during the Closing Auction Information
9	BC	Buy Order Effective only during the Closing Auction	Buy Orders Effective only during the Closing Auction Information

2.2.2. Control Message

Item No.	Tag ID	Name	Description
10	LC	Control	Various types of Control Information.

2.3. List of Issue Classification Codes/Applicable Tags

2.3.1. Issue Realtime Message – new

Only the changed tag is set and output.

Tags in the same message are set in the order of "NO" through "BC" as described below.

Message Type	Issue Classification Code		Tag ID	NO	ST	1P	VL	VA	QS	QB	SC	BC
	Large Classification	Medium Classification	Exchange Code	Update No.	Status Information	Current Prices	Trading Volume	Turnover	Ask Quotes	Bid Quotes	Sell Orders Effective Only during the Closing Auction	Buy Orders Effective Only during the Closing Auction
Issue Realtime Message new (100)	Stock-Related (01)	Refer to (6) Issue Classification Code of '5.3.3. Service Header' in Common Items.	-	*	*	*	*	*	*	*	*	*
	CB-Related (02)	CB (11) SW(13) *1*2 Exchangeable Bond(14) *1	1 (TSE)	*	*	*	*	*	*	*		
			3 (NSE)	*	*	*	*	*	*	*		

*1: Only TSE handles this classification.

*2: It is not used for time being.

2.3.2. Issue Realtime Message – Refreshment

All the applicable tags are set and sent.

Tags in the same message are set in the order of "NO" through "BC" as described below.

Message Type	Issue Classification Code		Tag ID	NO	ST	1P	VL	VA	QS	QB	SC	BC
	Large Classification	Medium Classification	Exchange Code	Update No.	Status Information	Current Prices	Trading Volume	Turnover	Ask Quotes	Bid Quotes	Sell Orders Effective Only during the Closing Auction	Buy Orders Effective Only during the Closing Auction
Issue Realtime Message new (103)	Stock-Related (01)	Refer to (6) Issue Classification Code of '5.3.3. Service Header' in Common Items.	.	*	*	*	*	*	*	*	*	*
	CB-Related (02)	CB (11) SW(13) *1*2 Exchangeable Bond(14) *1	1 (TSE)	*	*	*	*	*	*	*		
			3 (NSE)	*	*	*	*	*	*	*		

*1: Only TSE handles this classification.

*2: It is not used for time being.

2.3.3. Control Message

Message Type	Issue Classification Code	Tag ID Name	LC
		Exchange Code	Control
Control Message (900,905)	—	—	*
Control Message (908,910)	—	—	*

2.4. Information Concerning Individual Tags

The following pages describe the output conditions and the formats of individual tags.

Item No.	Name	Reference	Paragraph
1	Price	Common Items 5.3.5. General Rules for Data Sets	(1) Price, Parity, VWAP, Index
2	Trading Volume / Turnover		(2) Trading Volume, Turnover
3	Trading Volume		(3) Quote Quantity, Order quantity
4	Quote Quantity		
5	Order Quantity		
6	Number of Orders		(5) Time
7	Time		
8	Sequence to send Refreshment information	Common Items 6.4. Sequence of Backup Information /All-Day Information/Refreshment Information /Issue Basic Information (Base Price, Issue Information and Multicast Group Number Information)	Same as on the left.
9	Applicable Issues	This document 2.3. List of Issue Classification Codes/Applicable Tags	Same as on the left.
10	Flag Indicating the Middle of the Book	This document 3.3. Setting Method of Flag Indicating the Middle of the Book and Buying-Up/Selling-Down	Same as on the left.

NO: Update No.

1. Format (25 bytes)

Tag ID	Update No.	Packet Serial No.	Total Number of Packet Serial No.	Divided Message Serial No.
(2)	(8)	(5)	(5)	(5)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content</p> <p>In this tag, the update number for each issue is set.</p> <p>This tag appears as part of realtime data.</p> <p>When over 20 tags are generated at the same time, several divided messages are sent. At that time, "Packet Serial No." and "Total Number of Packet Serial No." are set in each divided messages for clarifying the number of divided messages.</p> <p>In Addition, when more than 500 prices are changed at the same time, "Divided Message Serial No." increases by 1 for every 500 prices, and "Packet serial No." and "Total number of packet serial No." are set for each set of 500 prices.</p> <p>2. Output Condition</p> <p>(1) When Issue Realtime Message is output.</p> <p>(2) When Refreshment Information is output</p>	<p>Other Issue Messages or Control Messages may be sent between several divided messages and result the divided messages having non-consecutive message serial numbers.</p> <p>About an example of the "Update No.", refer to "3.1 Sending Divided Messages" on this Volume.</p>

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition
1	Tag ID	0	2	C	Indicates update number tag.	"NO" is set.
2	Update No.	2	8	C	Indicates the update number. Larger update number indicates newer data	This number is increases by one every time new information is sent. When outputting refreshes, the same update number as the one that was previously transmitted is utilized. When a message is divided, the same update number is set in each message.
3	Packet Serial No.	10	5	C	When information generated at the same time is output as multiple divided messages because it cannot be set as one message, this tag indicates the sequence of the message.	The sequence of this message in the total number of messages. When message isn't divided, "1" is set in this field.
4	Total Number of Packet Serial No.	15	5	C	When information generated at the same time is output as multiple divided messages because it cannot be set as one message, this tag indicates the total number of messages.	Total number of all messages is set. When message isn't divided, "1" is set. When the number of changed price at the same time is over 500, Divided Message Serial No. is set at every 500 prices.
5	Divided Message Serial No.	20	5	C	In the case of dividing a message by 500 prices, the number indicates the sequence of the message.	When the number of changed prices at the same time is 500 or less, "0" is set. When the number of changed prices at the same time is more than 500, initially "1" is set. Then it increases by 1, and the last message is indicated by "E". When refreshment information is output, '0' is set in this field.

ST: Status Information.

1. Format (26 bytes)

Tag ID	Reserved	Change Flag	Status Information (5)			Time	Reserved
			Issue Status	State Flag	Short Selling Regulation Flag		
(2)	(2)	(1)	(2)	(2)	(1)	(12)	(4)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, status information (Issue Status, State Flag and Short Selling Regulation Flag) is set. This tag appears as part of realtime data. When ST tag is sent, Status of issue status, State flag or Short Selling Regulation Flag at that moment is set.</p> <p>2. Output Condition (1) When beginning order reception (1) When beginning a session (except during Trading Halt or Trading Suspension) (2) When ending a session (3) When Issue Realtime Message is output *1 (4) When Refreshment Information is output</p> <p>*1 In the case of divided messages, this tag only appears in the first message.</p>	<p>Refer to “3.5 Sending status information” for the example of status information.</p>

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition
1	Tag ID	0	2	C	Indicates status information tag.	"ST" is set.
2	Reserved	2	2	C	This item is reserved.	
3	Change Flag	4	1	C	For issue status, state flag or short selling regulation flag, indicates whether this has changed or not.	1: Changed. Space: Not changed. "1" is set when Issue Status, State Flag or Short Selling Regulation Flag is changed. Space is set when this tag is sent as Refreshment Information.
4	Status Information	5	5		Indicates status information	
	Issue Status	(5)	(2)	C	Indicates issue status	00: Out of Session*1 10: Accepting Order Input 20: during Trading Session 30: not Accepting Order Input 40: Close of Session *1 It is not used for time being.
	State Flag	(7)	(2)	C	Indicates the state of the trade	A0: Trading Halt(Accepting Order Input) A1: Release of Trading Halt B0: Itayose B1: Release of Itayose C0: Trading Suspension C1: Release of Trading Suspension D0: Trading Halt(Not Accepting Order Input) Space: Other than the above B0: Indicate Itayose for Trading Suspension after removal of Special Quote B1: Indicate exit from Itayose when Trading Suspension is removed after removal of Special Quote
	Short Selling Regulation Flag	(9)	(1)	C	Indicates whether short selling regulation applies or not.	0: Short selling regulation does not apply. 1: Short selling regulation is applied.

5	Time	10	12	C	Indicates the changed time of status change information (Issue Status, State Flag or Short Selling Regulation Flag).	It is specified as "HHMMSSttttt".
6	Reserved	22	4	C	This item is reserved.	

1P: Current Price

1. Format (36 bytes)

Tag ID	Reserved	Current Price (32)								
		Price (16)			Time	Change Flag	STQ Reference Point Flag	Reserved	Closing Price Input	
		Unit Flag	Price	Sign						
(2)	(2)	(1)	(14)	(1)	(12)	(1)	(1)	(1)	(1)	

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, current prices information is set. This tag appears as part of realtime data.</p> <p>2. Output Condition (1) Upon new occurrence of trade price information including Same Price Executions. (2) When ZARABA close (including close on Trading Halt or Trading Suspension) (3) When Refreshment Information is output</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition	
1	Tag ID	0	2	C	Indicates current prices tag.	"1P" is set.	
2	Reserved	2	2	C	This item is reserved.		
3	Current Price	4	32		Indicates the current price.		
	Price	Unit Flag	(4)	(1)	C	Indicates unit flag.	
		Price	(5)	(14)	C	Indicates current price.	When there is No Current Price, space is set.
		Sign	(19)	(1)	C	Indicates sign.	"+" or space is set.
	Time	(20)	(12)	C	Indicates trading time of current price.	It is specified as "HHMMSSttttt". If there are no Current Prices, space is set.	
	Change Flag	(32)	(1)	C	Indicates whether this has changed or not.	1: Changed (Going Up) / Execution Price is higher than last one. 2: Changed (Going Down) / Execution Price is lower than last one. 3: Changed (Same) / Execution Price is same as last one. 4: Changed (other than above) / Execution with no last price or ZARABA Close. Space: Other than the above. Space is set when this tag is sent as Refreshment..	
	STQ Reference Point Flag	(33)	(1)	C	Indicates the reference execution for Sequential Trade Quote	1: When the reference execution of Sequential Trade Quote is set by this trade. Space: Other than the above	
	Reserved	(34)	(1)	C	This item is reserved.		
Closing Price Input Flag	(35)	(1)	C	Indicates whether a closing price was reached.	1: When the trade is not established at closing (ZARABA Close). 2: When the trade is established at closing (Close with the Closing Price). Space: Other than the above.		

VL: Trading Volume

1. Format (33 bytes)

Tag ID	Reserved	Trading Volume (29)				
		Reserved	Trading Volume/ Turnover Unit Flag	Trading Volume	Time	Reserve
(2)	(2)	(1)	(1)	(14)	(12)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, by-issue trading volume information is set. This tag appears as part of realtime data.</p> <p>2. Output Condition (1) Upon new occurrence of trade price information including Same Price Executions. (2) When Refreshment Information is output.</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition
1	Tag ID	0	2	C	Indicates the trading volume tag.	"VL" is set.
2	Reserved	2	2	C	This item is reserved.	
3	Trading Volume	4	29		Indicates the trading volume.	
	Reserved	(4)	(1)	C	This item is reserved.	
	Trading Volume/ Turnover Unit Flag	(5)	(1)	C	Indicates the trading volume/ Turnover unit flag.	
	Trading volume	(6)	(14)	C	Indicates the trading volume.	This item will show the cumulative trading volume for the day.
	Time	(20)	(12)	C	Indicates the time at which the trading volume was changed.	It is specified as "HHMMSSttttt".
	Reserved	(32)	(1)	C	This item is reserved.	

VA: Turnover

1. Format (33 bytes)

Tag ID	Reserved	Turnover (29)				
		Reserved	Trading Volume/ Turnover Unit Flag	Turnover	Time	Reserve
(2)	(2)	(1)	(1)	(14)	(12)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, by-issue Turnover information is set. This tag appears as part of realtime data.</p> <p>2. Output Condition (1) Upon new occurrence of trade price information including Same Price Executions. (2) When Refreshment Information is output.</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition
1	Tag ID	0	2	C	Indicates turnover tag.	"VA" is set.
2	Reserved	2	2	C	This item is reserved.	
3	Turnover in yen value	4	29		Indicates the turnover.	
	Reserved	(4)	(1)	C	This item is reserved.	
	Trading Volume/ Turnover Unit Flag	(5)	(1)	C	Indicates the trading volume/ Turnover unit flag.	
	Turnover Value	(6)	(14)	C	Indicates the turnover.	This item will show the cumulative turnover for the day.
	Time	(20)	(12)	C	Indicates the time at which the turnover was changed.	It is specified as "HHMMSSttttt".
	Reserved	(32)	(1)	C	This item is reserved.	

QS: Ask Quote

1. Format (68 bytes)

Tag ID	Reserved	Ask Quote (64)													
		Change Flag	Price (16)			Time	Quote Flag	Matching Sign	Quote Quantity(16)			Number of Orders(16)			Flag Indicating the Middle of the Book
			Unit Flag	Price	Sign				Trading Volume/ Turnover Unit Flag	Quantity	Sign	Trading Volume/ Turnover Unit Flag	Number	Sign	
(2)	(2)	(1)	(1)	(14)	(1)	(12)	(1)	(1)	(1)	(14)	(1)	(1)	(14)	(1)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, ask quote information is set. This tag appears as part of realtime data.</p> <p>2. Output Condition (1) Upon new occurrence or change of any of ask quote information *1 (2) Upon occurrence, renewal and removal of Special Ask Quote, Continuous Ask Execution Quote (3) When Refreshment Information is output</p> <p>*1 In case that Special Quote or Sequential Trade Quote is displayed at closing auction for morning session, TSE sends the Quote information for the next session, with the Special Quote or Sequential Trade Quote removed, at around 12:00 (TSE,NSE) or 12:10 (FSE,SSE).</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition	
1	Tag ID	0	2	C	Indicates ask quote tag.	"QS" is set.	
2	Reserved	2	2	C	This item is reserved.		
3	Ask Quote	4	64		Indicates ask quote.		
	Change Flag	(4)	(1)	C	Indicates whether this has changed or not.	1: Any one of Price, Time, Quote Flag, Matching Sign, Quote Quantity, Number of Orders or Flag Indicating the Middle of the Book is changed Space: No change When Refreshment Information is sent, space is set.	
	Price	Unit Flag	(5)	(1)	C	Indicates unit flag.	
		Price	(6)	(14)	C	Indicates quote price.	In the case of Market Order, space is set.
		Sign	(20)	(1)	C	Indicates sign of quote price.	"+" or space is set.
	Time	(21)	(12)	C	Indicates time at which the quote occurs.	It is specified as "HHMMSSttttt". While Special Quote or Sequential Trade Quote is displaying, time of occurrence or renewal of that special quote or Sequential Trade Quote is set even if Quote Quantity or Number of Orders concerning the relevant price is changed.	
	Quote Flag	(33)	(1)	C	Indicates type of the quote.	1 : General Quote or Quote before Opening 2 : General Quote(Buying-Up or Selling-Down)*1 3 : Special Quote 4 : Sequential Trade Quote Space: When there are no quotes or all quotes are cancelled *1 It is set in the remaining ask quotes during Selling-Down in Sequential Trade and also set in the highest priority ask quote during Buying-Up in Sequential Trade.	
Matching Sign	(34)	(1)	C	Indicates matching sign.	0: No matching price 1: When matching price is within the price interval for Special Quote renewal. 2: When matching price is beyond the price interval for Special Quote renewal. Normally "0" is set. If a Special Bid Quote or Sequential Trade Bid Quote is displayed and this quote price is at the matching price, either "1" or "2" is set.		

