



OTC Markets Group Data Integration and Display

Requirements and Guidelines

Version 2.2

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OTC Markets Group Data Display Requirements

Change History

2.2	06/04/14	Clarification of attribution for delayed and historical data
2.1	06/06/12	Clarification of Level 1 guidelines and tier labeling options
2.0	11/29/11	Clarification of display guidelines for Quote Access Payments (QAP)
1.9	01/13/11	OTC Markets Group, tier and OTC Link name changes
1.8	11/01/10	Contact email change to marketdata@pinkotc.com
1.7	10/01/10	Removal of 'Do Not Assign' as an OTC market tier value
1.6	06/10/10	Addition of tier information for No Tier and Do Not Assign
1.5	04/28/2010	Addition of tier display options
1.4	04/15/2010	Addition of tier descriptions (grey market, otcbb only)
1.3	04/08/2010	Simplified Security Information updated to use OTC Tier information
1.2	04/08/2010	Tier label updates
1.1	10/05/2009	Updated to product naming convention changes
1.0	12/20/2007	Document is created.

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1 Introduction

This Integration Requirements and Guideline document serves as a reference for those who wish to display OTC Link information on web sites or develop a proprietary quote and trade data user interface on data terminals. The Integration Requirements and Guideline document is a supplement to the [Multicast Feed specification](#) document.

2 Identification and Display Requirements

Market data distributors and subscribers are required to adhere to the following display requirements:

Security Market Tier Identification: All securities should be clearly identified as within an OTC Market Tier (OTCQX, OTCQB, OTC Pink-Current etc.). Systems that require a user to add a unique market identifier to the symbol in order to retrieve a quote or a consolidated quote must have different identifier for OTCQX, OTCQB and OTC Pink securities. Please see our tier display options in section 3.4.

Security Description: Minimum security information should be displayed on each page or screen showing the quotes. This includes, but is not limited to, the security identifiers (symbol, etc.), security name and Market Tier information (OTCQX, OTCQB.)

Dual Quoted Securities Inside Quote: Broker-dealers are required by FINRA to consider the priced quotes in both the OTCBB and OTC Link for Best Execution purposes. Vendors must consolidate the inside quote for securities that are dually quoted on OTC Link and the OTCBB. The consolidated quote should be the best quote across OTC Link and OTCBB. The inside should clearly identify the source of the quote, i.e., OTC Link or OTCBB. See chapter 4.2.

Dual Quoted Securities Montages: When market maker quotes for the security exists on both OTC Link and the OTCBB, the source for each quote price should be clearly identified, for example by color coding the quotes based on the origin or by adding a suffix to the Market Participant ID. For OTC Link quotes the suffix will be based on OTC Market Tier e.g. qx while for OTCBB quotes the suffix will be '.bb'. For more information on dual quotes see chapter 5.7.

Data Source Attribution: Any end user application (including, but not limited to, mobile applications) or website that displays OTC Markets Group real-time, delayed or historical data must note OTC Markets Group as a source of the respective data. The preferred reference is 'OTC Data provided by OTC Markets Group Inc.' with 'OTC Markets Group Inc.' being a link to 'www.otcmarkets.com.' If OTC Markets Group data is integrated with other data sources (e.g. combining OTC Markets and OTCBB data for Level 1 quote data), explanation of the display and proper attribution is to be made available to users. For more information on combined quotes see chapter 4.2.

3 Displaying Security Information

OTC Markets Group data feeds include a full security database of all securities that are quoted on OTC Link. The OTC market is made up of many different types of companies, ranging from OTCQX companies that worthy of investor consideration to economically distressed companies to

speculative shell companies. All securities in the feed have fields to identify these qualities, such as OTC Market Tier or Caveat Emptor flag.

3.1 Security Identifiers and Trading Symbol

The primary symbol indicator should be the Security Trading Symbol. For OTC securities this is normally a four (4) character symbol issued by FINRA.

All securities are uniquely identified by an internal OTC ID. The OTC ID should primarily be used for internal system purposes, such as to track any quote updates and link to the corresponding security. The OTC ID should normally not be shown to users unless there are special circumstances, for example if the security does not have a FINRA issued Security Trading Symbol.

