



Technical Notice

09-005b

TO: BOX Participants
FROM: Participant Connectivity Coordinator
SUBJECT: BOX HSVF Protocol Consolidation
DATE: August 21, 2009

This technical notice is a follow-up to Technical Notice 09-005a.

This technical notice is intended for Participants receiving BOX market data via the HSVF feed.

On August 29, 2009, the Boston Options Exchange (BOX) will consolidate the HSVF protocol versions it offers. BOX will decommission protocols A0, A1, B, B0 and B1 and leave protocols C1 and C2 active.

BOX recommends that Participants analyze the impact of this change and make appropriate changes to their application to support the active protocols.

Change Summary

RS Message	Protocol Version	Protocol Behavior
With Protocol Version	C1	<ul style="list-style-type: none"> All message types are broadcast Field "UnderlyingSymbol", in message types J and N, defined to support 10 alphanumeric characters Support OSI new Symbology Symbol Root: The client must specify the 6 character symbol root for all Symbol for the Option series linked to an underlying, maximum 999 classes <ul style="list-style-type: none"> Example: for MSFT, you need to request MSQ, MQF, ZMF, ZZH and WMF) Example : to request for classes ABC and DEF: ABC<blank><blank><blank>DEF<blank><blank><blank> Fewer than 6 characters per symbol will be rejected
	C2	<ul style="list-style-type: none"> Behavior listed in C1 protocol plus HSVF & OPRA modifiers for trade through exemption ISO Inbound implementation PIP duration provided with 1/100e second accuracy
	Blank	<ul style="list-style-type: none"> Mapped to C1
	<Anything Else>	<ul style="list-style-type: none"> RS message will be rejected
Without Protocol Version	Not Applicable	<ul style="list-style-type: none"> RS message will be rejected

BOX currently provides two versions of RS messages. One that allows Participants to specify the protocol version they would like to receive and one that does not. Participants using the RS message without the protocol version specification should change their applications to use the RS message with the protocol version and specify the version they would like to receive. Sending in RS message without the protocol version specification will be rejected.

Change Details

This section describes the protocol changes required to migrate to either C1 or C2 protocol

Migrate to C1 protocol

- All Message Types are broadcast

HSVF Instrument Description – 20 bytes

Field Name	L	T	Definition / Validation Rules
Symbol Root	6	A	Field length expanded from 5 to 6 bytes. Symbol for the Option series 6 characters are mandatory
Expiry Year	2	N	Field length expanded from 1 to 2 bytes. Last 2 digits of the option expiry year
Expiry Day	2	N	Field added. Delivery day for the contract

- Support OSI New Symbology – Following HSVF message changes are required

HSVF Message Type J – Option Instrument key – 119 bytes

Field Name	L	T	Definition / Validation Rules
Instrument Description	20	X	Field length expanded from 16 to 20 bytes. Refer to Instrument Description.
Expiry Day	2		Field moved in the 'Instrument Description' data group
Filler	6		Field removed
ISIN	12		Field removed
Instrument	4	X	Field added to replace the 'ISIN' field.
Instrument external code	30	X	Field length expanded from 20 to 30 bytes. External identifier used by traders when entering an order
Underlying Symbol ❶	10	A	Symbol root for the underlying security

HSVF Message Type N – Option Summary – 120 bytes

Field Name	L	T	Definition / Validation Rules
Instrument Description	20	X	Field length expanded from 16 to 20 bytes. Refer to Instrument Description.
Underlying Symbol ❶	10	A	Symbol root for the underlying security

❶ Underlying Symbol – field length expanded from 5 to 10 characters if migration is from (A0 or A1) to C1. This is not required if migration is from (B0, B1 or B2) to C1.

HSVF Messages Types A, C, D, F, H, I, M, N, O and T

Field Name	L	T	Definition / Validation Rules
Instrument Description	20	X	Refer to Instrument Description

In these message types, the field “Instrument Description” is expanded from 16 to 20 characters. The rest of the fields remain unchanged.

HSVF Message Types GC and GR

The field "Symbol Root" will be expanded from 5 to 6 bytes. The content of this field is the option symbol, not the underlying

- **6 characters are mandatory**

HSVF Message Type RS

The field "Option classes requested" will be expanded up to 5994 bytes.

- **6 characters are mandatory**
- **Fewer than 6 characters per symbol will be rejected**

HSVF Message Types L, Q, S, U, V and W

These HSVF messages are not impacted.

Migrate to C2 protocol

- **Behavior listed in C1 protocol plus**
- HSVF & OPRA modifiers for trade through exemption
- ISO Inbound implementation
- PIP duration provided with 1/100e second accuracy

HSVF Message type C and I.

Field Name	L	Type	Definition / Validation Rules
Price Indicator Marker	1	Alphabetic	<ul style="list-style-type: none">• "W" Trades resulting from the transmission of an ISO Inbound order• "O" Trades performed during the opening• "C" Trades performed at the end of a PIP allocation phase• "X" Trades performed when the market is closed or crossed

HSVF Message type O.

Field Name	L	Type	Definition / Validation Rules
End of the Exposition	8	Numeric	<ul style="list-style-type: none">• HHMMSSCC - '0' filled for PIP messages

HSVF Message type M

Field Name	L	Type	Definition / Validation Rules
Improvement Phase Expiry Time	8	Alphabetic	<ul style="list-style-type: none">• Indicates the expiry time of the Improvement Phase (HHMMSSCC)
Improvement Process Expiry Duration	4	Numeric	<ul style="list-style-type: none">• Indicates the expiry duration of the Improvement Phase (value is in SSCC)

For detailed information on the HSVF messages, please refer to the HSVF protocol guide version 2.19, published April 27, 2009.

Contact

Please contact the Market Operations Center at (866) 768-8845 or by e-mail at BOXMOC@bostonoptions.com if you require assistance or any additional information regarding this Technical Notice.

Thank you,
BOX Participant Connectivity Coordinator