# NASDAQ OMX PSX Best Bid and Offer

For PSX Trading Venue

NASDAQ OMX Global Data Products 10/1/2013

### PSX Best Bid and Offer (PSX BBO)

### 1 Overview

### 1.1 Product Description

PSX Best Bid and Offer (PSX BBO) is a direct data feed product offered by NASDAQ OMX to support the PSX Trading Market upon launch. PSX BBO provides the exchange's best bid and offer position for NASDAQ-, New York Stock Exchange (NYSE)-, NYSE MKT-, NYSE Arca- and BATS-listed securities.

PSX BBO – Version 2.0 will be released in the 1<sup>st</sup> Quarter 2014 and will feature the data feed enhancements detailed in <u>Data Technical News #2013-45</u>.

Market data distributors may use the PSX BBO data feed to feed dynamically updating stock tickers, portfolio trackers, trade alert programs, time and quote graphs, and other display systems. For market data administration purposes, PSX BBO is part of the PSX Basic entitlement.

For pricing and ordering information:

- 1. Refer to Market Data section of the NASDAO OMX Trader website.
- 2. Contact the <u>NASDAQ OMX Global Data Products Account Team</u> at +1 301 978 5307 or +45 33 93 33 66.

## 2 Network Protocol Options

For direct data feed subscribers, NASDAQ OMX will offer the PSX BBO data feed in the following protocol options:

- SoupBinTCP
- MoldUDP64
- SoupTCP
- MoldUDP

In order to match the PSX Basic entitlement structure, PSX BBO will initially support three outbound channels for both protocol options. The PSX BBO data set will be channelized based on the listing market of a security.

Data Channel	Securities coverage
1	NASDAQ-listed issues
2	NYSE- and BATS-listed issues
3	NYSE MKT-, NYSE Arca- listed issues

### 3 Architecture

PSX BBO will be made up of a series of sequenced messages. Each message is variable in length based on the message type. The messages that make up the PSX BBO protocol are typically delivered using a higher level protocol that takes care of sequencing and delivery guarantees.

## 4 Data Types

All integer fields are unsigned big-endian (network byte order) binary encoded numbers.

All alphanumeric fields are ASCII fields which are left justified and padded on the right with spaces.

Prices are integer fields, supplied with an associated precision. When converted to a decimal format, prices are in a fixed point format, where the precision defines the number of decimal places. For example, a field flagged as Price (4) has an implied 4 decimal digits.

Timestamps reflects the NASDAQ system time at which the outbound message was generated. NASDAQ states time as the number of nanoseconds past midnight. The time zone is U.S. Fastern Time.

### **5 Message Formats**

Note: For consistency, NASDAQ OMX has coded the PSX Best Bid and Offer to use the same data formats as the NASDAQ Best Bid and Offer (QBBO) 2.0 and BX Best Bid and Offer (BX BBO) 2.0 data feed offerings. Functionality that will not be supported for the PSX market upon initial market implementation has been grayed out.

## 5.1 System Event Message

The System Event message is used to signal key market or data feed control events. PSX BBO will support the System Event messages.

SYSTEM EVENT MESSAGE							
Name	Offset	Length	Value	Notes			
Message Type	0	1	"S"	System Event			
Tracking Number	1	2	Integer	NASDAQ OMX internal tracking number			
Time Stamp	3	6	Timestamp	Time stamp			
Event Code	9	1	Alphanumeric	Denotes the type of event for which the message is being generated. See list below for allowable values.			

On a daily basis, PSX BBO will support the following event codes:

SYSTEM EVENT CODE	S - DAILY
Code	Explanation
0	Start of Transmissions: Denotes that PSX BBO has started its daily transmission schedule
S	Start of System Hours: This message indicates that PSX is open and ready to start accepting orders.
Q	Start of Market Hours: This message is intended to indicate that Market Hours orders are available for execution.
М	End of Market Hours: This message is intended to indicate that Market Hours orders are no longer available for execution.
E	End of System Hours: It indicates that PSX is now closed and will not accept any new orders today.
С	End of Transmissions: Denotes that PSX BBO has completed its daily transmission schedule.

## 5.2 Administrative Messages

### **5.2.1** Stock Directory

At the start of each trading day, NASDAQ OMX PSX disseminates stock directory messages for all active symbols in its market center system.

Market data vendors should process this message to populate the Financial Status Indicator (required display field) and the Market Category (recommended display field) for <a href="NASDAQ-listed issues">NASDAQ-listed issues</a>.

