



Market Information System
FLEX Connection Specifications
Common Items

Ver.DS.17.3
Applicable from April 1, 2021.

Tokyo Stock Exchange

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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).

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1. OUTLINE

1.1. Purpose

This document contains information on the various connection methods (communication method, procedure of transmission control, etc.), IP addresses and port numbers of each multicast group for the TSE Market information system.

1.2. About the Version Expression

The definition of the version expression is as below.

<Version scheme> X.YY.Z

[X]

“X” means Definite or Tentative Specification.

DS: Definite Specification

TS: Tentative Specification

[Y Y]

“Y Y” means the system phase.

Ex) 25: System phase 2.5

35: System phase 3.5

[Z]

“Z” means the number of the revision in the same system phase.

Ex) 0: The time of revision is zero.

1: The time of revision is one.

1.3. FLEX Service

The outline of each FLEX Service is defined as below.

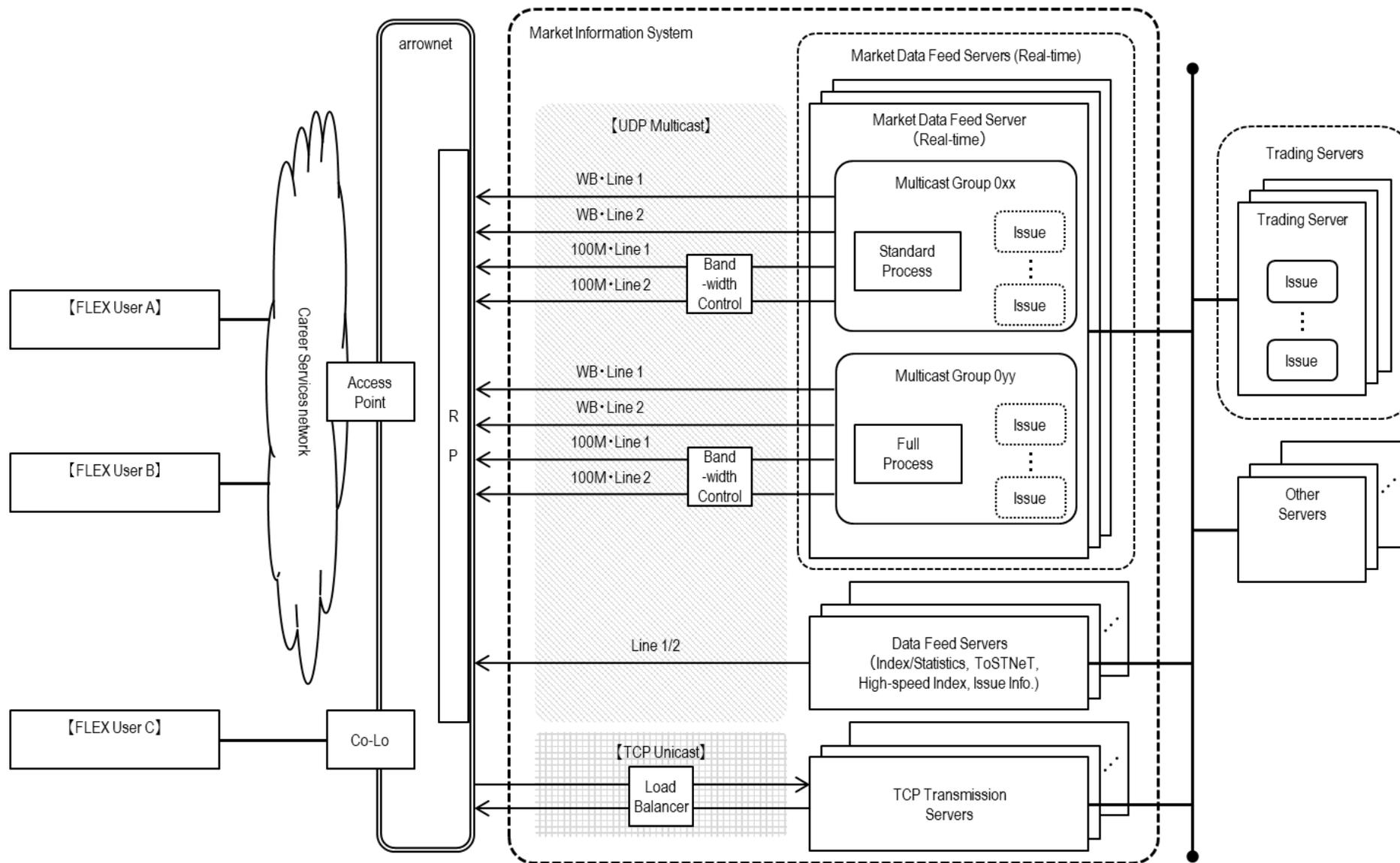
Service Name	Contents	Summary	BandWidth
Standard	Real-time Information	Information about quotes/executions/Trading volume/Turnover, etc. are sent.	100Mbps
	Index/Statistics Information	Information about Stock Indices as TOPIX and Statistics are sent.	
	ToSTNeT Information	Information about ToSTNeT are sent.	
	Issue Basic Information	Master data of each issue (Base Price Information, Issue Information and Multicast Group Number Information) are sent.	
Full	Realtime Information	All quotes on the book are sent. Every updated price information is sent.	100Mbps
	Issue Basic Information	Master data of each issue (only Multicast Group Number Information) is sent.	
High-Speed Index	High-Speed Index Information	Information about High-Speed Index is sent.	150Mbps
Standard(WB)	Realtime Information	Same as Standard.	500Mbps
	Index/Statistics Information	Information about Stock Indices as TOPIX and Statistics are sent.	
	ToSTNeT Information	Information about ToSTNeT are sent.	
	Issue Basic Information	Master data of each issue (Base Price Information, Issue Information and Multicast Group Number Information) are sent.	
Full(WB)	Realtime Information	Same as Full.	450Mbps
	Issue Basic Information	Master data of each issue (only Multicast Group Number Information) is sent.	

Users connecting in FLEX Full and FLEX Full (WB) can also obtain Base Price Information and Issue Information from FLEX Standard.

For details on IP address, refer to "IP Address/Port Number/Throttling Value".

1.4. Market Information System

The outline of Market Information System is defined as below.



(1) Trading Server

- A Trading Server matches orders received from Trading Participants.
- Trading Servers match orders for each issue separately.
- Three Trading Servers make up a cluster. Each Trading Server cluster is tasked with matching orders for multiple issues.
- Each business day, different issues are assigned to each Trading Server cluster for order processing. (The assigned issues remain the same for the specific Trading Server cluster throughout the day.)
- The three Trading Servers in each cluster continuously copy data among each other to promptly recover such data in the event one of the Trading Servers in the cluster malfunctions. This mechanism allows for the FLEX service to continue without breaking the order of message sequence numbers.
- In the event that all three Trading servers in a cluster go out of order, TSE will halt trading of the issues assigned to that specific Trading Server cluster.

*The timestamps in the User Data Section of FLEX (Real-time) messages are those output by Trading Servers.

(2) DF (Market Data Feed) Server

- A DF Server distributes quotes and price information received from Trading Servers for FLEX.
- DF servers distribute information to each multicast group separately.
- Three DF servers make up a cluster, and each DF Server cluster is tasked with distributing information to multiple multicast groups.
- Each business day, different issues are assigned to each multicast group for order processing. (The assigned issues remain the same for the specific multicast group throughout the day.)
- The throttling (byte/25msec) on each multicast group is implemented on the DF Server.
- The three DF Servers in each cluster continuously copy data among each other to promptly recover such data in the event one of the DF Servers in the cluster malfunctions. This mechanism allows for the FLEX service to continue, but the order of message sequence numbers is rolled forward. (For details, please see "FLEX Connection Specification System Operation") Note, however, that DF Servers distributing non-real-time information will remain in operation to maintain redundancy even if one of the other DF Servers malfunctions.
- In the event that all three DF servers in a cluster go out of order, TSE will halt trading of the issues within the multicast group assigned to those DF servers in accordance with its contingency plan.

(3) Bandwidth Control

- There are bandwidth control mechanisms in place to prevent dropped messages or unexpected delays in the 100M service, because the network lines are narrower than those used for delivering the network interface of the Market Information System.

(4) TCP Transmission Server

- A TCP Transmission Server receives requests from FLEX users to retransmit FLEX messages, etc.
- There are several TCP Transmission Servers in operation to allow for continuation of TCP Transmission even if one of the TCP Transmission Servers malfunctions.
- If all TCP Transmission Servers go out of order, then TCP transmission will be unavailable.

(5) Load Balancer

- A Load Balancer determines to which destination server to forward TCP connection establishment requests.