A CUSIP may be present in the security information. Use or display of the CUSIP identifier requires a license from the CUSIP Service Bureau.

3.2 Displaying Simplified Security Information

All display pages and screens that show full or limited information from OTC Link should at minimum show the following information for the security:

- Security trading symbol and symbol suffix (if applicable)
- Security name
- OTC Market Tier: OTCQX, OTCQB, OTC Pink - Current

Example of simple Security Information:

ADDYY—Adidas AG

Tier: OTCQX

3.3 Displaying Detailed Security Information

OTC Markets Group encourages vendors to offer viewers more detail on the security. This can either be done by expanding on the minimum requirement above, or have a separate Security Detail page or screen that users can access from the basic information.

You have access to the following detailed Security Information within OTC data feed:

- Security trading symbol
- Security name
- Security CUSIP (*User must be licensed to use CUSIP information by CUSIP Service Bureau*)
- Security OTC ID, an internal OTC Markets Group ID
- Internal issuer ID and Issuer name
- Primary Market (used to identify quotation/trading venue, see chapter 3.6.1 below)
- OTC Market Tier identifier for OTC securities

- Piggyback status (see chapter 3.6.2 below)
- Security status (see chapter 3.6.2 below)
- Unsolicited only status (see chapter 3.6.2 below)
- Reg-SHO status (see chapter 3.6.2 below)
- Caveat Emptor warning (see chapters 3.5 and 3.6.2 below)

The internal OTC ID is primarily used to track securities inside your application, to link securities to quotes, but can also be used to reference securities when submitting data to OTC Link.

The trading symbol is the primary identifier for a security. Some securities on NYSE have a secondary symbol suffix identifier. These securities should be displayed with symbol identifier as *symbol.suffix*.

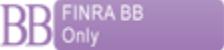
3.4 OTC Tier Identification

OTC securities are further identified by a tier identifier. Tiers provide a classification scheme for OTC securities based on reporting type (e.g. SEC Reporting, Alternative Reporting Standard), reporting timeliness and, in the case, of OTCQX – quantitative and qualitative listing requirements.

Each tier has a graphical logo associated with it which is optional to use when identifying the tier. If the graphic is not used, a text version of the tier must be displayed. The text display options are noted below the tier description table.

Name & Graphic	Tier Value	Comments
No Tier	0	Rarely used. Denotes that no classification has been given to this security.
OTCQX U.S. Premier 	1	The highest tier for U.S. companies that trade over-the-counter, OTCQX U.S. Premier identifies issuers that are able to meet the financial requirements of NASDAQ's Capital Market continued listing standards. OTCQX U.S. Premier provides a credible disclosure process for companies that choose not to be SEC-reporting or, for SEC reporting companies, a more reputable platform for growth or a springboard to a NASDAQ listing.
OTCQX U.S 	2	Identifies issuers that have ongoing business operations with audited financials and management review, but not of sufficient size to be on OTCQX U.S. Premier
OTCQX International Premier 	5	The highest tier for international exchange listed companies that are able to meet the financial qualifications of the NYSE's Worldwide Listing Standards. OTCQX International provides a mechanism for

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		companies to make their home country disclosure available in English to U.S. investors rather than via duplicative SEC reporting requirements.
OTCQX International 	6	This tier identifies those companies that are listed on an international exchange but are not of sufficient size to list on OTCQX International Premier
OTCQB 	10	The OTCQB market tier helps investors easily identify companies that are Registered and current in their reporting obligations with the SEC or report to a U.S. banking or insurance regulator. OTCQB securities are quoted on OTC Markets Group's quotation and trading system and some may also be quoted on FINRA's OTCBB.
OTCBB Only 	11	This security is one of approximately 20 OTC securities that are quoted solely on FINRA's OTCBB quotation system.
OTC Pink -Current Information 	20	Companies that follow the International Reporting Standard or the Alternative Reporting Standard by making filings publicly available through the OTC Disclosure & News Service pursuant to OTC Markets Group Guidelines for Providing Adequate Current Information (pdf) are designated as OTC Pink Current Information. The Current Information category is based on the level of disclosure and is not a designation of quality or investment risk.
OTC Pink - Limited Information 	21	Designed for companies with financial reporting problems, economic distress, or in bankruptcy to make the limited information they have publicly available. The Limited Information category also includes companies that may not be troubled, but are unwilling to meet OTC Markets Group Guidelines for Providing Adequate Current Information. Companies in this category have limited financial information not older than six months available on the OTC Markets Group News Service or have made a filing on the SEC's EDGAR system in the previous six months.
OTC Pink - No Information	22	Indicates companies that are not able or