STOCK DIRECTOR	RY				
Name	Offset	Length	Value	Notes	
Message Type	0	1	"R"	Stock Dire	ctory Message
Tracking Number	1	2	Integer	NASDAQ (	MX internal tracking numbe
Timestamp	3	6	Timestamp	was gener	hich the directory message ated. Refer to Data Types f essing notes.
Stock	9	8	Alphanumeric		ne security symbol for the e NASDAQ execution system
Market Category	17	1	Alphanumeric		isting market or listing r for the issue
				Code	Definition
				NASDAQ-	-Listed Instruments
				Q	NASDAQ Global Select Market <sup>SM</sup>
				G	NASDAQ Global Market <sup>SM</sup>
				S	NASDAQ Capital Market®
				Non-NAS	DAO-Listed Instruments

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		1	T	1 [	
				N	New York Stock
					Exchange (NYSE)
				A	NYSE MKT
				Р	NYSE Arca
				Z	BATS Z Exchange
				<space></space>	Not available
Financial Status	18	1	Alphanumeric		Q-listed issues, this field
Indicator					hen a firm is not in
					with NASDAQ continued
				listing requ	irements.
				Code	Definition
				NASDAQ-	Listed Instruments
				D	Deficient
				E	Delinquent
				Q	Bankrupt
				S	Suspended
				G	Deficient and Bankrupt
				Н	Deficient and
				''	Delinquent
				J	Delinquent and
					Bankrupt
				K	Deficient, Delinguent
					and Bankrupt
				С	Creations and/or
					Redemptions
					Suspended for
					Exchange Traded
					Product
				N	Normal (Default):
					Issuer Is NOT
					Deficient, Delinquent,
					or Bankrupt
				Non-NASI	DAQ-Listed Instruments
				<space></space>	Not available. Firms
				Topaces	should refer to SIAC
					feeds for code if
					needed.
Round Lot Size	19	4	Integer	Denotes th	e number of shares that
					round lot for the issue
Round Lots Only	23	1	Alphanumeric		NASDAQ system limits orde
,				entry for is	
				Code	Definition
				Υ	NASDAQ OMX system
					only accepts round lots
					orders for this security.
				N	NASDAQ OMX system
					does not have any
					order size restrictions
					for this security. Odd
					and mixed lot orders

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	Τ	1	1	<del>                                      </del>	ana allanna d
T 01 15 11	24			171 1151 11	are allowed.
Issue Classification	24	1	Alphanumeric		e security class for the iss
					by NASDAQ. See Appendix
Icoup Colb To 1	25	12	Alphanimaria	for allowable	
Issue Sub-Type	25	2	Alphanumeric		e security sub-type for the
					igned by NASDAQ. See r allowable values.
Authenticity	27	1	Alphanumeric		n issue or quoting
Addicitionly	4/	1	Aiphanument		n issue or quoting ecord is set-up in NASDAC
					a live/production, test, or
					Please note that firms
					show live issues and quoti
					on public quotation displa
				Code	Definition
				P	Live/Production
				<del> </del>	Test
Short Sale	28	1	Alphanumeric	Indicates if	a security is subject to
Threshold Indicator		-	, apriariament		a security is subject to close-out of short sales und
conora marcatul				SEC Rule 20	
					χ - / <del>\ -</del> / ·
				Code	Definition
					Issue is restricted under
					SEC Rule 203(b)(3)
					Issue is not restricted
					Threshold Indicator not
					available
IPO Flag	29	1	Alphanumeric	Indicates if t	the NASDAQ security is set
				up for IPO re	elease. This field is
					help NASDAQ market
					irms comply with FINRA R
				5131(b).	Defi-:::
				Code	Definition
				NASDAQ-LI	isted Instruments
					NASDAQ listed instrument is set up as
					I
				N	a new IPO security  NASDAQ listed
					instrument is not set
					up as a new IPO
					security
				Non-NASD	AQ-Listed Instruments
	L	L		<space></space>	Not available
LULD Reference	30	1	Alphanumeric	Indicates wh	nich Limit Up / Limit Down
Price Tier				price band c	alculation parameter is to
				used for the	instrument. Refer to LUL
				Rule for deta	ails.
				Code	Definition
				1	Tier 1 NMS Stocks and
					select ETPs
				2	Tier 2 NMS Stocks
				<space></space>	Not applicable
	1	1			

