Johannesburg Stock Exchange

Trading and Information Solution

JSE Specification Document

Volume 08 – Regulatory News Feed (FAST – UDP)

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1 DOCUMENT CONTROL

1.1 Table of Contents

1.2 Document Information

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22 July 2011	1.00	Initial Draft
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30 July 2013	2.00	Inclusion of sequence numbers on Heartbeat message
29 February 2016	3.00	Integrated Trading and Clearing Project changes
27 February 2019	3.01	Fix Message (Application Message) Tag 149 description update

1.4 References

FAST 1.1 Session Control Protocol Specification
FIX 5.0 (Service Pack 2) Specification

1.5 Contact Details

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1.6 Definitions, Acronyms and Abbreviations

Client	A Recipient connected to the Replay channel of the regulatory news feed. The Replay channel is sufficient to recover messages missed on the real time channel.
FAST	The JSE implementation will be based on Version 1.1 of the Session Control Protocol of the FIX Adapted for Streaming Protocol specification. FAST is a binary encoding method for message orientated data streams. The encoding method reduces the size of data streams by removing redundant data, thus leveraging data affinities of a stream. The remaining data in the stream is then sterilized with respect to a control structure (a template) through binary encoding in the template.
FIX	Version 5.0 (Service Pack 2) of the Financial Information Exchange Protocol.
FIX Session	A bi-directional stream of ordered messages between the client and server within a continuous sequence number series.
JSE	Johannesburg Stock Exchange
NSX	Namibian Stock Exchange
Recipient	A subscriber to the regulatory news feed.
Server	The FIX Regulatory News Gateway at the JSE for the JSE and NSX markets.
SENS	Stock Exchange News Service of the JSE
NENS	Namibia Exchange News Service of the NSX

2 OVERVIEW

JSE market data will be published through various services each service disseminating many different types of market data.

One of such services will publish regulatory news to its Recipients.

The JSE will obtain news from the JSE SENS/NENS systems and will disseminate the news related to the markets on 2 different FAST Regulatory News Gateways channels for the JSE and NSX markets.

In order to obtain news published for the JSE and NSX, the Server will connect to two incoming feeds, SENS and NENS.

The feed is a multicast service based on the technology and industry standards UDP, IPv4, FAST and FIX. The application messages are defined using the FIX 5.0 (Service Pack 2) standard and comply with the best practices outlined by the FIX Market Data Working Group. The data feed is transmitted in the FAST v1.1 encoding method to minimize bandwidth and reduce latency and conforms to Level 1 of the FAST 1.1 specification.

3 FAST GATEWAY SERVICE DESCRIPTION

3.1 System Architecture

Each FAST Regulatory News Gateway includes a multicast Real-Time channel for the dissemination of real-time news.

A TCP Replay channel will be available per each FAST gateway. A Recipient may connect to the Replay channel to recover from any data losses occurred.

3.1.1 Real-Time Channel

The Real-Time Channel is the primary means of disseminating regulatory news. Real-time news updates supported by the feed are available on this multicast channel.

The Real-time channel will disseminate the regulatory news updates via News message.

The Server will use the Heartbeat message to exercise the communication line during periods of inactivity. A Heartbeat will be sent every HB_INTERVAL *<20>* seconds when the Real-Time channel is inactive.

Recipients have access to two identically sequenced Real-Time feeds; one from the main site (Feed A) and one from the backup feed (Feed B). It is recommended that Recipients process both feeds and arbitrate between them to minimise the probability of a data loss.

3.1.2 Replay Channel

The TCP Replay channel permits Recipients to request the retransmission of a limited number of messages already published on the Real-Time channel. This channel may be used by Recipients to recover from a small data loss.

The Replay channel supports the retransmission of the last CACHE_SIZE *<20,000>* messages published on the Real-Time channel. The channel does not support the retransmission of messages published from previous trading days.

All messages sent by the Server are transfer encoded in terms of the FAST protocol. While the application messages (e.g. News) sent by the Server is field encoded, the administrative messages it sends (e.g. Logon, Heartbeat, etc.) are not. All messages (i.e. both administrative and application) initiated by the client should be transfer encoded but not field encoded.

While a Replay channel is available from the backup feed, it will only be activated in the unlikely event of an outage at the main site.

3.2 Overview of a Trading Day

Each news update obtained from the two incoming feeds, SENS and NENS will be disseminated via the News message. Each News message will contain the news headline on the Encoded Headline (359) field and the details of one or more companies the news is related to. Details of the companies involved will be disseminated in the NoRelatedSym (146) repeating group.