		<p>willing to provide disclosure to the public markets - either to a regulator, an exchange or OTC Markets Group. Companies in this category do not make Current Information available via OTC Markets Group News Service, or if they do, the available information is older than six months. This category includes defunct companies that have ceased operations as well as 'dark' companies with questionable management and market disclosure practices. Publicly traded companies that are not willing to provide information to investors should be treated with suspicion and their securities should be considered highly risky.</p>
<p>Grey Market</p> 	<p>30</p>	<p>There are no market makers in this security. It is not listed, traded or quoted on any stock exchange, the OTCBB or OTC Link. Trades in grey market stocks are reported by broker-dealers to their Self Regulatory Organization (SRO) and the SRO distributes the trade data to market data vendors and financial websites so investors can track price and volume. Since grey market securities are not traded or quoted on an exchange or interdealer quotation system, investor's bids and offers are not collected in a central spot so market transparency is diminished and Best Execution of orders is difficult.</p>

3.4.1 Caveat Emptor

The Caveat Emptor parameter is used by OTC Markets Group Inc. to issue a Buyer Beware warning to investors in OTC securities. If this property is set in the Security message there is a public interest concern associated with the company, which may include a spam campaign, stock promotion or known investigation of fraudulent activity committed by the company or insiders. The Caveat Emptor warning is a valuable tool for broker-dealers to identify questionable customer activity as part of their internal compliance and AML programs.

A prominent message to users should be displayed if a Caveat Emptor warning is set on a security. Optionally, the graphic below can be used to emphasize the gravity of the matter.



A Caveat Emptor warning on a security is specified in field CaveatEmptor (Security Flag) on the Security message. See chapter 3.6.2 below.

3.4.2 Tier/Caveat Emptor Text Display Options

All applications displaying OTC Link quote data must include at least one of the tier display options within the same screen as the security identifier and security name information. The option selected must be communicated to OTC Markets Group by emailing marketdata@otcmarkets.com.

Option 1 - Full Name	Option 2 – 2 Characters	Option 3 – 5 Characters	Option 4 – Short Name
OTCQX US Premier	QX	OTCQX	OTCQX
OTCQX US	QX	OTCQX	OTCQX
OTCQX International Premier	QX	OTCQX	OTCQX
OTCQX International	QX	OTCQX	OTCQX
OTCQB	QB	OTCQB	OTCQB
OTC Pink - Current Information	PK	OTCPK	OTCPK – Current
OTC Pink - Limited Information	PK	OTCPK	OTCPK – Limited
OTC Pink - No Information	PK	OTCPK	OTCPK – No Info
OTCBB Only	BB	OTCBB	OTCBB
Grey Market	GM	Grey	Grey Market
Caveat Emptor	CE	CV EM	CV Emptor

Securities in 'No Tier' should not display any tier information.

3.5 The Security Message in Detail

This chapter discusses some fields of the Security message that allow you to further define the security.

3.5.1 Identifying the Primary Market

The Primary Market (field 9550 in the ASCII Reference Data Channel) identifies the market where the security primarily trades or in the case of the OTC market – the inter-dealer quotation system(s) where the security is quoted. Primary Market may also be derived for OTC securities by using the tier value and the BB quote value in the security message of the binary quote channels. See the Multicast Specification document: <http://www.otcmarkets.com/content/doc/otc-markets-multicast-spec.pdf>

Valid values are:

Primary Market	Value of Field 9550 in ASCII Reference Data Channel	Comments
OTC Link	OP	Security is quoted exclusively on OTC Link.
OTCBB	OB	This security is quoted solely on the OTC Bulletin Board quotation system and not accessible for trading via OTC Link.