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Alphanumeric

Indicates whether the security is an

31

ETP Flag

		1	1	<u> </u>	
				exchange	traded product (ETP):
				Code	Definition
				Υ	Instrument is an ETP
				N	Instrument is not an
					ETP
				<space></space>	Not available
ETP Leverage Factor	32	4	Integer	ETP to the If the undervalue of 1 is 3, indications increase/d Note: Leve ETP is NOT	integral relationship of the underlying index. Example erlying Index increases by a and the ETP's Leverage factores the ETF will ecrease (see Inverse) by 3. erage Factor of 1 indicates the Ileveraged.  s used for LULD Tier I price lation purposes.
Inverse Indicator	36	1	Alphanumeric	Indicates t	the directional relationship ne ETP and underlying index
				Code	Definition
				Υ	ETP is an Inverse ETP
				N	ETP is not an Inverse ETP
				and an Inv	An ETP Leverage Factor of 3 verse value of 'Y' indicates the crease by a value of 3.

### 5.2.2 Stock Trading Action

NASDAQ OMX uses this administrative message to indicate the current trading status of a security to the trading community.

Prior to the start of system hours, NASDAQ OMX will send out a Trading Action spin. In the spin, NASDAQ OMX will send out a Stock Trading Action message with the "T" (Trading Resumption) for all NASDAQ- and other exchange-listed securities that are eligible for trading at the start of the PSX system hours. If a security is absent from the pre-opening Trading Action spin, firms should assume that the security is being treated as halted in the PSX platform at the start of the system hours. Please note that securities may be halted in the PSX system for regulatory or operational reasons.

After the start of system hours, NASDAQ OMX will use the Trading Action message to relay changes in trading status for an individual security. Messages will be sent when a stock is:

- Halted
- Released for quotation
- Released for trading

STOCK TRAD	DING ACTI	ON MESSA	GE	
Name	Offset	Length	Value	Notes

Message Type	0	1	"H"	Trading /	Action
Tracking Number	1	2	Integer	NASDAQ tracking	
Time Stamp	3	6	Timestamp	Time Sta	mp.
Stock	9	8	Alphanumeric	indicator which th action m generate on NASE	2-assigned for issue for the stock trading thessage is being ted. For details DAQ symbology, tefer to Appendix
Security Class	17	1	Alphanumeric	listing m	s the primary narket for the Illowable values
				Code	Value
				Q	NASDAQ Listed Issue
				N	NYSE
				Α	NYSE MKT
				Р	NYSE Arca
				Z	BATS
Current Trading State	18	1	Alphanumeric	trading s	the current state for the he allowable re:
				Code	Value
				Н	Halted/Paused on NASDAQ and all UTP participants
				Q	Quotation only period for cross-SRO halt or pause
				Р	Paused across all U.S. equity markets / SROs (NASDAQ-listed

					securities only)
				Т	Trading on PSX
Reason	19	4	Alphanumeric	or Mark code for change.	the Market Ops etWatch the trading state Refer to ix C for current t.

## 5.2.3 Reg SHO Short Sale Price Test Restricted Indicator

In November 2010, the Securities and Exchange Commission (SEC) implemented changes to Rule 201 of the Regulation SHO (Reg SHO). For details, please refer to <a href="SEC Release Number 34-61595">SEC Release Number 34-61595</a>. In association with the Reg SHO rule change, NASDAQ introduced the following Reg SHO Short Sale Price Test Restricted Indicator message format.

For NASDAQ-listed issues, NASDAQ supports a full pre-opening spin of Reg SHO Short Sale Price Test Restricted Indicator messages indicating the Rule 201 status for all active issues. NASDAQ also sends the Reg SHO Short Sale Price Test Restricted Indicator message in the event of an intraday status change.

For other exchange-listed issues, NASDAQ relays the Reg SHO Short Sale Price Test Restricted Indicator message when it receives an update from the primary listing exchange.

NASDAQ processes orders based on the most Reg SHO Restriction status value.