	Quote Quantity	Trading Volume/ Turnover Unit Flag	(35)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Quantity	(36)	(14)	C	Indicates quantity for this quote.	When Quote Quantity does not exist, space is set. When the quote is removed, space is set.
		Sign	(50)	(1)	C	Indicates sign of quote quantity.	"+" or space is set.
	Number of Orders	Trading volume/ Turnover unit flag	(51)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Number	(52)	(14)	C	Indicates number of orders for quote.	When Number of Order does not exist, space is set. When the quote is removed, space is set.
		Sign	(66)	(1)	C	Indicates sign of number of orders.	"+" or space is set.
	Flag Indicating the Middle of the Book	(67)	(1)	C	Indicates that price is in the middle of the book.	<p>[During ITAYOSE] 1: In case of setting the price in the Middle of the Book. 0: Other than above. (In the case of Market Order, "0" is always set.)</p> <p>[During ZARABA] 1: In case that the price is the highest priority ask quote. 0: Other than above.</p> <p>For Special Quote or Sequential Trade Quote, "1" is set for that quote price.</p> <p>When displaying or renewing a Special Bid Quote or Continuous Bid Execution Quote, "1" is set for that price.</p>	

QB: Bid Quote

1. Format (68 bytes)

Tag ID	Reserved	Bid quote (64)													
		Change Flag	Price (16)			Time	Quote Flag	Matching Sign	Quote Quantity(16)			Number of Orders(16)			Flag Indicating the Middle of the Book
			Unit Flag	Price	Sign				Trading Volume/ Turnover Unit Flag	Quantity	Sign	Trading Volume/ Turnover Unit Flag	Number	Sign	
(2)	(2)	(1)	(1)	(14)	(1)	(12)	(1)	(1)	(1)	(14)	(1)	(1)	(14)	(1)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, bid quote information is set. This tag appears as part of realtime data..</p> <p>2. Output Condition (1) Upon new occurrence or change of any of bid quote information *1 (2) Upon occurrence, renewal and removal of Special Bid Quote, Continuous Bid Execution Quote (3) When Refreshment Information is output</p> <p>*1 In case that Special Quote or Sequential Trade Quote is displayed at closing auction for morning session, TSE sends the Quote information for the next session, with the Special Quote or Sequential Trade Quote removed, at around 12:00 (TSE,NSE) or 12:10 (FSE,SSE).</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition	
1	Tag ID	0	2	C	Indicates bid quote tag.	"QB" is set.	
2	Reserved	2	2	C	This item is reserved.		
3	Bid quote	4	64		Indicates bid quote.		
	Price	Change flag	(4)	(1)	C	Indicates whether this has changed or not.	1: Any one of Price, Time, Quote Flag, Matching Sign, Quote Quantity, Number of Orders or Flag Indicating the Middle of the Book is changed Space: No change When Refreshment Information is sent, space is set.
		Unit flag	(5)	(1)	C	Indicates unit flag.	
		Price	(6)	(14)	C	Indicates quote price.	In the case of Market Order, space is set.
	Sign	(20)	(1)	C	Indicates sign of quote price.	"+" or space is set.	
	Time	(21)	(12)	C	Indicates time at which the quote occurs.	It is specified as "HHMMSSttttt". While Special Quote or Sequential Trade Quote is displayed, time of occurrence or renewal of that special quote or Sequential Trade Quote is set even if Quote Quantity or Number of Orders concerning the relevant price is changed.	
	Quote flag	(33)	(1)	C	Indicates type of the quote.	1 : General Quote or Quote Before Opening 2 : General Quote(Buying-Up or Selling-Down)*1 3 : Special Quote 4 : Sequential Trade Quote Space: When there are no quotes or all quotes are cancelled *1 It is set in the remaining bid quotes during Buying-Up in Sequential Trade and also set in the highest priority bid quote during Selling-Down in Sequential Trade Quote	
	Matching sign	(34)	(1)	C	Indicates matching sign.	0: No matching price 1: When matching price is within the price interval for Special Quote renewal. 2: When matching price is beyond the price interval for Special Quote renewal. Normally "0" is set. If a Special Ask Quote or Sequential Trade Ask Quote is displayed and this quote price is at the matching price, either "1" or "2" is set.	

	Quote quantity	Trading volume/ Turnover unit flag	(35)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Quantity	(36)	(14)	C	Indicates quantity for this quote.	When Quote Quantity does not exist, space is set. When the quote is removed, space is set.
		Sign	(50)	(1)	C	Indicates sign of quote quantity.	"+" or space is set.
	Number of Orders	Trading volume/ Turnover unit flag	(51)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Number	(52)	(14)	C	Indicates number of orders for quote.	When Number of Order does not exist, space is set. When the quote is removed, space is set.
		Sign	(66)	(1)	C	Indicates sign of number of orders.	"+" or space is set.
	Flag indicating the middle of the book	(67)	(1)	C	Indicates that price is in the middle of the book.	[During ITAYOSE] 1: In case of setting the price in the Middle of the Book. 0: Other than above. (In the case of Market Order, "0" is always set.) [During ZARABA] 1: In case that the price is the highest priority bid quote. 0: Other than above. For Special Quote or Sequential Trade Quote, "1" is set for that quote price. When displaying or renewing a Special Ask Quote or Continuous Ask Execution Quote, "1" is set for that price.	

SC: Sell Order Effective only during the Closing Auction

1. Format (66 bytes)

Tag ID	Reserved	Sell Order Effective Only during the Closing Auction (62)											
		Change Flag	Price (16)			Time	Reserved	Quote Quantity(16)			Number of Order(16)		
			Unit Flag	Price	Sign			Trading Volume/ Turnover Unit Flag	Quantity	Sign	Trading Volume/ Turnover Unit Flag	Number	Sign
(2)	(2)	(1)	(1)	(14)	(1)	(12)	(1)	(1)	(14)	(1)	(1)	(14)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, Sell Order Effective only during the Closing Auction Information is set. This tag appears as part of realtime data..</p> <p>2. Output Condition (1) Upon new occurrence or change of Sell Orders Effective only during the Closing Auction information (2) When Refreshment Information is output</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition	
1	Tag ID	0	2	C	Indicates the sell orders effective only during the closing auction tag.	"SC" is set.	
2	Reserved	2	2	C	This item is reserved.		
3	Sell Order Effective only during the Closing Auction	4	62		Indicates the sell orders effective only during the closing auction.		
	Change Flag	(4)	(1)	C	Indicates whether this has changed or not.	1: Any one of Price, Time, Order Quantity or Number of Order is changed Space: Not changed In case of Refreshment, a space is set.	
	Price	Unit Flag	(5)	(1)	C	Indicates unit flag.	
		Price	(6)	(14)	C	Market Orders Effective only during the Closing Auction, includes limit orders that become Market Orders at the Closing Auction.	Limit Orders Effective only during the Closing Auction: Order Price is set. Market Order Effective only during the Closing Auction: Space is set.
		Sign	(20)	(1)	C	Indicates sign of quote price.	"+" or space is set.
	Time	(21)	(12)	C	Indicates order input time.	It is specified as "HHMMSSttttt".	
	Reserved	(33)	(1)	C	This item is reserved.		
	Order Quantity	Trading Volume/ Turnover Unit Flag	(34)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Quantity	(35)	(14)	C	Indicates order quantity. Quantity of Market Orders Effective only during the Closing Auction, includes that of limit orders that become Market Orders at the Closing Auction.	When the quote is removed, space is set.
		Sign	(49)	(1)	C	Indicates sign of order quantity.	"+" or space is set.
	Number of Order	Trading Volume/ Turnover Unit Flag	(50)	(1)	C	Indicates Trading volume/ Turnover unit flag.	

			Number	(51)	(14)	C	Indicates number of orders. Number of Market Orders Effective only during the Closing Auction, includes that of limit orders that become Market Orders at the Closing Auction.	
			Sign	(65)	(1)	C	Indicates sign of number of orders.	“+” or space is set.

BC: Buy Order Effective only during the Closing Auction

1. Format (66 bytes)

Tag ID	Reserved	Buy Order Effective only during the Closing Auction (62)											
		Change Flag	Price (16)			Time	Reserved	Quote Quantity(16)			Number of Order(16)		
			Unit Flag	Price	Sign			Trading Volume/ Turnover Unit Flag	Quantity	Sign	Trading Volume/ Turnover Unit Flag	Number	Sign
(2)	(2)	(1)	(1)	(14)	(1)	(12)	(1)	(1)	(14)	(1)	(1)	(14)	(1)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, Buy Order Effective only during the Closing Auction Information is set. This tag appears as part of realtime data..</p> <p>2. Output Condition (1) Upon new occurrence or change of any of Buy Order Effective only during the Closing Auction Information (2) When Refreshment Information is output</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition	
1	Tag ID	0	2	C	Indicates the buy orders effective only during the closing auction tag.	"BC" is set.	
2	Reserved	2	2	C	This item is reserved.		
3	Buy Order Effective only during the Closing Auction	4	62		Indicates the buy orders effective only during the closing auction.		
	Change Flag	(4)	(1)	C	Indicates whether this has changed or not.	1: Any one of Price, Time, Order Quantity or Number of Order is changed Space: Not changed In case of Refreshment, a space is set.	
	Price	Unit Flag	(5)	(1)	C	Indicates unit flag.	
		Price	(6)	(14)	C	Market Orders Effective only during the Closing Auction, includes limit orders that become Market Orders at the Closing Auction.	Limit Order Effective only during the Closing Auction: Order Price is set. Market Order Effective only during the Closing Auction: Space is set. *1
		Sign	(20)	(1)	C	Indicates sign of quote price.	"+" or space is set.
	Time	(21)	(12)	C	Indicates order input time.	It is specified as "HHMMSSttttt".	
	Reserved	(33)	(1)	C	This item is reserved.		
	Order Quantity	Trading Volume/ Turnover Unit Flag	(34)	(1)	C	Indicates Trading volume/ Turnover unit flag.	
		Quantity	(35)	(14)	C	Indicates order quantity. Quantity of Market Orders Effective only during the Closing Auction includes that of limit orders that become Market Orders at the Closing Auction.	When the quote is removed, space is set.
		Sign	(49)	(1)	C	Indicates sign of order quantity.	"+" or space is set.
	Number of Order	Trading Volume/ Turnover Unit Flag	(50)	(1)	C	Indicates Trading volume/ Turnover unit flag.	

			Number	(51)	(14)	C	Indicates number of orders. Number of Market Orders Effective only during the Closing Auction, includes that of limit orders that become Market Orders at the Closing Auction.	
			Sign	(65)	(1)	C	Indicates sign of number of orders.	“+” or space is set.

LC: Control

1. Format (15 bytes)

Tag ID	Reserved	Test Mode Flag	Start/End Flag	time
(2)	(2)	(1)	(1)	(9)

2. Content and Output Condition

Content and Output Condition	Remarks
<p>1. Content In this tag, the Test Mode Flag and the Start/End Flag that are used in a Control Message are set. This tag is edited into a Control Message (Communication Control, Refreshment Information Control and Health Check Control) for output.</p> <p>2. Output Condition</p> <p>(1) Communication Control:</p> <ul style="list-style-type: none"> a. In the case of start of communication, this message is output at the specified time before opening of morning session. b. In the case of end of communication, this message is output at the specified time after closing of afternoon session. <p>* For multicast group for multicast group number information, Control message for end of transmission is output after outputting end of transmission for other exchange’s multicast group.</p> <p>(2) Refreshment Information Control:</p>	<p>In cases where high traffic data over the throttle rate of a certain multicast group is generated, there is possibility that Health Check Control Message will not be transmitted in 60-second intervals.</p> <p>If user wants to monitor for circuit malfunction, TSE recommends using not only Health Check Control Messages but also other real-time issue messages.</p>

Content and Output Condition	Remarks
<p>a. In the case of start, before Refreshment Information transmission. b. In the case of end, after Refreshment Information transmission.</p> <p>(3) Health Check Control: Sent in 1-minute intervals during the period in which the abovementioned control message (Communication Control) is sent (from start to end of communications). Even during periods when there is no information being sent through the circuit, this message will be sent to allow users to identify circuit malfunction.</p>	

3. Detailed Format

Item No.	Name	Location	Byte Count	Format	Description	Setting Condition
1	Tag ID	0	2	C	Indicates the control tag.	"LC" is set.
2	Reserved	2	2	C	This item is reserved.	
3	Test Mode Flag	4	1	C	Indicates the flag for identifying the distinction between Real and Test Operation.	1: Real Operation 2: Test Operation
4	Start/End Flag	5	1	C	Indicates the flag for identifying the distinction between Start and End.	(1) In the case of Control Message (Communication control, Refreshment Information Control): 1: Start 2: End (2) In the case of Control Message (Health Check Control): space
5	Time	6	9	C	Indicates the time.	In the case of Control Message (Health Check Control): Time at which this message is sent Other than the above: space

3. APPENDIX

3.1. Sending Divided Messages

When information that occurs at the same time cannot be set in one message or more than 500 buy and sell prices are generated separately, information is divided and set into several messages and transmitted. Divided messages are transmitted as below.

- Message format for sending divided messages from Market Information System to users remains unchanged, "Service Header" + "User Data Section".
- Information updated at the same time will have the same update number.