Dually quoted on OTC Link and OTCBB	OBP	Identifies securities that are quoted on both OTC Link and the OTCBB. More than 98% of all securities eligible to be quoted on the OTCBB are dually quoted on OTC Link as the OTC Link messaging system allows market participants to electronically trade.
OTC Link – Fixed Income (f/k/a Yellow Sheets)	OY	Fixed Income quoted on OTC Link
NYSE	N	Security is primarily trading on NYSE, but has quote(s) on OTC Link (usually unpriced).
NASDAQ	O	Security is primarily trading on NASDAQ, but has quote(s) on OTC Link (usually unpriced).
NYSE - AMEX	A	Security is primarily trading on NYSE - AMEX, but has quote(s) on OTC Link (usually unpriced).
NYSE - ARCA	X	Security is primarily trading on NYSE - ARCA, but has quote(s) on OTC Link (usually unpriced).
Grey market	“ “ (a single space) or “G”	<p>It is not listed, traded or quoted on any stock exchange, the OTCBB or OTC Link. Trades in grey market stocks are reported by broker-dealers to the OTC Reporting Facility operated by the Financial Industry Regulatory Authority (FINRA), which trade data is subsequently disseminated to market data vendors and financial websites so investors can track price and volume.</p> <p>Also identified in Tier field. Value = 30.</p>

3.5.2 Other Security Identifiers and Parameters

Other identifiers in the Security message (Binary Quote Channels and the ASCII Reference Data Channel that identify various states of the security are as follows:

Field Name	Comments
OTCSecurityID	A unique security ID used internally to track securities, primarily for linking to Quote and Trader messages.
PiggybackFlag	<p>Used to note the Piggyback status of the security.</p> <p>Qualified as a SEC Rule15c2-11 “PiggyBack” exempt security: Y=Yes N=No (default)</p>

CaveatEmptor	A Caveat Emptor warning on the security. See Section 3.5. This warning identifier shows public interest concern and can be used by firms to identify questionable customer sales activities as part of their internal compliance and AML programs.
RegSHO	Indicates that a security is on Regulation SHO/FINRA Rule 3210 Threshold Security List as of the display date. Valid values: Y – is RegSho list N – is not on RegSho list
UnsolicitedOnly	A flag indicating that a security is only quoted unsolicited. If a Security has one or more market maker quote, and all those quotes are UNS, the security is quoted UNS. (Securities that have some UNS mm quotes and some not UNS are not flagged UNS). Valid values: N – not quoted unsolicited (default) Y – quoted unsolicited only
Status	The status of the security on the OTC Link system. Valid values: A – Active S – Suspended H – Halted I – Internal Halt R – Revoked D - Deleted

4 Displaying Level I Quote

4.1 *Displaying OTC Link Exclusive Inside*

For OTC Feed customers, the Inside Quote is used to display the Level I quote information. For multicast feed customers, Level 1 information is included in the 'Quote Inside' channel – access to which is determined by the license purchased.

Level 1 has separate Bid and Ask prices along with corresponding sizes. All sizes are in actual number of shares, not in multiples of 100.

4.1.1 Example of Showing Exclusive OTC Link Insides

Showing Inside Quote as single item, format *bid / ask (bid size x ask size)*:

10.00 / 10.05 (200 x 200)

Showing Bid and Ask separately, format *bid x bid size* and *ask x ask size*:

BID = 10.00 x 200 shares

ASK = 10.05 x 200 shares

4.2 *Displaying Consolidated OTC Link and OTCB Inside*

When a security is dually quoted on the OTC Link and OTCBB, the best quotes across venues is the consolidated inside or NBBO (NATIONAL BEST BID OFFER or NBBO). The Consolidated Inside should clearly indicate where each side of the inside originates from. Some examples of how to identify each side are shown below.

4.2.1 Options of Showing Consolidated OTC Link and OTCBBS Insides

Assume the best bid on the OTC Link is 10.00 while the best bid on the OTCBB is 9.95. The best ask is 10.05 on the OTCBB while the best ask on OTC Link is 10.10. Thus the inside bid is 10.00 from OTC Link and 10.05 from OTCBB.

For quotes originating from OTC Link, the suffix/indicator used (2 character version) should match the OTC Market Tier that the security is within. For example if the quote is for an OTCQX security then the suffix/indicator should be 'qx'. Please see Section 3.4.2 – Tier/Caveat Emptor Text Display Options.