REG SHO RESTRIC	REG SHO RESTRICTION							
Name	Offset	Length	Value	Notes				
Message Type	0	1	"Y"	Reg SHO Short Sale Price Test Restricted Indicator				
Tracking Number	1	2	Integer	NASDAQ OMX internal tracking number				
Timestamp	3	6	Timestamp	Time at which the market participant position message was generated				
Stock	9	8	Alphanumeric	Stock symbol right padded with spaces.				
Reg SHO Action	17	1	Alphanumeric	Denotes the Reg SHO Short Sale Price Test Restriction status for the issue at the time of the message dissemination. Allowable values are: "0" = No price test in place "1" = Reg SHO Short Sale Price Test Restriction in effect due to an intra-day price drop in security				

	"2" = Reg SHO Short Sale Price
	Test Restriction remains in
	effect

### 5.2.4 Market-Wide Circuit Breaker (MWCB) Messaging

#### 5.2.4.1 MWCB Decline Level Message

Informs data recipients what the daily MWCB breach points are set to for the current trading day.

MWCB Decline Level Message				
Name	Offset	Length	Value	Notes
Message Type	0	1	"V"	Market wide circuit breaker Decline Level Message.
Tracking Number	1	2	Integer	NASDAQ OMX internal tracking number
Timestamp	3	6	Timestamp	Time at which the MWCB Decline Level message was generated
Level 1	9	8	Price (8)	Denotes the MWCB Level 1 Value.
Level 2	17	8	Price (8)	Denotes the MWCB Level 2 Value.
Level 3	25	8	Price (8)	Denotes the MWCB Level 3 Value.

#### 5.2.4.2 MWCB Status Message

Informs data recipients when a MWCB has breached one of the established levels

MWCB Breach Message				
Name	Offset	Length	Value	Notes
Message	0	1	"W"	Market-Wide Circuit Breaker Status
Type				message
Tracking	1	2	Integer	NASDAQ OMX internal tracking
Number				number
Timestam	3	9	Timestamp	Time at which the MWCB Breaker
p				Status message was generated
Breached Level	9	1	Alphanumeric	Denotes the MWCB Level that was breached.
				"1" = Level 1
				"2" = Level 2
				"3" = Level 3

## 5.3 Quotation Message

PSX BBO will broadcast a real-time update every time that the exchange's best bid and offer quote is updated during the trading day.

PSX BBO Quo	TATION	MESSAGE			
Name	Offs	Lengt	Value	Notes	
	et	h			
Message Type	0	1	"Q"	QBBO 0	Quotation Message
Tracking Number	1	2	Integer		Q OMX internal I number
Time Stamp	3	6	Timestamp	Time st	
Stock	9	8	Alphanumeric		s the PSX market
Stock	3	0	Aiphanamenc	center s identifie BBO qu	system issue er for which the PSX otation message is enerated.
Security Class	17	1	Alphanumeric	market	es the primary listing for the stock. The le values are as
				Code	Value
				Q	NASDAQ Listed Issue
				N	NYSE
				Α	NYSE MKT
				Р	NYSE Arca
				Z	BATS
PSX Best Bid Price	18	4	Price (4)	price -	s the PSX best bid the highest price for buy order(s) in the stem.
PSX Best Bid Size	22	4	Integer	number for disp market	s the aggregated r of shares available lay within the PSX center system at ( best bid Price.
PSX Best Offer Price	26	4	Price (4)	Denote: exchan- the lo market PSX sys	s the PSX ge's best offer price west price for sell order(s) in the stem.
PSX Best Offer Size	30	4	Integer	number for disp market	s the aggregated r of shares available lay within the PSX center system at & Best Offer Price.

## **6 Contact Information**

Questions about the PSX Basic entitlement and PSX BBO specification document may be directed to  $\underline{\mathsf{NASDAQ}}$   $\underline{\mathsf{OMX}}$   $\underline{\mathsf{Global}}$   $\underline{\mathsf{Data}}$   $\underline{\mathsf{Products}}$  at +1 301 978 5307.

Questions about PSX BBO transmissions may also be directed to <u>NASDAQ OMX</u> <u>Operations Center</u>.

## Appendix A

### **Stock Symbol Convention**

For NASDAQ-listed issues, NASDAQ OMX currently restricts its symbol length to a maximum of 8 characters. For common stock issuances, NASDAQ, PSX and BX will only assign root symbols of 1 to 4 characters in length with possible fifth and or sixth character denoting a suffix. In certain instances, a dot "." delimiter may be applied to symbols after the root and between the suffix eg., XXXX.A. For subordinate securities, NASDAQ and BX will assign a 5 character symbol for which the last character relays information about the issue class or issue type. For the current list of fifth and or six character symbol suffixes, please refer to Ticker Symbol Convention page on the NASDAQ OMX Trader website.

For NYSE-, NYSE MKT- and NYSE Arca-listed securities with subordinate issue types, please refer to <u>Ticker Symbol Convention</u> page on the NASDAQ OMX Trader website.