The actual news text published by the Server will be disseminated in the same News message in the NoLinesOfText (33) repeating block. The News texts will be available in the form of NewsML with the embedded windows 1252 character set wrapped in the FIX field.

3.3 News Messages Spanning Across Multiple Packets

The length of the News message could be larger than the Maximum Transmission Unit (MTU) of a packet. Therefore, a single News message could span across multiple packets.

Each News message spanning across multiple packets will contain a NewsID (1472) - unique identifier of the announcement, NewsCounter (1689) number of packets the News message will span across and NewsSequence (1688) the unique sequence number of the News message sharing the same NewsID.

Upon receiving multiple News messages which span across multiple packets the recipients may collate all the News messages available under the same NewsID to interpret the news on their side. However, the Recipients should wait till they receive the number of News messages which is specified in NewsCounter (1689).

4 CONNECTIVITY

4.1 Transmission Standards

4.1.1 Multicast Channel

The Real-Time channel utilises IP version 4 (IPv4) over UDP and Ethernet standards. UDP header information will be as defined in the IETF RFC 791 (IPv4) and RFC 768 (UDP) transmission protocol standards. One or more FAST encoded FIX messages may be included in a single UDP packet.

4.1.2 Point-to-Point Channel

The Replay channel utilises IP version 4 (IPv4) over TCP and Ethernet standards. TCP header information will be as defined in the IETF RFC 793 standard and IPv4 will be as defined in the RFC 791 standard.

4.2 Application IDs

4.2.1 Server

The Server ApplIDs for the Real-Time and Replay channels of different News Gateways are given below.

Regulatory News Gateway	Real-Time Channel		Replay Channel	
	Primary	Secondary	Primary	Secondary
SENS	*JSESENSP*	*JSESENSS*	*JSESENSP*	*JSESENSS*
NENS	*NSXSENSP*	*NSXSENSS*	*NSXSENSP*	*NSXSENSS*

4.2.2 Clients

The Interface User ID (CompID) and IP address of each client wishing to connect to the Replay channel must be registered with JSE before communications can begin. An Interface User ID (CompID) may, at any particular time, only be logged into one TCP channel across all Regulatory News Gateways.

4.2.2.1 Passwords

Each new Interface User ID (CompID) will be assigned a password on registration. Clients must change their password on first use to one of their choosing via the Logon message. The acceptance of a Logon request indicates that the new password has been accepted. The new password will, if accepted, be effective for subsequent logins.

In terms of the password policy of JSE, the password of each Interface User ID (CompID) should be changed at least every *<30>* days. If not, the password will expire and the client will be unable to login to the Server. In such a case, the client should contact the JSE to have its password reset. The SessionStatus (1409) of the Server's Logon message will be Password Due to Expire (2) for the last *<5>* days of a password's validity period.

4.3 Production IP Addresses and Ports

The production IP addresses and ports of the Real-Time and Replay channels for each Regulatory News Gateway available in the system. The IP addresses and ports of the production servers will be detailed in a consolidated JSE Production Market Facing Client document.

5 RECOVERY

5.1 Recipient Failures

It is recommended that Recipients process both Real-Time feeds (i.e. Feed A and Feed B) to minimise the probability of a data loss.

A message loss can be detected using the ApplSeqNum (1181) included in each message on the Real-Time channel. If a gap in sequence numbers is detected, the Recipient should assume that some or all of the news messages maintained on its systems are incorrect and initiate the recovery process outlined below.

5.1.1 Replay Channel

The TCP Replay channel should be used by recipients to recover from a small data loss. It permits Recipients to request the retransmission of a limited number of messages already published on the Real-Time channel. The channel supports the retransmission of the last CACHE_SIZE *<20,000>* messages published on the Real-Time channel.

Each Interface User ID (CompID) may login to the Replay channel of a particular Regulatory News Gateway up to LOGIN_LIMIT *<5>* times each day. The total number of Application Message Requests that a client may send on the Replay channel of a particular Regulatory News Gateway is also limited to APP_REQ_LIMIT *<20>* times each day per interface user.

Recipients may request JSE to reset its login and request counts. This feature is intended to help manage an emergency situation and should not be relied upon as a normal practice.

If a client submits multiple requests on the Replay channel, they will be processed serially (i.e. one at a time). Active requests of multiple clients will be served on a FIFO basis.