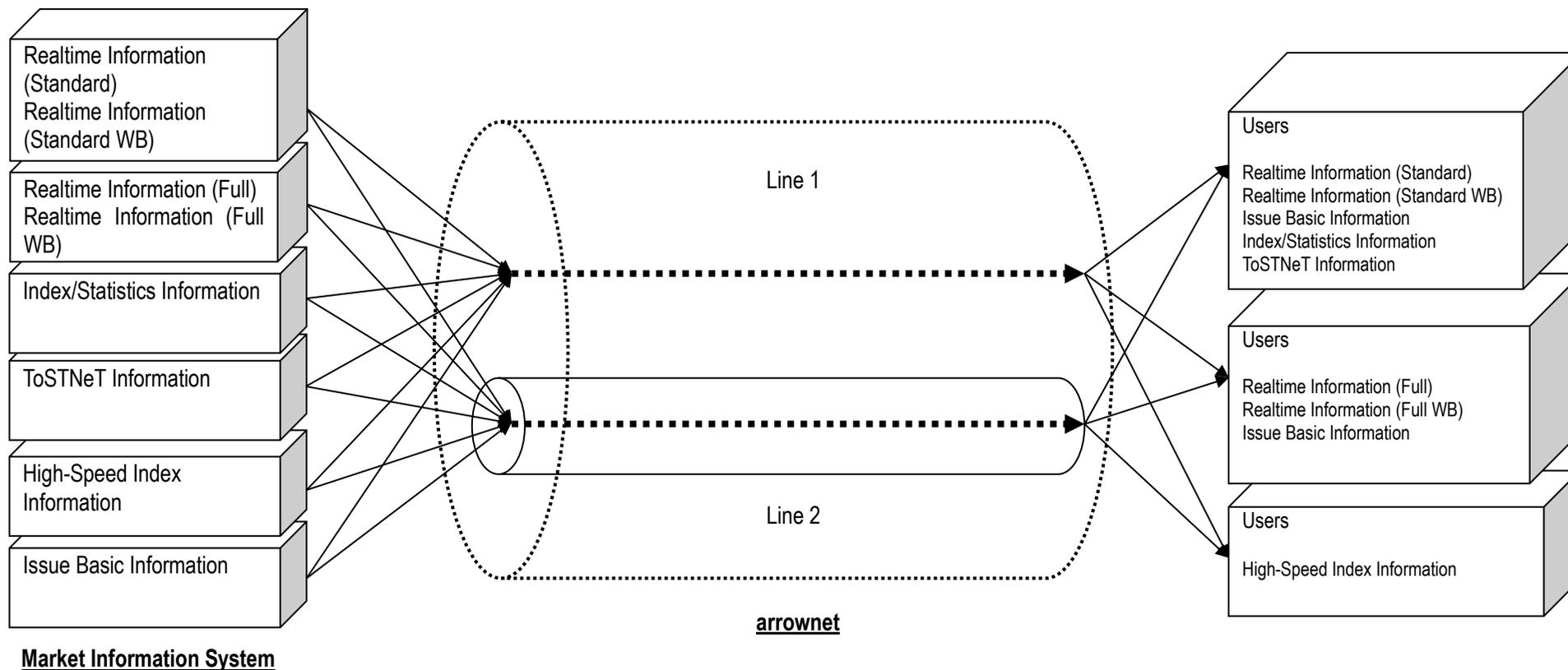
* Difference between sets of issues associated with Trading Servers vs. Multicast Groups

- Under the current system architecture, there are more Trading Servers than DF Servers. This means that each DF Server receives information from multiple Trading Servers.
- Therefore, data transmission pertaining to sets of issues in a Multicast Group (assigned to DF Servers) does not occur in the same exact order as data processing in Trading Servers.
- Note, however, that data transmission/processing will not be out of sequence for a single unique issue

2. CONNECTION METHOD

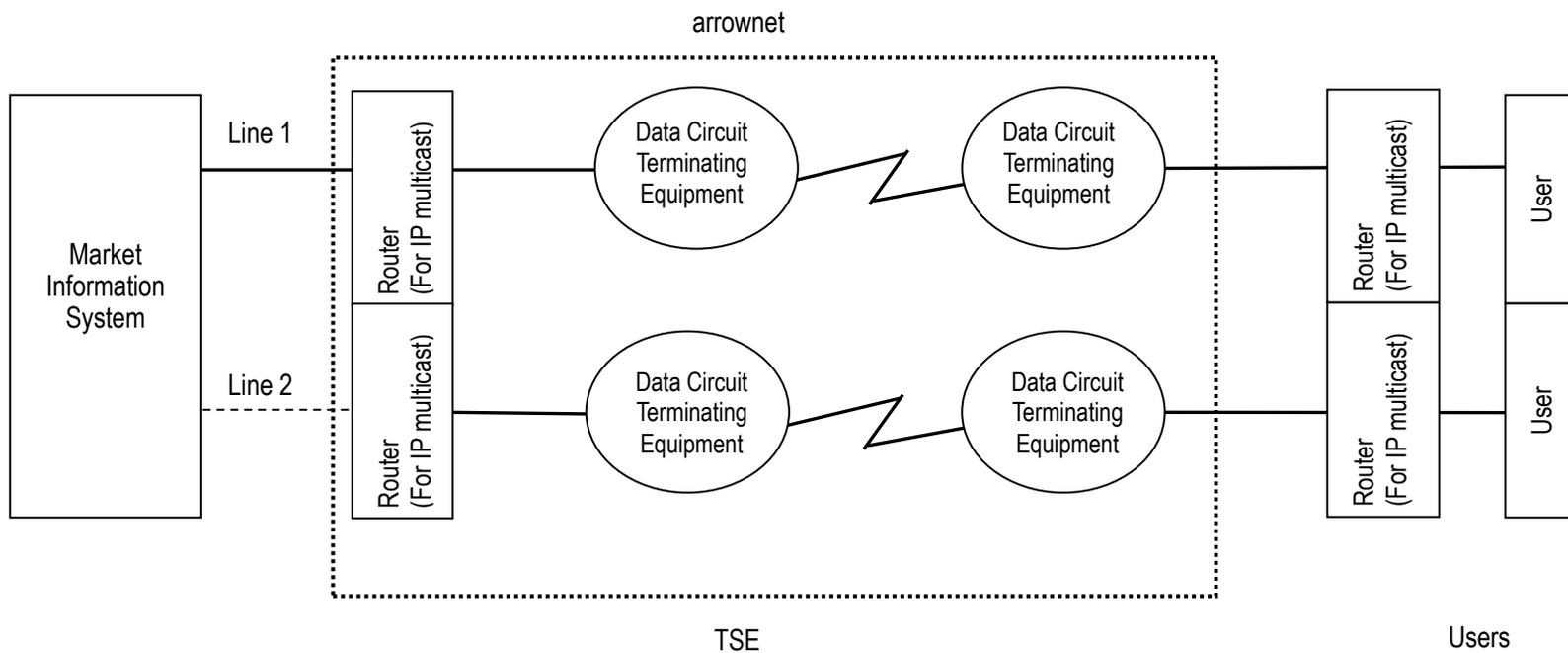
2.1. Outline of Connection

The Market Information System (Including the information from arrowhead; this applies to the descriptions hereafter) and user are connected with two lines through arrownet. The figure below shows the image of connection.



2.2. Configuration of Communication Circuit

The Market Information System and users are connected through arrownet. (Refer to “the arrownet guideline”) The figure below shows the configuration of communication circuit. In addition, users are required to connect via 2 lines (2 circuits). Users can also connect from via the Co-Location Area, which is not through “arrownet”.



3. COMMUNICATION MODE

3.1. Connection Conditions

Item No.	Item	Description	Remarks
1	Data Circuit Terminating Equipment	Depending on carrier's specification	
2	Transmission Mode	Transparent Mode	
3	Communication Mode	Full Duplex	
4	Protocol	UDP, TCP	
5	Transmission Code	1 byte/alphanumeric: JIS8 code 2 bytes: S-JIS code	
6	Receiving-side Router	For IP Multicast Protocol: PIM-SM	

3.2. IP Address, Port Number

3.2.1. UDP Multicast (Market Information System Side)

IP Address and Port Number on Market Information System side
Refer to “IP Address/Port Number” of attached APPENDIX.

3.2.2. TCP Unicast (Market Information System Side)

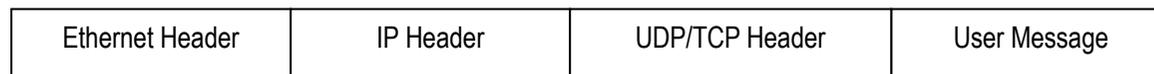
IP Address and Port Number on Market Information System side
IP Address and Port Number are depending on the requesting Multicast Group Number. Refer to “IP Address/Port Number” of attached APPENDIX.

3.2.3. TCP Unicast (User Side)

IP Address and Port Number on the user side
TSE provides them to each user.

3.3. Packet Structure

The figure below shows the structure of a packet to be sent in the transmission circuit.