## **Appendix B**

#### **Trading Action Reason Codes**

For NASDAQ-listed issues, NASDAQ acts as the primary market and has the authority to institute a trading halt or trading pause in an issue due to news dissemination or regulatory reasons.

For CQS issues, NASDAQ, BX and PSX abide by any regulatory trading halts and trading pauses instituted by the primary or listing market as appropriate.

For all issue types, NASDAQ, BX and/or PSX may also halt trading for operational reasons.

NASDAQ, BX and/or PSX will send out a trading action message to inform its market participants when the trading status of an issue changes. For informational purposes, NASDAQ and PSX also attempt to provide the reason for each trading action update. For bandwidth efficiency reasons, NASDAQ, BX and PSX use a 4-byte code for the reason on its outbound data feeds.

<b>REASON C</b>	ODES FOR TRADING HALT ACTIONS
Code	Value
T1	Halt News Pending
T2	Halt News Disseminated
T5	Single Security Trading Pause In Affect
T6	Regulatory Halt — Extraordinary Market Activity
T8	Halt ETF
T12	Trading Halted; For Information Requested by Listing Market
H4	Halt Non-Compliance
H9	Halt Filings Not Current
H10	Halt SEC Trading Suspension
H11	Halt Regulatory Concern
01	Operations Halt; Contact Market Operations
LUDP	Volatility Trading Pause
LUDS	Volatility Trading Pause – Straddle Condition
MWC1	Market Wide Circuit Breaker Halt – Level 1
MWC2	Market Wide Circuit Breaker Halt – Level 2
MWC3	Market Wide Circuit Breaker Halt – Level 3
MWC0	Market Wide Circuit Breaker Halt – Carry over from previous day
IPO1	IPO Issue Not Yet Trading
M1	Corporate Action
M2	Quotation Not Available
<space></space>	Reason Not Available

REASON	REASON CODES FOR QUOTATION/TRADING RESUMPTION ACTIONS			
Code	Value			
T3	News and Resumption Times			
T7	Single Security Trading Pause / Quotation Only Period			
R4	Qualifications Issues Reviewed/Resolved; Quotations/Trading to Resume			
R9	Filing Requirements Satisfied/Resolved; Quotations/Trading To Resume			
C3	Issuer News Not Forthcoming; Quotations/Trading To Resume			
C4	Qualifications Halt ended; Maintenance Requirements Met; Resume			

C9	Qualifications Halt Concluded; Filings Met; Quotes/Trades To Resume
C11	Trade Halt Concluded By Other Regulatory Auth.; Quotes/Trades Resume
MWCQ	Market Wide Circuit Breaker Resumption
R1	New Issue Available
R2	Issue Available
IPOQ	IPO Security Released for Quotation (NASDAQ OMX Securities Only)
IPOE	IPO Security — Positioning Window Extension (NASDAQ OMX Securities Only)
<space></space>	Reason Not Available

For the current list of regulatory halts, please refer to the  $\underline{\text{Trading Halts page}}$  on the NASDAQ OMX Trader website.

## **Appendix C - Issue Classification Values**

Identifies the security class for the issue as assigned by NASDAQ

CODES	FOR ISSUE CLASSIFICATION VALUES
Code	Value
Α	American Depositary Share
В	Bond
С	Common Stock
F	Depository Receipt
I	144A
L	Limited Partnership
N	Notes
0	Ordinary Share
Р	Preferred Stock
Q	Other Securities
R	Right
S	Shares of Beneficial Interest
Т	Convertible Debenture
U	Unit
V	Units/Benif Int
W	Warrant