A client may cancel an outstanding request via the Application Message Request message. Such a message should include an ApplReqType (1347) of Cancel Retransmission (5) and the ApplReqID (1346) of the request to be cancelled. While the Server will not confirm a successful cancellation, it will transmit a Business Message Reject if the request is rejected. A cancellation request submitted by a client will take priority over all the requests of the client being queued.

If a cancellation request is received for an Application Message Request message which has already started processing, then a Business Message Reject will be sent with the Reject Reason 1 (Unknown ID) to reject the request.

All messages sent by the Server are transfer encoded in terms of the FAST protocol. While all application messages sent by the Server (e.g. News) are field encoded, the administrative messages it sends (e.g. Logon etc.) are not. All messages (i.e. both administrative and application) initiated by the client should be transfer encoded but not field encoded.

5.1.1.1 Establishing a Connection

The client should use the relevant IP address and port to establish a TCP/IP session with the Replay channel. The client should initiate a session by sending the Logon message. The client should identify itself specifying its Interface User ID (CompID) in the Username (553) field. The Server will validate the Interface User ID (CompID), password and IP address of the client.

Once the client is authenticated, the Server will respond with a Logon message. The SessionStatus (1409) of this message will be Session Active (0).

If a logon attempt fails because of an invalid Interface User ID (CompID), invalid password or IP address, the Server will break the TCP/IP connection with the client without sending a Logout message.

If a logon attempt fails because of an expired password, a locked Interface User ID (CompID) or if logins are not currently permitted, the Server will send a Logout message and then break the TCP/IP connection with the client.

Each Interface User ID (CompID) may login to the Replay channel of a particular Regulatory News Gateway up to a LOGIN_LIMIT <5> times each day. Once this limit is reached, the Server will reject any additional logon attempt with a Logout and then break the TCP/IP connection with the client. The SessionStatus (1409) of such a Logout message will be Logons Not Allowed (7).

If an Application Message Request is not received within INACTIVITY_TIME <5> seconds of a successful logon, the Server will send a Logout message and then break the TCP/IP connection with the client. The Text (58) field of Logout will contain the value “c” (i.e. Logout Due to Inactivity).

Each time the TCP/IP connection is terminated, it will increment the counter of the maximum amount of times each CompID may login to the Replay channel.

A second attempt to log in by an already logged in client will be rejected via a Business Message Reject.

5.1.1.2 Heartbeats

The Server will not send heartbeats on the Replay channel during periods of inactivity.

5.1.1.3 Requesting Missed Messages

The client is expected to transmit an Application Message Request within INACTIVITY_TIME <5> seconds of establishing the FIX connection.

The message should include the ApplID identifier of the Real-Time channel to which the retransmission request applies along with the list of messages to be resent. The ApplBegSeqNum (1182) and ApplEndSeqNum (1183) fields should be used to specify the ApplSeqNum (1181) of the first and last message in the range to be resent.

The Application Message Request can be used in four modes:

(i) To request a single message. The ApplBegSeqNum (1182) and ApplEndSeqNum (1183) should both be the message sequence number of the missed message.

(ii) To request a specific range of messages. The ApplBegSeqNum (1182) should be the message sequence number of the first message of the range and the ApplEndSeqNum (1183) should be that of the last message of the range.

(iii) To request all messages after a particular message. The ApplBegSeqNum (1182) should be the message sequence number immediately after that of the last processed message and the ApplEndSeqNum (1183) should be zero (0).

(iv) To request all messages available. The ApplBegSeqNum (1182) should be one (1) and the ApplEndSeqNum (1183) should be zero (0).

The retransmission request will be serviced from the Server’s cache of the last CACHE_SIZE <10,000> messages published on the Real-Time channel. If the retransmission request includes one or more messages that are not in the Server’s cache, the entire request will be rejected and no messages will be retransmitted.

5.1.1.4 Response to a Retransmission Request

The Server will respond to the Application Message Request with an Application Message Request Ack to indicate whether the retransmission request is successful or not. If the request is unsuccessful, the reason will be specified in the field ApplResponseType (1348).

The total number of Application Message Requests that a client may send on the Replay channel of a particular Regulatory News Gateway is limited each day. Once this limit is reached, the Server will reject any additional request via a Business Message Reject.

In the case of a successful retransmission request, the Server will transmit the requested messages immediately after the Application Message Request Ack. The message sequence

number from the Real-Time channel will be included in the ApplSeqNum (1181) field of each retransmitted message. Once the last of these messages is sent, the Server will indicate that the retransmission is complete via an Application Message Report.