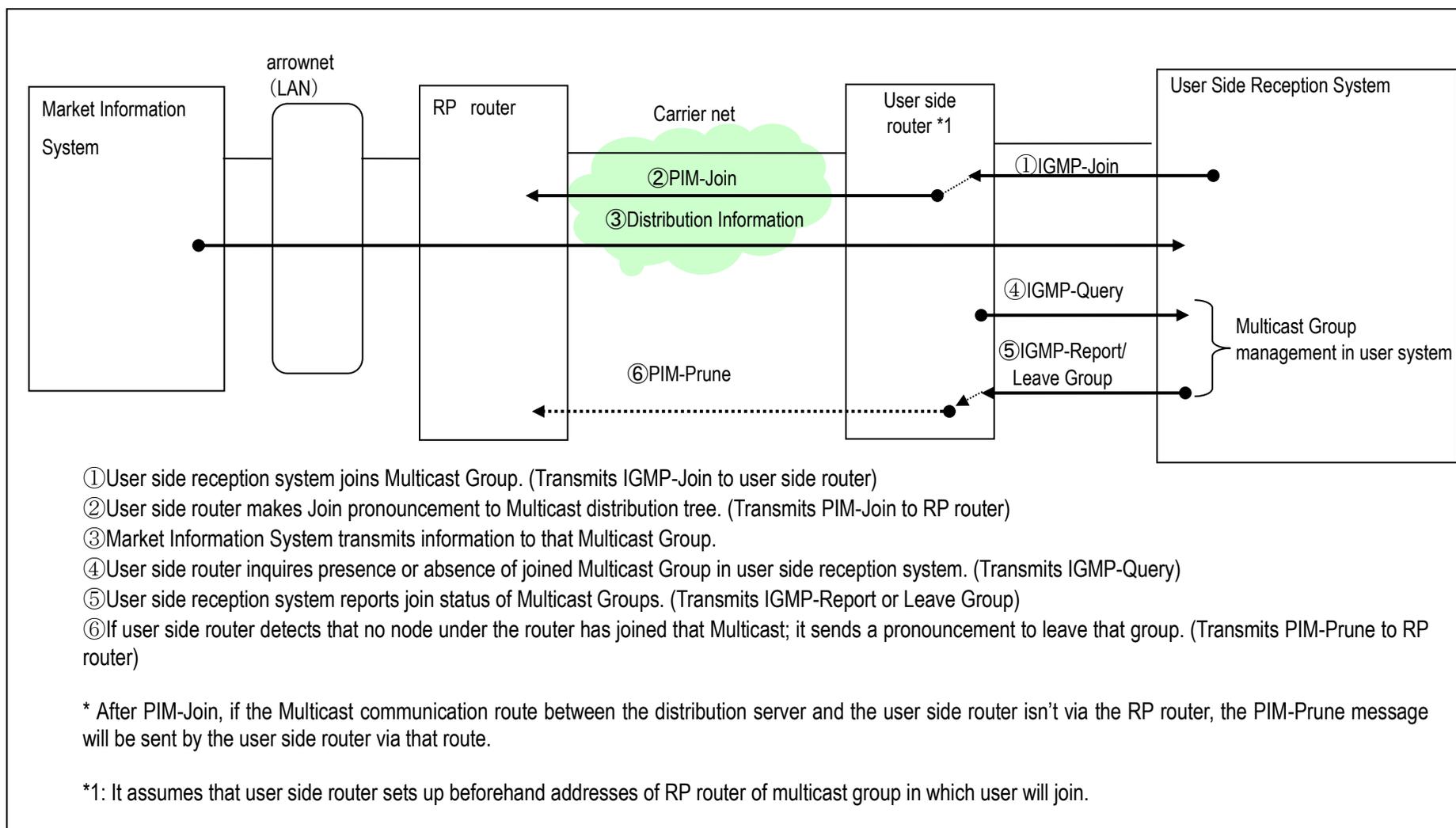
4. PROCEDURE OF TRANSMISSION CONTROL

UDP or TCP is used depending on transmission.

4.1. UDP/IP Protocol

UDP/IP Protocol is used for normal message transmission and reception.

4.1.1. Join and Leave Procedure of Multicast Group



4.1.2. Multicast Routing Maintenance Message

Multicast routing maintenance message will be transmitted to each multicast group.

This message will be transmitted to each multicast group before transmission of control messages (communication control "start" and Health check control) so that it will maintain multicast routing and will prevent the message duplication, etc. concerning the message that follows. *2 This message has to reach the user, but the user side doesn't have to take the message into the application of it. User, therefore, is able to keep its port for receiving messages close.

*1 Port Number is different from other messages.

*2 When Control Message (Communication Control "Start" and Health Check Control) was transmitted before the maintenance of Multicast Routing, the event of losing, duplicating or overtaking of message were sometimes found.

After recovery from a communication device, etc. failure, there may be message loss, duplication or overtaking if other messages are transmitted before the multicast routing information is obtained by this message.

(1) Port Number on User Side

Refer to "IP Address/Port Number/Throttling Value" of attached APPENDIX.

(2) IP Address

Refer to "IP Address/Port Number/Throttling Value" of attached APPENDIX.

(3) Message Format

Service Header: Nothing

User Data Section: 1-byte space "0x20" will be set

(4) Timing of Sending Message

Start: refer to System Operation specifications.

End: refer to System Operation specifications.

It will be sent in about 1-minute intervals.

4.2. TCP/IP Protocol

TCP/IP Protocol is used for TCP Transmission.
Refer to the FLEX Connection Specification (TCP Transmission).

5. TRANSMISSION AND RECEPTION INFORMATION

5.1. Market Information System Transmission Information

5.1.1. Realtime Information

The table below shows the applicable information.

Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	Issue Realtime Information	TSE	Issue Realtime Message	<ul style="list-style-type: none"> • New information about quotes, executions, Trading volume or Turnover, etc.is sent (new). • The latest information of FLEX Standard (including WB) is sent (Backup Information). • The latest information of FLEX Full (including WB) is sent (Refreshment Information). • In FLEX Standard (including WB), information about Open, High, Low and Current Price, Trading Volume,etc.is sent throughout the day (All-Day Information).
		NSE		
		FSE		
		SSE		
2	Control Information	-	Control Message	[UDP Messages] <ul style="list-style-type: none"> • This is used for start/end of transmission information (Communication Control). • This is used for start/end of transmission of Backup Information (Backup Information Control). • This is used for start/end of transmission of Refreshment Information (Refreshment Information Control). • This is used for start/end of transmission of All-Day Information (All-Day Information Control). • Health Check Information is sent by about 1-minute intervals (Health Check Control).
				[TCP Messages] <ul style="list-style-type: none"> • Completion of Retransmission/Backup Information/Refreshment Information /All-Day Information/Issue Basic Information is sent (TCP Control). • Error Response Message for user's request is sent (TCP Control).

5.1.2. Index/Statistics Information

The table below shows the applicable information.

Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	Statistics Information	TSE	Statistics Message	Statistics Message is sent (Statistics Information).
2	Index Information	TSE	Index Message (excluding High-Speed Index)	Index Message is sent (Index Information).
3	Control Information	-	Control Message	[UDP Messages] <ul style="list-style-type: none"> • This is used for Starting/Ending Information for messages(Communication Control). • Health Check Information is sent by about 1-minute intervals (Health Check Control).
				[TCP Messages] <ul style="list-style-type: none"> • Completion of Retransmission is sent (TCP Control). • Error Response Message for user's request is sent (TCP Control).

5.1.3. ToSTNeT Information

The table below shows the applicable information.

Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	Issue Realtime Message (ToSTNeT)	TSE	Issue Realtime Message	ToSTNeT Information is sent (new).
2	Control Information	-	Control Message	[UDP Messages] <ul style="list-style-type: none"> • This is used for Starting/Ending Information for messages(Communication Control). • Health Check Information is sent by about 1-minute intervals (Health Check Control). [TCP Messages] <ul style="list-style-type: none"> • Completion of Retransmission is sent (TCP Control). • Error Response Message for user's request is sent (TCP Control).

5.1.4. High-Speed Index Information

The table below shows the applicable information.

Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	High-Speed Index Information	TSE	Index Message (High-Speed Index)	High-Speed Index Message is sent (High-Speed Index Information).
2	Control Information	-	Control Message	[UDP messages] <ul style="list-style-type: none"> • This is used for Starting/Ending Information for messages(Communication Control). • Health Check Information is sent by about 1-minute intervals (Health Check Control).

5.1.5. Issue basic information

The table below shows the applicable information.

Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	Base Price Information*1	TSE	Issue Basic Message (Base Price Information)	Base Price Information (including Newly Listed Issue) is sent (Issue Basic Message).
		NSE		
		FSE		
		SSE		
2	Issue Information*1	TSE	Issue Basic Message (Issue Information)	Issue Information (issue name, etc.) is sent (Issue Basic Message).
		NSE		
		FSE		
		SSE		
3	Multicast Group Number Information	TSE	Issue Basic Message (Multicast Group Number Information)	Information about relationship between Issue and Multicast Group Number is sent (Issue Basic Message).
		NSE		
		FSE		
		SSE		
4	Control Information	-	Control Message	[UDP Messages] <ul style="list-style-type: none"> • This is used for Starting/Ending Information for messages (Communication Control). • This is used for Starting/Ending Information when sending Issue Basic Information (Issue Basic Information Control). • Health Check Information is sent in about 1-minute intervals (Health Check Control).
				[TCP Messages] <ul style="list-style-type: none"> • This is used for Starting/Ending Information for messages (Communication Control). • Error Response Message for user's request is sent (TCP Control).

*1 Users connecting in FLEX Full and FLEX Full (WB) can also obtain Base Price Information and Issue Information from FLEX Standard.

For details on IP address, refer to "IP Address/Port Number/Throttling Value".

5.2. User Transmission Information

The table below shows the applicable information.