User refers to "Packet Serial No.", "Total Number of Packet Serial No." and "Divided Message Serial No." in NO tag to identify whether a message is divided or not. Fig.3.1-a below shows an example of sending 1200 changed prices at the same time.

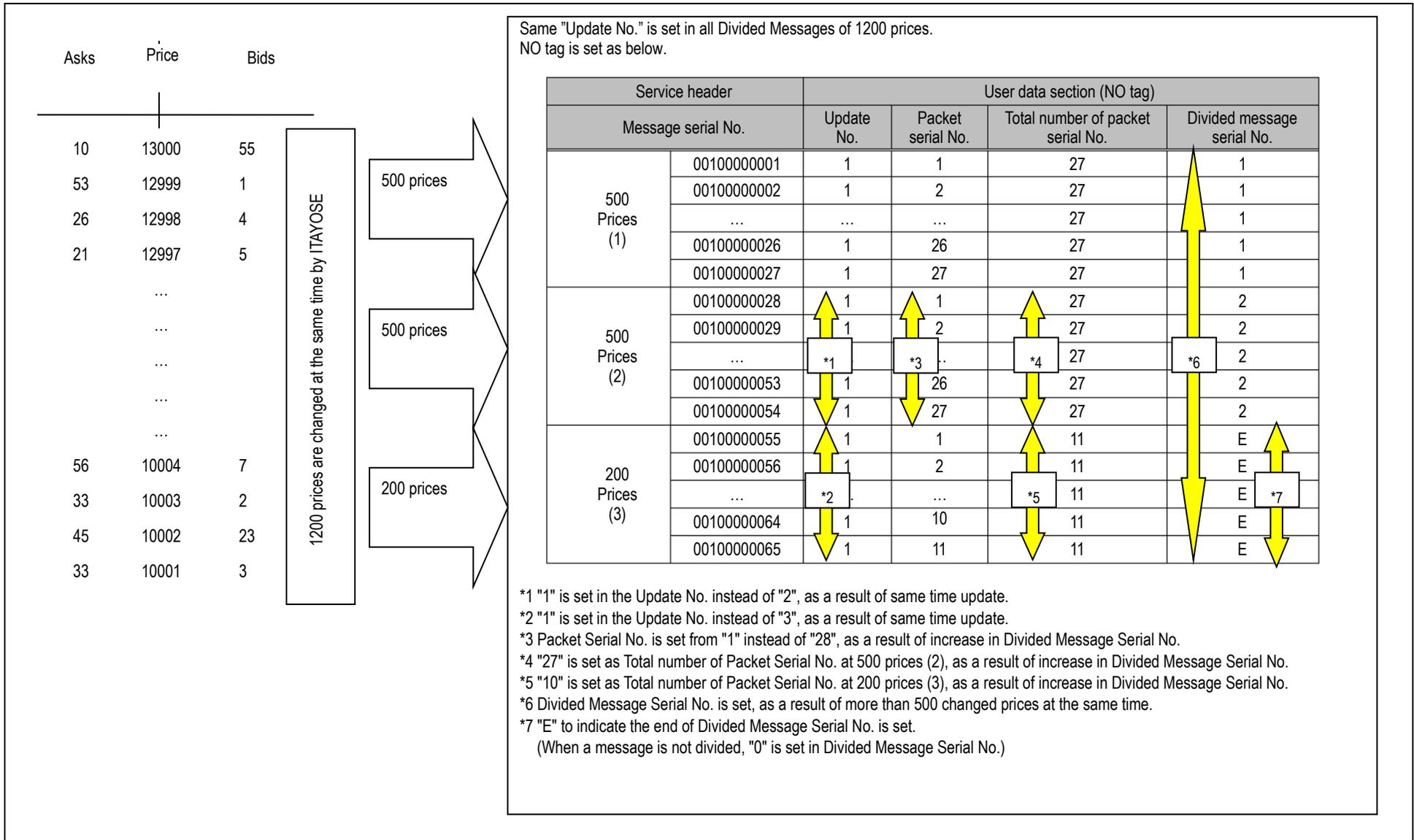
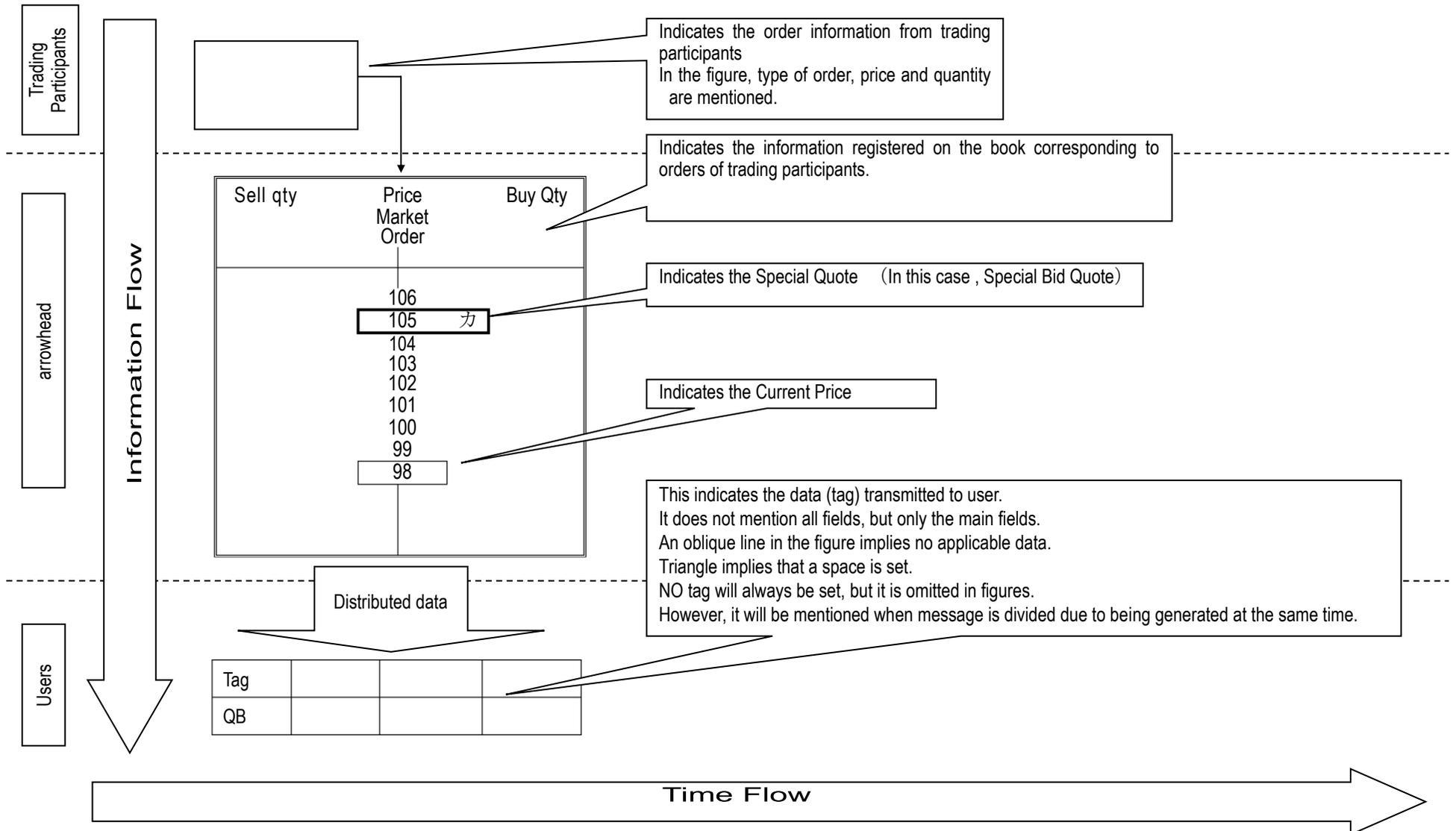


fig.3.1-a Example of Sending Divided Messages

3.2. Tag Information and State of Order Book

Orders from trading participants are registered on the book. Registered information is transmitted to user with tags. Information from Market information system is transmitted to user each time an event occurs. The figure below shows the image of transmission.



Unit of message transmission that is distributed to user

Distribution to user is done in each time an event occurs, but when multiple events occur at the same time, they're edited as one message and distributed. As instances, they're shown as below in the figure.

① In case of distributing as one message, it is described as below

Tag	Price	Trading Volume	Turnover	Quote Qty	State Flag
ST					
1P					
VL					
VA					
QS					

② In case of distributing as multiple messages, it is described as below.

Tag	Price	Quote Qty	State Flag
ST			
1P			
VL			
VA			

ST			
1P			
VL			
VA			

③ In case of distributing divided messages, it is described as below.

Tag	Packet serial No	Total Number of Packet Serial No	Price	Quantity	State Flag
NO					
ST					
1P					
VL					
VA					

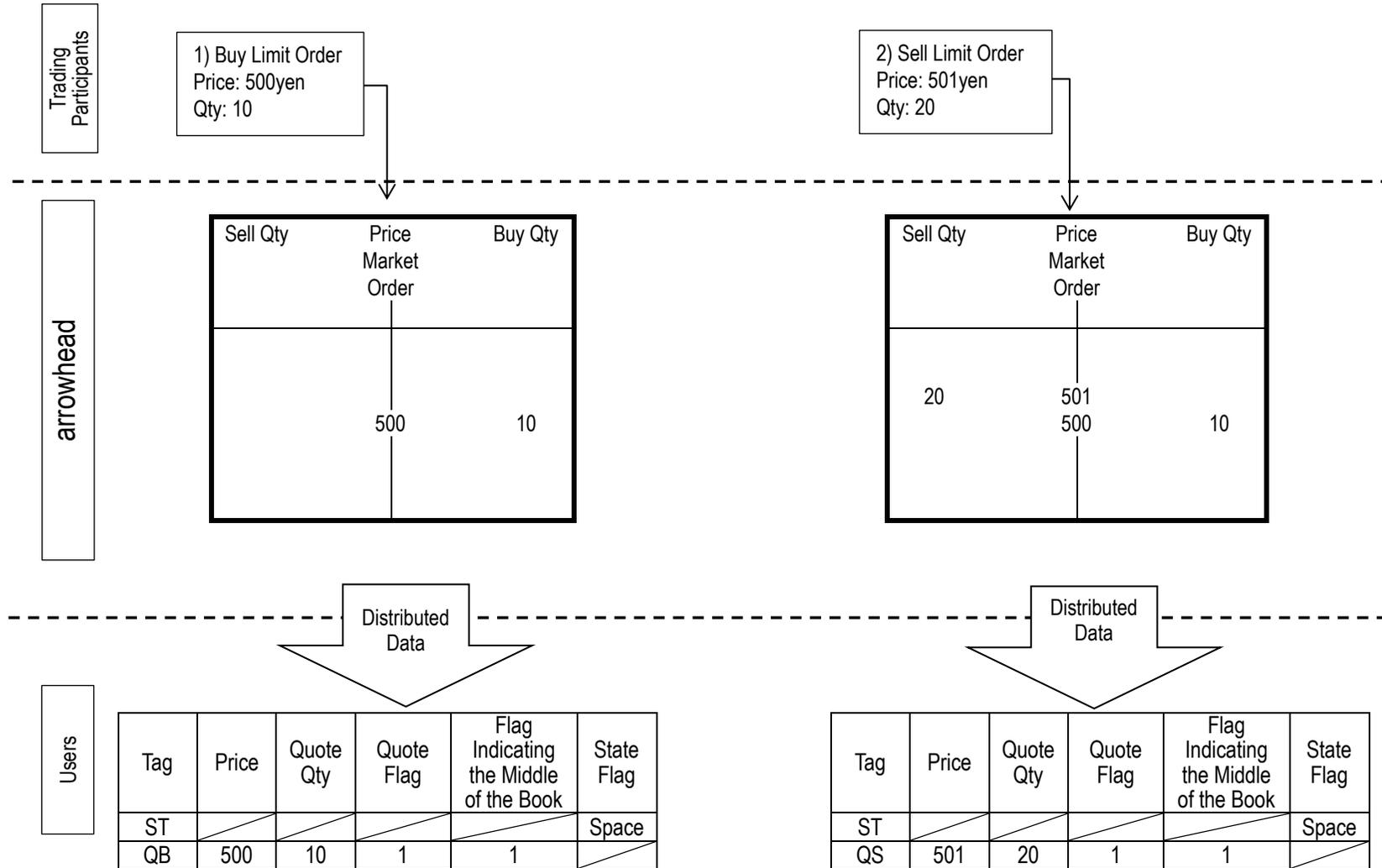
NO					
QB					

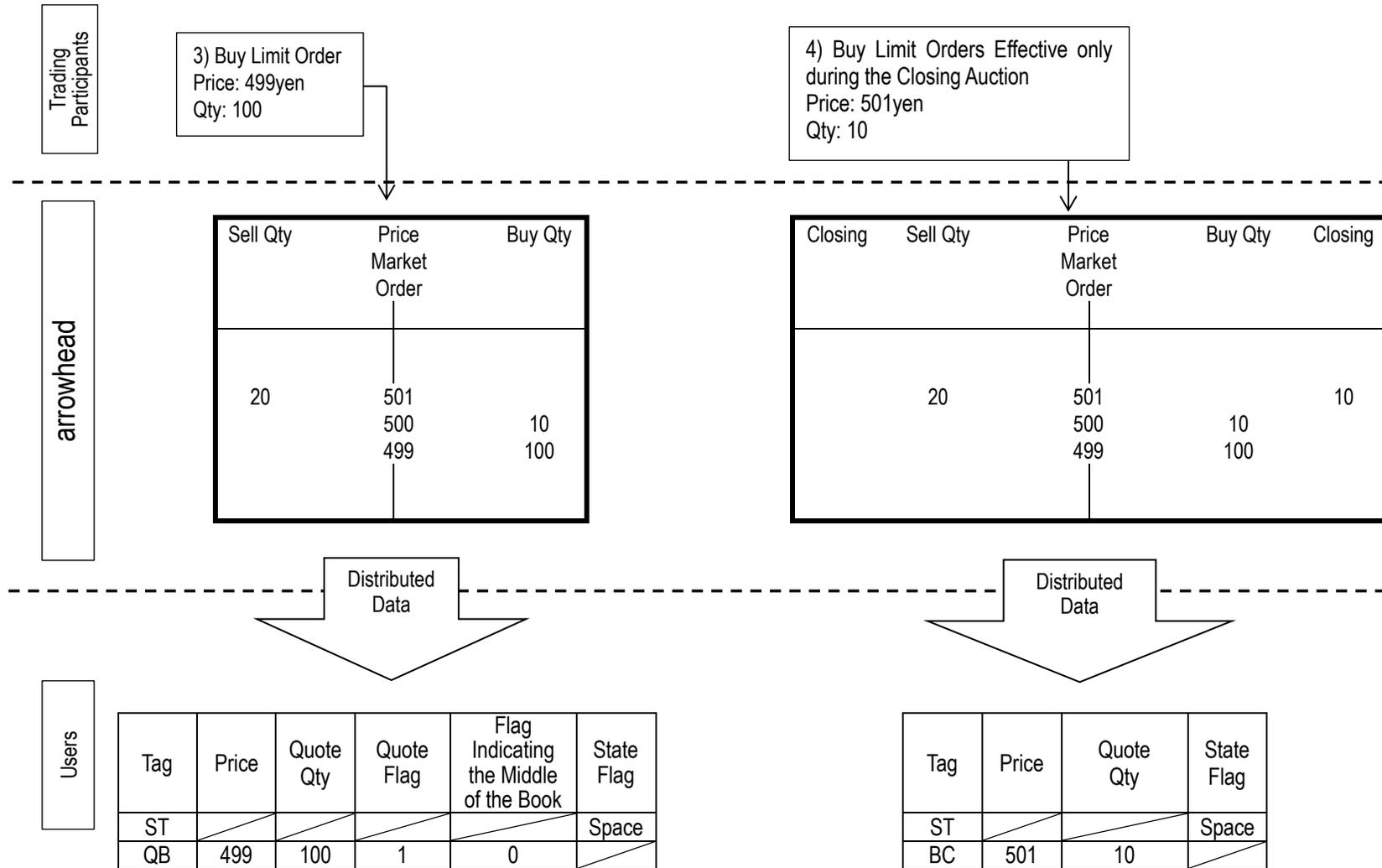
The order in message is the same as the order described in the table for distributed data.