5.1.1.5 Termination of the Connection

If the client does not terminate the connection within INACTIVITY_TIME <5> seconds of the transmission of the last missed message, the Server will send a Logout message and then break the TCP/IP connection with the client. The Text (58) field of Logout will contain the value “d” (i.e. Retransmission Complete).

5.2 Failures at JSE

5.2.1 Resetting Sequence Numbers

If the regulatory news feed is, due to the unlikely event of an outage, restarted during a trading day, the message sequence number of the Real-Time channel will be reset to 1.

In such a case, messages sent on the Real-Time channel prior to the resetting of sequence numbers will not be available for retransmission on the Replay channel. Messages sent after the outage will have sequence numbers starting from 1 and should be processed and merged with data received prior to the outage.

6 MESSAGE FORMATS AND TEMPLATES

This section provides details on the three administrative messages and three application messages utilized by the regulatory news feed.

All messages sent by the Server are transfer encoded in terms of the FAST protocol. While all application messages sent by the Server (e.g. News etc.) are field encoded, the administrative messages it sends (e.g. Logon etc.) are not. All messages (i.e. both administrative and application) initiated by the client should be transfer encoded but not field encoded.

The FIX format of each is described along with the applicable FAST template.

6.1 Variations from the FIX Protocol

The regulatory news feed conforms to the FIX protocol except as follows:

(i) The NoRelatedSym (146) repeating block is being used to define the details of the related instruments involved in the announcement/news. The field NewsSource (6940) is added to the block to define the description of a related company which will be the short code given to a related company by the JSE.

(ii) Custom enumerations defined for NewsCategory (1473) as Regulatory (101) and Non-Regulatory (102).

(iii) Custom enumeration defined for NewsRefType (1477) as Cancellation (100).

(iv) NewsSequence (1688) and NewsCounter (1689) introduced to be used in the News message when news spans across multiple packets.

6.2 Administrative Messages

6.2.1 Logon

6.2.1.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	A = Logon
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1180	ApplID	N	Identifier of the Server sending the message. Required if the message is generated by the Server.
553	Username	N	CompID of the client. Required if the message is generated by the client.
554	Password	N	Password assigned to the CompID. Required if the message is generated by the client.
925	NewPassword	N	New password for the CompID.
1409	SessionStatus	N	Status of session. Required if message is generated by Server. **Value** **Meaning** 0 Session Active 2 Password Due to Expire

6.2.1.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1180	ApplID	ASCII String	None	
553	Username	ASCII String	None	
554	Password	ASCII String	None	
925	NewPassword	ASCII String	None	
1409	SessionStatus	Unsigned Integer	None	

6.2.2 Logout

6.2.2.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	5 = Logout
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1180	ApplID	N	Identifier of the Server sending the message. Required if the message is generated by the Server
1409	SessionStatus	N	Status of the FIX session. Required if the message is generated by the Server. **Value** **Meaning** 4 Session Logout Complete 5 Invalid Password 6 Account Locked 7 Logons Not Allowed 8 Password Expired 100 Other
58	Text	N	Reason for the logout.

6.2.2.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1180	ApplID	ASCII String	None	
1409	SessionStatus	Unsigned Integer	None	
58	Text	ASCII String	None	

6.2.3 Heartbeat

6.2.3.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	0 = HeartBeat
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1180	ApplID	Y	Identifier of the Server sending the message.
1399	ApplNewSeqNum	Y	Will contain the next application sequence (i.e. ApplSeqNum (1181) of the next application message)

6.2.3.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1180	ApplID	ASCII String	None	Please refer to Section 4.2.1
1399	ApplNewSeqNum	Unsigned Integer	None	

6.3 Application Messages (Client-Initiated)

6.3.1 Application Message Request

6.3.1.1 FIX Message

Tag	Field Name		Req	Description
35	MsgType		Y	BW = Application Message Request
52	SendingTime		Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1346	ApplReqID		Y	Client specified unique identifier of the request.
1347	ApplReqType		Y	Type of request. **Value** **Meaning** 0 Retransmission of Messages 5 Cancel Retransmission
1351	NoApplIDs		N	If specified, the value in this field should always be "1". Required if ApplReqType (1347) is Retransmission of Messages (0).
➡	1355	RefApplID	N	AppIID of the Real-Time channel for which the retransmission is requested. Please refer to Section 4.2.1 for the list of valid AppIIDs. Required if NoApplIDs (1351) is specified.
➡	1182	ApplBeg SeqNum	N	ApplSeqNum (1181) of the first message in the range to be resent from the Real-Time channel. Required if NoApplIDs (1351) is specified.
➡	1183	ApplEnd SeqNum	N	ApplSeqNum (1181) of the last message in the range to be resent from the Real-Time channel. Required if NoApplIDs (1351) is specified.