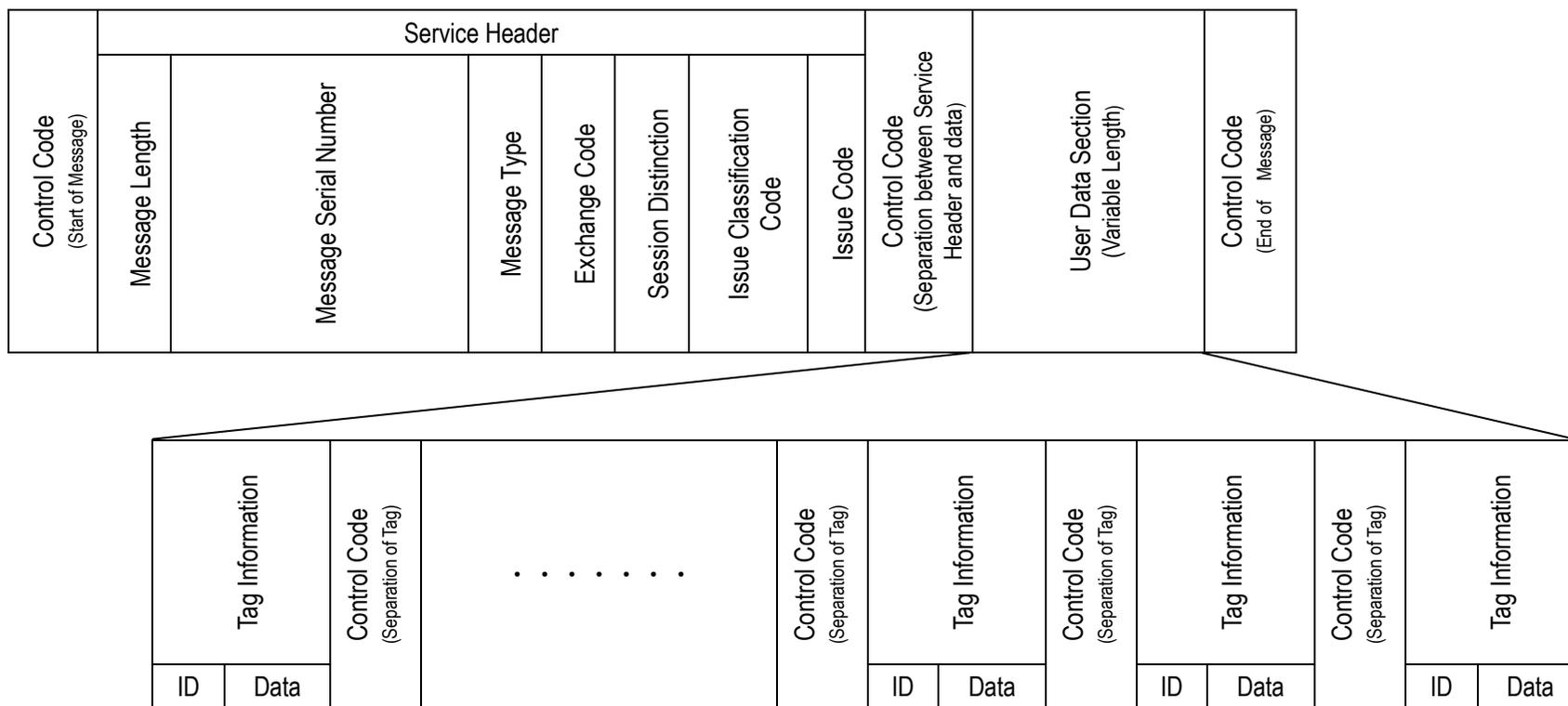
Item No	Sending and Receiving Information	Exchange	Message	Explanation
1	Control Information	-	Control Message	[TCP Messages] <ul style="list-style-type: none"> • User uses this message to make a request for Retransmission (TCP Control). • User uses this message to make a request for Backup Information (TCP Control). • User uses this message to make a request for Refreshment Information (TCP Control). • User uses this message to make a request for All-Day Information (TCP Control). • User uses this message to make a request for Issue Basic Information (TCP Control). • User uses this message to make a request for index Information (TCP Control).

5.3. Message Format

5.3.1. Message Basic Format

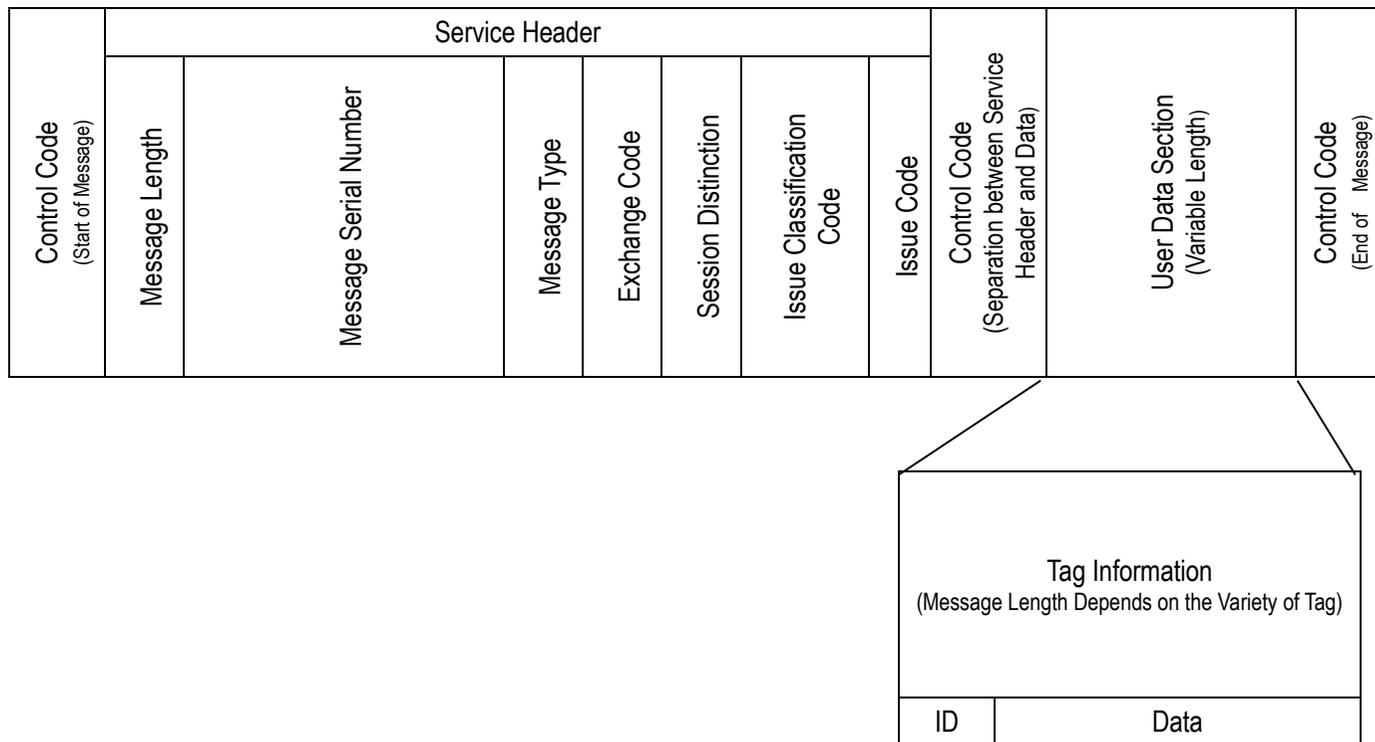
(1) Issue Realtime Message (Standard/Full), Index Message (High- Speed Index)

Format of Service Header is common in all messages, but User Data Section is variable because Data Section classified by the Tag compiled as much as it needs when a message is outputs. The figure below shows a basic format of user message.



(2) Issue Realtime Message (ToSTNeT), Issue Basic Message, Index Message (except for High-Speed Index), Statistics Message, Control Message

Service Header is common among each message, but in User Data Section, Tag corresponding to Message Type is set. Only one Tag is always set in User Data Section, so Message Length is fixed for all message types. The table below shows the basic format of user message.



5.3.2. Control Code

Following three codes (1byte) are used as Control Code.

<DC1>	0x11	Start/End of a message
<DC2>	0x12	Separation between Service Header and Data Section
<DC3>	0x13	Separation between Tag

The following is the format of a message using Control Code.

Example: <DC1>[Service Header]<DC2>[Tag 1]<DC3>[Tag 2]<DC3>[Tag 3]<DC1>

DC 1-3: Control Character of ASCII Code
(Device Control 1-3)

5.3.3. Service Header

Format of a Service Header is shown below.

Item No	Name	Byte	Type	Description
1	Message Length	6	C	Refer to (1).
2	Message Serial No.	11	C	Refer to (2).
3	Message Type	3	C	Refer to (3).
4	Exchange Code	1	C	Refer to (4).
5	Session Distinction	2	C	Refer to (5).
6	Issue Classification	4	C	Refer to (6).
7	Issue Code	12	C	Refer to (7).

(1) Message Length

Indicates the Total Length: Control Code (DC1 and DC2) + Service Header Section + User Data Section (including DC3). (right-align the data, suppress "space" in the leading space.)

(2) Message Serial Number

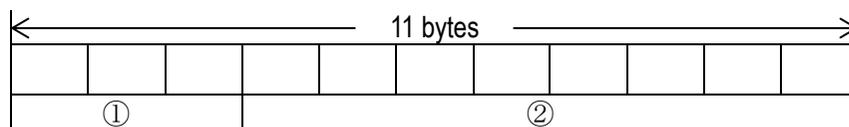
Message Serial Number is numbered from 1 on each Multicast Group. However multicast group number (Refer to 5.5 Relation between Multicast Group and Information to be provided) is set in the first to third byte.

Messages with the same Message Serial Number are sent at the same time through the two lines (line 1 and 2) from Market Information System.

Because of same number received via the two lines, users can maintain message sequence continuity even if one line fails.

Space is set in ② (In the figure below) in the case of Backup Information, Refreshment Information, All-Day Information, or Issue Basic Information, and requested serial number which was used for UDP message is set in Retransmission.

Because of multicast transmission, message can be lost, duplicated or overtaken. In such cases, the serial number of the messages will also be lost, duplicated, or overtaken.



- ① Multicast Group Number
- ② Numbered in sequence, beginning with 00000001

(3) Message Type

Large Classification indicates Message Type, and Medium Classification indicates details and other information. The table below shows the Message Type Code.