Option 1 identifies the quote by preceding each side with either QX, QB or PK for OTC Link or OTCBB¹, as a combined inside:

BID/ASK = QX:10.00 x 200 / BB:9.95 x 200

Or with separate bid and ask items:

Option 2 shows the source identifier next to the price.

BID/ASK = 10.00qx x 200 / 10.05bb x 200 shares

Option 3 shows each side separately with an identifier on the BID and ASK caption:

BID.qx = 10.00 x 200 shares ASK.bb = 10.05 x 200 shares

The option selected must be communicated to OTC Markets Group by emailing marketdata@otcmarkets.com.

¹ For OTCBB quotes, the 2 character abbreviation suggested is 'bb.'

5 Displaying Full Level 2 Quote Montage

5.1 The Level 2 Quote

The Level 2 quote montage is constructed by combining all Market Participant Quotes (non-inside) for a single security and ranking them based on price. Level 2 quotes will be included in the Quote Book channel of the multicast feed.

The basic market participant quote consists of 5 different display items:

- Market Participant ID (MPID, 4 character ID as issued by NASDAQ)
- Price
- Quote Access Payment (QAP) value
- Size
- Time of Update

Each Market Participant Quote has two sides: a bid and an ask. The bid specifies at which price the Market Participant is willing to buy the security and the ask specifies the price for which the Market Participant is willing to sell the security. On a Quote Montage you will typically split the screen display into two parts with the bids showing on the left hand side and the asks showing on the right hand side.

The bid side would normally show information in 5 columns, from left to right: MPID, bid price, bid qap value, bid size and time of update.

The ask side could either repeat the order of items from the bid side, apart from showing the ask information of the quotes, or it could mirror the information to show them in reverse order.

Example of an identically ordered sides montage:

Bid					Ask				
MPID1	Bid1	Bid QAP	BidSize1	Time1	MPID1	Ask1	Ask QAP	AskSize1	Time1
MPID2	Bid2	Bid QAP	BidSize2	Time2	MPID2	Ask2	Ask QAP	AskSize2	Time2
MPID3	Bid3	Bid QAP	BidSize3	Time3	MPID3	Ask3	Ask QAP	AskSize3	Time3

Example of a mirrored ordered sides montage:

Bid					Ask				
MPID1	Bid1	Bid QAP	BidSize1	Time1	Time1	AskSize1	Ask QAP	Ask1	MPID1
MPID2	Bid2	Bid QAP	BidSize2	Time2	Time2	AskSize2	Ask QAP	Ask2	MPID2
MPID3	Bid3	Bid QAP	BidSize3	Time3	Time3	AskSize3	Ask QAP	Ask3	MPID3

5.2 Quote Price Types

Each side of a Market Participant Quote can be any of 3 different price types. The quote type is noted in the Quote Flag. Valid types are:

Price Type	Comment
Actual/Priced	Actual is the actual dollar amount a trader is willing to buy or sell securities.
Offer/Bid (OW/BW) Wanted	Offer Wanted/Bid Wanted (OW/BW) is used to solicit sellers/buyers, without displaying actual price or size. OW/BW quotes may not have a Quote Access Payment (QAP) value.
Unpriced	Unpriced quotes are an indication of interest (IOI) in a security used when a trader does not wish to show a price or size. Unpriced, name-only quotes are also used as the other side of a one-sided, priced quote. Unpriced quotes may not have a Quote Access Payment (QAP) value.

When ranking quotes on the quote montage by type, all priced quotes should be shown above any Unpriced and OW/BW quotes and ranked based on rules specified in chapter 5.5. Unpriced and OW/BW quotes should all be shown in same cluster and should be ranked on time of updated (oldest time of update on top).

OW/BW and Unpriced Quotes never have a size or quote access payment associated with them. For these price types the size and QAP should be shown as blank, or zero (0).

