



**December 4, 2019**

**To:** OPRA Multicast Subscribers

**Subject:** New OPRA Symbol Distribution – **Effective March 9, 2020**

### **What You Need To Know**

The symbol distribution for the Options Price Reporting Authority (OPRA) is being modified.

### **Changes Being Made**

Currently OPRA employs individual symbol distribution (Options Calls and Puts) either over one or two multicast lines. In order to provide for further optimal symbol balancing and line capacity utilization, **OPRA will begin to distribute individual symbols over one, two, three, or four multicast lines.**

Reference the attached Appendix 'B' from the OPRA Data Recipient Specification for the current and new OPRA symbol routing.

### **When it is Changing**

**OPRA** will employ a new symbol distribution at the start of day **Monday, March 9, 2020.**

### **Evening Test Schedule**

OPRA replay test data for the new symbol distribution will be available beginning on **Wednesday, December 4, 2019** and then disseminated business weekdays from 9:15 p.m. – 9:30 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 **(which is required of all OPRA Subscribers)**, please register by e-mailing your name, organization name, phone number, and date of test(s) to: [CQS-CTS-OPRA@siac.com](mailto:CQS-CTS-OPRA@siac.com). **Indirect Data Recipients must also contact their service provider to coordinate testing.**

### **Confidence Test**

A Confidence test will take place on **Saturday, March 7, 2020 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 is on OPRA **1 through 48**
- **EXTENDED SESSION:** Equity and index options traffic is 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, 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:

**APPENDIX B:**

**OPRA TRAFFIC DISTRIBUTION (Current)**

Current as of August 26, 2019												
Line	Security Symbol					Exp Mo	Security Symbol					Exp Mo
1	A						A	B	S	Z	Z	X
2	A	B	T				A	G	N	Z	Z	X
3	A	G	O				A	M	Z	M	Z	X
4	A	M	Z	N			A	M	Z	N		L
5	A	M	Z	N		M	A	M	Z	N		X
6	A	M	Z	N	A		A	Y	Q	Z	Z	X
7	A	Y	R				B	A	B	A		L
8	B	A	B	A		M	B	K	N	G		L
9	B	K	N	G		M	C	A	S	Z	Z	X
10	C	A	T				C	L	R			L
11	C	L	R			M	C	R	L	Z	Z	X
12	C	R	M				D	A	T			X
13	D	A	T	A			D	N	K	M	Z	X
14	D	N	K	N			E	O	F	Z	Z	X
15	E	O	G				F	B				L
16	F	B				M	G	D				X
17	G	D	A				G	O	O	G		L
18	G	O	O	G		M	G	O	O	G	L	X
19	G	O	O	G	M		H	L	H	Z	Z	X
20	H	L	I				I	Q	D	E	Z	X
21	I	Q	D	F			I	W	M			L
22	I	W	M			M	J	N	J			X
23	J	N	J	A			L	N	G			L
24	L	N	G			M	M	D	L	Y	Z	X
25	M	D	L	Z			M	S	F	S	Z	X
26	M	S	F	T			N	D	X	O	Z	X
27	N	D	X	P			N	J	Q	Z	Z	X
28	N	J	R				N	V	C	Z	Z	X
29	N	V	D				O	I	H	Z	Z	X
30	O	I	I				P	L	A	X	Z	X
31	P	L	A	Y			Q	Q	P	Z	Z	X
32	Q	Q	Q				Q	Q	Q			X
33	Q	Q	Q	A			R	V	L	S	Z	X
34	R	V	L	T			S	N	A	O	Z	X
35	S	N	A	P			S	P	X	Z	Z	X
36	S	P	Y				S	P	Y			L
37	S	P	Y			M	S	P	Y			X
38	S	P	Y	A			S	W	M	Z	Z	X
39	S	W	N				T	N				X
40	T	N	A				T	S	L	A		L
41	T	S	L	A		M	T	W	T	R		L
42	T	W	T	R		M	U	P	R	N	Z	X
43	U	P	R	O			V	A	B	Z	Z	X
44	V	A	C				W	B	A	H	Z	X
45	W	B	A	I			W	Z	Z	Z	Z	X
46	X						X	L	H	Z	Z	X
47	X	L	I				X	M	L	U	Z	X
48	X	M	L	V			Z	Z	Z	Z	Z	X