Item No.	Message Type	Message Type Code		Meaning	Direction		Service		
		Large Classification	Medium Classification		Up*1	Down*2	Stand ard	Full	High-S peed Index
1	Issue Realtime Message	1	00	New		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
			01	Backup		<input type="radio"/>	<input checked="" type="radio"/>		
			02	All-Day		<input type="radio"/>	<input checked="" type="radio"/>		
			03	Refreshment		<input type="radio"/>		<input checked="" type="radio"/>	
2	Statistics Message	2	00	-		<input type="radio"/>	<input checked="" type="radio"/>		
3	Index Message	3	00	Index		<input type="radio"/>	<input checked="" type="radio"/>		
			05	High-Speed Index		<input type="radio"/>			<input checked="" type="radio"/>
4	Issue Basic Message	4	00	Regular*3		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
			01	Special *4		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
5	Control Message	9	00	Communication Control		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
			02	Issue Information Control		<input type="radio"/>	<input checked="" type="radio"/>		
			04	All-Day Information Control		<input type="radio"/>	<input checked="" type="radio"/>		
			05	Health Check Control		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
			06	Stock Base Price Information Control		<input type="radio"/>	<input checked="" type="radio"/>		
			07	CB Base Price Information Control		<input type="radio"/>	<input checked="" type="radio"/>		
			08	Multicast Group Number Information Control		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
			09	Backup Information Control		<input type="radio"/>	<input checked="" type="radio"/>		
			10	Refreshment Information Control		<input type="radio"/>		<input checked="" type="radio"/>	
			90	TCP Transmission Control					
			(Request)		<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>		
			(Completion)			<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	
			(Error response)			<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	

*1 Sending from users to Market Information System.

*2 Sending from Market Information System to users.

*3 In the case of regular sending about Base Price Information, Issue Information or Multicast Group Number Information or sending changed Base Price Information.

*4 In the case of TSE judgment to send Base Price Information, Issue Information or Multicast Group Number Information except the *3 case.

(4) Exchange Code

This section is a space in Control Message. The table below shows Exchange Code.

Item No.	Exchange Code	Exchange	Remarks
1	1	Tokyo Stock Exchange	
2	3	Nagoya Stock Exchange	
3	6	Fukuoka Stock Exchange	
4	8	Sapporo Securities Exchange	
5	0	Other	Do not use for the time being

(5) Session Distinction Code

This is set in Issue Real-time Message (FLEX Standard, ToSTNeT) and Index Message (Index, High-Speed Index), but for Issue Realtime Message (FLEX Full), Issue Basic Message, Statistics Message and Control Message, spaces is set.

Session Distinction Code indicates the session in which the new information is generated.

The table below shows the Session Distinction Code. Setting value of Session Distinction Code in FLEX is different from that of Trading System. (In the case of morning session, "0(zero)" is set in the leading field (It is shown in two bytes.))

As for the High-Speed Index, the Session Distinction Code of Issue Realtime Message (FLEX Standard) which triggered the calculation of the index is set.

Message Type	Session Distinction Code		
	Morning Session	Afternoon Session	Out of Service
Issue Realtime Message (Standard)	01	02	-
Issue Realtime Message (Full)	Space	Space	-
Issue Realtime Message (ToSTNeT)	-	-	00
Statistics Message	Space	Space	—
Statistics Message (ToSTNeT)	-	-	Space
Index Message (Index)	01	02	-
Index Message (High-Speed Index)	01	02	-
Issue Basic Message (Base Price Information)	Space	Space	-
Issue Basic Message (Issue Information)	Space	Space	-
Issue Basic Message (Multicast Group Number Information)	Space	Space	-
Control Message	Space	Space	Space

(6) Issue Classification Code

This will be set in issue realtime message and issue basic message. In the case of Control, Index and Statistics Message, space is set.

The table below shows the Issue Classification Codes.

Item No.	Product Name	Issue Classification Code		Issue Classification	Remarks
		Large Classification	Medium Classification		
1	Stock-Related	01	11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27	First Section (Domestic Stock) *1 Second Section (Domestic Stock) First Section (Foreign Stock) *1*6 Mothers (Domestic Stock) *2 Domestic Beneficiary Certificate of Investment Trust *3 Foreign Beneficiary Certificate of Investment Trust *4 Preferred Share*8 Mothers (Foreign Stock) *5*6 Investment Certificate*9 Second Section (Foreign Stock) *6 TOKYO PRO Market (Domestic Stock) TOKYO PRO Market (Foreign Stock) JASDAQ Standard (Domestic Stock) JASDAQ Standard (Foreign Stock) JASDAQ Growth (Domestic Stock) JASDAQ Growth (Foreign Stock)	*1: Stocks traded on FSE (except Q Board) and SSE (except Ambitious) are applicable. (0111 is used for Domestic Stock, 0114 is used for Foreign Stock.) *2: For the NSE, this indicates Centrex; for the SSE, Ambitious; and for the FSE, Q Board. *3: Domestic Beneficiary Certificate of Investment Trust under the direction of trustor (trustee) and Domestic Exchange Traded Fund are included. *4: Foreign Exchange traded Fund and Foreign Exchange Traded Note are included. *5: For the NSE, this indicates Centrex. *6: Foreign Stock Trust Beneficiary Certificates are included. *7: It is not used for time being. *8: It is treated as Preferred Share if listed on TOKYO PRO Market *9: Including Venture Fund and Country Fund
2	CB-Related	02	11 13 14	CB SW*7 Exchangeable Bond	(NOTE) For Subscription Warrant Securities, Issue Classification is the same as Exercise Target Shares.

* About Test Issue refer to "5.4 Test Issue" on this Volume.

(7) Issue Code

A space is set in the case of Control Messages and Index Messages. The following shows the settings. FLEX Issue Code is set with right-align.

a. Stocks

			①					②			③

- ① Space
- ② Proper Name Code
- ③ Reserved Code *1

*1 Space is set on the reserved code of a Mother Stock.

b.

	①		②			③				④	

- ① Space
- ② Reserved Code
 - 4: SW
 - 8: Exchangeable bond (EB)
 - 9: CB
 - Space: Bond other than the above
- ③ Time Symbol
- ④ Proper Name Code

5.3.4. List of Service Header Settings

The following table shows how each item of the Service Header is set for each message types. About TCP Transmission, refer to TCP Transmission specifications.

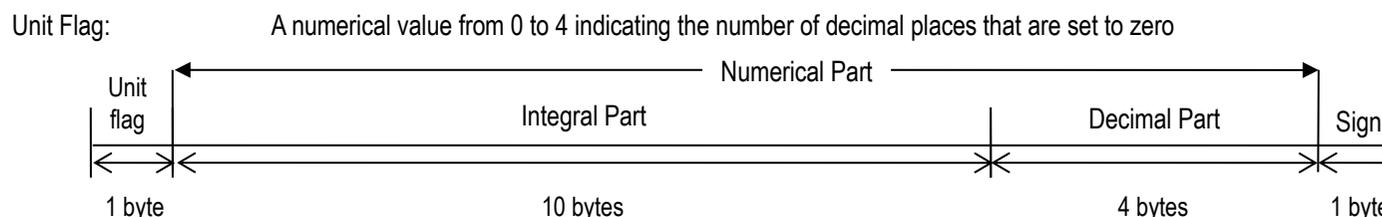
Message Type		Service Header							User Data
		Message Length	Message Sequence Number	Message Type	Exchange Code	Session Distinction	Issue Classification	Issue Code	Referent
Issue Realtime Message	Stock, CB	Variable	Numbering from 1 each Multicast Group (refer to 5.4).	100~103	1,3,6,8	01/02/Space(Full)	Refer to 5.3.3 (6)	Refer to 5.3.3 (7)	Realtime Message (Standard) Realtime Message (Full)
	ToSTNeT	Fixed*1		100,101	1	00	Refer to 5.3.3 (6)	Refer to 5.3.3 (7)	ToSTNeT
Statistics Message	Statistics	Fixed*1		200	1	Space	Space	Space	Index/Statistics Group
	ToSTNeT Statistics	Fixed*1		200	1	Space	Space	Space	ToSTNeT
Index Message	Index	Fixed*1		300	1	01/02	Space	Space	Index/Statistics Group
	High-Speed Index	Variable		305	1	01/02	Space	Space	High-speed Index Group
Issue Basic Message	Issue Information	Fixed*1		400,401	1,3,6,8	Space	Refer to 5.3.3 (6)	Refer to 5.3.3 (7)	Issue Information Group
	Base Price Information	Fixed*1		400,401	1,3,6,8	Space	Refer to 5.3.3 (6)	Refer to 5.3.3 (7)	Issue Information Group
	Multicast Group Number Information	Fixed*1		400,401	1,3,6,8	Space	Refer to 5.3.3 (6)	Refer to 5.3.3 (7)	Issue Information Group
Control Message		Fixed*1			900~910	Space	Space	Space	Space

*1 about specific bytes, refer to the specifications for Realtime Message (Standard), Realtime Message (Full), Index/Statistics Group, ToSTNeT, Issue Information Group.

5.3.5. General Rules for Data Sets

The general rules for the common part of data sets are described below.

(1) Price, Parity, VWAP, Index (16 bytes)



Spaces will be set if the numerical part are set to spaces.

Item No.	Unit Flag	Effective Digits of Decimal Point	Setting Value of Decimal Point
1	4	-	All the decimal places are zero.
2	3	To the first decimal place	The second, third and fourth decimal places are always zero.
3	2	To the second decimal place	The third and fourth decimal places are always zero.
4	1	To the third decimal place	The fourth decimal place is always zero.
5	0	To the fourth decimal place	All the decimal places are valid.

Numerical Part: As a rule, this part will be made up of a 10-digit integral part and a 4-digit decimal part (fixed point). When the tag contains a numerical value, the value is compensated for the units digit and below.