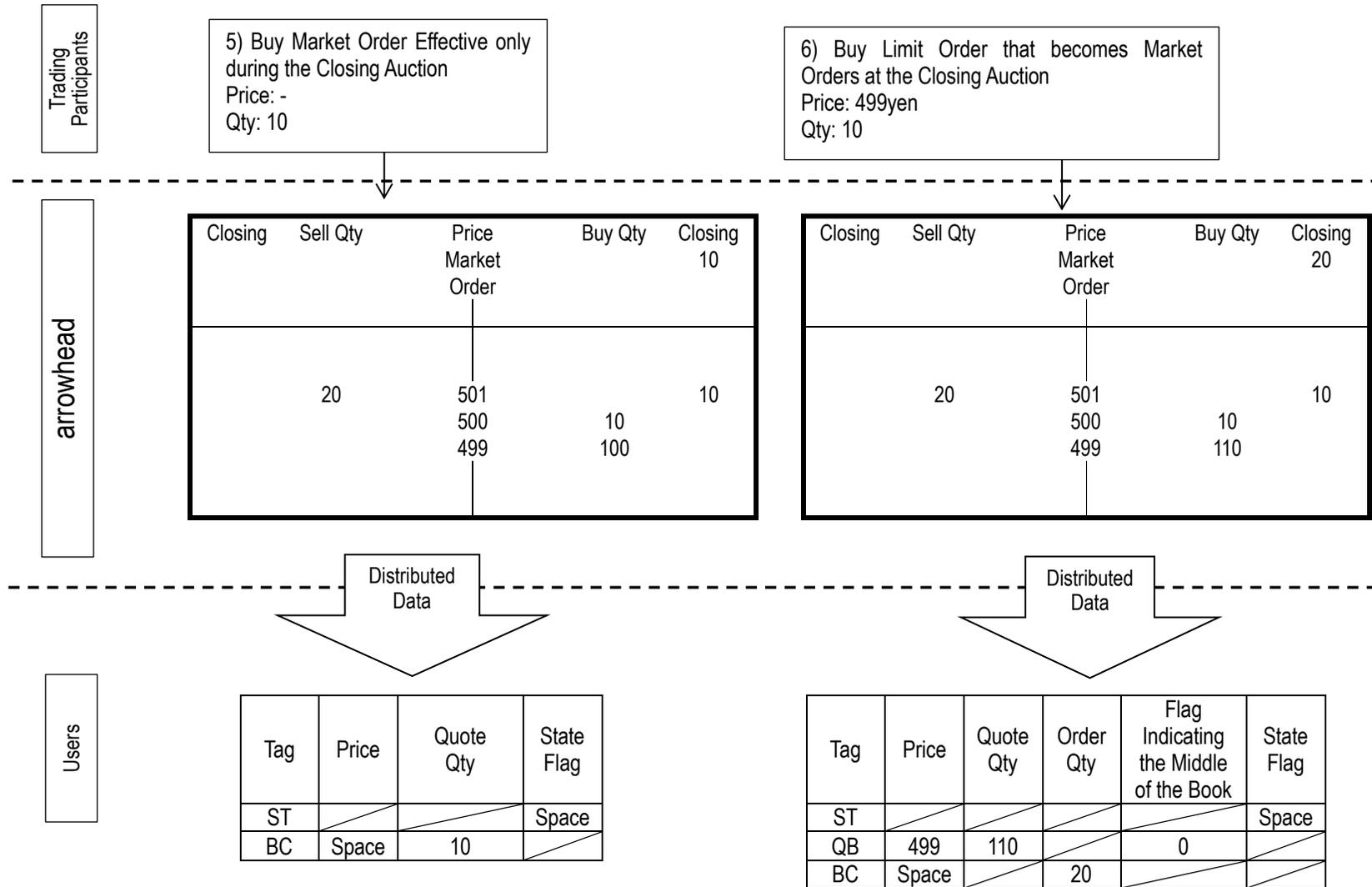
If multiple information are generated within each tag, information about bid and ask are distributed in the following order of price priority. Market order for which price field is not set is considered as the price with the highest priority.

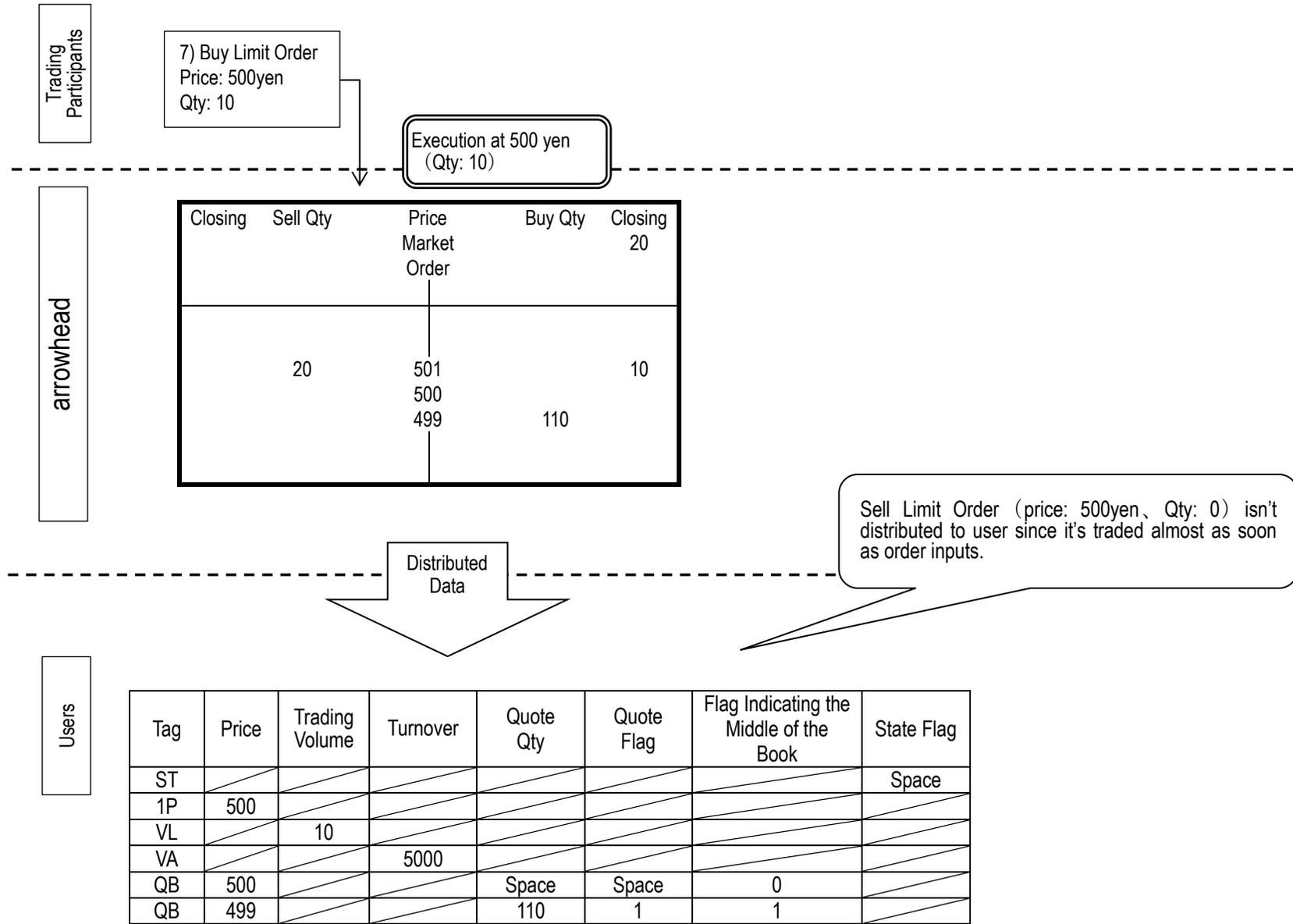
Order	Quantity (Ask)	Price Market Order	Quantity (Bid)	Order
7		105		1
6		104		2
5		103		3
4		102		4
3		101		5
2		100		6
1		99		7