Example:

Bid					Ask				
MPID1	Best actual bid price	Bid QAP	BidSize1	Time1	MPID1	Best actual ask price	Ask QAP	AskSize1	Time1
MPID2	Second best actual bid price	Bid QAP	BidSize2	Time2	MPID2	Second best actual ask price	Ask QAP	AskSize2	Time2
MPID3	OW	No QAP	No size	Time 3 (< Time 4)	MPID3	Unpriced	No Size	No size	Time 3 (< Time 4)
MPID4	Unpriced	No QAP	No size	Time 4	MPID4	BW	No Size	No size	Time 4

5.3 Unsolicited Quotes

A market participant can choose to quote the security unsolicited. The Unsolicited state is noted within the Quote Flag (Section 3.3.9 of [Multicast Specification](#)) Unsolicited quotes should be identified with a lower case "u" after the Market Participant ID on the Quote Montage.

Example, Market Participant 1 is quoting unsolicited:

Bid					Ask				
MPID1u	Bid1	Bid QAP	BidSize1	Time1	MPID1u	Ask1	Ask QAP	AskSize1	Time1
MPID2	Bid2	Bid QAP	BidSize2	Time2	MPID2	Ask2	Ask QAP	AskSize2	Time2
MPID3	Bid3	Bid QAP	BidSize3	Time3	MPID3	Ask3	Ask QAP	AskSize3	Time3

5.4 Open and Closed Quotes

The concept of opening and closing quotes is that traders can indicate when they are available for business within the operating hours of the OTC Link system. All quotes will be closed at the start of the trading day and will remain closed until the traders open their quotes. Although traders are free to open their quotes at any time within OTC Link business hours (6 AM to 5 PM ET Monday through Friday), they will generally do so between 7AM and 9:30AM. Most traders close their quotes after 4PM. OTC Link will automatically close any quotes that remain open at 11PM.

Quote open/closed status is noted within the Quote Flag (Section 3.3.9 of [Multicast Specification](#))

The general rule on displaying quotes is that any open quote should be shown above a closed quote of same price type. Open priced quotes are ranked at the top, followed by closed priced quotes. If a closed quote would rank above another open quote based on price, it is still shown below all Priced Quotes but above any OW/BW or Unpriced Quote, regardless of whether those quotes are open or closed.

A closed quote should be identified by showing a lower case "c" in front of the Market Participant ID and colored amber to distinguish from open quotes.

Example, assuming MPID2 would normally be ranked second, he is placed 3rd behind the third best quote because he's closed, as identified with a lower case "c" in front of his MPID.

Bid					Ask				
MPID1	Bid1	Bid QAP	BidSize1	Time1	MPID1	Ask1	Ask QAP	AskSize1	Time1
MPID3	Bid3	Bid QAP	BidSize3	Time3	MPID3	Ask3	Ask QAP	AskSize3	Time3
cMPID2 (closed)	Bid2	Bid QAP	BidSize2	Time2	cMPID2 (closed)	Ask2	Ask QAP	AskSize2	Time2
MPID4	OW	No QAP		Time4	MPID4	Unp	No QAP		Time4

Note - Open quotes are firm.

5.5 Quote Access Payments (QAP)

Under FINRA Rule 6450, OTC market participants are able to charge access fees related to transactions in OTC securities. In order to facilitate the posting and dissemination of access fees,

OTC Markets Group created Quote Access Payment (QAP) functionality in its core quotation, messaging and market data systems. Quote Access Payment (QAP) functionality allows participants to dynamically set access fees or rebates, in real-time and on a per security basis through OTC Dealer or OTC FIX connections.

QAP values are disseminated on the multicast data feed in the BidQAP and AskQAP fields within the Quote Book channel. QAP values must be incorporated in the Level 2 montage display and should be used for the ranking of Level 2 quotations (as explained in sections 5.6, 5.7, 5.8).

5.6 Ranking Actually Priced Quotes

Actual Priced Quotes are ranked based first on price, then QAP value, then size, then time. The best price is displayed on top, followed by second best price, third best price, etc. The best price is defined as following:

- On the bid side, the best price is the highest price
- On the ask side, the best price is the lowest price

When two or more quotes share the same price, ranking should be based on the QAP value. The quote with the higher QAP value gets ranked above quotes with a smaller QAP value.

When two or more quotes share the same price and QAP ranking should be based on the quote size. The quote with the higher size value gets ranked above quotes with a smaller size value.

When two or more quotes share the same price, QAP and quote size, then ranking should be based on the time of update. The quote with the oldest time of update will be ranked above newer quotes.