## **Appendix D - Issue Sub-Type Values**

Code	Value			
Α	Preferred Trust Securities			
В	Index Based Derivative			
С	Common Shares			
CB	Commodity Based Trust Shares			
CF	Commodity Futures Trust Shares			
CL	Commodity-Linked Securities			
CM	Commodity Index Trust Shares			
CT	Currency Trust Shares			
CU	Commodity-Currency-Linked Securities			
CW	Currency Warrants			
D	Global Depositary Shares			
Е	ETF-Portfolio Depositary Receipt			
EG	Equity Gold Shares			
EI	ETN-Equity Index-Linked Securities			
EN	Exchange Traded Notes			
FI	ETN-Fixed Income-Linked Securities			
FL	ETN-Futures-Linked Securities			
G	Global Shares			
Н	Debt-Based Derivative			
I	ETF-Index Fund Shares			
IX	Index-Linked Exchangeable Notes			
K	Callable Common Stock			
L	Contingent Litigation Right			
LL	Identifies securities of companies that are set up as a Limited Liability			
	Company (LLC)			
М	Equity-Based Derivative			
MF	Managed Fund Shares			
ML	ETN-Multi-Factor Index-Linked Securities			
MP	Master Limited Partnership			
MT	Managed Trust Securities			
N	NY Registry Shares			
0	Open Ended Mutual Fund			
P	Privately Held Security			
PU	Partnership Units			
R	Reg-S			
RC	Commodity-Redeemable Commodity-Linked Securities			
RF	ETN-Redeemable Futures-Linked Securities			
RU	Commodity-Redeemable Currency-Linked Securities			
S	SEED			
<u></u> T	Tracking Stock			
TC	Trust Certificates			
TU	Trust Units			
U	Portal			
V	Contingent Value Right			
W	Trust Issued Receipts			

## Appendix E

#### **Documentation Version Control Log**

#### October 1, 2013: PSX Best Bid and Offer (PX BBO) 2.00

Released a new version of PSX BBO documentation to support the following changes:

Conversion to binary

#### August 2, 2013: PSX Best Bid and Offer (PX BBO) 2.00

Released a new version of PX BBO documentation to support the following changes:

- Inclusion of the Appendices for Issue Classification and Issue Sub-Type
- Updated offsets in the Symbol Directory Message
- Updated offsets and lengths for the MWCB Decline Level Message
- Renamed the Compliance ID field to TrackingID

#### July 10, 2013: PSX Best Bid and Offer (PX BBO) 2.00

The PX BBO Specification was updated to reflect the following changes:

- Added Enhanced Symbol Directory
- Added Market-Wide Circuit Breaker (MWCB) Messaging
  - o MWCB Decline Level Message
  - MWCB Status Message
- Addition of an internal tracking number to multiple messages
- Addition of 'C' to the Financial Status Indicator field in the Symbol Directory Message

#### March 11, 2013: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX added the following Trading Action Reason Code for LULD to reflect when the National Best Bid is below the lower price band and/or the National Best Offer is above than the upper price band and the NMS Stock is not in a Limit State.

• LUDS - Volatility Trading Pause - Straddle Condition

#### January 9, 2013: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX added the following Trading Action Reason Code:

• MWC0 - Market Wide Circuit Breaker Halt - Carry over from previous day

#### January 8, 2013: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX removed the Trading Action State, "P", from the Stock Trading Message.

#### November 6, 2012: PSX Best Bid and Offer (PX BBO) 1.1

Released a new version of the PX BBO documentation to support the following changes:

- Added the "P" value to the Trading State in the Stock Trading Message.
- Modified the values for the Trading Action Reason Codes. Added the following codes:
  - o LUDP Volatility Trading Pause
  - MWC1 Market Wide Circuit Breaker Halt Level 1
  - MWC2 Market Wide Circuit Breaker Halt Level 2
  - MWC3 Market Wide Circuit Breaker Halt Level 3
  - o MWCQ Market Wide Circuit Breaker Resumption
- Removed the Trading Action values related to the Volatility Guard Program. Removed Trading State, "V". Eliminated Trading Action Reason Codes, V1 and V2.

#### November 1, 2011: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX added a new Market Center code, "Z", for BATS-listed securities to the Market Category and Security Class fields.

#### July 14, 2010: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX added a new Regulation SHO Short Sale Price Test Restricted Indicator message format to be introduced in the fourth quarter of 2010.

#### July 2, 2010: PSX Best Bid and Offer (PX BBO) 1.1

NASDAQ OMX added new Action Trading code(s) to the Stock Trading Action message for the NASDAQ Volatility Guard trading pause.

#### May 25, 2010: PSX Best Bid and Offer (PX BBO) 1.1

Inclusion of two new Trading Action Reason code values (T5 and T7) for single security trading pause situations

#### March 26, 2010: PSX Best Bid and Offer (PX BBO) 1.1

Inclusion of EMC (Emergency Market Conditions) System Event Codes

#### February 26, 2010: PSX Best Bid and Offer (PX BBO) 1.1

Initial release of PSX documentation.

(Note: For cross market consistency, PSX is using the same version numbers as the NASDAQ and BX markets. There will be no PX BBO 1.0.)