3.2.1. From Order Input to Execution



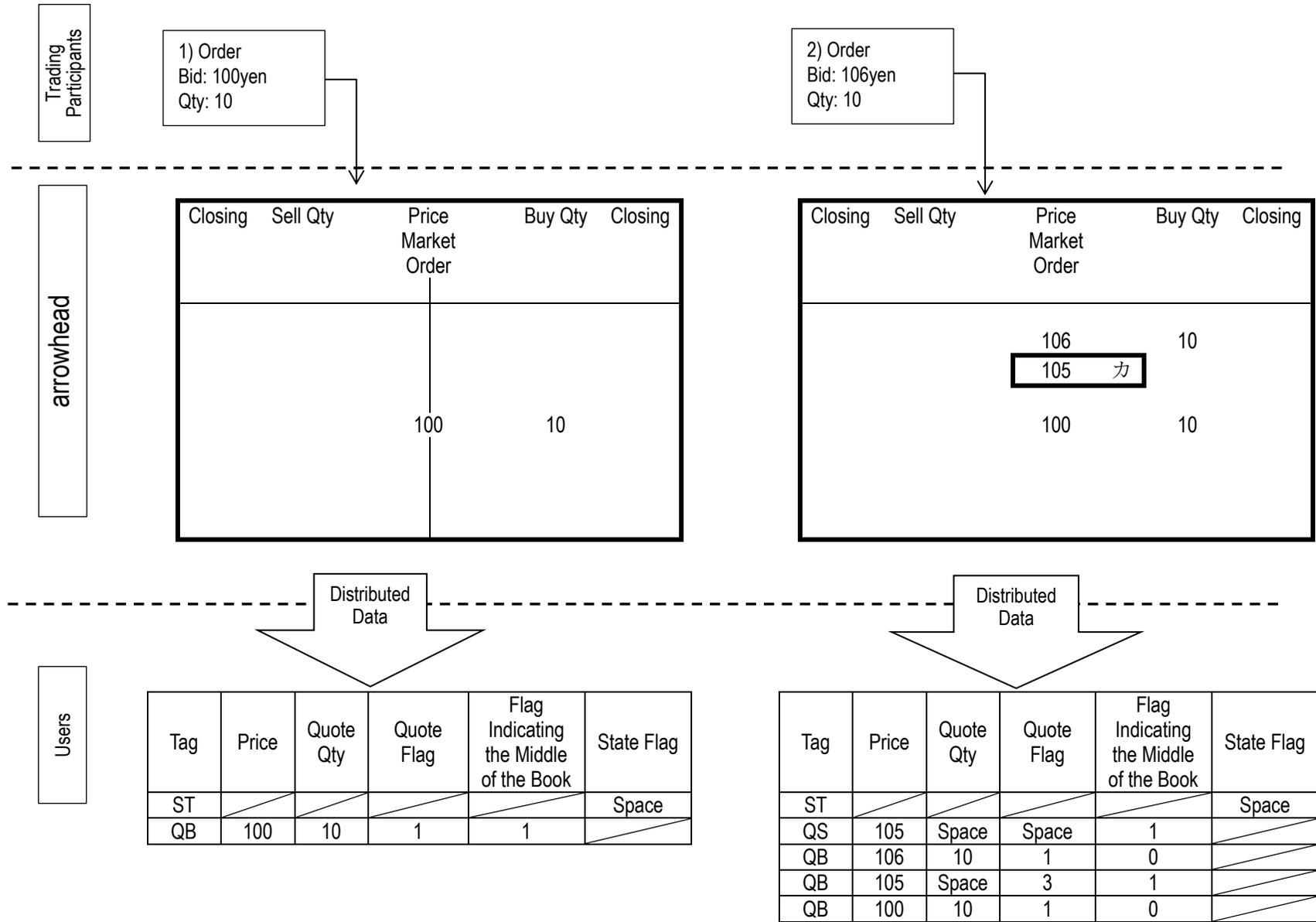


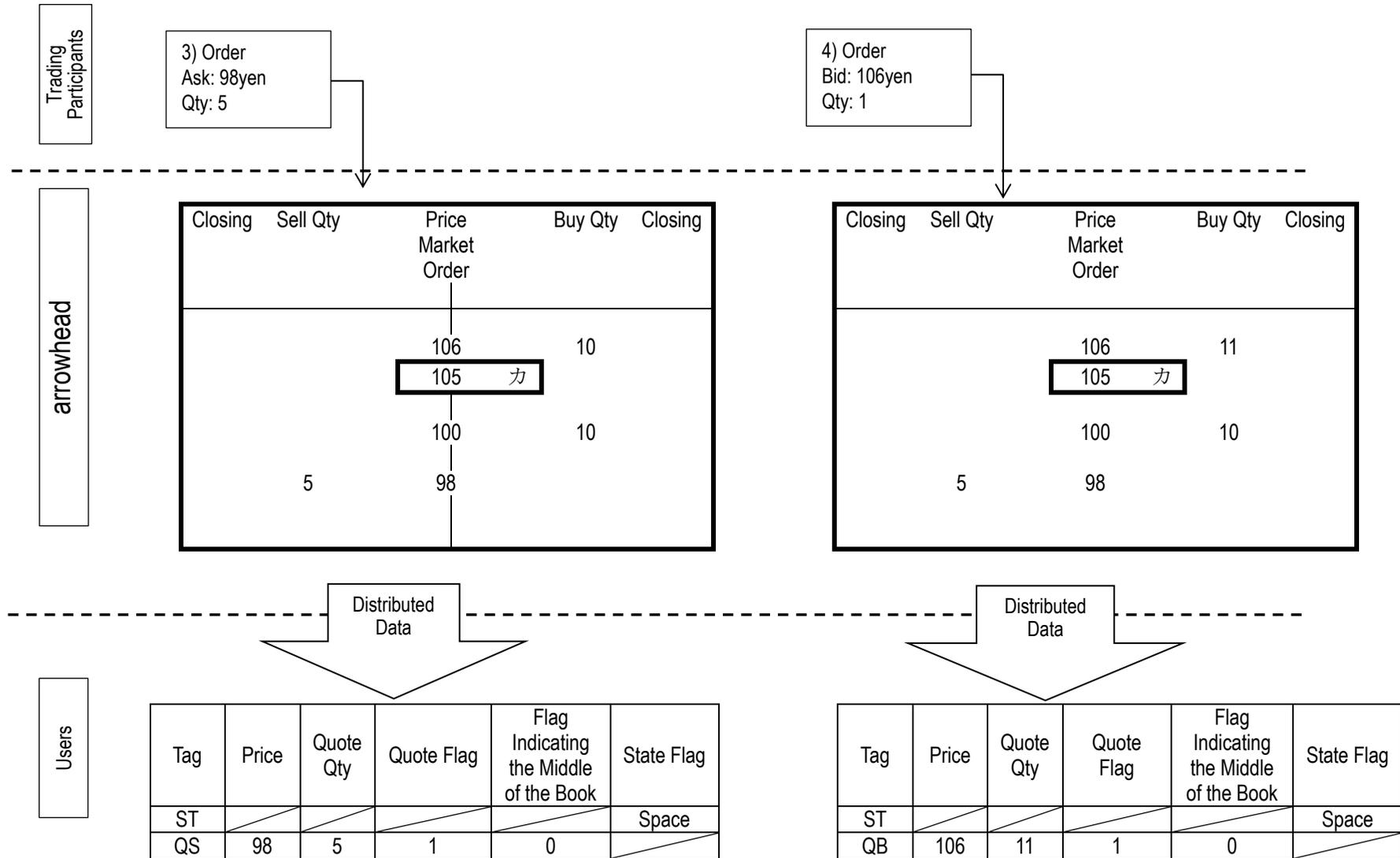




3.2.2. Special Quote

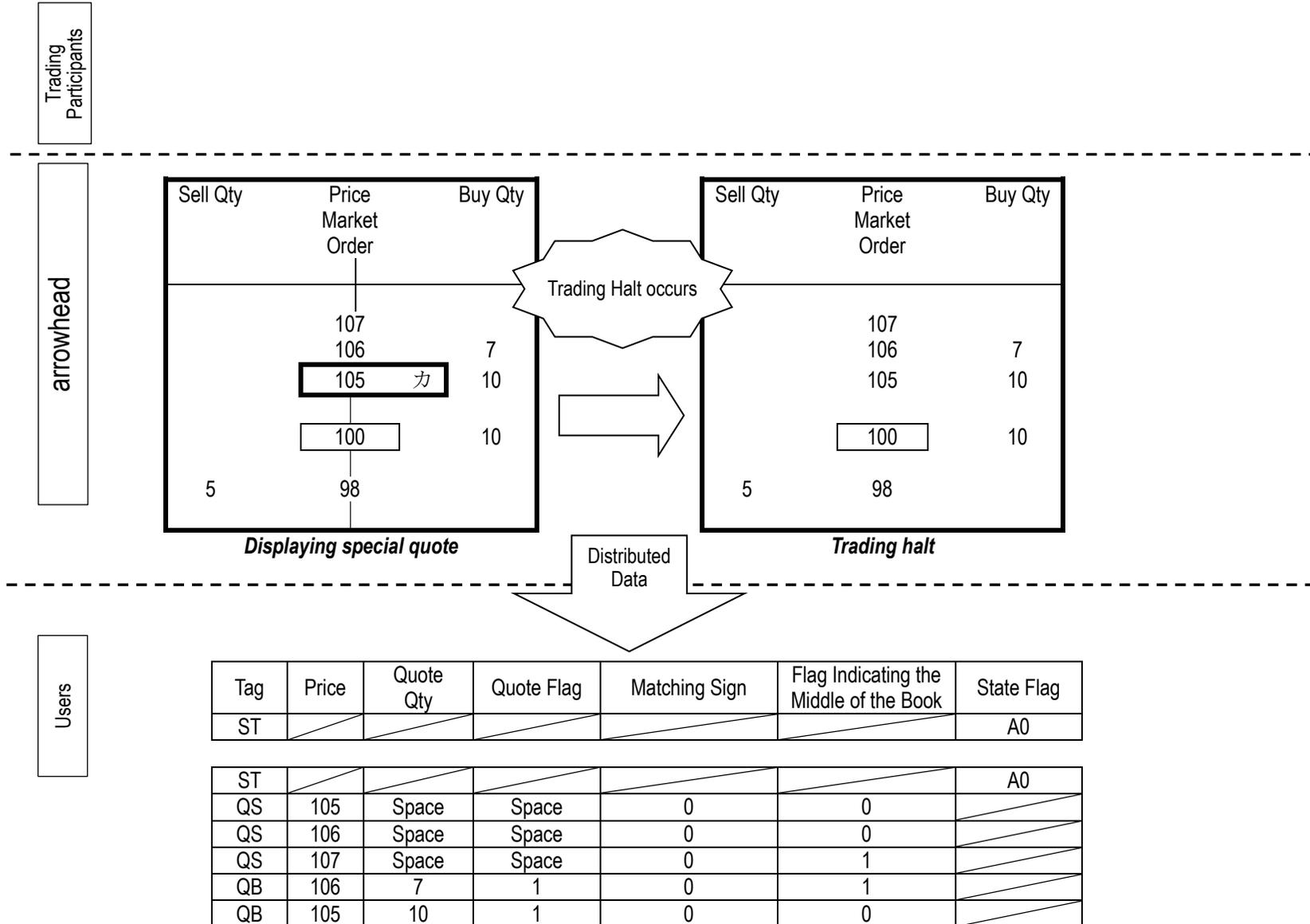
Quote flag (3: Special Quote) is set when Special Quote is displayed. Quote which has priority over Special Quote isn't added to Special Quote Price unlike FLEX Standard, but it is displayed as quantity of each price. The figure below shows the image of the book when Special Quote is displayed.





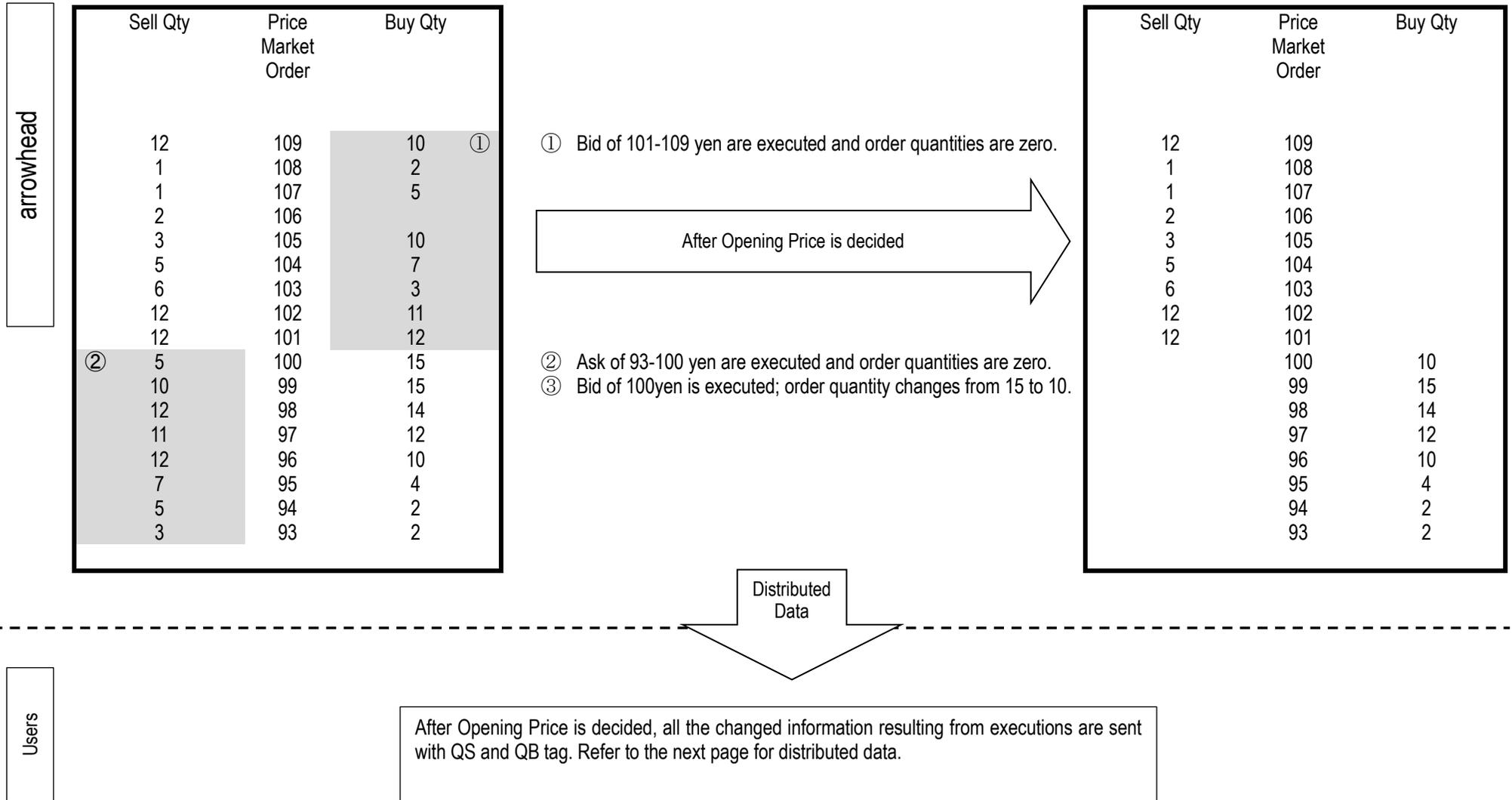
3.2.3. Trading Halt when Special Quote is Displayed

When a Trading Halt occurs while a Special Quote is displayed, that quote is removed. In case of a Trading Halt (Order Accepting), after the Special Quote is removed, quantity changes due to new orders are sent as per normal for each change. The figure below shows the image from displaying Special Quote to Trading Halt.



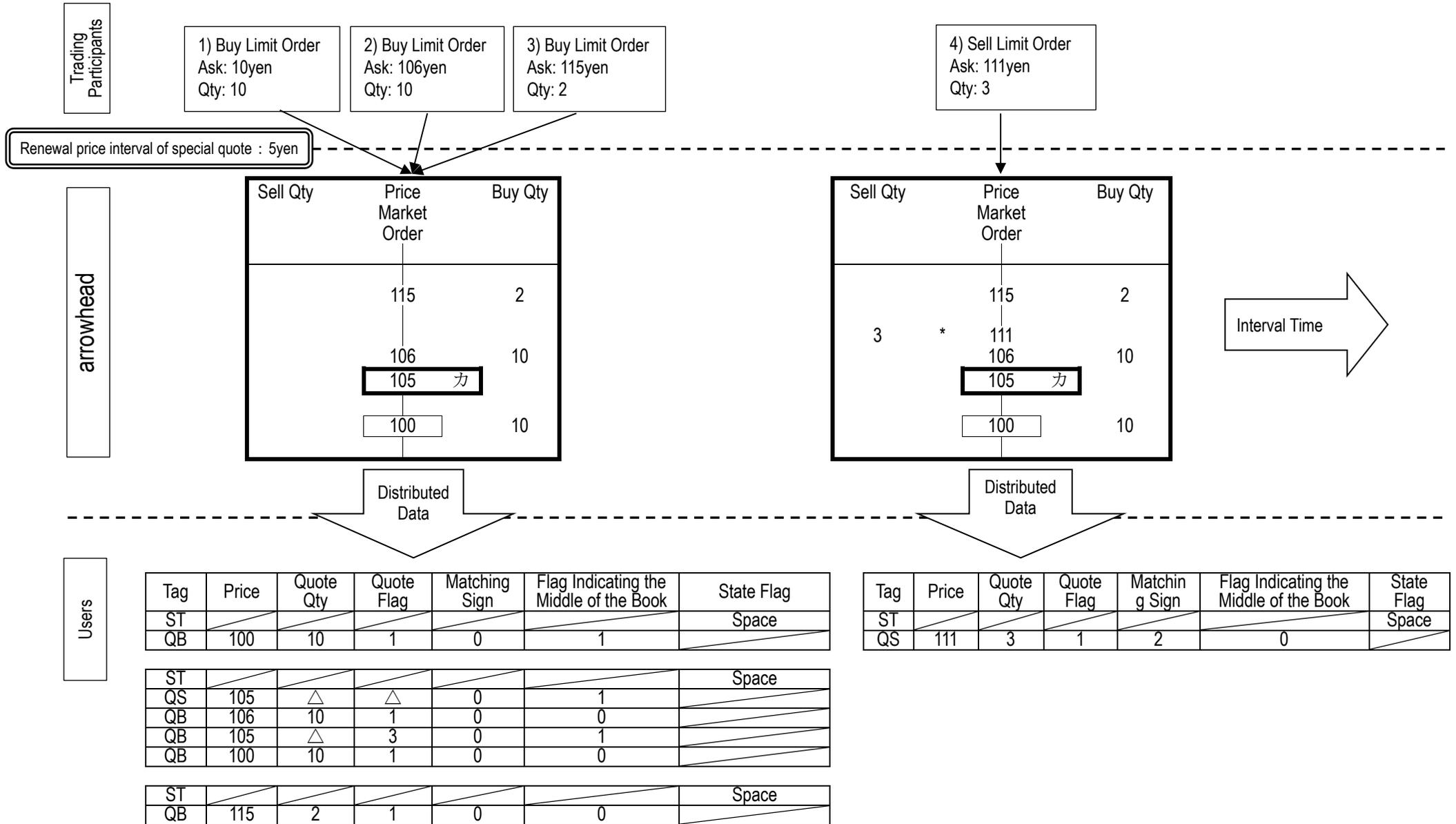
3.2.4. Opening the Market

The figure below shows the relation between the state of the order book and sending information.