(Example) When the price is 0.05:

△△△△△△△△△△00500 (△ represents space; this applies to the descriptions hereafter)

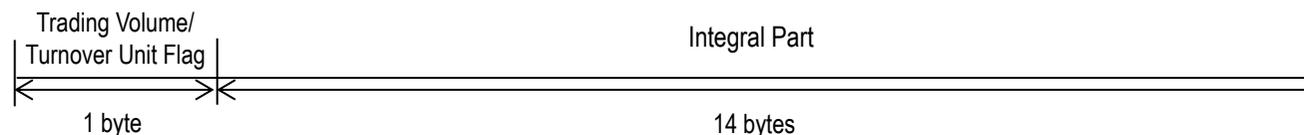
When information contains no numerical values, this part is all-space.

Integral Part: This part specifies a 10-digit integer.

Decimal Part: This part specifies the four decimal places.

Sign: '+' or space (when the Numerical Part is all-space, the sign will be space.)

(2) Trading Volume, Turnover (15 bytes)



Trading volume/ Turnover unit flag: This flag specifies the unit of the numerical value set in the Numerical Part . Unless the integral part exceeds 14 digits in length, "0" will always be set. Space will be set if the numerical part is space.

- 0:10⁰=1
- 1:10¹=10
- 2:10²=100
- ⋮
- 9:10⁹=1000000000

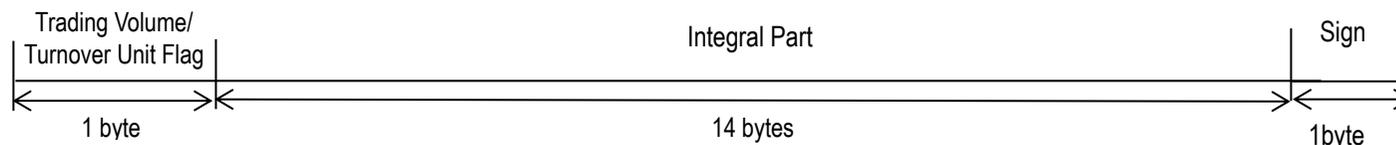
Numerical Part:

Specifies the 14 digits of an integer (no decimal points).

When information contains no numerical values, this part will be all-space.

Unit of Turnover in yen values will be yen. (For the units used for different types of Turnover, refer to "6.2. Details of Various Units" on this Volume.)

(3) Quote Quantity, Number of Order (16 bytes)

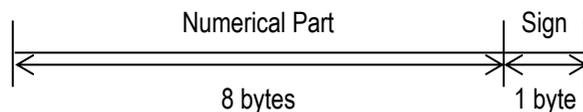


Trading Volume/ Turnover Unit Flag: The unit of the numerical value to be set in the integral part (variable). Space will be set when the numerical part is space.

Numerical Part: the 14 digits of an integer (no decimal points).
When information contains no numerical values, this part will be all-space.

Sign: '+' or 'space' (when the Numerical Part is all-space, the sign will be space.)

(4) Yield (9 bytes)

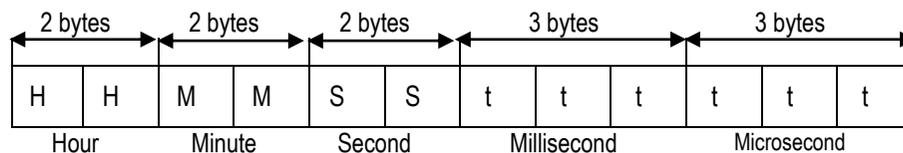


Numerical Part: Yield (%)
When the tag contains a numerical value, the value will be compensated for the units digit and below.
(Example) When the price is 0.05% (when the tag format includes 1/100%)
 △△△△△005

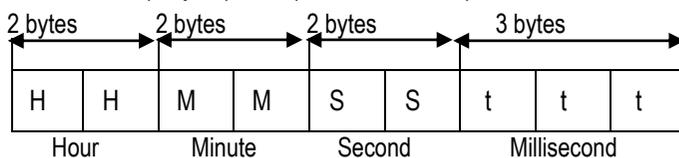
Sign: '+' or space (when the Numerical Part is all-space, the sign will be a space.) For units, refer to the formats of different tags.

(5) Time

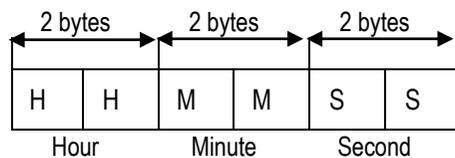
1. Microseconds (12 bytes) : HH (24-hour notation) MMSSttttt



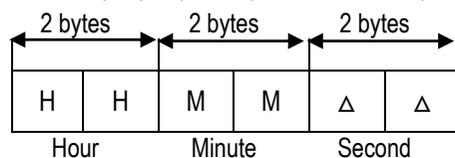
2. Milliseconds (9 bytes) : HH (24-hour notation) MMSSttt



3. Seconds (6 bytes) : HH (24-hour notation) MMSS



4. Minutes (6 bytes) : HH (24-hour notation) MM△△(*)



* △ represents space.

5.4. Test Issue

Use the test issue to confirm order input, execution and Market data transmission (FLEX) in the production environment. Test Issue of FLEX information are sent through a separate multicast group than those for real issues.

- Issue Realtime Message
- Base Price Information
- Multicast Group Number Information

Issue Information is not provided for the test issue. Index/Statistics information also do not include the test issue.

For TCP Transmission (Retransmission, Backup Information, Refresh Information, All-Day Information, Issue Basic Information), only Retransmission is supported.

The table below shows the setting value of Test Issue.

Item No.	Exchange Code	Issue Classification	Issue Code	Issue Name	Base Price*	Unit of Trading	Number of Tick size table
1	1 :Tokyo Stock Exchange	(Large Classification)01 (Medium Classification)99	2000	Test Issue1	200yen	1,000	01
2			3000	Test Issue2	8,000yen	100	01
3			4000	Test Issue3	200yen	1,000	03
4			5000	Test Issue4	8,000yen	100	03

*In principle, the closing price on the previous day would be the base price for the trading day. TSE would regularly return the setting value for Test Issues as above.

5.5. Relation between Multicast Group and Information to be provided

The table below shows the information of FLEX Standard/ Issue Basic Information/ Index Statistics/ ToSTNeT/ High-Speed Index Information to be provided in each group.

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
001 ~ 018	TSE: Issue realtime	Stock-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW	- 10 quotes above and below - Market order - OVER/UNDER	0111: First section(Domestic stock) 0112: Second section(Domestic stock) 0113: First section(Foreign stock) 0114: Mothers(Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0116: Foreign beneficiary certificate of investment trust 0117: Preferred share 0118: Mothers(Foreign stock) 0119: Investment certificate 0121: Second section(Foreign stock) 0122: TOKYO PRO Market (Domestic stock) 0123: TOKYO PRO Market (Foreign stock) 0124: JASDAQ Standard (Domestic stock) 0125: JASDAQ Standard (Foreign stock) 0126: JASDAQ Growth (Domestic stock) 0127: JASDAQ Growth (Foreign stock)
		CB-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW, PA, YI		0211: CB 0213: SW (*1) 0214: Exchangeable bond
021	TSE: Issue basic Info. (Base Price)	Stock-related	BP	--	Same as Multicast Group 001~018
		CB-related			

Common Items

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
022	NSE: Issue realtime	Stock-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW	<ul style="list-style-type: none"> - 10 quotes above and below - Market order - OVER/UNDER 	0111: First section(Domestic stock) 0112: Second section(Domestic stock) 0113: First section(Foreign stock) 0114: Centrex(Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0118: Centrex(Foreign stock) 0121: Second section(Foreign stock)
		CB-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW, PA, YI		0211: CB
023	NSE: Issue basic Info. (Base Price)	Stock-related	BP	--	Same as multicast group 022
		CB-related			
024	FSE: Issue realtime	Stock-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW	<ul style="list-style-type: none"> - 10 quotes above and below - Market order - OVER/UNDER 	0111: First section(Domestic stock) 0114: Q board(Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0119: Investment certificate
025	FSE: Issue basic Info. (Base Price)	Stock-related	BP	--	Same as multicast group 024
026	SSE: Issue realtime	Stock-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW	<ul style="list-style-type: none"> - 10 quotes above and below - Market order - OVER/UNDER 	0111: First section(Domestic stock) 0114: Ambitious(Domestic stock) 0115: Domestic beneficiary certificate of investment trust
027	SSE: Issue basic Info. (Base Price)	Stock-related	BP	--	Same as multicast group 026
032	TSE: Issue basic Info. (Issue Info.)	Stock-related	II	--	Same as Multicast Group 001~018
		CB-related			
033	NSE: Issue basic Info. (Issue Info.)	Stock-related	II	--	Same as multicast group 022
		CB-related			
034	FSE: Issue basic Info. (Issue Info.)	Stock-related	II	--	Same as multicast group 024

Common Items

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
035	SSE: Issue basic Info. (Issue Info.)	Stock-related	II	--	Same as multicast group 026
040	Multicast Group Number Information	--	MG	--	Whole issue classification(except 0199:Test Issue)
041	TSE: Issue realtime	ToSTNeT (Stock, CB)	TI, TM	--	0111: First section(Domestic stock) 0112: Second section(Domestic stock) 0113: First section(Foreign stock) 0114: Mothers(Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0116: Foreign beneficiary certificate of investment trust 0117: Preferred share 0118: Mothers(Foreign stock) 0119: Investment certificate 0121: Second section(Foreign stock) 0122: TOKYO PRO Market (Domestic stock) 0123: TOKYO PRO Market (Foreign stock) 0124: JASDAQ Standard (Domestic stock) 0125: JASDAQ Standard (Foreign stock) 0126: JASDAQ Growth (Domestic stock) 0127: JASDAQ Growth (Foreign stock) 0211: CB
042	TSE: Index, Statistics	Statistics	MV, YS, YW, AP, AW, AT, IY, NC, TV, TA, VS, TS, RO, RA, RC, RP	--	--
		Index	4I, SQ	--	--
046	TSE:High-Speed Index	High-speed index (TOPIX)	SN, SI, AI, BI	--	--
047		High-speed index (TOPIX Core30)			
048		High-speed index (TOPIX 500)			

Common Items

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
101	TSE: Issue realtime (Test Issue)	Stock-related	NO, ST, 4P, Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, QA, QM, QO, VL, VA, VW	- 10 quotes above and below - Market order - OVER/UNDER	0199: Test Issue
102	TSE: Issue basic Info. (Base Price for Test Issue)	Stock-related	BP	--	Same as multicast group 101
110	Multicast Group Number Information (Test Issue)	--	MG	--	Same as multicast group 101

*1: SW is not used for time being.

