



Computer to Computer Interface (CTCI) Specifications for the Over the Counter Trade Reporting Facility

Version 1.0

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1.0 ORF CTCI INTERFACE

1.1 Introduction

The Over the Counter Trade Reporting Facility (ORF) is a service of FINRA that supports on-line trade reporting of over the counter equity securities. In addition to last sale dissemination of eligible trades, the system also supports trade matching and forwarding to NSCC for clearing. Currently, FINRA members (or their designated third parties) are provided with the capability of submitting trade report information on over the counter equity securities through the use of a Computer to Computer Interface (CTCI) linkage. This document describes the new formats of the message text to be used to interface through the NASDAQ OMX network to the FINRA application.

CTCI participants are expected to build and update an image file of their own trades in their interface systems by using the ORF CTCI input and output messages. Participants will be able to enter and correct trades through their CTCI interfaces during the on-line reconciliation cycle that consists of entries submitted within the past 5 rolling business days, inclusive of the current day. Trades that were submitted greater than the 5 day period are not retained in the system for trade management purposes but may still be canceled using reversal input message formats designated for such trades. CTCI Participants may request retransmission of acknowledgements of any trade or group of trades to update their image files during the permissible hours by calling NASDAQ Technical Support at (212) 231-5180.

The Eastern Time operating hours of the ORF system are as follows:

System Open:	8:00 A.M.
Market Open:	9:30 A.M.
Market Close:	4:00 P.M.
System Close:	8:00 P.M.

When a trade is entered into ORF, a control date and number will be assigned to identify the trade throughout its ORF processing and a status will be assigned to reflect its processing state. As trades are entered into the system, ORF will validate trade information, forward proper acknowledgment messages to the Reporting Parties (RP) and Allege messages to the Contra Parties (CP) of the trades. Acknowledgment and Allege messages will contain the terms of the trade, the ORF assigned status, control date and control number which uniquely identifies each trade. These messages will enable the CTCI participants to build their own ORF image files. CTCI participants will utilize the combination of FINRA assigned control date and control number to communicate with the ORF system for subsequent trade report correction processing. Participants may also modify trades using their own assigned reference numbers (Client Trade Identifier). Trade reports will be retained in the ORF system on a rolling 5 business day period inclusive of the day the trade is reported and available for subsequent trade management processing (Cancel or Correction). A Cancel or Correction of a previously reported trade submitted prior to the 5 day period is allowed via submission of a Trade Reversal or combination of a Reversal and a new As-of Trade Report. Please see section 3.3 for details concerning the submission of Reversals.

ORF will forward proper Notification messages to the trading parties as trades are corrected. Each Notification message will contain the control date, control number and the updated status of the corrected trade such that the trading parties will be able to update their ORF image files.

The above message flow and ORF image file techniques are applicable to CTCI environments only.

The ORF CTCI specifications are applicable to both the T-day and As-of (T+n) trade reporting process. Any trade executed during or off market hours, which has not been reported during T-day, may be reported on T+1 or later on an As-of basis.

A retransmission of ORF CTCI messages may be requested by phone on a current day basis. The following information must be provided as part of the request:

Message Type -	Specify if only one type (e.g. OREN). If multiple message types, then all types will be retransmitted.
Start Time -	Start (original send) time for the messages to be retransmitted.
End Time -	End time for the messages to be transmitted.
Possible Dupe -	Specify if possible duplicates are to be included.
Address -	Specify if the retransmission is to be directed to an address other than the regular one(s) (the CTCI I1I2 specified in the ORF Firm profile) for these messages. Note: A specified address may not be for a printer.

Note: This facility retransmits the requested messages in their original form. However, when retransmitted, their sequence numbers assigned by NASDAQ will be current, i.e., not a repeat of their originally transmitted numbers.

1.2 CTCI – TCP/IP & MQ Interfaces

A subscriber can submit and receive ORF *Computer to Computer Interface* (CTCI) messages utilizing NASDAQ Messages through either 1) TCP/IP protocol (preferred method) or 2) IBM *MQSeries* Middleware using *MQSeries* API calls over TCP/IP protocol (Sender/Receiver MQ architecture). For more information on its availability, please contact NASDAQ Technical Support at (212) 231-5180, Option #1 or via email to: tradingservices@nasdaqomx.com.

For questions concerning trade reporting and ORF, please contact FINRA Product Management at (866) 899-2107 or via email to: FINRAProductManagement@finra.org.

1.3 Document Format

This document has been prepared to facilitate your development of an interface to FINRA's Reporting Facility for Over the Counter Equities transactions (ORF). The sections have been divided to easily identify those messages that will be supported.

Section 1 describes the initiative and its purpose.

Section 2 defines the header and trailer that will be used for all input messages. It also defines all the fields used in ORF CTCI messaging.

Section 3 defines the input messages supported for Trade Reporting and Management.

Section 4 describes general information for output messages generated by ORF.

Section 5 describes the output message formats generated by ORF, including input acknowledgments, matching confirmations, and input rejects.

2.0 INPUT MESSAGE FORMATS

Each ORF input message format requires the same message "envelope" which is composed of three parts:

- I. Header - defines the beginning of the message, origin and destination of the message.
- I. Text - data included are ORF entries which can be a Trade Entry, Cancel, Correction, Reversal, Accept and Decline.
- III. Trailer - defines the end of the message, date/time of the message, control sequence number.

The following notes apply to all of the input message formats:

- Note 1:** Required fields must be entered, unless otherwise noted.
- Note 2:** If a field is entered and the field is designated as an alphabetic field, only A-Z can be entered unless otherwise noted. If the field is designated as numeric, only 0-9 can be entered unless otherwise noted. Embedded spaces cannot be entered in alphabetic or numeric fields unless otherwise noted.
- Note 3:** At the end of each line, a line delimiter is required even if no data has been entered on the line. Where the line delimiter has been specified as CR LF (carriage return, line feed) the use of CR is optional. The LF, however must be entered.
- Note 4:** The maximum limit of 1024 characters per message block includes the Header and Trailer.
- Note 5:** Records reported in ORF cannot be intermixed with messages pertaining to other NASDAQ or FINRA systems (e.g., TRACE SP, TRACE CA, MFQS, FINRA/NASDAQ TRF, etc.) in the same block.

2.1 Header

The header consists of four lines. The first line is line 0 and contains the origin of the message. The second line is line 1 and contains the Branch Sequence Number. The third line is line 1a and contains the category and destination of the message. The fourth line is always a blank line:

Line 0: [Origin] <CR/LF>
Line 1: [Br Seq Num] <CR/LF>
Line 1A: [Category] space [Destination] <CR/LF>
Blank Line: <CR/LF>

Line 0

Entry Originator - One to six character Entry Originator ID. This field is optional for firms that are not acting as a service bureau. For firms acting as a service bureau, this field is mandatory and must contain the four character MPID (as assigned by FINRA) of the firm submitted as the Reporting Party (RPID), (i.e., the executing firm entering the Trade message).

CR LF - Required line delimiter- carriage return, line feed.

Line 1

Branch Sequence 1-8 character alphanumeric (A-Z, a-z, 0-9, embedded spaces, left justified)
CR LF - Required line delimiter.

Line 1A

Category - This field identifies the message category. Contains the constant "OTHER" for ORF.

Space - Required field separator.

Destination - A required field.
Destination Code will be "**OR**" for **all Trade Entry, Cancel, Reversal, Correction, Accept and Decline input messages for ORF reporting**. The destination Code will route CTCI transactions to ORF for processing.

Note: Wrong assignment of Destination Code will result in an "Invalid Format" reject.

CR, LF -

CR, LF - Required line delimiter

Line 2

Text of Trade Entry, Cancel, Correction, Reversal, Accept or Decline.

2.2 Trailer

The sequence number entered by the user will be validated by NASDAQ to determine if there is a number gap or if the number is equal to or less than a previously received number.

Each station on a service bureau line shall have an individual sequence check. As an example, the first entry for station 1 shall have a sequence number of 0001. Similarly, the first entry from station 2 shall also have a sequence number 0001.

The sequence number provided by the subscriber can be in one of the following formats:

- I. The sequence number immediately precedes the end-of-text code (interposed line feeds are disregarded) and is either: fixed at four digits, zero filled.
Example: 0034
or one to four digits preceded by a "dash"
Example: -34.
- II. The sequence number may appear anywhere on the last line if it is immediately preceded by the letters "OL" (and an optional space).
Example: OL 23 or OL23
A third contiguous alphabetic character is optional.
Example: OLX 23 or OLX23
Fill zeros for high-order digits (e.g., OL 0023) are also optional.
A space is used to separate the sequence number from any following user-defined data.
Example: [user-defined data]OLX 0034[spaceuser-defined data]
- III. A one to four digit sequence number at the beginning of the line, followed by a space and a user-defined character string starting with a non-numeric character. The sequence number can be zero filled if desired.
Example: **34spaceAXD**
or: **0034space/200008041717**

The remainder of the field may also be used to include user identifiers such as date/time group.