Tag	Packet Serial No	Total Number of Packet Serial No	Price	Trading Volume	Turnover	Quote Qty	Quote Flag	Flag Indicating the Middle of the Book	State Flag
NO	1	2							
ST									Space
1P			100						
VL				65					
VA					6500				
QS			93			Space	Space	0	
QS			94			Space	Space	0	
QS			95			Space	Space	0	
QS			96			Space	Space	0	
QS			97			Space	Space	0	
QS			98			Space	Space	0	
QS			99			Space	Space	0	
QS			100			Space	Space	0	
QB			109			Space	Space	0	
QB			108			Space	Space	0	
QB			107			Space	Space	0	
QB			105			Space	Space	0	
QB			104			Space	Space	0	
QB			103			Space	Space	0	
QB			102			Space	Space	0	
NO	2	2							
QB			101			Space	Space	0	
QB			100			10	1	1	

3.2.5. Matching Sign when Special Quote is Displayed

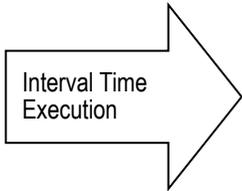


Trading Participants

Renewal Price interval of Special Quote: 5yen

arrowhead

Sell Qty	Price Market Order	Buy Qty
	115	2
3	# 111	
	110 力	
	106	10
	100	10



Sell Qty	Price Market Order	Buy Qty
	115	
1	111	
	110	
	106	10
	100	10

Distributed Data

Distributed Data

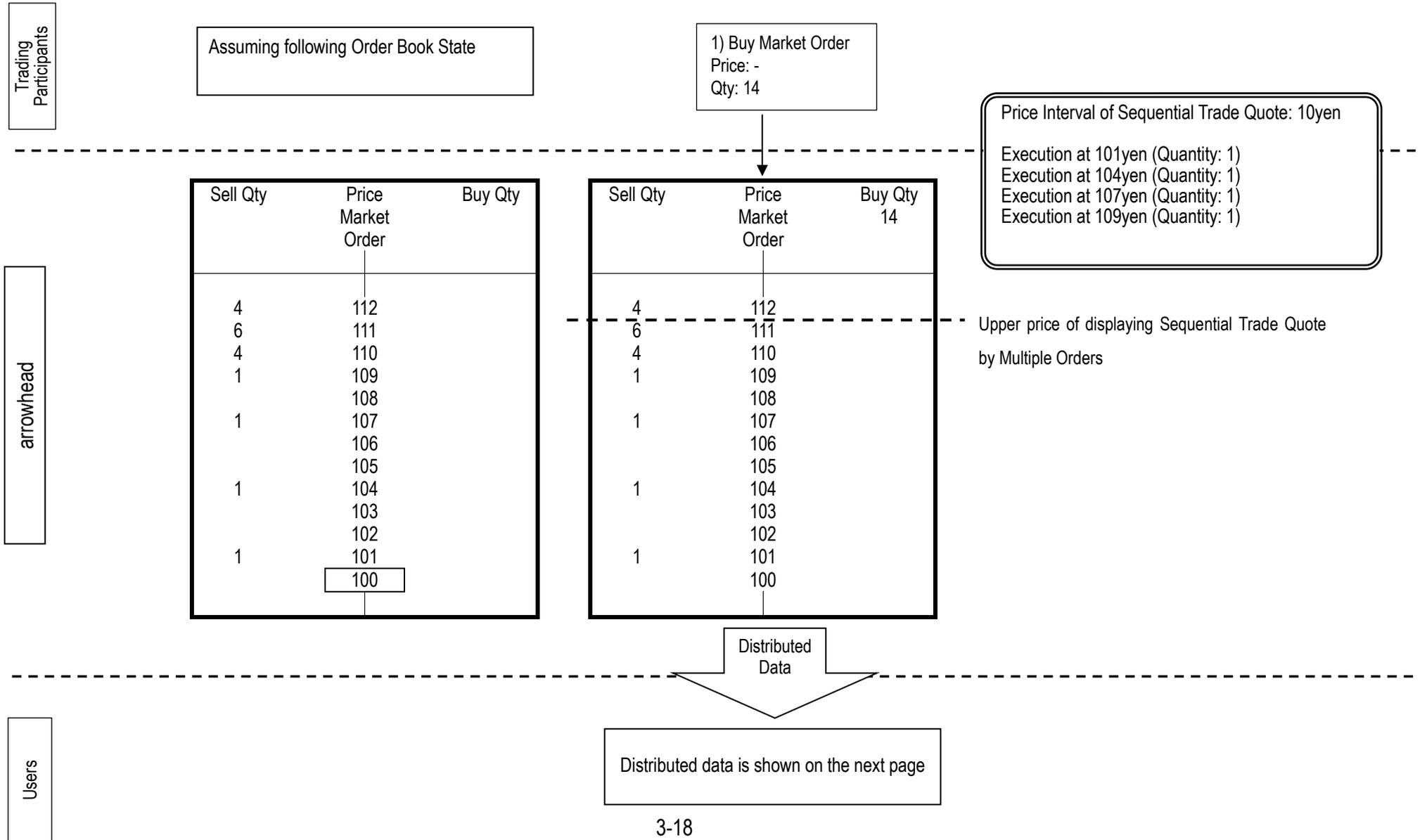
Users

Tag	Price	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST						Space
QS	105	Space	Space	0	0	
QS	110	Space	Space	0	1	
QS	111	3	1	1	0	
QB	110	Space	3	0	1	
QB	105	Space	Space	0	0	

Tag	Price	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST								Space
1P	111							
VL		2						
VA			222					
QS	110			Space	Space	0	0	
QS	111			1	1	0	1	
QB	115			Space	Space	0	0	
QB	110			Space	Space	0	0	
QB	106			10	1	0	1	

3.2.6. Sequential Trade Quote

1) Sequential Trade Quote by one order



Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	101	1							
VL			1						
VA				101					
QS	101				Space	Space	0	0	
QS	104				1	2	0	1	
QB	Space				13	2	0	0	

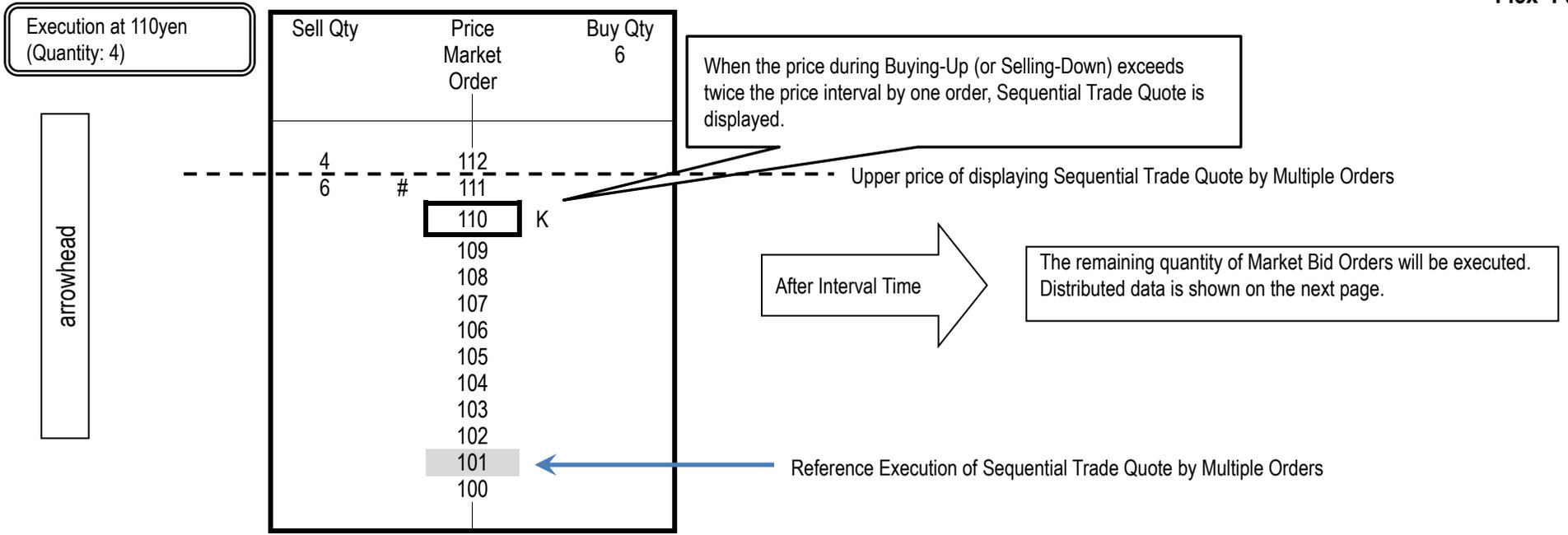
ST									Space
1P	104	Space							
VL			2						
VA				205					
QS	104				Space	Space	0	0	
QS	107				1	2	0	1	
QB	Space				12	2	0	0	

ST									Space
1P	107	Space							
VL			3						
VA				312					
QS	107				Space	Space	0	0	
QS	109				1	2	0	1	
QB	Space				11	2	0	0	

ST									Space
1P	109	Space							
VL			4						
VA				421					
QS	109				Space	Space	0	0	
QS	110				4	2	0	1	
QB	Space				10	2	0	0	

The conditions assumed for displaying the Sequential Trade Quote in this example are as follows.
 1: In the case of Buying-Up from Current Execution Price (100 yen) to over the price interval of Sequential Trade Quote (10 yen).
 2: Buying-Up does not reach the price to display Special Quote.

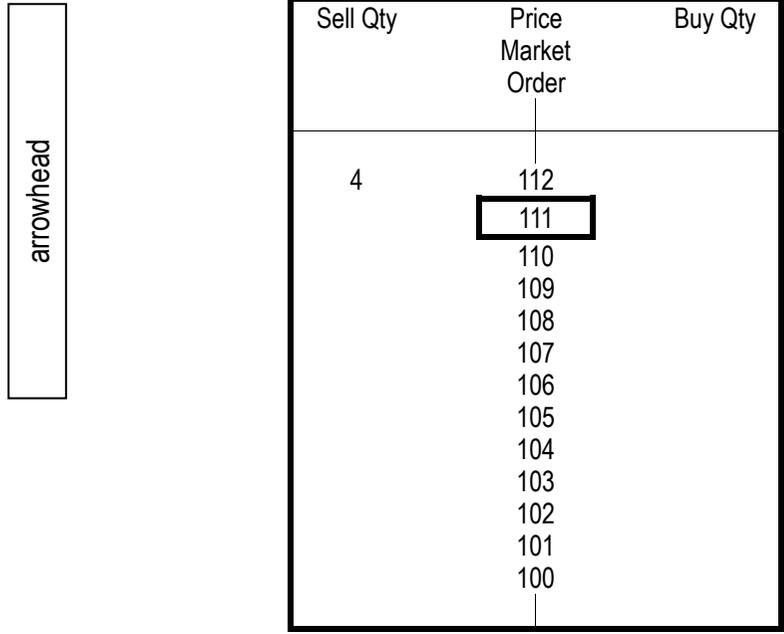
As such, Buying-Up occurs up to 110 yen, then "K" (Sequential Trade Quote) is displayed at the upper Limit Price (110 yen).



Distributed Data

Users

Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	110	Space							
VL			8						
VA				861					
QS	110				Space	Space	0	1	
QS	111				6	1	1	0	
QB	Space				6	1	0	0	
QB	110				Space	4	0	1	