Example: note that the order of Market Participants on the bid side and ask side are not the same:

Bid					Ask				
MPID1	10	-20	100	12:00	MPID2	11	-10	200	11:00
MPID2	9	10	200	11:00	MPID3	11	-20	200	9:00
MPID3	9	-10	100	10:00	MPID1	11	-20	100	12:00
MPID4	9	-30	100	10:00	MPID4	11	-30	100	10:00

5.7 Combining All Quote Rankings

Market Participant Quotes should be ranked independently on the bid and ask side. Quotes are ranked based on the price type, open/close status and the individual quote attributes:

- Any Open quote is shown above any Closed quote of same price type
- Any priced quote is shown above any Unpriced and OW/BW quote (regardless of open/close status)
- OW/BW quotes are ranked above Unpriced quotes with oldest time of update at the top for each respective quote type.

- Actually priced quotes are ranked such that the best price is at the top, with second best price below, followed by third best price etc. Best price is defined as the highest bid and lowest ask.
- When two or more quotes share the same price, ranking should be based on the QAP value... The quote with the greatest QAP value gets ranked above quotes with smaller QAP values.
- When two or more quotes share the same price and QAP value, then ranking should be based on quote size. The quote with the greatest quote size gets ranked above quotes with smaller quote size.

Offer Wanted/Bid Wanted quotes are displayed by reflecting “OW” or “BW” in the price column. Unpriced Quotes display “Unpr” (or ‘U’) in the price column. OW/BW and Unpriced Quotes never have a quote size associated with them, so the size column should be left blank.

Example: Bid side of a simple Quote Montage for a security quoted only on OTC Link:

MPID	Bid Price	QAP	Size	Time	Remarks
ABCD	57.00	-30	200	12:00	Actual, open
BCDE	56.50	-10	200	11:00	Actual, open
CDEFu	52.00	-10	200	10:00	Unsolicited Quote, actual, open
DEFG	52.00	-10	200	11:00	Actual, open (below CDEF because newer time)
cEFGH	58.00	-20	200	11:00	Actual, closed (“c” in front of MPID)
GHIJ	OW			06:00	Offer Wanted (OW in price column), open
HJK	Unpr			07:00	Unpriced, open

5.8 Combining OTC Link and OTCBB Quotes in one Montage

For dually quoted securities with quotes on both OTC Link and the OTCBB, it is necessary to distinguish the quotes from each source. There are two options for doing this, either by using the suggested color scheme as specified in chapter 5.8 in this document, or by appending a suffix such as “.qx” and “.bb” to the market participant ID. The suffix used should be the 2 character option noted in the OTC Tier labeling section (section 3.4.2)

When combining quotes from both venues into one montage, Vendors may choose to show both quotes separately or combine them into one display quote when possible. The method to determine if this is possible and then combining quotes is the following:

- When a Market Participant is quoting a security on both OTC Link and the OTCBB and the price and size is identical on both venues then combine that Market Participant’s quotes into one displayed quote and identify it as coming from OTC Link by either using the suggested color scheme and/or with a respective OTC tier suffix (e.g. ‘qx’) on the market participant ID (in other words, hide the OTCBB quote).
- When a market participant has quotes for a single security on both OTC Link and OTCBB but you cannot combine the quotes into one displayed quote as suggested above, display each quote separately either by using the suggested color scheme and/or by appending a respective tier suffix such as “.qx” for OTC Link quotes and “.bb” for OTCBB quotes to the market participant ID.
- If market participant is only quoting the security on the OTCBB, then show that quote and identify it with a “.bb” suffix on the market participant ID, and/or with a light purple color to indicate it’s not OTC Linkable. This indicates that no quote exists on OTC Link from this

market participant and thus it's not possible to use OTC Link to trade with the market participant.

- If a market participant is only quoting the security on OTC Link, then add the respective OTC tier suffix to the market participant ID (e.g. 'qx') and/or show the security using the suggested color scheme.

Example of combining OTC Link and OTCBB quotes in one montage.

