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Date: July 5, 2016

TO: All OPRA Market Data Recipients
FROM: OPRA, LLC
RE: New OPRA Symbol Distribution— **Effective August 8, 2016**

Dear OPRA Market Data Recipients:

What You Need To Know

For optimal symbol balancing and line capacity utilization, the symbol distribution for the Options Price Reporting Authority (OPRA) will be modified.

Changes Being Made

The security symbol range over the OPRA multicast lines will be redistributed. Reference the attached Appendix 'B' which is from the OPRA Data Recipient Specification for the current and new OPRA symbol routing.

When is it Changing

OPRA will employ a new symbol distribution at the start of day **Monday August 8, 2016.**

Evening Test Schedule

An OPRA replay file with test data including the new symbol distribution is available and will be disseminated business weekdays from 9:00 – 9:15 p.m. ET from the multicast Playback Test channels (not over Production channels).

To coordinate testing, and to provide verbal or written confirmation of testing (**required of all Data Recipients**), please register in one of the following ways:

E-mail your name, organization name, phone number, and date of test(s) to:
CQS-CTS-OPRA@siac.com

Indirect Data Recipients must contact their service provider to coordinate testing.

Final Verification Test

A final verification test will be conducted on **Saturday, August 6, 2016 from 9:00 am ET to 11:00 am ET.**

APPENDIX B: OPRA TRAFFIC DISTRIBUTION

OPRA messages are disseminated over multiple IP Multicast lines as follows:

- **REGULAR SESSION:** Equity and index options traffic will be on OPRA 1 through 48.
- **EXTENDED SESSION:** Equity and index options traffic will be on EXTENDED SESSION 91, through 94

Traffic will be routed over the IP Multicast lines as follows:

1 . REGULAR SESSION: Generated on 48 line network:

OPRA 4:

- All Equity and Index Administrative messages, including Flex messages
- Any symbol with a numeric in first character

ALL 48 Lines (1-48):

- All Control messages

For Equity and Index Last Sale, Long and Short Equity and Index Quote, Open Interest, Equity and Index End of Day Summary and Underlying Value messages, traffic is routed by the Security Symbol to assigned lines, according to the following routing rules:

REVISED SYMBOL DISTRIBUTION- EFFECTIVE AUGUST 8th

Revised Symbol Distribution												
Line	Security Symbol					Exp Mo	Security Symbol					Exp Mo
1	A						A	B	B	Z	Z	X
2	A	B	C				A	J	Z	Z	Z	X
3	A	K					A	M	Z	Z	Z	X
4	A	N					A	U	Z	Z	Z	X
5	A	V					B	D	Z	Z	Z	X
6	B	E					B	V	M	Z	Z	X
7	B	V	N				C	D	Z	Z	Z	X
8	C	E					C	M	D	Z	Z	X
9	C	M	E				C	P	Z	Z	Z	X
10	C	Q					C	V	Z	Z	Z	X
11	C	W					D	H	Z	Z	Z	X
12	D	I					D	M	Z	Z	Z	X
13	D	N					E	E	Z	Z	Z	X
14	E	F					E	V	Z	Z	Z	X
15	E	W					F	B	Z	Z	Z	X
16	F	C					F	T	Z	Z	Z	X
17	F	U					G	I	Z	Z	Z	X
18	G	J					G	O	O	G		X
19	G	O	O	G	A		G	Z	Z	Z	Z	X
20	H						H	T	Z	Z	Z	X
21	H	U					I	O	Z	Z	Z	X
22	I	P					I	W	M			L
23	I	W	M			M	J	N	Z	Z	Z	X
24	J	O					K	Z	Z	Z	Z	X
25	L						L	R	Z	Z	Z	X
26	L	S					M	D	T	Z	Z	X
27	M	D	U				M	O	Z	Z	Z	X
28	M	P					N	C	Z	Z	Z	X
29	N	D					N	E	Z	Z	Z	X
30	N	F					N	U	Z	Z	Z	X
31	N	V					P	B	Z	Z	Z	X
32	P	C					P	F	Z	Z	Z	X
33	P	G					Q	C	Z	Z	Z	X
34	Q	D					Q	Z	Z	Z	Z	X
35	R						R	Z	Z	Z	Z	X
36	S						S	H	Z	Z	Z	X
37	S	I					S	O	Z	Z	Z	X
38	S	P					S	P	Y			L
39	S	P	Y			M	S	T	M	Z	Z	X
40	S	T	N				T	H	Z	Z	Z	X
41	T	I					T	S	L	Z	Z	X
42	T	S	M				U	M	Z	Z	Z	X
43	U	N					U	U	Z	Z	Z	X
44	U	V					V	L	N	Z	Z	X
45	V	L	O				V	Z	Z	Z	Z	X
46	W						X	F	Z	Z	Z	X
47	X	G					X	L	U	Z	Z	X
48	X	L	V				Z	Z	Z	Z	Z	X

2. EXTENDED SESSION: Generated on a 4 line* network:
OPRA 94:

- All Equity and Index Administrative messages, including Flex messages
- Any symbol with a numeric in first character

ALL 4 Lines (91-94):

- All Control messages
- i. For Equity and Index Last Sale, Long, Short Equity, Expanded Short Equity and Index Quote, Open Interest, Equity and Index End of Day Summary and Underlying Value messages, traffic is routed by the Security Symbol to assigned lines, according to the following routing rules:

*The extended session has 4 active lines (91-94) and 4 inactive lines (95-98), reserved for future expansion.

OPRA Extended Symbol Distribution													
Line	Security Symbol					Exp Mo		Security Symbol					Exp Mo
91	A							S	P	X			L
92	S	P	X			M		T	Z	Z	Z	Z	X
93	U							V	I	X			L
94	V	I	X			M		Z	Z	Z	Z	Z	X

3. The following applies **to both the REGULAR AND EXTENDED SESSION**

- Symbols containing only alpha characters will be routed according to the distribution table.
- Symbols containing numerics will be routed based upon the alpha characters preceding the first numeric,

e.g.: Non-Standard symbol 'STD1' will be routed to the line containing 'STD'

- If a numeric is received in the first character, e.g., '1RSTU' it will be routed to Multicast Line as follows:
 - REGULAR SESSION: Line 4
 - EXTENDED SESSION: Line 94
- If an Index message is generated for a symbol that is split by call/put it will be generated over the line designated for calls.

e.g., Index message for GLD will be sent over the line for calls

Selectively sent to Any Line:

- Reset Block Sequence Number message (dependent upon line that requires the block sequence number to be reset)

Note: Data recipients are responsible for handling any symbol over any line. Redistribution of traffic will not occur intraday but can occur on a next day basis. Notification may not be sent to the data recipients regarding redistribution of traffic.