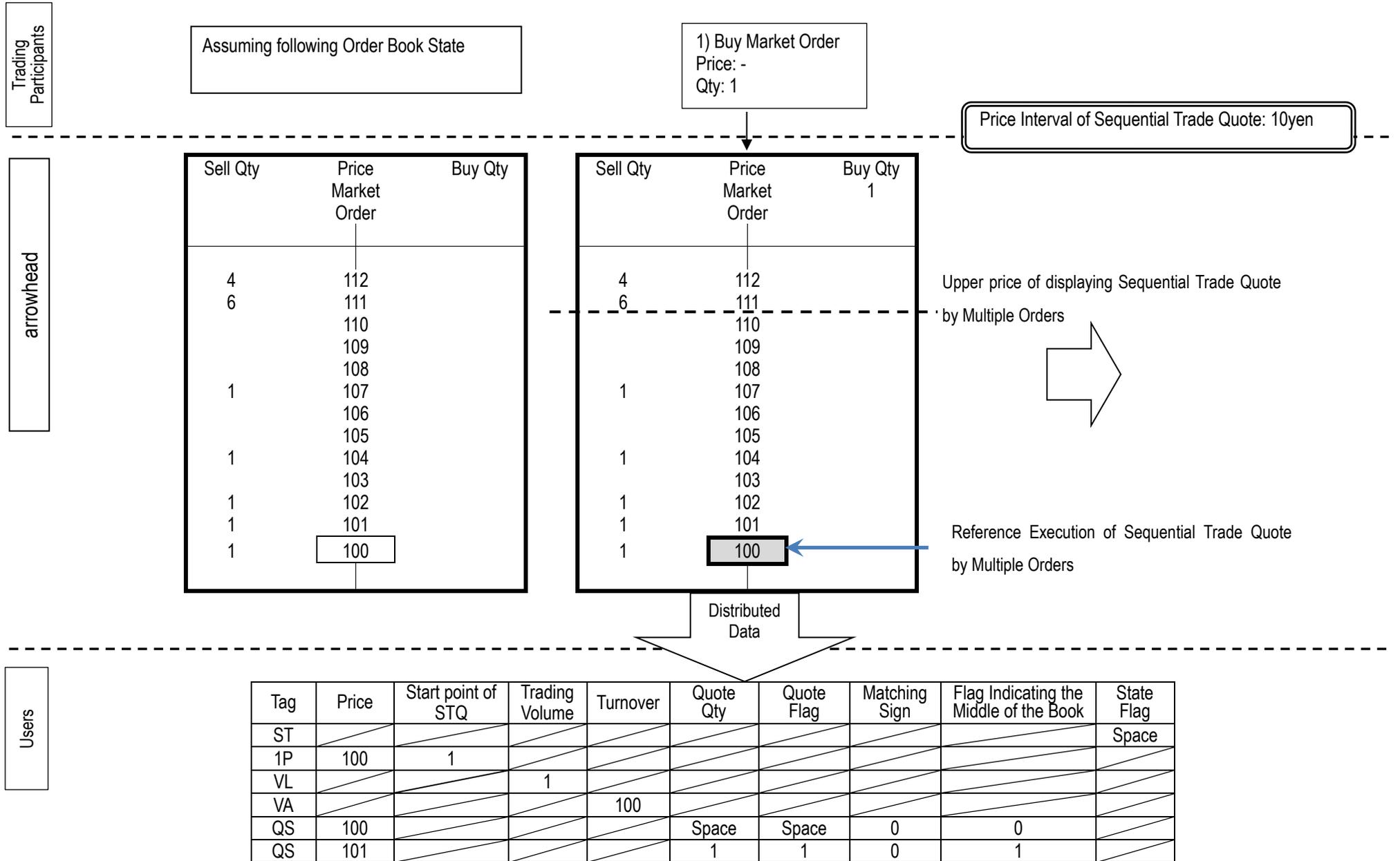


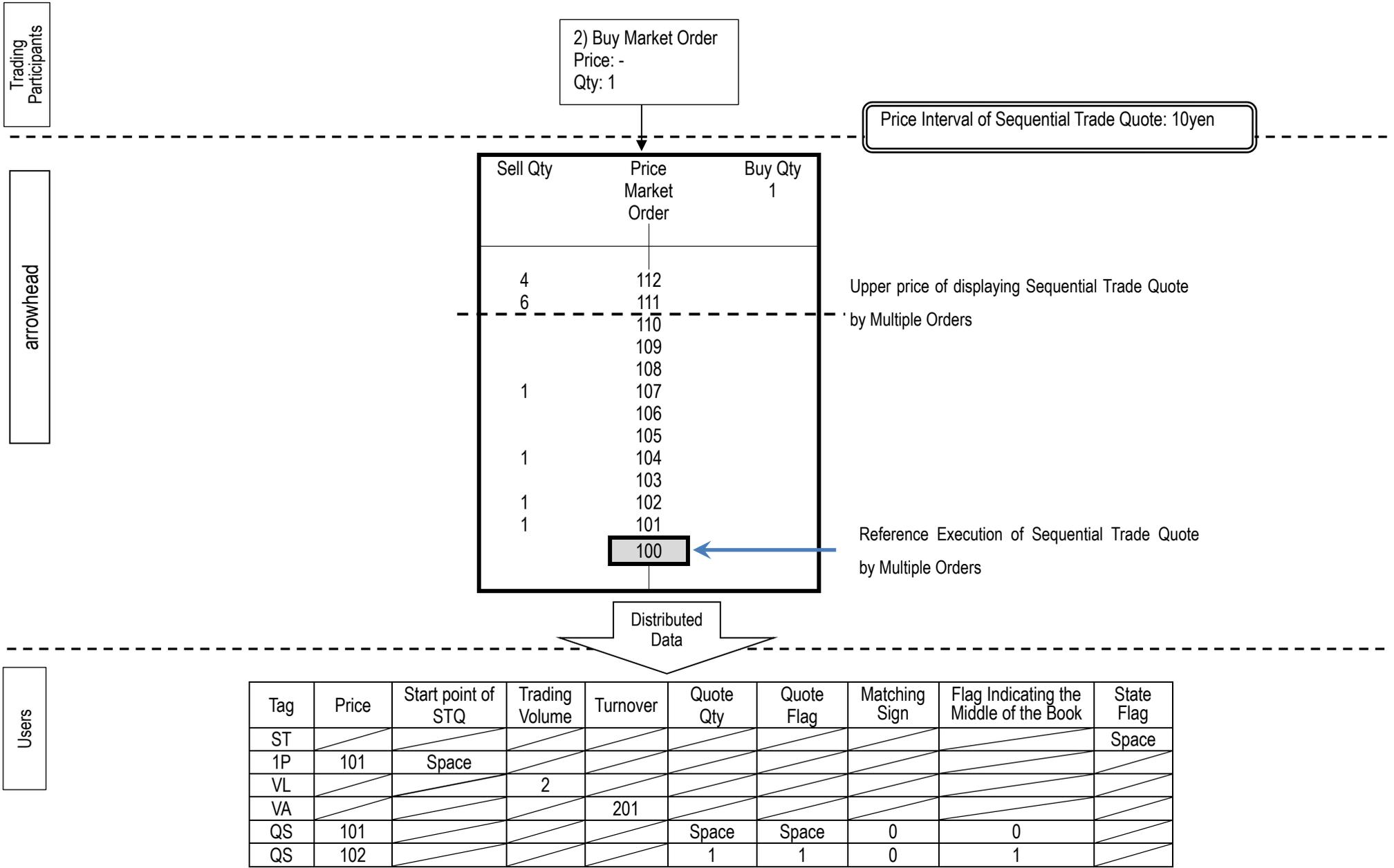
Distributed Data

Users

Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	111	Space							
VL			14						
VA				1527					
QS	110				Space	Space	0	0	
QS	111				Space	Space	0	0	
QS	112				4	1	0	1	
QB	Space				Space	Space	0	0	
QB	110				Space	Space	0	0	

2) Sequential Trade Quote by Multiple Orders





Trading Participants

3) Buy Market Order
Price: -
Qty: 10

Price Interval of Sequential Trade Quote: 10yen

arrowhead

Sell Qty	Price Market Order	Buy Qty 10
4	112	
6	111	
	110	
	109	
	108	
1	107	
	106	
	105	
1	104	
	103	
1	102	
	101	
	100	

Upper price of displaying Sequential Trade Quote
by Multiple Orders

Reference Execution of Sequential Trade Quote
by Multiple Orders

Distributed Data

Distributed data is shown on the next page

Users

Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	102	Space							
VL			3						
VA				303					
QS	102				Space	Space	0	0	
QS	104				1	1	0	1	

ST									Space
1P	104	Space							
VL			4						
VA				407					
QS	104				Space	Space	0	0	
QS	107				1	1	0	1	

Trading Participants

4) Buy market order
Price: -
Qty: 7

Price interval of Sequential Trade Quote: 10yen

Sell Qty	Price	Market Order	Buy Qty
4	#	112	7
6		111	
		110	K
		109	
		108	
		107	
		106	
		105	
		104	
		103	
		102	
		101	
		100	

When the price during Buying-Up (or Selling-Down) exceeds twice the price interval from the reference execution within interval time, Sequential Trade Quote is displayed.

Upper price of displaying Sequential Trade Quote by Multiple Orders

After Interval Time

The remaining quantity of market bid order will be executed. Distributed data is shown on the next page.

Reference Execution of Sequential Trade Quote by Multiple Orders

Distributed Data

Users

Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	107	Space							
VL			5						
VA				514					
QS	107				Space	Space	0	0	
QS	110				Space	Space	0	1	
QS	112				4	1	1	0	
QB	Space				7	1	0	0	
QB	110				Space	4	0	1	

Sell Qty	Price Market Order	Buy Qty
3	112	
	111	
	110	
	109	
	108	
	107	
	106	
	105	
	104	
	103	
	102	
	101	
	100	

Distributed
Data

Tag	Price	Start point of STQ	Trading Volume	Turnover	Quote Qty	Quote Flag	Matching Sign	Flag Indicating the Middle of the Book	State Flag
ST									Space
1P	112	Space							
VL			12						
VA				1298					
QS	110				Space	Space	0	0	
QS	111				Space	Space	0	0	
QS	112				3	1	0	1	
QB	Space				Space	Space	0	0	
QB	110				Space	Space	0	0	

3.2.7. Closing the Market (Execution at the Closing)

Trading Participants

Assuming following Order Book State

1) Buy Limit Order that becomes Market Order at the closing auction
Price: 98 yen
Qty: 12

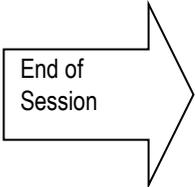
2) Sell Limit Order effective only during the closing auction
Price: 101 yen
Qty: 20

arrowhead

Sell Qty	Price Market Order	Buy Qty
13	112	
3	111	
2	110	
4	109	
6	108	
5	107	
10	105	
8	104	
10	103	
	102	13
	101	7
	100	5
	99	5
	98	
	97	2
	96	1
	95	1

Closing	Sell Qty	Price Market Order	Buy Qty	Closing 12
	13	112		
	3	111		
	2	110		
	4	109		
	6	108		
	5	107		
	10	105		
	8	104		
	10	103		
		102	13	
20		101	7	
		100	5	
		99	5	
		98	12	
		97	2	
		96	1	
		95	1	

Distributed Data



Users

Tag	Price	Quote Qty	Quote Flag	Flag Indicating the Middle of the Book	State Flag
ST					Space
QB	98	12	1	0	
BC	Space	12			
ST					Space
SC	101	20			

arrowhead

Sell Qty	Price Market Order	Buy Qty
13	112	
3	111	
2	110	
4	109	
6	108	
5	107	
10	105	
8	104	
10	103	
	102	5
	101	7
	100	5
	99	5
	98	
	97	2
	96	1
	95	1

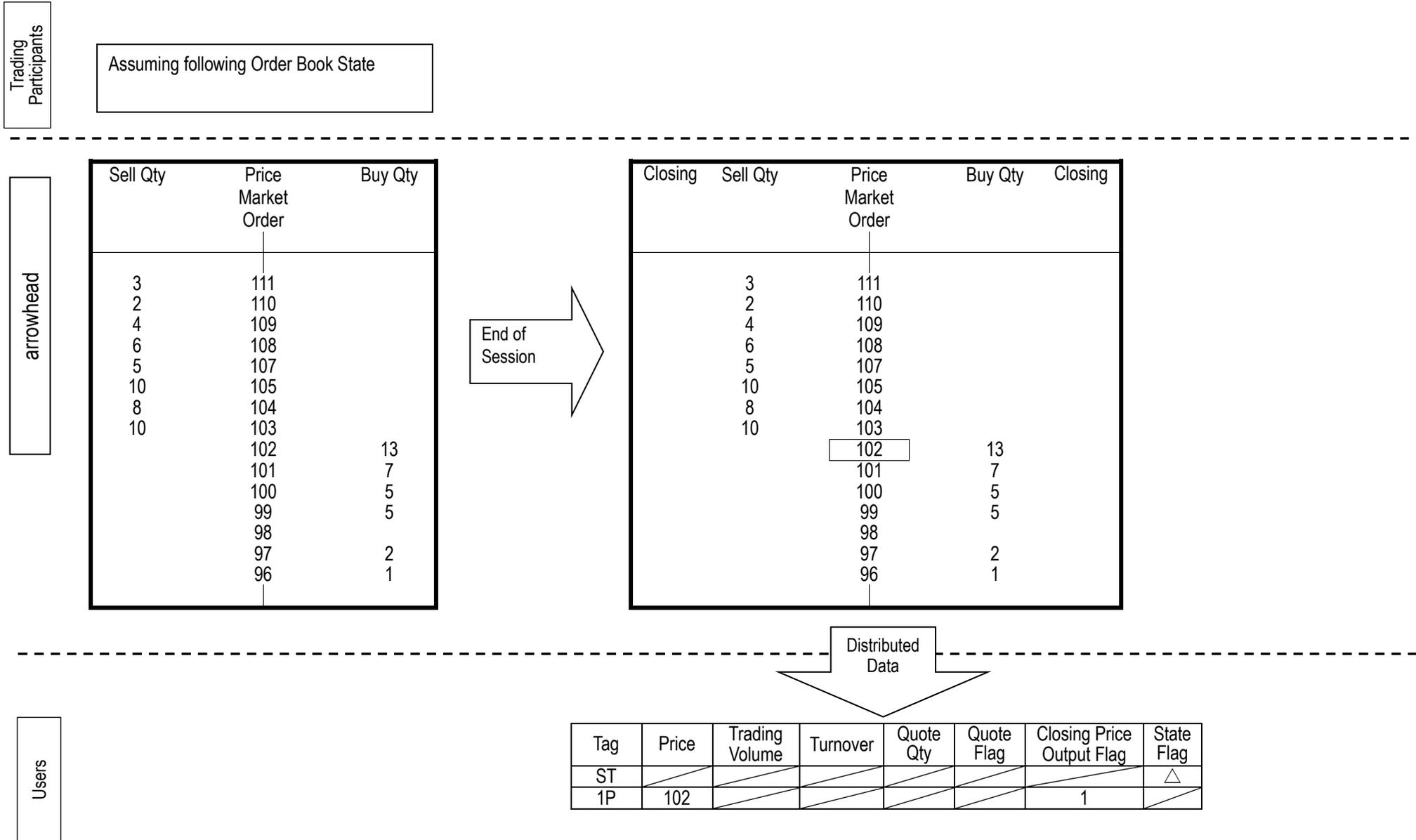
Distributed
Data

Users

Tag	Price	Trading Volume	Turnover	Quote Qty	Quote Flag	Flag Indicating the Middle of the Book	Closing Price Output Flag	State Flag
ST								Space
1P	102						2	
VL		20						
VA			2040					
QB	102			5	1	1		
QB	98			Space	Space	0		
SC	101			Space				
BC	Space			Space				

At the end of session, the information of execution at closing is sent.

3.2.8. Closing the Market (No Execution at the Closing)



3.3. Setting Example for Flag Indicating the Middle of the Book and Buying-Up/Selling-Down

3.3.1. Quote before Opening

Setting instance of Flag indicating the middle of the book in the event quotes before opening is shown below.