Example: 0012 /120179011

2.3 ORF Transaction Text

For the purposes of this section, the term ‘Reporting Party’ or ‘RP’ refers to the party with the reporting obligation as defined in FINRA Rule 6622(b), and the term ‘Contra Party’ or ‘CP’ refers to the party that does not have this obligation to report as defined in the Rule.

Trade Entry	(Function T) All original T-day and T+n (As-Of) trades executed by a Reporting Party will be entered into the ORF System using this message format. A Contra Party may also use this message format in lieu of accepting the Reporting Party’s trade report.
Cancel Entry	(Function X) - <u>for cancelling trades submitted within the 5 day period</u> Trade Cancels may be submitted on open (unmatched) trades, and as Cancel/Break requests for matched/locked trades by either RP or CP.
Correction Entry	(Function R) - <u>for correcting trades submitted within the 5 day period</u> Either party submits a Correction to a previously entered trade that was incorrect. Corrections may only be submitted on open (unmatched) trades. ¹
Reversal Entry	(Function Y) - <u>for reversing trades submitted outside the 5 day period</u> Either party submits a Reversal entry for a trade previously entered prior to the rolling 5 day period but for whatever reason decides to cancel it. ²
Accept Entry	(Function A) - <u>for accepting open trades alleged against CP</u> The RP reports a trade entry and an Allege is sent to the Contra Party. The CP elects to Accept the trade, rather than submit his version of the trade. Once the trade is accepted, the trade is no longer Open status and is now Matched/Locked and forwarded to NSCC.
Decline Entry	(Function D) - <u>for declining open trades alleged against either side</u> Either party reports a trade entry and an Allege is sent to the other party. The alleged party Declines the trade, (doesn’t know the trade, disagrees with trade details, etc). The Declined trade remains in Open status until system close of the current day.

¹ In order to correct a matched trade, firms are required to first Break the trade by submitting a Cancel (Function X), followed by a new As-Of Trade Report (Function T) that contains the correct trade details.

² In order to correct a trade submitted prior to the 5 day period, firms are required to submit a Reversal (Function Y), followed by a new As-Of Trade Report (Function T) that contains the correct trade details.

2.4 Text Field Definitions

The following contains the general definitions for all fields that are contained within the ORF message text. Any specific information that is relevant to a particular transaction type can be found in the description of the transaction. In addition, these definitions apply to both ORF Input and Output messages.

Function	This field is required. Valid values are: T = Trade Entry X = Cancel Entry (for trades entered within current 5 day period) Y = Reversal Entry (for trades entered outside 5 day period) R = Correction Entry (trades entered within current 5 day period) A = Trade Accept D = Trade Decline
Special Processing Flag	This field allows a trade to be marked for special processing (e.g., position transfers). Use of this field for special processing purposes MUST be authorized by FINRA Operations prior to submission of trades. Authorization will be granted on a trade by trade basis. Valid values are: <i>Blank</i> = No special processing P = Position Transfer (AUTHORIZATION REQUIRED)
B/S Indicator (Side)	A required one alpha character field indicating the Side being reported on the trade. Valid values are: B = Buy (reporting firm (i.e., RP) bought) S = Sell (reporting firm sold) X = Cross (internalized trade)
Short Sale Indicator	Indicates whether the trade is a short sale or short sale exempt trade. Valid values are: S = Short Sale E = Short Sale Exempt <i>Blank</i> = not a short sale
Client Trade Identifier (User Reference Number)	A twenty alphanumeric character field, left justified, fill unused positions with spaces. Optionally, the subscriber may assign this Reference Number as a unique identifier to each trade. Subscribers may also use the Client Trade Identifier, in lieu of the FINRA Control Number, to Cancel or Correct previously entered trades within the 5 day period (Control Date is still required if Client Trade Identifier is used). The ORF System <u>will not</u> validate this field; therefore firms are required to ensure uniqueness of their own Client Trade Identifiers submitted within a given day. In the event a firm submits duplicate Identifiers on different trade reports within a given day and chooses to modify (Cancel or Correct) a trade using this reference number, ORF will reject the Cancel/Correct submission and the firm will be required to modify using the ORF generated Control Number. ORF will always return the subscriber entered Client Trade Identifier in the acknowledgment message (i.e., OREN) associated with the trade to the submitter and will space fill this field in the allege message (i.e., ORAL) to the contra party of the trade.
Contra Client Trade	User defined trade reference number for the Contra side of the trade.

Identifier (Contra User Reference Number)	Optional, may only be used on Locked-In trade reports (AGU/QSR) . Please note, the Contra Client Trade Identifier cannot be used for cancelling or correcting previously submitted trades.
Quantity (Volume)	11 digit numeric field, right justified, filled with leading zeros, representing the actual number of shares traded (please note the ORF system will only allow a maximum quantity of 99,999,999 shares to be reported. Trades involving a quantity greater than this amount must be broken into multiple trade reports). Required field.
Symbol	A required field. Up to fourteen alphanumeric character security identifier. Left justified, fill unused positions with spaces. Please note: Symbol CANNOT be changed on a correction. In order to change the security on a previously submitted trade report, firms must cancel the original trade and submit a new trade with the correct Symbol.
Symbol Suffix	An optional field. Up to seven alphanumeric character suffix assigned to the security that provides additional information regarding that security (e.g., preferred, warrants, etc.)
Security Description	A required field. Defines the U.S. Market that the security pertains to. For ORF, this field must always be set to "P" (non-NASDAQ OTC).
Price	A required nine digit numeric field which indicates the price at which the security traded. Can be entered as a decimal unit price or a contract amount, based on Price Type. Formats: Decimal Unit (Price Type = D): 999999v999999 Contract Amount (Price Type = C): 9999999999v99 In both formats, the 'v' is an implied decimal point. Leading and trailing zeros must be used where necessary in either format.
Price Type	Required field. Type of price submitted. Valid values are: D = Decimal Unit Amount C = Contract Amount
Price Override	A one character field that is used to indicate that the entered price is valid although it may fall outside the reasonability check made by the system. The override should not be used on initial submission; only after a trade report has been rejected for having a price that is considered out of range. The alpha character "O" = price override, otherwise the field must be blank on initial submissions.
Clearing Price	Price inclusive of Explicit Fee. Cannot equal the trade price. Entered as a decimal unit price or contract amount, based on Price Type used. Formats: Decimal Unit (Price Type = D): 999999v999999 Contract Amount (Price Type = C): 9999999999v99 In both formats, the 'v' is an implied decimal point. Leading and trailing zeros must be used where necessary in either format.
Trade Modifier 1	Settlement modifiers. Valid values are: C = Cash (same day) settlement N = Next Day settlement

	R = Seller's Option Blank = regular (T+3) settlement
Seller's Option Days	Required days to settlement when Trade Modifier 1 = R. Valid values are 02, 04 – 60, otherwise this field must be space filled.
Trade Modifier 3	Time modifiers to be submitted by the reporting party identifying Extended hours/Late sale conditions, when applicable. Valid values are: Blank = no time modifier applicable T = Trade executed outside normal market hours Z = Trade executed during normal market hours and reported late U = Trade executed outside normal market hours and reported late Note: FINRA will also determine and generate time modifiers and append accordingly on the outbound acknowledgement.
Trade Modifier 4	SRO detail sale condition. Required modifier if a trade falls under one of the following transaction types: W = Weighted Average Price S = Stopped Stock P = Prior Reference Price X = Trade related to option exercises R = Trade price unrelated to the current market If a trade does not meet any of the above conditions, then this field must be left blank.
Trade Modifier 4 Time	The time associated with a Prior Reference Price or Stopped Stock trade (if Trade Modifier 4 = S or P), otherwise the field must be left blank. Format: HHMMSSsss.
Contra Party ID (CPID)	Required. A four alpha character field denoting the MPID of the Contra Party to the trade. If the Contra party is a customer, "C " may be reported as a valid entry (left justified, space-fill remaining 3 bytes). Contra of "C" is only valid when the transaction is entered by the reporting party. However, FINRA member firms cannot qualify each other as a customer.
Contra Party Give Up (CPGU)	The MPID of the Contra Party Give Up Firm, when applicable. This field can only be filled when the Reporting Firm submits the trade as an AGU Locked-In trade report (RPID = CPID and Locked-In Indicator = A). On QSR Locked-In trade reports and non-Locked-In trade reports, the field must be blank. A Uniform Service Agreement must be in place in order for firms to submit trade reports on behalf of their give ups. Customer ("C") cannot be entered as a give up.
Contra Clearing Number	Used to identify the clearing broker who will clear this trade for the Contra Party. This field may be left blank and ORF will default to the contra party's primary clearing firm.
Contra Party Capacity	A one character Capacity Indicator field for the contra firm. It denotes whether the firm is acting as "P" for principal, "A" for agency or "R" for riskless principal on this trade. This field is required only when the Reporting Firm submits the trade as a Locked-In trade report (AGU or QSR). On non-Locked-In trade reports, the field must be blank.