## APPENDIX B: OPRA TRAFFIC DISTRIBUTION (New)

Revised Symbol Distribution - Effective: March 9, 2020

Line	Beginning Range: Security Symbol	Expiration Months				Ending Range: Security Symbol	Expiration Months			
		Odd Calls	Even Calls	Odd Puts	Even Puts		Odd Calls	Even Calls	Odd Puts	Even Puts
		(Jan-Mar- May-Jul- Sep-Nov)	(Feb-Apr- Jun-Aug- Oct-Dec)	(Jan-Mar- May-Jul- Sep-Nov)	(Feb-Apr- Jun-Aug- Oct-Dec)		(Jan-Mar- May-Jul- Sep-Nov)	(Feb-Apr- Jun-Aug- Oct-Dec)	(Jan-Mar- May-Jul- Sep-Nov)	(Feb-Apr- Jun-Aug- Oct-Dec)
1	A	X	X	X	X	ABQZZ	X	X	X	X
2	ABR	X	X	X	X	ALBZZ	X	X	X	X
3	ALC	X	X	X	X	AMZMZ	X	X	X	X
4	AMZN	X				AMZN	X			
5	AMZN		X			AMZN		X		
6	AMZN			X		AMZN			X	
7	AMZN				X	AMZN				X
8	AMZNA	X	X	X	X	AZZZZ	X	X	X	X
9	B	X	X	X	X	BJZZZ	X	X	X	X
10	BK	X	X	X	X	BKNG	X	X		
11	BKNG			X	X	CF	X	X	X	X
12	CFA	X	X	X	X	CMHZZ	X	X	X	X
13	CMI	X	X	X	X	CSCNZ	X	X	X	X
14	CSCO	X	X	X	X	DDZZZ	X	X	X	X
15	DE	X	X	X	X	DRMZZ	X	X	X	X
16	DRN	X	X	X	X	ESTBZ	X	X	X	X
17	ESTC	X	X	X	X	FBBZZ	X	X	X	X
18	FBC	X	X	X	X	GDXIZZ	X	X	X	X
19	GDXJ	X	X	X	X	GOOG	X	X		
20	GOOG			X	X	GTLRZ	X	X	X	X
21	GTLS	X	X	X	X	IBAZZ	X	X	X	X
22	IBB	X	X	X	X	ITVZZ	X	X	X	X
23	ITW	X	X	X	X	JBKZZ	X	X	X	X
24	JBL	X	X	X	X	KO	X	X	X	
25	KO				X	LUUZZ	X	X	X	X
26	LUV	X	X	X	X	MGOZZ	X	X	X	X
27	MGP	X	X	X	X	MSLZZ	X	X	X	X
28	MSM	X	X	X	X	NFLX	X	X		
29	NFLX			X	X	NUGT	X	X		
30	NUGT			X	X	ORHZZ	X	X	X	X
31	ORI	X	X	X	X	PPBZZ	X	X	X	X
32	PPC	X	X	X	X	QQQ	X	X		
33	QQQ			X	X	ROKU	X	X		
34	ROKU			X	X	SE	X	X	X	X
35	SEA	X	X	X	X	SOXKZ	X	X	X	X
36	SOXL	X	X	X	X	SPXZZ	X	X	X	X
37	SPY	X				SPY	X			
38	SPY		X			SPY		X		
39	SPY			X		SPY			X	
40	SPY				X	SPY				X
41	SPYA	X	X	X	X	TECKZ	X	X	X	X
42	TECL	X	X	X	X	TPQZZ	X	X	X	X
43	TPR	X	X	X	X	TWLNZ	X	X	X	X
44	TWLO	X	X	X	X	UPRNZ	X	X	X	X
45	UPRO	X	X	X	X	VMVZZ	X	X	X	X
46	VMW	X	X	X	X	WMSZZ	X	X	X	X
47	WMT	X	X	X	X	XLOZZ	X	X	X	X
48	XLP	X	X	X	X	ZZZZZ	X	X	X	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
- 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

## APPENDIX B: Traffic Distribution, continued

### 3. The following applies to both the REGULAR AND EXTENDED SESSIONS

- Symbols containing only alpha characters will be routed according to the distribution table.
- Symbols containing numeric 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

Note: The Index message for a symbol will be sent over the first 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.**