The table below shows the information of FLEX Full to be provided in each group.

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
051 ~ 068	TSE: Issue realtime	Stock-related	NO, ST, 1P, VL, VA, QS, QB, SC, BC	- Ask Quote - Bid Quote - Market order - Effective only during the Closing Auction	0111: First section (Domestic stock) 0112: Second section (Domestic stock) 0113: First section (Foreign stock) 0114: Mothers (Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0116: Foreign beneficiary certificate of investment trust 0117: Preferred share 0118: Mothers (Foreign stock) 0119: Investment certificate 0121: Second section (Foreign stock) 0122: TOKYO PRO Market (Domestic stock) 0123: TOKYO PRO Market (Foreign stock) 0124: JASDAQ Standard (Domestic stock) 0125: JASDAQ Standard (Foreign stock) 0126: JASDAQ Growth (Domestic stock) 0127: JASDAQ Growth (Foreign stock)
		CB-related	NO, ST, 1P, VL, VA, QS, QB	- Ask Quote - Bid Quote - Market order	0211: CB 0213: SW (*1) 0214: Exchangeable bond
072	NSE: Issue realtime	Stock-related	NO, ST, 1P, VL, VA, QS, QB, SC, BC	- Ask Quote - Bid Quote - Market order - Effective only during the Closing Auction	0111: First section (Domestic stock) 0112: Second section (Domestic stock) 0113: First section (Foreign stock) 0114: Centrex (Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0118: Centrex (Foreign stock) 0121: Second section (Foreign stock)
		CB-related	NO, ST, 1P, VL, VA, QS, QB	- Ask Quote - Bid Quote - Market order	0211: CB

Common Items

No.	Classification of information to be provided	Type of information to be provided	Variety of tag to be provided	Quote	Issue Classification
074	FSE: Issue realtime	Stock-related	NO, ST, 1P, VL, VA, QS, QB, SC, BC	- Ask Quote - Bid Quote - Market order - Effective only during the Closing Auction	0111: First section (Domestic stock) 0114: Q board (Domestic stock) 0115: Domestic beneficiary certificate of investment trust 0119: Investment certificate
076	SSE: Issue realtime	Stock-related	NO, ST, 1P, VL, VA, QS, QB, SC, BC	- Ask Quote - Bid Quote - Market order - Effective only during the Closing Auction	0111: First section (Domestic stock) 0114: Ambitious (Domestic stock) 0115: Domestic beneficiary certificate of investment trust
090	Multicast Group Number Information	--	MG	--	Whole issue classification (except 0199:Test Issue)
111	TSE: Issue realtime (Test Issue)	Stock-related	NO, ST, 1P, VL, VA, QS, QB, SC, BC	- Ask Quote - Bid Quote - Market order - Effective only during the Closing Auction	0199: Test Issue
120	Multicast Group Number Information (Test Issue)	--	MG	--	Same as multicast group 111

*1: SW is not used for time being.

6. APPENDIX

6.1. Industry Code

Item No.	Industry Code	Industry Classification	Remarks	Item No.	Industry Code	Industry Classification	Remarks
1	0050	Fishery, Agriculture & Forestry		25	5250	Information & Communication	
2	1050	Mining		26	6050	Wholesale Trade	
3	2050	Construction		27	6100	Retail Trade	
4	3050	Foods		28	7050	Banks	
5	3100	Textiles & Apparels		29	7100	Securities & Commodity Futures	
6	3150	Pulp & Paper		30	7150	Insurance	
7	3200	Chemicals		31	7200	Other Financing Business	
8	3250	Pharmaceuticals		32	8050	Real Estate	
9	3300	Oil & Coal Products		33	9050	Services	
10	3350	Rubber Products		(Notes) Besides the abovementioned industry codes, (9999) is used for issues which are difficult to be classified in terms of Industry Classification System by treating them as "Others".			
11	3400	Glass & Ceramics Products					
12	3450	Iron & Steel					
13	3500	Nonferrous Metals					
14	3550	Metal Products					
15	3600	Machinery					
16	3650	Electric Appliances					
17	3700	Transportation Equipment					
18	3750	Precision Instruments					
19	3800	Other Products					
20	4050	Electric Power & Gas					
21	5050	Land Transportation					
22	5100	Marine Transportation					
23	5150	Air Transportation					
24	5200	Warehouse & Harbor Transportation Services					

6.2. Details of Various Units

6.2.1. Unit of various prices and turnover

Details for unit of various prices and turnover by Issue Classification and index type are shown below. (Trade sum unit is all one yen).

Item No.	Issue Classification Code	Issue Classification/Index Type	Price (Unit)	Quantity (Unit)	Remarks
1	0111	First Section (Domestic Stock)	Based on Tick Size Table No. For details, refer to 6.2.2 Tick Size Table No.	1 share	
2	0112	Second Section (Domestic Stock)		1 share	
3	0113	First Section (Foreign Stock)		1 share	
4	0114	Mothers (Domestic Stock)		1 share	
5	0115	Domestic Beneficiary Certificate of Investment		1 unit	
6	0116	Foreign Beneficiary Certificate of Investment Trust		1 unit	
7	0117	Preferred Stock		1 unit	
8	0118	Mothers (Foreign Stock)		1 share	
9	0119	Investment Certificate		1 unit	
10	0121	Second Section (Foreign Stock)		1 share	
11	0122	TOKYO PRO Market (Domestic Stock)		1 share	
12	0123	TOKYO PRO Market (Foreign Stock)		1 share	
13	0124	JASDAQ Standard (Domestic Stock)		1 share	
14	0125	JASDAQ Standard (Foreign Stock)		1 share	
15	0126	JASDAQ Growth (Domestic Stock)		1 share	
16	0127	JASDAQ Growth (Foreign Stock)		1 share	
17	0211	CB	1 yen	1 yen	
18	0213	SW	1 point	1 security	

Common Items

Item No.	Issue Classification Code	Issue Classification/Index Type	Price (Unit)	Quantity (Unit)	Remarks
19	0214	Exchangeable Bond	1 yen	1 security	
20	—	Index	1 yen or 1 point	—	
21	—	High-Speed Index	1 point	—	

6.2.2. Tick Size Table No.

The following Tick Size is applied based on the "Tick Size Table No."

If Value of "Tick Size Table No." is the same, the same Tick size is used at each exchange.

(1)Tokyo Stock Exchange

Issue classification code (Large classification)	Price per share (yen)	Tick Size	
		Value of "Tick Size Table No."	
		01	03
Stock (01)	1,000 yen up to	1 yen	0.1 yen
	1,000 yen over ~ 3,000 yen "	1 yen	0.5 yen
	3,000 yen " ~ 5,000 yen "	5 yen	1 yen
	5,000 yen " ~ 10,000 yen "	10 yen	1 yen
	10,000 yen " ~ 30,000 yen "	10 yen	5 yen
	30,000 yen " ~ 50,000 yen "	50 yen	10 yen
	50,000 yen " ~ 100,000 yen "	100 yen	10 yen
	100,000 yen " ~ 300,000 yen "	100 yen	50 yen
	300,000 yen " ~ 500,000 yen "	500 yen	100 yen
	500,000 yen " ~ 1,000,000 yen "	1,000 yen	100 yen
	1,000,000 yen " ~ 3,000,000 yen "	1,000 yen	500 yen
	3,000,000 yen " ~ 5,000,000 yen "	5,000 yen	1,000 yen
	5,000,000 yen " ~ 10,000,000 yen "	10,000 yen	1,000 yen
	10,000,000 yen " ~ 30,000,000 yen "	10,000 yen	5,000 yen
	30,000,000 yen " ~ 50,000,000 yen "	50,000 yen	10,000 yen
50,000,000 yen "	100,000 yen	10,000 yen	
CB (02)	—	0.05 yen	No setting

(2) Nagoya Stock Exchange

Same as "(1) Tokyo Stock Exchange"

(3) Fukuoka Stock Exchange

Issue classification code (Large classification)	Price per share (yen)	Tick Size
		Value of "Tick Size Table No."
		01
Stock (01)	3,000 yen up to	1 yen
	3,000 yen over ~ 5,000 yen "	5 yen
	5,000 yen " ~ 30,000 yen "	10 yen
	30,000 yen " ~ 50,000 yen	50 yen
	50,000 yen " ~ 300,000 yen "	100 yen
	300,000 yen " ~ 500,000 yen "	500 yen
	500,000 yen " ~ 3,000,000 yen "	1,000 yen
	3,000,000 yen " ~ 5,000,000 yen "	5,000 yen
	5,000,000 yen " ~ 30,000,000 yen "	10,000 yen
	30,000,000 yen " ~ 50,000,000 yen "	50,000 yen
50,000,000 yen " ~ "	100,000 yen	

(4) Sapporo Securities Exchange

Same as "(3) Fukuoka Stock Exchange"

6.3. Information to be dealt with as Provisional Matters

Table of Contents

- 6.3.1 Nikkei 300 Stock Index Listed Fund Beneficiary Certificate Information
- 6.3.2 Foreign Securities Investment Trust Beneficiary Certificate Information
- 6.3.3 Tracking Stocks Information
- 6.3.4 Exchange Traded Funds Information
- 6.3.5 Depositary Receipt Information
- 6.3.6 REIT subscription warrant securities Information concerning Real Estate Investment Trusts Certificate
- 6.3.7 Infrastructure Fund Market Information

6.3.1. Nikkei 300 Stock Index Listed Fund Beneficiary Certificate Information

For Nikkei 300 Stock Index Listed Fund Beneficiary Certificates, Issue Classification Code will be set to Domestic Securities Investment Trust Beneficiary Certificate.