Reporting Party ID (RPID)	Required. A four alpha character field denoting the MPID of the Reporting Party of the trade.
Reporting Party Give Up (RPGU)	The MPID of the Reporting Party Give Up Firm, when applicable. May be used on AGU and non-Locked In trades. Cannot be entered on QSR trades. A Uniform Service Agreement must be in place in order for firms to submit trade reports on behalf of their give ups. Customer ("C") cannot be entered as a give up.
Reporting Clearing Number	Used to identify the clearing broker who will clear this trade for the Reporting Party. This field may be left blank and ORF will default to the reporting party's primary clearing firm.
Reporting Party Capacity	Required field. A one character Capacity Indicator field for the reporting firm. It denotes whether the firm is acting as "P" for principal, "A" for agency or "R" for riskless principal on this trade.
Reporting Obligation	Required field. Indicates whether or not this trade report represents the submission from the member firm with the trade reporting obligation, as defined under FINRA Rule 6622(b). Valid values are: Y = Trade reported by firm with the reporting obligation N = Trade reported by firm that does not have the obligation
As-Of Indicator	This field is used to denote whether the trade is an As-Of trade entry (i.e., executed on a prior day), or a cancel or correction of an As-Of trade. Valid values are: <i>Blank</i> = T-Day trade Y = As-Of (T+n) trade Note: "Y" is required on all Reversals. "Y" is required on Corrections of prior day submissions and T-day submissions originally submitted as an As-Of trade. For Corrections of non-As-Of T-day submissions, this field must be space-filled.
Execution Date	The date that the transaction was executed (<i>aka Trade Date</i>). For an As-of trade (As-Of Indicator = Y), the date must be T-1 or older. The format is MMDDYYYY. Note: On non-As-Of trades, the Execution Date cannot be changed on a Correction submission to a different date than what was originally submitted. Firms would be required to Cancel the original trade and resubmit a new Trade Report with the intended Execution Date. On As-Of trades, the Execution Date can be changed only to a date prior to the original execution date. The Execution Date cannot be changed to a date that is subsequent to the original execution date. In the case of the latter, firms would be required to Cancel the original trade and resubmit a new As-Of Trade Report with the intended Execution Date.
Execution Time	This is a required field. A field denoting the time of execution in military time (HHMMSSsss) format where HH represents hours, MM represents minutes, SS represents seconds and sss represents milliseconds. For example, if the trade was executed at 2:03:02:005 p.m., the entry will be 140302005. Execution Time must be entered in Eastern Time.

	Note: On Corrections, Execution Time can be changed only to a time prior to the originally submitted execution time. Execution time cannot be changed to a time that is subsequent to the originally submitted time. In the case of the latter, firms would be required to Cancel the original trade and resubmit a new Trade Report with the intended Execution Time.
Memo	An optional ten character alphanumeric memo field. Fill unused positions with spaces. This field is not displayed to the Contra party.
Locked-In Indicator	Indicates that the reporting party entering the trade report is reporting for both sides of the trade in a single trade report, as an AGU (Automatic Give Up) trade or as a QSR (Qualified Service Representative) trade. Valid values are: - A = AGU trade report - Q = QSR trade report - Blank = non Locked-In trade report Firms may use the Locked-In Indicator to identify an AGU trade report when a firm trades with one of its correspondents (one-sided AGU trade), or when a firm reports a trade executed between two of its correspondents (two-sided AGU trade). A correspondent must be a FINRA member and is entered under one or both Give Up fields (on two-sided Locked-In trades). The reporting party's MPID must be the same on the RPID and CPID fields. Firms may use the Locked-In Indicator to identify a QSR trade report when a firm has an agreement to report on behalf of their contra party for an execution they entered into. For QSR trade reports, the RPID and CPID cannot be the same and a Give Up field cannot be used. A Uniform Service Agreement must be in place in order for firms to submit Locked In trade reports.
OATS Identifier	Required field for compliance purposes, up to 20 alphanumeric characters allowed. Left justified, space-fill unused positions.
Contra OATS Identifier	On Locked In trades only, required field for compliance purposes on the contra side. Up to 20 alphanumeric characters allowed. Left justified, space-fill unused positions.
Branch Sequence	An optional eight (8) alphanumeric character field, (A-Z, 0-9 embedded spaces, left justified, pad with trailing spaces), to indicate the reporting firm's branch office. The Branch Sequence Number entered in this field must be the same as the Branch Sequence Number submitted in Line 1 of the message Header.
Contra Branch Sequence	An optional eight (8) alphanumeric character field, (A-Z, 0-9 embedded spaces, left justified, pad with trailing spaces), to indicate the contra firm's branch office. This field can only be filled when the Reporting Firm submits the trade as a Locked-In trade report. On non-Locked-In trade reports, the field must be blank.

Settlement Date	Optional field. Date when the trade settles. MMDDYYYY format.
Clearing Indicator	Indicates if the trade should be forwarded to NSCC for clearing. Required. Valid values are: 0 = send to clearing 1 = do not send to clearing Note: on AGU trades (Locked In Indicator = A), this field MUST be set to "0" (send to clearing).
Publish Indicator	Indicates that the trade should be published to the tape (disseminated). Required. Valid values are: Y = report to the tape N = do not report to the tape
Special Instruction Indicator	This field indicates if the trade falls under any of the following conditions: Y = Special trade S = Step Out trade X = Special and Step Out trade Blank = regular trade (none of the above) A special trade (Y) and special/step out trade (X) instructs the NSCC not to include the trade in the CNS settlement process.
Related Market Center	Available on transaction reports submitted through ORF such as step outs, non-tape, and riskless principal transactions, the market where the underlying transaction was reported, as applicable. Valid values are: O = Unknown Market Center U = Unspecified Multiple Market trades 0 = ADF/ORF F = Foreign Market Blank = not applicable
Trade Reference Number	Used to discretely tie a Media eligible trade to one or more non-Media eligible trades, e.g., same ref number used on a Media trade and on a riskless principal trade. Up to 20 characters allowed (left justified, space-fill unused portion).
Preparation Time	Time of Trade submission in HHMMSSsss format. Denotes the time the submitter prepared the trade report or trade correction (in military Eastern Time format). Optional.
Service Bureau Preparation Time	If a service bureau is submitting the trade report, denotes the time the service bureau prepared the trade report or trade correction (HHMMSSsss in military Eastern Time format). Optional.
Control Date	When a trade is submitted to ORF and accepted, the system will return a Control Date with the trade acknowledgement. The Control Date reflects the date when the system received and processed the trade entry. Control Date, in combination with Control Number, is required in subsequent trade cancel and correction messages to modify a trade report. Firms that elect to use their Client Trade Identifier to Cancel or Correct a trade (within the T-5 period) must still submit the Control Date assigned to the original trade report. Trade corrections will receive a new Control Date/Control Number trade identifier.

Control Number	When a trade is submitted to ORF and accepted, the system will assign a Control Number which will be returned on the trade acknowledgement. The Control Number is a 10 digit identifier of the trade, which will be unique throughout the day. Control Date, in combination with Control Number, is required in subsequent trade cancel and correction messages to modify a trade report. Trade corrections will receive a new Control Date/Control Number trade identifier. In ORF, all control numbers will start with the value “5” followed by nine sequential numeric integers.
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2.5 ORF Message Types by Function

ORF output messages are sent to the Reporting and Contra Party firms as verification for each ORF transaction. The following table shows the output messages sent to the Reporting and Contra Parties as categorized by Function.