6.3.1.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
Standard Header				
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1346	ApplReqID	ASCII String	None	
1347	ApplReqType	Unsigned Integer	None	
1351	NoApplIDs	Unsigned Integer	None	
1355	RefApplID	ASCII String	None	
1182	ApplBegSeqNum	Unsigned Integer	None	
1183	ApplEndSeqNum	Unsigned Integer	None	

6.4 Application Messages (Server-Initiated)

6.4.1 News

6.4.1.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	B = News
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1180	ApplID	Y	Identifier of the Server sending the message.
1181	ApplSeqNum	N	Sequence number of the message on the Real-Time channel. Required if the message is disseminated via the Real-Time or Replay channel.
912	LastRptRequested	N	Indicates the last message sent in response to a retransmission request. **Value** **Meaning** Y Last Message
1472	NewsID	Y	Unique Identifier of the News/Announcement.
1473	NewsCategory	N	**Value** **Meaning** 101 Regulatory 102 Non-Regulatory If available for the NewsID, the field will be required when NewsSequence =1.
42	OrigTime	N	Time the announcement was published which will be specified in South African Standard Time (SAST) and in the HH:MM:SS format. Required when the NewsSequence = 1.
358	EncodedHeadlineLen	Y	Required if EncodedHeadline (359) is specified.
359	EncodedHeadline	Y	Encoded Headline or subject of the announcement.
1688	NewsSequence	Y	The unique sequence number of the News message under a NewsID.
1689	NewsCounter	Y	The number of news messages spanning across multiple packets sharing the same NewsID.
1300	MarketSegmentID	N	Announcement Group Code Please refer to Section 7.1 for the valid announcement group codes. If available for the NewsID, the field will be required when NewsSequence =1.

61	Urgency		N	Level of urgency of the announcement. **Value** **Meaning** 0 Normal 1 Flash (High Priority)
149	URLLink		N	Provides a URL for the PDF version of the news announcement hosted on JSE website. Note that for News announcements that relate to Financial Results, an additional URL will be added after the first URL that will point to the PDF version of the full Financial Results Announcement hosed on the JSE website. The following news announcements types pertain to Financial Results: Audited Results • Interim results • Late publication of financial information • Preliminary Results • Quarterly results • Reviewed results • Unaudited results
1475	NoNewsRefIDs		N	Always set to '1'. If available for the NewsID, the field will be required when NewsSequence =1.
➡	1476	NewsRefID	N	The News ID of the News which needs to get corrected.
➡	1477	NewsRefType	N	Type of correction made to News. **Value** **Meaning** 0 Replacement 100 Cancellation
33	NoLinesOfText		N	Number of NewsML blocks available for the announcement.
➡	354	EncodedTextLen	N	Byte length of EncodedTextLen (355)
➡	355	EncodedText	N	Text of the News message in NewsML
146	NoRelatedSym		N	Number of related Instrument. Can be any value depending on the number of instruments. The first ever record in the repeating block will be of the primary instrument the announcement is related to. If available for the NewsID, the field will be required when NewsSequence =1.
➡	207	SecurityExchange	N	The market identifier to which the news applies

➡	470	CountryOfIssue		N	Place of company listing
➡	48	SecurityID		N	ISIN of the instrument, if any.
➡	22	SecurityIDSource		N	Required if SecurityID (48) is specified. **Value** **Meaning** 8 instrument identifier
➡	454	NoSecurityAltID		N	If present, value in this field will always be “1”.
➡	➡	455	Security AltID	N	Identification number for the security.
➡	➡	456	SecurityAlt IDSource	N	Type of security identification number used. Required if SecurityAltID (455) is specified. **Value** **Meaning** 8 TIDM
➡	6940	NewsSource		N	The related issuer/company description. This will be the Instrument Issuer Long Name specified by the JSE. Required if NoRelatedSym (146) is specified. Can be any value depending on the number of issuers. The first ever record in the repeating block will be of the primary issuer/company the announcement is related to.