(1) Prices of offers (sell) and bids (buy) cross

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	222	10	105		0	
	212	53	104	21	21	
	159	26	103	45	66	
Flag Indicating the Middle of the Book	133	21	102	64	130	
	112	10	101	40	170	Flag Indicating the Middle of the Book
	102	92	100	46	216	
	10	10	99	10	226	
	0		98			

(2) Prices of offers and bids do not cross

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	89	10	105		0	
	79	53	104		0	
Flag Indicating the Middle of the Book	26	26	103		0	
	0		102		0	
	0		101	40	40	Flag Indicating the Middle of the Book
	0		100	46	86	
	0		99	10	96	
	0		98		96	

(3) Cumulative quantity of offers and bids are reversed and there is a price where the difference of cumulative quantity of offers and bids is zero.

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
		1	Market Order	1		
	2	1	105		1	
	1		104		1	
	1		103		1	
	1		102		1	
Flag Indicating the Middle of the Book	1		101	1	2	Flag Indicating the Middle of the Book
	1		100		2	
	1		99		2	
	1		98		2	

Base Price/Flag (Indicating the central price of the order book)

(4) Differences of cumulative quantities of offers and bids (upper/lower limit of order acceptance price range) match up to the limit price.

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
		20	Market Order	20		
	20		105		20	
	20		104		20	
	20		103		20	
Flag Indicating the Middle of the Book	20		102		20	Flag Indicating the Middle of the Book
	20		101		20	
	20		100		20	
	20		99		20	

Base Price/Flag (Indicating the central price of the order book)

(5) Cumulative quantity of offers or bids is greater than the cumulative quantity on the other side and there is a price where the difference in the cumulative quantities is zero.

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
		1	Market Order	1		
	1		105		1	
	1		104		1	
	1		103		1	
Flag Indicating the Middle of the Book	1		102	1	2	Flag Indicating the Middle of the Book
	1		101		2	
	1		100		2	
	1		99		2	

Base Price/Flag (Indicating the central price of the order book)

(6) Only either offers or bids

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)
			Market Order		
	222	10	105		
	212	53	104		
	159	26	103		
	133	21	102		
	112	10	101		
Flag Indicating the Middle of the Book	102	92	100		
	10	10	99		
			98		

(7) There are both offers and bids and there is no price where the difference in the cumulative quantities is zero.

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
		20	Market Order			
	20		105			
	20		104			
	20		103			
	20		102			
	20		101			
	20		100			
Flag Indicating the Middle of the Book	20		99	19	19	Flag Indicating the Middle of the Book

Limit Price/ Lower Limit Price of Orders Acceptable

3.3.2. During ZARABA (Selling-Down)

Setting examples of Flag Indicating the Middle of the Book and Quote Flag (Buying-Up or Selling-Down) during Selling-Down are shown below.

- Sell Limit Order(100 yen, 50 qty.)

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
			Market Order			This sell order (100 yen, 50 qty.) is not sent because of immediate execution.
	10	10	105			
	46	46	104			
Flag Indicating the Middle of the Book (already distributed)	40	40	103			
			102	21	21	Flag Indicating the Middle of the Book (already distributed)
			101	26	26	
		<u>50</u>	100	53	53	
			99	10	10	

• Execution (102 yen, 21 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			When buy quote at 102 yen, 21 qty. is executed, remaining sell 29 qty. is sent
	46	46	104			
Flag Indicating the Middle of the Book	40	40	103			
			102			
			101	26	26	Flag Indicating the Middle of the Book
	29	<u>29</u>	100	53	53	
			99	10	10	

[Distributed data]

General Quote(Buying-Up or Selling-Down): "2" is set in the highest priority 101 yen buy quote during Selling-Down by the Sequential Trade Quote.

(During Selling-Down, other new order at 101 yen is not possible to be executed.)

General Quote(Buying-Up or Selling-Down): "2" is set in the 100 yen sell quote of remaining 29 qty.

Tag	Offer			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	2	100	29	0

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	Space	102	Space	0
QB	2	101	26	1

• Execution (100 yen, 26 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			When buy quote at 101 yen, 26 qty. is executed, remaining sell 3 qty. is sent
	46	46	104			
Flag Indicating the Middle of the Book	40	40	103			
			102			
			101			
	3	<u>3</u>	100	53	53	Flag Indicating the Middle of the Book
			99	10	10	

[Distributed data]

General Quote(Buying-Up or Selling-Down): "2" is set in the highest priority 100 yen buy quote during Selling-Down by the Sequential Trade Quote.

(During Selling-Down, other new order at 100 yen is not possible to be executed.)

General Quote(Buying-Up or Selling-Down): "2" is set in the 100 yen sell quote of remaining 3 qty.

Tag	Ask			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	2	100	3	0

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	Space	101	Space	0
QB	2	100	53	1

• Execution (100 yen, 3 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			After buy quote at 100 yen, 3 qty. is executed, sell 100 yen, 0 Qty is sent
	46	46	104			
Flag Indicating the Middle of the Book	40	40	103			
			102			
			101			
			100	50	50	Flag Indicating the Middle of the Book
			99	10	10	

[Distributed data]

After Sequential Trade Quote ends, General Quote: "1" is set.

Tag	Ask			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	Space	100	Space	0

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	1	100	50	1

3.3.3. During ZARABA (Buying-Up)

Setting examples of Flag Indicating the Middle of the Book and Quote Flag (Buying-Up or Selling-Down) during Buying-Up are shown below.

• Buy Limit Order(104 yen, 50 qty.)

	(Total Qty.)	Sell Qty.	Price	Buy Qty.	(Total Qty.)	
	10	10	Market Order			This buy order (104 yen, 50 qty.) is not sent because of immediate execution.
	53	53	105			
	26	26	104	<u>50</u>		
Flag Indicating the Middle of the Book (already distributed)	21	21	103			
			102			
			101	40	40	Flag Indicating the Middle of the Book (already distributed)
			100	46	46	
			99	10	10	

• Execution (102 yen, 21 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			When sell quote at 102 yen, 21 qty. is executed, remaining buy 29 qty. is sent
	53	53	104	29	29	
Flag Indicating the Middle of the Book	26	26	103			
			102			
			101	40	40	Flag Indicating the Middle of the Book
			100	46	46	
			99	10	10	

[Distributed data]

General Quote(Buying-Up or Selling-Down): "2" is set in the highest priority 103 yen sell quote during Buying-Up by the Sequential Trade Quote.

(During Buying-Up, other new order at 103 yen is not possible to be executed.)

General Quote(Buying-Up or Selling-Down): "2" is set in the 104 yen buy quote of remaining 29 qty.

Tag	Ask			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	2	103	26	1
QS	Space	102	Space	0

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	2	104	29	0

• Execution (103 yen, 26 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			When sell quote at 103 yen, 26 qty. is executed, remaining buy 3 qty. is sent
Flag Indicating the Middle of the Book	53	53	104	<u>3</u>	3	
			103			
			102			
			101	40	40	Flag Indicating the Middle of the Book
			100	46	46	
			99	10	10	

[Distributed data]

General Quote(buying-up or Selling-Down): "2" is set in the highest priority 104 yen sell quote during Buying-Up by the Sequential Trade.

(During Selling-Down, other new order at 104 yen is not possible to be executed.)

General Quote(Buying-Up or Selling-Down): "2" is set in the 104 yen buy quote of remaining 3 qty.

Tag	Ask			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	2	104	53	1
QS	Space	103	Space	0

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	2	104	3	0

• Execution (104 yen, 3 qty.)

	(Total Qty.)	Sell Qty.	Price Market Order	Buy Qty.	(Total Qty.)	
	10	10	105			After sell quote at 104 yen, 3 qty. is executed, buy quote 104 yen, 0 qty. is sent
Flag Indicating the Middle of the Book	50	50	104			
			103			
			102			
			101	40	40	Flag Indicating the Middle of the Book
			100	46	46	
			99	10	10	

[Distributed data]

After Sequential Trade ends, General quote: "1" is set.

Tag	Ask			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QS	1	104	50	1

Tag	Bid			
	Quote Flag	Price	Qty	Flag Indicating the Middle of the Book
QB	Space	104	Space	0

3.4. Setting method of unit flag

The setting method of unit flag for prices of stocks and CBs is as below.

For unit flag for prices of stocks, 3 or 4 is set dynamically based on the price.

(If valid up to the first decimal part, 3 is set in unit flag. If only the integral part of the price is valid, 4 is set in unit flag.)

For unit flag for prices of CBs, 2 is set in unit flag.

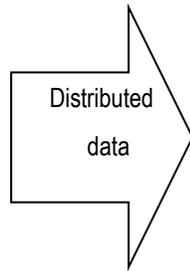
[Example(Unit flag of stocks)]

Refer to 6.2.2 Tick Size Table No. of Common Items for Tick Size Table.

- a. When the minimum price fluctuation is less than 1 yen (Tick Size is 0.5 yen under 5000 yen)
(In case that the "Tick Size Table No." of BP tag is "03".)

When registering buy limit order (3000.0 yen - 50stocks) on the book

arrowhead	Sell Qty	Price	Buy Qty
	Market order		
	100	3002	
	70	3001	
	40	3000.0	
	10	2999.5	<u>50</u>
		2999.0	10
		2998.5	20
		2998.0	30



Trading Participants

Buy Limit order
price: 3000.0 yen
Qty: 50

• Execution (2999.5 yen, 10 atv.)

Tag	Unit flag	Price	Trading volume	Turnover	Quote Qty	Quote flag	Flag indicating the middle of the book
1P	3	29995000					
VL			10				
VA				29995			
QS	3	29995000			Space	Space	0
QS	3	30000000			40	2	1
QB	3	30000000			40	2	0

• Execution (3000.0 yen, 40 qty.)

Tag	Unit flag	Price	Trading volume	Turnover	Quote Qty	Quote flag	Flag indicating the middle of the book
1P	3	30000000					
VL			50				
VA				149995			
QS	3	30000000			Space	Space	0
QS	3	30010000			70	1	1
QB	3	30000000			Space	Space	0

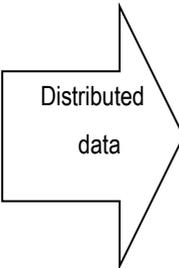
b. When the minimum price fluctuation is not less than 1 yen
 (In case that the " Tick Size Table No." of BP tag is "01")

When registering buy limit order (3000 yen - 50stocks) on the book

arrowhead	Sell Qty	Price	Buy Qty
	Market order		
	100	3010	
	70	3005	
	40	3000	50
	10	2999	
		2998	10
		2997	20
		2996	30
		2995	40

Trading Participants

Buy Limit order
 price: 3000 yen
 Qty: 50



• Execution (2999 yen, 10 qty.)

Tag	Unit flag	Price	Trading volume	Turnover	Quote Qty	Quote flag	Flag indicating the middle of the book
1P	4	29990000					
VL			10				
VA							
QS	4	29990000			Space	Space	0
QS	4	30000000			40	2	1
QB	4	30000000			40	2	0

• Execution (3000 yen, 40 qty.)

Tag	Unit flag	Price	Trading volume	Turnover	Quote Qty	Quote flag	Flag indicating the middle of the book
1P	4	30000000					
VL			50				
VA				149990			
QS	4	30000000			Space	Space	0
QS	4	30050000			70	1	1
QB	4	30000000			Space	Space	0

3.5. Sending Status information

3.5.1. Timing of Status Information

Status Information indicates status of each issue at the time of sending. This information includes session schedule (Start of Order Acceptance, Beginning of Session, Close of Session and so on) and Issue status of Realtime Message (Quotes, Trading Information, Trading Halt, Trading Suspension, Release of Trading Halt and so on).

Changing status is described at “3.6.1 Timing of Status Information” in FLEX Standard. Backup Information and All-Day Information is not available in FLEX Full.

3.5.2. Sending Status Information for Trading Halt / Release of Trading Halt

Messages to be delivered in case that trading is restricted or restriction is released are described below.

- (1) When restriction is executed
 After sending restriction information, changed quote information after imposing the restriction is output.
 Details of messages are described in Table 3.5-1.

Table 3.5-1 Messages to be delivered when trading halt is imposed

No.	Latest Order Book State Before Restriction	Trading Halt	Messages to be Sent in the Case that Trading is Restricted
1	Zaraba	>>	[Content of Message] A) is output, then B) is output. A) Restriction Information is output. B) Quotes that are changed by the restriction are output. *1 *1 If there is no changed quote after restriction, B) is not output.
	During Restriction Trading Suspension, Trading Halt		
	ITAYOSE (B0)		
	The issue whose opening price of the day isn't determined.		
	Special Quote		
	Sequential Trade Quote		

(2) When restriction is released

When quote is changed because of Restriction Release, the information below is output after Restriction Release.

The messages to be output in Restriction Release are divided into three patterns. Details of messages are described in Table 3.5-2.

Table 3.5-2 Messages to be delivered when trading halt is released

Order Book State	Release of Restriction	Just After Release of Restriction	
		Sending Release Information of Restriction	
Trading Suspension or Trading Halt	>>	Execution (Matched)	<p>[Content of Message] A) is output, then B) is output. A) Release Information of Restriction is output. B) Execution and Quotes that are changed by the Execution after the Release of Restriction are output.</p> <p>[Tag] A) ST: Change Flag "1", Issue Status "20", State Flag "A1" (Release Information of Restriction) B) ST: Change Flag "1", Issue Status "20", State Flag space 1P, VL, VA: Execution Information QS, QB, SC, BC: Quote Information changed by execution is output.</p>
		Not Matched	<p>[Content of Message] A) is output A) Release Information of Restriction is output.</p> <p>[Tag] A) ST: Change Flag "1", Issue Status "20", State Flag "A1" (Release Information of Restriction) * Quote Information is not sent because of No Execution.</p>
Trading Suspension or Trading Halt	>>	Special Quote	<p>[Content of Message] A) is sent, then B) is output. A) Release Information of Restriction is output. B) Quotes that are changed, due to displaying a Special Quote after the Release of Restriction, are output.</p> <p>[Tag] A) ST: Change Flag "1", Issue Status "20", State Flag "A1" (Release Information of Restriction) B) ST: Change Flag "1", Issue Status "20", State Flag space QS, QB: Quotes Information Related Special Quote is output. "3: Special Quote" is set when Special Quote is displayed, and space is set on the opposite side quote of Special Quote. ("1: General Quote or Quote Before Opening" is set when the quote of same price exists on the opposite side of Special Quote Price.) "1: General Quote or Quote Before Opening" is set for Other quotes.</p>