Input Message Type	Function Code	Reporting Party Confirmation Message Sent	Contra Party Confirmation Sent
Trade Entry	T	OREN	ORAL
Cancel	X	ORCX	ORCX
Reversal	Y	ORHX	ORHX
Correction	R	ORCR	ORCR
Accept	A	ORAC	ORAC
Decline	D	ORDK	ORDK

Note: on a trade where the contra party (CPID) is subsequently amended to a different contra party via a Correction, the original contra party will receive a Cancel acknowledgement (ORCX) and the new contra party will receive a Trade Entry Allege acknowledgement (ORAL).

3.0 TRADE REPORTING INPUT MESSAGES

3.1 *Trade Entry*

Either party to a trade will use this message to enter an original T Date or an As-Of Trade Entry into the ORF System. A Trade Entry will be processed if it satisfies the trade report requirement.

The Trade Entry may generate the following output message flow:

- o Reject message (refer to Section 4.2)
If a Trade Entry is rejected for any reason, the current reject message containing the reject reason and the echo of the trade will be returned to the entering party. The maximum size of a reject reason is 75 bytes.
- o OREN (refer to Section 5.1.1)
If a Trade Entry is accepted, an OREN Acknowledgment message containing the “T” for trade reporting status, Control Date, Control Number, and the echo of the trade will be returned to the reporting party. The entering firm may use this message to build the initial trade record in its image file.
- o ORAL (refer to Section 5.2.1)
If a Trade Entry is accepted, an ORAL Allege message containing the same contents as the OREN will be forwarded to the contra side of the trade. The contra may use this message to build the initial trade record in its image file.

The following table displays the ORF Function T Trade Entry message format.

Exhibit 3.1 ORF TRADE ENTRY MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	T = RP Trade Entry.
Special Processing Flag	2-2	X(1)		Valid values: P = Position transfer space = no special processing
B/S Indicator (Side)	3-3	X(1)	Y	Valid values: B = Buy S = Sell X = Cross
Short Sale Indicator	4-4	X(1)		Valid values: S = Sold Short E = Sold Short Exempt space = not a short sale trade
Client Trade Identifier	5-24	X(20)		Optional user assigned reference number, up to 20 alphanumeric characters, space fill unused characters.
Contra Client Trade Identifier	25-44	X(20)		Optional user assigned reference number on the contra side, used on Locked-In trade reports (AGU or QSR) only.
Quantity	45-55	9(11)	Y	Trade volume as number of shares. Right justified, always pad with leading zeros. Please note only a maximum of 99,999,999 shares allowed to be entered (00099999999).
Symbol	56-69	X(14)	Y	Security symbol. Left justified, space fill unused portion.
Symbol Suffix	70-76	X(7)		Security symbol suffix. Left justified, space fill unused portion. Optional.
Security Description	77-77	X(1)	Y	P = Non-NASDAQ OTC
Price	78-89	9(12)	Y	Twelve digit numeric field. Entered as a decimal unit price or contract amount (based on Price Type used). Formats: As a Decimal Unit (Price Type = D): 999999v999999 As a Contract Amount (Price Type = C): 9999999999v99 In both formats, the 'v' is an implied decimal point. Leading and trailing zeros must be used where necessary in either format.
Price Type	90-90	X(1)	Y	Valid values: D = Decimal Unit Price C = Contract Amount
Price Override	91-91	X(1)		Valid values: O = Override space = No Override
Clearing Price	92-103	9(12)		Price inclusive of Explicit Fee. Cannot equal the trade price. Entered as a decimal unit price or contract amount (based on Price Type used). Formats:

Field Name	Position	Format	Req'd	Contents/Comments
				As a Decimal Unit (Price Type = D): 999999v999999 As a Contract Amount (Price Type = C): 9999999999v99 In both formats, the 'v' is an implied decimal point. Leading and trailing zeros must be used where necessary in either format.
Trade Modifier 1 (Settlement Modifier)	104-104	X(1)		Valid values: space = Regular (T+3) settlement C = Cash (same day) settlement N = Next Day settlement R = Seller's Option
Seller's Option Days	105-106	X(2)		Required when Trade Modifier 1 = R. Valid values = 02, 04 – 60.
Filler	107-108	X(2)		Reserved for future use. Space-fill on input.
Trade Modifier 3 (Time Modifier)	109-109	X(1)		Valid values: T = Trade executed outside normal market hours Z = Trade executed during normal market hours and reported late U = Trade executed outside normal market hours and reported late
Trade Modifier 4 (SRO Modifier)	110-110	X(1)		Valid values: W = Weighted Average Price S = Stopped Stock P = Prior Reference Price X = Trade related to option exercises R = Trade price unrelated to the current market space = not applicable
Trade Modifier 4 Time	111-119	X(9)		Time associated with Prior Reference Price or Stopped Stock trade, if Trade Modifier 4 = S or P. Format: HHMMSSsss, otherwise the field should be space filled.
CPID	120-123	X(4)	Y	MPID of the Contra Party (or C for Customer).
CPGU	124-127	X(4)		MPID of the Contra Party Give Up.
Contra Clearing Number	128-131	9(4)		Contra Party's 4 digit clearing number or space fill to default to the contra's primary clearing number.
Contra Party Capacity	132-132	X(1)		Valid values: space = not applicable A = Agency P = Principal R = Riskless Principal
RPID	133-136	X(4)	Y	MPID of the Reporting Party.
RPGU	137-140	X(4)		MPID of the Reporting Party Give Up.
Reporting Clearing Number	141-144	9(4)		Reporting Party's 4 digit clearing number or space fill to default to the reporting party's primary clearing number.
Reporting Party Capacity	145-145	X(1)	Y	Valid values: A = Agency P = Principal R = Riskless Principal
Reporting Obligation	146-146	X(1)	Y	Valid values:

Field Name	Position	Format	Req'd	Contents/Comments
				Y = Trade reported by firm with reporting obligation N = Trade reported by firm that does not have the reporting obligation
As-Of Indicator	147-147	X(1)		Valid values: Y = As-Of trade (T+n) space = T-Date entry (non As-Of)
Execution Date	148-155	9(8)	Y	MMDDYYYY format.
Execution Time	156-164	9(9)	Y	HHMMSSsss ET format.
Memo	165-174	X(10)		Optional user memo.
Locked-In Indicator	175-175	X(1)		Valid values: A = AGU trade Q = QSR trade space = non Locked In trade
OATS Identifier	176-195	X(20)	Y	Up to 20 alphanumeric characters allowed, left justified, space fill unused portion.
Contra OATS Identifier	196-215	X(20)		Required on Locked In trades for the contra side, up to 20 alphanumeric characters allowed, left justified, space fill unused portion. Space fill on non-Locked In trades.
Branch Sequence	216-223	X(8)		Optional field, up to 8 alphanumerics.
Contra Branch Sequence	224-231	X(8)		Optional field, up to 8 alphanumerics (can only be submitted on Locked-In trade reports).
Settlement Date	232-239	9(8)		MMDDYYYY format.
Clearing Indicator	240-240	9(1)	Y	Valid values: 0 = send to clearing 1 = do not send to clearing Note: on AGU trades (Locked In Indicator = A), this field MUST be set to "0" (send to clearing).
Publish Indicator	241-241	X(1)	Y	Valid values: Y = report to the tape N = do not report to the tape
Special Instruction Indicator	242-242	X(1)		Valid values: Y = Special trade S = Step Out trade X = Special and Step Out trade space = regular trade (none of the above)
Related Market Center	243-243	X(1)		Valid values: O = Unknown Market Center U = Unspecified Multiple Market trades 0 = ADF/ORF F = Foreign Market space = not applicable
Trade Reference Number	244-263	X(20)		Up to 20 characters allowed, left justified, space fill unused portion.
Preparation Time	264-272	9(9)		HHMMSSsss ET format.
Service Bureau Preparation Time	273-281	9(9)		HHMMSSsss ET format.
CR LF				Carriage Return, Line Feed

3.2 Trade Cancel Entry

Firms will use this message to cancel a trade entry which was previously reported. ORF will forward an ORCX (Cancel confirmation) message to both parties of the trade to advise them that the specified trade is updated to Cancel status. The Cancel function can be used when a trade was submitted during the past 5 rolling business days.