(1) Issue Code, etc.

The issues code, New Securities Codes of issues, and others decided by the Securities Identification Code Committee will be used.

a. Issue Code

Refer to "5.3.3 Service Header (7)" on this Volume.

b. New Securities Codes of Issues

<Example>

J	P	3	0	1	3	1	9	0	0	0	8
(a)	(b)	(c)					(d)			(e)	

- (a) Nation Name Code ... "JP" (2 digits)
- (b) Attribute Code ... "3" (1 digit)
- (c) Specific Name Code ... (5 digits)
- (d) Securities Type Code ... "000" (3 digits)
- (e) Check Digit ... (1 digit)

- c. Industry Code ... "9999"
- d. Identification Code for Securities Type, etc. ... "B1"
- e. ISIN flag ... "1"

(2) Output Information and Output timing

Same as Domestic Stock, but Turnover Unit will be "instrument".

(3) Treatment at Statistical Information

Statistical Information does not include the concerned issues.

6.3.2. Foreign Securities Investment Trust Beneficiary Certificate Information

As to Foreign Securities Investment Trust Beneficiary Certificate, Issue Classification Code will be set up for Foreign Securities Investment Trust Beneficiary Certificate. Foreign Exchange Traded Fund and Foreign Exchange Traded Note are treated as Exchange Traded Funds Information.

(1) Issue Code, etc.

- | | |
|--|--|
| a. Issue Code | ... The issue code to be decided by the Securities Identification Code Committee will be used. |
| b. New Securities Codes of Issues | ... The new securities codes of issues to be decided by the Securities Identification Code Committee will be used. |
| c. Industry Code | ... Industry code is "9999". |
| d. Identification Code for Securities Type, etc. | ... Identification code for securities type, etc. is "B3" |
| e. ISIN flag | ... ISIN flag is space. |

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Foreign Stock.
Issue Basic Message	

(3) Contents of Output Information

- Turnover Unit will be "instrument".
- Ex earning distribution will be treated as ex dividend.
- Home Country Market Information will be treated as unavailable.

(4) Treatment at Statistical Information

Same as First Section (Foreign Stock)

6.3.3. Tracking Stocks Information

As to Tracking stocks, similar treatment to preferred stock will be conducted.

(1) Issue Code, etc.

- | | |
|--|--|
| a. Issue Code | ... The Issue Code to be decided by Securities Identification Code Committee will be used. |
| b. New Securities Codes of Issues | ... The New Securities Codes of issues to be decided by Securities Identification Code Committee will be used. |
| c. Industry Code | ... This is same as Common Stock issued by Listed Company. |
| d. Identification Code for Securities Type, etc. | ... Identification code for securities type, etc is "08". |
| e. ISIN Flag | ... ISIN flag is "1". |

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Preferred Stock.
Issue Basic Message	

(3) Contents of Output Information

Same as Preferred Stock

(4) Treatment at Statistical Information

Same as Preferred Stock

6.3.4. Exchange Traded Funds Information

As to Exchange Traded Funds, Issue Classification Code will be set up for Domestic Security Investment Stock Beneficiary Security and Foreign Beneficiary Certificate of Investment Trust.

(1) Issue Code, etc.

- a. Issue Code ... The issue code to be decided by the Securities Identification Code Committee will be used.
- b. New Securities Codes of Issues ... The new securities codes of issues to be decided by the Securities Identification Code Committee will be used.
- c. Industry Code ... "9999"
- d. Identification Code for Securities Type, etc. ... "B1" or "B3".
- e. ISIN Flag ... "1"

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Domestic Stock and Foreign Stock.
Issue Basic Message	

(3) Contents of Output Information

Same as Domestic Stock and Foreign Stock, but Turnover Unit will be "instrument".

(4) Treatment at Statistical Information

Statistical Information does not include the concerned issues.

6.3.5. Depository Receipt Information

As to depository receipt, similar treatment to foreign stock will be conducted. In addition, quantity unit will be replaced stock with "securities".

(1) Issue Code, etc.

- | | |
|--|--|
| a. Issue Code | ... The Issue Code to be decided by the Securities Identification Code Committee will be used. |
| b. New Securities Codes of Issues | ... The New Securities Codes of Issues to be decided by the Securities Identification Code Committee will be used. |
| c. Industry Code | ... Same as Foreign Stock. |
| d. Identification Code for Securities Type, etc. | ... Same as Foreign Stock. |
| e. ISIN Flag | ... ISIN flag is "space". |

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Foreign Stock.
Issue Basic Message	

(3) Contents of Output Information

Same as Foreign Stock.

(4) Treatment at Statistical Information

Same as Foreign Stock.

6.3.6. REIT subscription warrant securities Information concerning Real Estate Investment Trusts Certificate

The Issue Classification Code for Real Estate Investment Trusts Certificate is "0119".

(1) Issue Code, etc.

- | | |
|--|--|
| a. Issue Code | ... The Issue Code to be decided by the Securities Identification Code Committee will be used. |
| b. New Securities Codes of Issues | ... The New Securities Codes of Issues to be decided by the Securities Identification Code Committee will be used. |
| c. Industry Code | ... "9999" |
| d. Identification Code for Securities Type, etc. | ... "07" |
| e. ISIN Flag | ... "1" |

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Real Estate Investment Trusts Certificate.
Issue Basic Message	

(3) Contents of Output Information

Same as Real Estate Investment Trusts Certificate.

(4) Treatment at Statistical Information

Same as Real Estate Investment Trusts Certificate(The issues are not covered by the computation).

6.3.7. Infrastructure Fund Market Information

(1) Issue Code, etc.

- a. Issue Code ... The Issue Code to be decided by the Securities Identification Code Committee will be used.
- b. New Securities Codes of Issues ... The New Securities Codes of Issues to be decided by the Securities Identification Code Committee will be used.
- c. Industry Code ... "9999"

Identification Code for Securities Type	Issue Classification	ISIN Flag
B1(Domestic beneficiary certificate of investment trust)	0115(Domestic Beneficiary Certificate of Investment Trust)	1
B2(Domestic investment certificate)	0119(Investment certificate)	1
B3(Foreign beneficiary certificate of investment trust)	0116(Foreign Beneficiary Certificate of Investment Trust)	1 or Space*
B4(Foreign investment certificate)	0119(Investment certificate)	1 or Space*

* "1" will be set if the issue is Japan Depository Receipt, otherwise "space" will be set.

(2) Output Information and Output Timing

Output Information	Output Timing
Issue Realtime Message	Same as Domestic Stock and Foreign Stock.
Issue Basic Message	

(3) Contents of Output Information

Same as Domestic Stock and Foreign Stock, but Turnover Unit will be "instrument".

(4) Treatment at Statistical Information

Statistical Information does not include the concerned issues.

6.4. Output order of various information when Backup/ All-Day Information/ Refreshment/ Issue Basic Message (Base Price Information, Issue Information and Multicast Group Number Information) is outputted.

When Backup Information (except ToSTNet Information) /All-Day Information/Refreshment Information /Issue Basic Information of all issues are sent, they are in ascending order following code shown below.

№1 Exchange*1		№2 Issue Classification		№3
1	TSE	0111	First Section (Domestic Stock)	Issue Code
		0112	Second Section (Domestic Stock)	
3	NSE	0113	First Section (Foreign Stock)	
		0114	Mothers (Domestic Stock)	
Centrex (Domestic Stock)				
Q Board (Domestic Stock)				
Ambitious (Domestic Stock)				
8	SSE	0115	Domestic Beneficiary Certificate of Investment Trust	
		0116	Foreign Beneficiary Certificate of Investment Trust	
		0117	Preferred Stock	
		0118	Mothers (Foreign Stock)	
			Centrex(Foreign Stock)	
		0119	Investment Certificate	
		0121	Second Section (Foreign Stock)	
		0122	TOKYO PRO Market (Domestic Stock)	
		0123	TOKYO PRO Market (Foreign Stock)	
		0124	JASDAQ Standard (Domestic Stock)	
		0125	JASDAQ Standard (Foreign Stock)	
		0126	JASDAQ Growth (Domestic Stock)	
		0127	JASDAQ Growth (Foreign Stock)	
		0211	CB	Issue Code
		0213	SW	
		0214	Exchangeable Bonds	

*1 Each information is sent based on the unit of Multicast Group which is divided into each exchange.