UBSS	14.50	200	09:30	MWRI	16.20	200	07:30
HILL	13.00	200	07:30	HILL	17.25	200	07:30
NITE	12.80	200	09:41	NITE	18.00	200	09:41
MONR	12.15	200	07:30	HDSNF	20.00	200	11/26
HDSNF	12.00	200	11/26	HOWE	20.00	200	07:30
HOWE	12.00	200	07:30	UBSS	101.00	100	09:30
MWRI	12.00	200	07:30	MONR	Unpr		>year
AUTO	Unpr		08:08	AUTO	Unpr		08:08

5.9 Quote Color Scheme Guidelines

If color is to be used to identify quotes, then OTC Markets Group Inc. recommends using the following color scheme:

- Green – inside, open, priced OTC Link quote, *i.e.*, best price on OTC Link
- Yellow – other OTC Link quotes, open quote not on the inside
- Cyan Blue – OTCBB quote, accessible via OTC Link
- Light Purple – OTCBB quote non-accessible via OTC Link (lack of, or closed, OTC Link quote)
- Amber – closed OTC Link quote
- Gray – stale quote, lost OTC Link connection

Example of use of color on montage:

PINK	1.15	500	11:12	SEAB	2.00	500	11/05
SEAB	1.00	2500	11/05	PINK	2.10	500	11:12
cHDSN	1.23	500	10/16	cTEST	2.00	500	09:37
cNITE	1.20	500	10/22	cNITE	2.80	500	10/22
cTEST	1.01	500	09:37	cHDSN	4.00	500	10/16
WSWW	Unpr		10/02	WSWW	Unpr		10/02
BEST	Unpr		10/29	BEST	Unpr		10/29

5.10 Quote Technical Details

5.10.1 Maximum length of display items

The following table shows the maximum length in characters of display items.

Description	Max. length
Security name (short name)	25 chars
Symbol (including Symbol suffix)	10 chars
CUSIP ²	9 chars
Security ID	7 chars
Market Participant ID ("BEST")	6 chars. 4 chars for MPID itself, plus an available 1 char prefix to denote closed markets ("c") and a 1 char suffix to denote unsolicited quote ("u").
Bid and Ask prices	Up to \$999,999 with precision to four (4) decimal places for prices at or below \$1.00.
Bid and Ask sizes	Integer values; greater of desired or regulatory minimum for priced quotations. Maximum value is 999,999,999.
Time (ET in milliseconds)	HH:MM:SS.sss

5.10.2 Pricing Precision

Decimal precision is currently 4 decimal places. Securities that are exclusive to OTC Link are further subject to a price tick rule which specifies that prices above \$1 should be truncated to the nearest penny. More specifically, bid prices are truncated down to the nearest penny and ask prices are truncated up to the nearest penny.

Minimum price is thus \$0.0001. Maximum price is \$999,999.9999, or \$999,999.99 for securities that fall under the price tick rule.

Bid and Ask sizes are always whole integers. The minimum allowed size for price quotes is 1 share and the maximum allowed size is 999,999,999 shares.

6 Displaying Delayed Data

6.1 *Delayed Data Attribution*

When displaying the 15 minute delayed data a notice must be prominently displayed stating the data is delayed by 15 minutes. Additionally the notice must identify OTC Markets Group as the owner of the information. The preferred reference is '[Data type] delayed 15 minutes. Data provided by OTC Markets Group Inc.' with 'OTC Markets Group Inc.' being a link to 'www.otcmarkets.com.'

² Vendors are only allowed to display the CUSIP information if they have a display agreement with CUSIP service bureau.

7 **Displaying Historical Data**

7.1 Historical Data Attribution

When displaying Historical Quote Information, a notice must be prominently displayed that states the Information is Historical Information. Historical Information is defined as the Information after 12:00 a.m. Eastern Standard Time subsequent to the date on which such Information was first provided to Distributor by OTC Markets Group. Additionally, the notice must identify OTC Markets Group as the owner of the Historical Information, and the notice must require that each Historical Information Recipient agrees not to sell, lease, furnish or otherwise permit or provide access to Historical Information to any other person or entity. The preferred reference is 'Historical Information provided by OTC Markets Group Inc. Recipient agrees not to sell, lease, furnish or otherwise permit or provide access to Historical Information to any other person or entity' with 'OTC Markets Group Inc.' being a link to 'www.otcmarkets.com'.