EXHIBIT 3.2 TRADE CANCEL MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	X = Trade Cancel Entry.
Control Date	2-9	9(8)	Y	Control Date associated with the trade to be canceled (returned on the ORF acknowledgement of the original submission), This field is required regardless of a firm using either their Client Trade Identifier or the Control Number. Format: YYYYMMDD
Control Number	10-19	9(10)		Control Number associated with the trade to be canceled (returned on the ORF acknowledgement of the original submission). If the Control Number is used to cancel a trade, the Client Trade Identifier may be space-filled. If both reference numbers are entered, ORF will process the Cancel based on the Control Number.
Client Trade Identifier	20-39	X(20)		Reference number assigned by the user to the original trade report. Optional. Firms may use their Client Trade Identifier to cancel the original submission. If the Client Trade Identifier is used to cancel a trade, the ORF Control Number may be space-filled. If both reference numbers are entered, ORF will process the Cancel based on the Control Number. If duplicate Client Trade Identifiers are found for the same Control Date, the Cancel Entry will be rejected and the Control Number must then be submitted to initiate the cancel.
Symbol	40-53	X(14)		Symbol submitted on the original trade to be canceled. Symbol is required when a firm uses their Client Trade Identifier to cancel the trade. If a firm uses the Control Number to cancel a trade, this field must be blank. <i>Note: If using Client Trade Identifier, Symbol Suffix would not be required, only Symbol.</i>
RPID	54-57	X(4)		Reporting Party ID submitted on the original trade to be canceled. This field is required when a firm uses their Client Trade Identifier to cancel the trade. If a firm uses the Control Number to cancel a trade, this field must be blank.
CR LF				Carriage Return, Line Feed

3.3 Trade Reversal Entry

Firms will use this message to cancel a trade entry which was originally reported prior to the rolling 5 day period. ORF will forward an ORHX (Reversal confirmation) message to both parties of the trade to advise them that the specified trade is updated to reversed status. The Reversal function cannot be used when a trade was submitted during the 5 day period.

Firms wishing to correct a trade entry which was originally reported prior to the 5 day period must submit the combination of a Reversal, followed by a new As-Of Trade Report (Function T) that contains the correct trade details.

Firms must use Control Date and Control Number of the original trade report to effect a Reversal. Use of the Client Trade Identifier to effect a Reversal is not supported.

EXHIBIT 3.3 TRADE REVERSAL MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	Y = Trade Reversal Entry.
Original Control Date	2-9	9(8)	Y	Control Date assigned to the original trade report.
Original Control Number	10-19	9(10)	Y	Control Number assigned to the original trade report.
Reference Reporting Facility	20-20	X(1)		Used only if a participant transitions from one FINRA reporting facility to another and the participant needs to reverse a trade on the new reporting facility that was originally entered on the old reporting facility. Valid values: A = ADF Q = FINRA/NASDAQ TRF N = FINRA/NYSE TRF
Special Processing Flag	21-21	X(1)		Enter value submitted on original trade report.
B/S Indicator (Side)	22-22	X(1)	Y	Enter value submitted on original trade report.
Short Sale Indicator	23-23	X(1)		Enter value submitted on original trade report.
Client Trade Identifier	24-43	X(20)		Optional user assigned reference number, up to 20 alphanumeric characters, space fill unused characters.
Contra Client Trade Identifier	44-63	X(20)		Optional user assigned reference number on the contra side, used on Locked-In trade reports (AGU or QSR) only.
Quantity	64-74	9(11)	Y	Enter value submitted on original trade report.
Symbol	75-88	X(14)	Y	Enter value submitted on original trade report.
Symbol Suffix	89-95	X(7)		Enter value submitted on original trade report.
Security Description	96-96	X(1)	Y	Enter value submitted on original trade report.
Price	97-108	9(12)	Y	Enter value submitted on original trade report.
Price Type	109-109	X(1)	Y	Enter value submitted on original trade report.
Price Override	110-110	X(1)		Enter value submitted on original trade report.
Clearing Price	111-122	9(12)		Enter value submitted on original trade report.
Trade Modifier 1 (Settlement Modifier)	123-123	X(1)		Enter value submitted on original trade report.
Seller's Option Days	124-125	X(2)		Enter value submitted on original trade report.
Filler	126-127	X(2)		Reserved for future use. Space-fill on input.

Field Name	Position	Format	Req'd	Contents/Comments
Trade Modifier 3 (Time Modifier)	128-128	X(1)		Enter value submitted on original trade report.
Trade Modifier 4 (SRO Modifier)	129-129	X(1)		Enter value submitted on original trade report.
Trade Modifier 4 Time	130-138	X(9)		Enter value submitted on original trade report.
CPID	139-142	X(4)	Y	Enter value submitted on original trade report.
CPGU	143-146	X(4)		Enter value submitted on original trade report.
Contra Clearing Number	147-150	9(4)		Enter value submitted on original trade report.
Contra Party Capacity	151-151	X(1)		Enter value submitted on original trade report.
RPID	152-155	X(4)	Y	Enter value submitted on original trade report.
RPGU	156-159	X(4)		Enter value submitted on original trade report.
Reporting Clearing Number	160-163	9(4)		Enter value submitted on original trade report.
Reporting Party Capacity	164-164	X(1)	Y	Enter value submitted on original trade report.
Reporting Obligation	165-165	X(1)	Y	Enter value submitted on original trade report.
As-Of Indicator	166-166	X(1)	Y	Must always be set to: Y = As-Of trade (T+n)
Execution Date	167-174	9(8)	Y	Enter value submitted on original trade report.
Execution Time	175-183	9(9)	Y	Enter value submitted on original trade report.
Memo	184-193	X(10)		Optional user memo.
Locked-In Indicator	194-194	X(1)		Enter value submitted on original trade report.
OATS Identifier	195-214	X(20)	Y	Enter value submitted on original trade report.
Contra OATS Identifier	215-234	X(20)		Enter value submitted on original trade report.
Branch Sequence	235-242	X(8)		Enter value submitted on original trade report.
Contra Branch Sequence	243-250	X(8)		Enter value submitted on original trade report.
Settlement Date	251-258	9(8)		Enter value submitted on original trade report.
Clearing Indicator	259-259	9(1)	Y	Valid values: 0 = send to clearing 1 = do not send to clearing Note: on AGU trades (Locked In Indicator = A), this field MUST be set to "0" (send to clearing).
Publish Indicator	260-260	X(1)	Y	Enter value submitted on original trade report.
Special Instruction Indicator	261-261	X(1)		Enter value submitted on original trade report.
Related Market Center	262-262	X(1)		Enter value submitted on original trade report.
Trade Reference Number	263-282	X(20)		Enter value submitted on original trade report.
Preparation Time	283-291	9(9)		Enter the time this message was prepared in HHMMSSsss ET format. Optional.
Service Bureau Preparation Time	292-300	9(9)		Enter the time this message was prepared by the service bureau, in HHMMSSsss ET format.
CR LF				Carriage Return, Line Feed

3.4 Trade Correction Entry

Firms will use this message to correct a trade entry which was previously reported. ORF will forward an ORCR (Correction confirmation) message to both parties of the trade to advise them that the specified trade is updated to Corrected status. The Correction function can be used when a trade was submitted during the 5 rolling business day period.

Firms may correct any field previously submitted in the original trade entry, with the exception of Symbol. If a firm wishes to change the reported security, the original trade must be cancelled, followed with a new trade entry replacing the original trade, containing the correct Symbol. In addition, Execution Date and Execution Time may only be corrected under certain conditions. Please refer to the Execution Date and Execution Time description table in Section 2.4 for details.

Note: All fields not being changed must be submitted as it was on the original submission, including those whose content is indicated as optional, (blank fields are to be space filled and unused positions are to be space or zero filled wherever applicable). The ORF System will assign a new control date and control number to the Correction Entry.

Positions 2-57 of the Correction Entry identify the trade that is being corrected. Positions 58-338 represent the trade details being resubmitted.