6.4.1.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1180	ApplID	ASCII String	None	Please refer to Section 4.2.1
1181	ApplSeqNum	Unsigned Integer with NULL support	None	
912	LastRptRequested	ASCII String	None	
1472	NewsID	ASCII String	None	
1473	NewsCategory	Unsigned Integer	None	
42	OrigTime	ASCII String	None	
358	EncodedHeadlineLen	ASCII String	None	
359	EncodedHeadline	byte Vector	None	
1688	NewsSequence	Unsigned Integer	None	
1689	NewsCounter	Unsigned Integer	None	
1300	MarketSegmentID	ASCII String	None	
61	Urgency	Unsigned Integer	None	
149	URLLink	ASCII String	None	
1475	NoNewsRefIDs	Unsigned Integer	None	
1476	NewsRefID	ASCII String	None	
1477	NewsRefType	Unsigned Integer	None	
33	NoLinesOfText	Unsigned Integer	None	
354	EncodedTextLen	ASCII String	None	
355	EncodedText	byte Vector	None	
146	NoRelatedSym	Unsigned Integer with NULL support	None	
207	SecurityExchange	ASCII String	None	
470	CountryOfIssue	ASCII String	None	
48	SecurityID	ASCII String	None	
22	SecurityIDSource	ASCII String	None	
454	NoSecurityAltID	Unsigned Integer with NULL support	None	
455	SecurityAltID	ASCII String	None	
456	SecurityAltIDSource	ASCII String	None	
6940	News Source	ASCII String	None	

6.4.2 Application Message Request Ack

6.4.2.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	BX = Application Message Request Ack
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1353	ApplResponseID	Y	Server specified identifier of the acknowledgement.
1346	ApplReqID	Y	Identifier of the request being acknowledged.
1347	ApplReqType	Y	Type of request being acknowledged. **Value** **Meaning** 0 Retransmission of Messages 5 Cancel Retransmission
1348	ApplResponse Type	Y	Whether the retransmission request was successful. **Value** **Meaning** 0 Request Successful 1 Unknown AppIID 2 Messages Not Available

6.4.2.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1353	ApplResponseID	ASCII String	None	
1346	ApplReqID	ASCII String	None	
1347	ApplReqType	Unsigned Integer	None	
1348	ApplResponse Type	Unsigned Integer	None	

6.4.3 Application Message Report

6.4.3.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	BY =Application Message Report
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
1356	ApplReportID	Y	Server specified identifier of the report.
1346	ApplReqID	Y	Identifier of the Application Message Request the report relates to.
1426	ApplReportType	Y	**Value** **Meaning** 3 Retransmission Completed

6.4.3.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
1356	ApplReportID	ASCII String	None	
1346	ApplReqID	ASCII String	None	
1426	ApplReportType	Unsigned Integer	None	

6.4.4 Business Message Reject

6.4.4.1 FIX Message

Tag	Field Name	Req	Description
35	MsgType	Y	j = Business Message Reject
52	SendingTime	Y	Time the message was transmitted specified in UTC and in the YYYYMMDD-HH:MM:SS.sss format.
379	BusinessReject RefID	N	ApplReqID (1346) of the rejected message.
371	RefTagID	N	If a message is rejected due to an issue with a particular field its tag number will be indicated.
372	RefMsgType	Y	MsgType (35) of the rejected message.
380	BusinessReject Reason	Y	Code specifying the reason for the reject. Please refer to Section 8.1 for a list of reject codes.
58	Text	N	JSE specific code specifying the reason for the reject.

6.4.4.2 FAST Template

Tag	Field Name	Field Type	Field Encoding	Description
35	MsgType	ASCII String	None	
52	SendingTime	ASCII String	None	
379	BusinessReject RefID	ASCII String	None	
371	RefTagID	Unsigned Integer with NULL support	None	
372	RefMsgType	ASCII String	None	
380	BusinessReject Reason	Unsigned Integer with NULL support	None	
58	Text	ASCII String	None	

7 ANNOUNCEMENT GROUP CODE CATEGORIES

7.1 Announcement Group Codes

The Announcement Group Code will be populated in the MarketSegmentID (1300) field in the News message.

Segment	Description
CCO	Competition Commission
EXCH	Exchange
FSB	Financial Services Board
JSEO	Other JSE
NSXO	Other NSX
TRP	Takeover Regulation Panel

8 REJECT CODES

8.1 Business Message Reject

Business Reject Reason	Text	Reason
0	400	Other
0	403	Incorrect data format for this tag
0	404	Value is invalid for this tag
0	405	Required tag missing
0	450	Request limit for day reached
1	-	Unknown ID
5	-	Conditionally required field missing