EXHIBIT 3.4 TRADE CORRECTION MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	R = Trade Correction Entry.
Control Date	2-9	9(8)	Y	Control Date assigned to the original trade report. This field is required regardless of a firm using either their Client Trade Identifier or the Control Number. Format: YYYYMMDD
Control Number	10-19	9(10)		Control Number assigned to the original trade report. If the Control Number is used to correct a trade, the Client Trade Identifier may be space-filled. If both reference numbers are entered, ORF will process the Correction based on the Control Number.
Original Client Trade Identifier	20-39	X(20)		Reference number assigned by the user to the original trade report. Firms may use their Client Trade Identifier to correct the original submission. If the Client Trade Identifier is used to correct a trade, the Control Number may be space-filled. If both reference numbers are entered, ORF will process the Correction based on the Control Number. If duplicate Client Trade Identifiers are found for the same Control Date, the Correction Entry will be rejected and the Control Number must then be submitted to initiate the correction.
Original Symbol	40-53	X(14)		Symbol submitted on the original trade being corrected. Symbol is required when a firm uses their Client Trade Identifier to correct the trade. If

Field Name	Position	Format	Req'd	Contents/Comments
				a firm uses the Control Number to correct a trade, this field must be blank. <i>Note: If using Client Trade Identifier, Symbol Suffix would not be required, only Symbol.</i>
Original RPID	54-57	X(4)		Reporting Party ID submitted on the original trade being corrected. This field is required when a firm uses their Client Trade Identifier to correct the trade. If a firm uses the Control Number to correct a trade, this field must be blank.
Special Processing Flag	58-58	X(1)		Enter original value or amended value.
B/S Indicator (Side)	59-59	X(1)	Y	Enter original value or amended value.
Short Sale Indicator	60-60	X(1)		Enter original value or amended value.
Client Trade Identifier	61-80	X(20)		New user reference number may be entered to corrected trade.
Contra Client Trade Identifier	81-100	X(20)		New reference number only on Locked-In trades.
Quantity	101-111	9(11)	Y	Enter original value or amended value.
Symbol	112-125	X(14)	Y	SYMBOL CANNOT BE MODIFIED.
Symbol Suffix	126-132	X(7)		Enter original value or amended value.
Security Description	133-133	X(1)	Y	Always set to "P".
Price	134-145	9(12)	Y	Enter original value or amended value.
Price Type	146-146	X(1)	Y	Enter original value or amended value.
Price Override	147-147	X(1)		Enter original value or amended value.
Clearing Price	148-159	9(12)		Enter original value or amended value.
Trade Modifier 1 (Settlement Modifier)	160-160	X(1)		Enter original value or amended value.
Seller's Option Days	161-162	X(2)		Enter original value or amended value.
Filler	163-164	X(2)		Reserved for future use. Space-fill on input.
Trade Modifier 3 (Time Modifier)	165-165	X(1)		Enter original value or amended value.
Trade Modifier 4 (SRO Modifier)	166-166	X(1)		Enter original value or amended value.
Trade Modifier 4 Time	167-175	X(9)		Enter original value or amended value.
CPID	176-179	X(4)	Y	Enter original value or amended value.
CPGU	180-183	X(4)		Enter original value or amended value.
Contra Clearing Number	184-187	9(4)		Enter original value or amended value.
Contra Party Capacity	188-188	X(1)		Enter original value or amended value.
RPID	189-192	X(4)	Y	Enter original value or amended value.
RPGU	193-196	X(4)		Enter original value or amended value.
Reporting Clearing Number	197-200	9(4)		Enter original value or amended value.
Reporting Party Capacity	201-201	X(1)	Y	Enter original value or amended value.
Reporting Obligation	202-202	X(1)	Y	Enter original value or amended value.
As-Of Indicator	203-203	X(1)		Enter original value or amended value.
Execution Date	204-211	9(8)	Y	Enter original value or amended value.
Execution Time	212-220	9(9)	Y	Enter original value or amended value.
Memo	221-230	X(10)		Optional user memo.
Locked-In Indicator	231-231	X(1)		Enter original value or amended value.
OATS Identifier	232-251	X(20)	Y	Enter original value or amended value.
Contra OATS Identifier	252-271	X(20)		Enter original value or amended value.

Field Name	Position	Format	Req'd	Contents/Comments
Branch Sequence	272-279	X(8)		Enter original value or amended value.
Contra Branch Sequence	280-287	X(8)		Enter original value or amended value.
Settlement Date	288-295	9(8)		Enter original value or amended value.
Clearing Indicator	296-296	9(1)	Y	Valid values: 0 = send to clearing 1 = do not send to clearing Note: on AGU trades (Locked In Indicator = A), this field MUST be set to "0" (send to clearing).
Prior Day Clearing Indicator	297-297	9(1)		Used to indicate if a reversal of the original trade details must be sent to DTCC. Valid values: 0 = send to clearing 1 = do not send to clearing
Publish Indicator	298-298	X(1)	Y	Enter original value or amended value.
Special Instruction Indicator	299-299	X(1)		Enter original value or amended value.
Related Market Center	300-300	X(1)		Enter original value or amended value.
Trade Reference Number	301-320	X(20)		Enter original value or amended value.
Preparation Time	321-329	9(9)		Enter the time this message was prepared in HHMMSSsss ET format. Optional.
Service Bureau Preparation Time	330-338	9(9)		Enter the time this message was prepared by the service bureau, in HHMMSSsss ET format.
CR LF				Carriage Return, Line Feed

3.5 Trade Accept

This message can only be used by the firm that does not have the reporting obligation, as defined in FINRA Rule 6622(b), to confirm and accept the trade alleged against them. A Trade Accept can be submitted in lieu of submitting a trade entry. Firms that submit Accept messages will be identified as the Contra Party on the trade.

ORF will forward an ORAC (Accept confirmation) message to both parties of the trade to advise them that the specified trade has been accepted by the contra party.

EXHIBIT 3.5 TRADE ACCEPT MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	A = Trade Acceptance Entry.
Client Trade Identifier	2-21	X(20)		User reference number.
Control Date	22-29	9(8)	Y	Control Date assigned to the alleged trade report.
Control Number	30-39	9(10)	Y	Control Number assigned to the alleged trade report.
Symbol	40-53	X(14)	Y	Symbol of the alleged trade.
B/S Indicator (Side)	54-54	X(1)	Y	Side <u>from the Accepting party's perspective</u> . Valid values: B = Buy S = Sell
Short Sale Indicator	55-55	X(1)		Indicates if the Accepting party bought or sold short/short exempt. Valid values: S = Short E = Short Exempt space = not a short sale trade
CPID	56-59	X(4)	Y	MPID of the firm alleged as the contra party on the trade, accepting the trade.
Clearing Number	60-63	9(4)		Clearing number of the contra party (accepting firm).
Capacity	64-64	X(1)	Y	Capacity of the accepting firm. Valid values: A = Agency P = Principal R = Riskless Principal
OATS Identifier	65-84	X(20)	Y	OATS ID of the accepting firm.
CR LF				Carriage Return, Line Feed

3.6 Trade Decline

Either party to a trade will use this message to decline (DK) a trade that is alleged against them. ORF will forward an ORDK (Decline confirmation) message to both parties of the trade to advise them that the specified trade has been declined by the contra party. Declined trades will still be available for Accepting (Function A) until the end of the trade report day.

EXHIBIT 3.6 TRADE DECLINE MESSAGE FORMAT

Field Name	Position	Format	Req'd	Contents/Comments
Line 2				
Function	1-1	X(1)	Y	D = Trade Decline Entry.
Client Trade Identifier	2-21	X(20)		User reference number.
Control Date	22-29	9(8)	Y	Control Date assigned to the alleged trade being declined. YYYYMMDD format.
Control Number	30-39	9(10)	Y	Control Number assigned to the alleged trade being declined.
Decline Reason Code	40-40	X(1)	Y	Reason for decline of trade. Valid values: A = Unknown symbol B = Wrong side C = Quantity exceeds order D = No matching order E = Price exceeds limit F = Calculation difference Z = Other
Memo	41-50	X(10)		Optional field to be used to further define the reason for the DK, when the Reason Code = Z (other). Cannot exceed 10 characters.
CR LF				Carriage Return, Line Feed

4.0 OUTPUT MESSAGE FORMATS

For more detailed Output Message formats, refer to the CTCI for Trade Reporting Specifications published by NASDAQ OMX on www.nasdaqtrader.com.

Input messages received from ORF subscribers will be forwarded to the ORF System for processing through NASDAQ. Identical to currently existing CTCI applications (e.g., TRACE Trade Reporting), NASDAQ will perform validations for each ORF input message received. NASDAQ will always generate a response back to the originator for each input message received. The response can be a positive acknowledgment if the input messages pass the NASDAQ validation or a negative acknowledgment (rejection) if the input messages fail validation.

All output messages (NASDAQ or application output messages) forwarded by NASDAQ to an output destination (i.e., subscriber station) will be contained in the Output Message Envelope format.

4.1 ORF Application Output Messages

An ORF input message that successfully passes NASDAQ validations is forwarded to the ORF application, which will perform additional validations on the text of the input message. If an error is detected, the originating subscriber shall receive a reject message explaining why the original message could not be processed. If no errors are detected and ORF accepts the input message, the ORF application will send an acknowledgment message to the originating subscriber and a Notification message to the contra party. All Reject and Notification messages released from the ORF Application Processor will be forwarded to the subscriber via NASDAQ in Output Message format if the subscriber is employing a CTCI and will be contained in an Output Message Envelope. Note that if the rejected text is too large, the Trailer will overlay the text such that the block does not exceed 1024 characters.

There is no guarantee that ORF messages will be received in a logical sequence. Subscribers should take this into consideration in their design.

4.2 Reject Message Format

If the ORF application cannot process a message received from the subscriber, it will generate a Status Message for the originator which indicates why the message was rejected. The Status Message will be received by the originator as the text portion of a Standard NASDAQ Output Message. The text (Status Message) is described below.

Line 1:

Originator MPID -	This is an optional line that may contain the four character MPID of the entering firm, or the MPID of the firm the Service Bureau is acting for. If this option is utilized for multistation lines, it will equal the four character MPID associated with the station (select/poll address).
CR LF -	Required line delimiter.

Line 2:

Category -	This field identifies the message category and will contain "STATUS".
CR LF -	Required line delimiter.

Line 3: This line contains ("REJ - Reason for Rejection"). The maximum reject reason is 75 bytes. If the message is shorter than 75 bytes, the reject reason will be followed by CR LF.

CR LF - Required line delimiter.

Line 4: **Branch Office Code and Sequence Number** This line of the Status Message contains the one to eight alphabetic character Branch Office Code Sequence Number which appears on line 1 of the input message, if one was submitted. In addition, a time field (HH:MM:SS) will be sent on this line. If a Branch Office Code Sequence Number were not entered in the input message, Line 4 contains only the time message.

CR LF - Required line delimiter.

Line 5: This line contains an echo of the original input message being rejected.

CR LF - Required line delimiter.

EXHIBIT 4.2

ORF REJECT MESSAGE FORMAT

Line 1: MPID cr lf
 Line 2: STATUS cr lf
 Line 3: REJ - (Reject Reason) cr lf
 Line 4: BRIDSQNO HH:MM:SS cr lf
 Line 5: (Text of original input message) cr lf

4.3 ORF UM Notification Message

For more detailed NASDAQ Output Message formats, refer to the CTCI for Trade Reporting Specifications published by NASDAQ on www.nasdaqtrader.com.

If an ORF input message (i.e., Trade Entry, Cancel, Reversal, Correction, Accept or Decline) is accepted by the ORF application (i.e., it passes all validations), an appropriate UM Notification Message will be forwarded to the proper ORF subscriber. The ORF UM Notification Messages contain sufficient data to enable subscribers to build their own ORF Image Files to perform trade reporting procedures. If the firm selected header options but has not specified customized headers, then the default message header origin will be ORRXXX where XXX represents 1 - 3 alphanumeric characters reserved for Nasdaq's use, and the default message header type field will contain T (OTHER). Following the optional header line(s), the UM notification message will be received by the subscriber as the text portion of a Standard NASDAQ Output Message and is described below:

Line 1: **OTHER MPID -** Receiving firm MPID.
CR LF - Required line delimiter.

Line 2: **ORF Message Type -** This field identifies the ORF UM Notification message header and will contain the type of message being sent. See Section 4.4 for a list of Output Message Types.

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Line 3:

Message Detail

This line is the detail data of the UM Notification Message corresponding to the Output Message Type specified in Line 2. See Section 4.4 for a description of the message formats associated with each Output Message Type.

4.4 Message Format Definitions

OREN -	denotes an ORF Trade Entry Acknowledgment Message. When firm enters an original or As-of trade and the trade is accepted by ORF, this message will be forwarded to the originator.
ORAL -	denotes an ORF Trade Entry Allege Notification Message. When a firm enters an original or As-of trade and the trade is accepted by ORF, this message will be forwarded to the contra party. Note: If a subscriber chooses to build an ORF Image File, which contains all trades entered by the firm or trades other firms entered against the firm, then respective OREN and ORAL messages should be used to build it. Other ORF UM messages described below will be used to update the statuses and/or contents of these trades.
ORCX -	denotes an ORF Trade Cancel UM Notification Message. If a trade submitted within the 5 day period (inclusive of the current day) is canceled, this message will be forwarded to both parties.
ORHX -	denotes an ORF Trade Reversal UM Notification Message. If a trade submitted prior to the 5 day period is reversed, this message will be forwarded to both parties.
ORCR -	denotes an ORF Trade Correction UM Notification Message. If a trade submitted within the 5 day period (inclusive of the current day) is corrected, this message will be forwarded to both parties.
ORAC -	denotes an ORF Trade Accept UM Notification Message. If a trade is alleged against the contra party, and the contra party Accepts the alleged trade, this message will be forwarded to both parties.
ORDK -	denotes an ORF Trade Decline UM Notification Message. If a trade is alleged against the contra party, and the contra party Declines the alleged trade, this message will be forwarded to both parties.
ORMA -	denotes an ORF Trade Match Notification Message. Trades are considered Matched when an alleged trade is accepted, or two trades (Buy and Sell) are compared and all pertinent trade details match. This message will be forwarded to both parties.

5.0 TRADE REPORTING OUTPUT MESSAGES

5.1 Trade Entry Acknowledgment Message (OREN)

Denotes an ORF Trade Entry Acknowledgment Notification Message. When a firm enters an ORF trade entry and the entry is accepted, this message will be forwarded to the originator. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: OREN *CR LF*
LINE 3: Control Date Control Number (Trade Text) *CR LF*

Where:

- MPID -** Receiving firm MPID
- Control Date -** The date the system received and processed the submission. The Control Date is required, in combination with the Control Number, to uniquely identify the record in the system for subsequent processing (cancels and corrections).
- Control Number -** The ten digit control number which the System had assigned to the trade when it was accepted. The Control Number is required, in combination with the Control Date, to uniquely identify the record in the system for subsequent processing.
- Trade Text -** This field contains the trade and will be formatted as a Trade Entry Message.
- CR LF -** Carriage return, Line feed. Required line delimiter.

Note 1: Valid ORF statuses are:
T - Trades entered for Trade Reporting

Exhibit 5.1 ORF Trade Entry Acknowledgment - (OREN)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Date referencing when the system processed the trade report. YYYYMMDD format.
Control Number	9-18	9(10)	System assigned reference number.
Trade Status	19-19	X(1)	Status of trade. T = accepted trade entry.
Special Processing Flag	20-20	X(1)	Reflects user input: P or blank.
B/S Indicator	21-21	X(1)	Reflects user input: B, S or X.
Short Sale Indicator	22-22	X(1)	Reflects user input: S, E or blank.
Client Trade Identifier	23-42	X(20)	Reflects user input: User assigned reference number or blank.
Contra Client Trade Identifier	43-62	X(20)	Reflects user input: User assigned reference number on the contra side (on Locked-In trade reports) or blank.
Quantity	63-73	9(11)	Reflects user input: Number of shares.
Symbol	74-87	X(14)	Reflects user input.
Symbol Suffix	88-94	X(7)	Reflects user input: Symbol suffix or blank.
Security Description	95-95	X(1)	Reflects user input: P.
Price	96-107	9(12)	Reflects user input: Trade price.
Price Type	108-108	X(1)	Reflects user input: D or C.
Price Override	109-109	X(1)	Reflects user input: O or blank.
Clearing Price	110-121	9(12)	Reflects user input: Clearing price or blank.
Trade Modifier 1	122-122	X(1)	Reflects user input: C, N, R or blank.
Seller's Option Days	123-124	9(2)	Reflects user input: 02, 04 – 60 or blank.
Filler	125-126	X(2)	Reserved for future use. Blank on output.
Trade Modifier 3	127-127	X(1)	Reflects user input: T, U, Z or blank.
FINRA Trade Modifier 3	128-128	X(1)	Time Modifier determined by FINRA. System generated on the outbound acknowledgements: Blank = no system generated modifier T = Trade reported after market hours U = Trade reported after market hours and reported late Z = Trade reported during market hours and reported late
Trade Modifier 4	129-129	X(1)	Reflects user input: W, S, P, X, R or blank.
Trade Modifier 4 Time	130-138	9(9)	Reflects user input: HHMMSSss or blank.
CPID	139-142	X(4)	Reflects user input: MPID of the Contra Party (or C for Customer).
CPGU	143-146	X(4)	Reflects user input: MPID of the Contra Party Give Up or blank (MPID may only be submitted on a Locked-In trade report).
Contra Clearing Number	147-150	9(4)	Reflects user input: Contra Party's clearing number or blank.
Contra Party Capacity	151-151	X(1)	Reflects user input: A, P, R or blank.
RPID	152-155	X(4)	Reflects user input: MPID of the Reporting Party.
RPGU	156-159	X(4)	Reflects user input: MPID of the Reporting Party's Give Up or blank.
Reporting Clearing Number	160-163	9(4)	Reflects user input: Reporting Party clearing number or blank.
Reporting Party Capacity	164-164	X(1)	Reflects user input: A, P, or R.
Reporting Obligation	165-165	X(1)	Reflects user input: Y or N.
As-Of Indicator	166-166	X(1)	Reflects user input: Y or blank.
Execution Date	167-174	9(8)	Reflects user input: MMDDYYYY.

Field Name	Position	Format	Contents/Comments
Execution Time	175-183	9(9)	Reflects user input: HHMMSSsss.
Memo	184-193	X(10)	Reflects user input: User Memo (Will not be displayed to Contra party) or blank.
Locked In Indicator	194-194	X(1)	Reflects user input: A, Q or blank.
OATS Identifier	195-214	X(20)	Reflects user input.
Contra OATS Identifier	215-234	X(20)	Reflects user input or blank.
Branch Sequence	235-242	X(8)	Reflects user input or blank.
Contra Branch Sequence	243-250	X(8)	Reflects user input or blank.
Settlement Date	251-258	9(8)	Reflects user input: MMDDYYYY or blank.
Clearing Indicator	259-259	9(1)	Reflects user input: 0 or 1.
Publish Indicator	260-260	X(1)	Reflects user input: Y or N.
Special Trade Indicator	261-261	X(1)	Reflects user input: Y, S, X or blank.
Related Market Center	262-262	X(1)	Reflects user input: O, U, 0, F or blank.
Trade Reference Number	263-282	X(20)	Reflects user input or blank.
Preparation Time	283-291	9(9)	Reflects user input: HHMMSSsss or blank.
Service Bureau Preparation Time	292-300	9(9)	Reflects user input: HHMMSSsss or blank.
CR LF			Carriage Return, Line Feed

5.2 Trade Entry Allege Message (ORAL)

Denotes an ORF Trade Entry Allege Notification Message. When a firm enters a trade entry and the entry is accepted, this message will be forwarded to the contra party. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORAL *CR LF*
LINE 3: Control Date Control Number (Trade Text) *CR LF*

Where:

MPID -	Receiving firm MPID
Control Date -	The date the system received and processed the submission.
Control Number -	The ten digit control number which the system had assigned to the trade when it was accepted by the system.
Trade Text -	This field contains the trade and will be formatted as an ORF Trade Entry Message (Section 3.1).
CR LF -	Carriage return, Line feed. Required line delimiter.

Note 1: Valid ORF statuses are:

- R - On a Correction to the contra party (when the Reporting Party has amended the CPID, the new contra party will receive an ORAL with the Status code "R").
- T - On a new Trade report, the alleged contra party will receive an ORAL with the Status code "T".

Exhibit 5.2 ORF Trade Entry Allege Message - (ORAL)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Date referencing when the system processed the trade report. YYYYMMDD format.
Control Number	9-18	9(10)	System assigned reference number.
Trade Status	19-19	X(1)	Status of trade. T = accepted trade entry. R = reporting party amended the contra party to the recipient of this ORAL.
Special Processing Flag	20-20	X(1)	Reflects user input: P or blank.
B/S Indicator	21-21	X(1)	Reflects user input: B, S or X.
Short Sale Indicator	22-22	X(1)	Reflects user input: S, E or blank.
Client Trade Identifier	23-42	X(20)	Reflects user input: User assigned reference number or blank.
Contra Client Trade Identifier	43-62	X(20)	Reflects user input: User assigned reference number on the contra side (on Locked-In trade reports) or blank.
Quantity	63-73	9(11)	Reflects user input: Number of shares.
Symbol	74-87	X(14)	Reflects user input.
Symbol Suffix	88-94	X(7)	Reflects user input: Symbol suffix or blank.
Security Description	95-95	X(1)	Reflects user input: P.
Price	96-107	9(12)	Reflects user input: Trade price.
Price Type	108-108	X(1)	Reflects user input: D or C.
Price Override	109-109	X(1)	Reflects user input: O or blank.
Clearing Price	110-121	9(12)	Reflects user input: Clearing price or blank.
Trade Modifier 1	122-122	X(1)	Reflects user input: C, N, R or blank.
Seller's Option Days	123-124	9(2)	Reflects user input: 02, 04 – 60 or blank.
Filler	125-126	X(2)	Reserved for future use. Blank on output.
Trade Modifier 3	127-127	X(1)	Reflects user input: T, U, Z or blank.
FINRA Trade Modifier 3	128-128	X(1)	Time Modifier determined by FINRA. System generated on the outbound acknowledgements: Blank = no system generated modifier T = Trade reported after market hours U = Trade reported after market hours and reported late Z = Trade reported during market hours and reported late
Trade Modifier 4	129-129	X(1)	Reflects user input: W, S, P, X, R or blank.
Trade Modifier 4 Time	130-138	9(9)	Reflects user input: HHMMSSsss or blank.
CPID	139-142	X(4)	Reflects user input: MPID of the Contra Party (or C for Customer).
CPGU	143-146	X(4)	Reflects user input: MPID of the Contra Party Give Up or blank (MPID may only be submitted on a Locked-In trade report).
Contra Clearing Number	147-150	9(4)	Reflects user input: Contra Party's clearing number or blank.
Contra Party Capacity	151-151	X(1)	Reflects user input: A, P, R or blank.
RPID	152-155	X(4)	Reflects user input: MPID of the Reporting Party.
RPGU	156-159	X(4)	Reflects user input: MPID of the Reporting Party's Give Up or blank.
Reporting Clearing Number	160-163	9(4)	Reflects user input: Reporting Party clearing number or blank.
Reporting Party Capacity	164-164	X(1)	Reflects user input: A, P, or R.

Field Name	Position	Format	Contents/Comments
Reporting Obligation	165-165	X(1)	Reflects user input: Y or N.
As-Of Indicator	166-166	X(1)	Reflects user input: Y or blank.
Execution Date	167-174	9(8)	Reflects user input: MMDDYYYY.
Execution Time	175-183	9(9)	Reflects user input: HHMMSSsss.
Memo	184-193	X(10)	User Memo will not be displayed to Contra party. Field will be blank.
Locked In Indicator	194-194	X(1)	Reflects user input: A, Q or blank.
OATS Identifier	195-214	X(20)	Reflects user input.
Contra OATS Identifier	215-234	X(20)	Reflects user input or blank.
Branch Sequence	235-242	X(8)	Reflects user input or blank.
Contra Branch Sequence	243-250	X(8)	Reflects user input or blank.
Settlement Date	251-258	9(8)	Reflects user input: MMDDYYYY or blank.
Clearing Indicator	259-259	9(1)	Reflects user input: 0 or 1.
Publish Indicator	260-260	X(1)	Reflects user input: Y or N.
Special Trade Indicator	261-261	X(1)	Reflects user input: Y, S, X or blank.
Related Market Center	262-262	X(1)	Reflects user input: O, U, 0, F or blank.
Trade Reference Number	263-282	X(20)	Reflects user input or blank.
Preparation Time	283-291	9(9)	Reflects user input: HHMMSSsss or blank.
Service Bureau Preparation Time	292-300	9(9)	Reflects user input: HHMMSSsss or blank.
CR LF			Carriage Return, Line Feed

5.3 Trade Cancel Acknowledgment (ORCX)

Denotes an ORF Trade Cancel Notification Message. When a firm cancels a trade and the entry is accepted, this message will be forwarded to both parties on the trade. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORCX *CR LF*
LINE 3: (Control Date) (Control Number) (Cancel Entry Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - The date the system received and processed the submission.

Control Number - The ten digit control number which the system had assigned to the trade when it was accepted by the system.

Client Trade Identifier - The twenty character alphanumeric reference assigned by the user to the original trade report.

CR LF - Required line delimiter.

Exhibit 5.3 Trade Cancel Acknowledgment (ORCX)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Control Date of the original trade being canceled. YYYYMMDD format.
Control Number	9-18	9(10)	Control number of the original trade being canceled.
Client Trade Identifier	19-38	X(20)	Reflects user input: User assigned reference number or blank.
Symbol	39-52	X(14)	Reflects user input or blank.
RPID	53-56	X(4)	Reflects user input or blank.
CR LF			Carriage Return, Line Feed

5.4 Trade Reversal Acknowledgment (ORHX)

Denotes an ORF Trade Reversal Notification Message. When a firm reverses a trade and the entry is accepted, this message will be forwarded to both parties on the trade. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORHX *CR LF*
LINE 3: Control Date Control Number (Trade Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - The date the system received and processed the submission. The Control Date is required, in combination with the Control Number, to uniquely identify the record for subsequent processing (cancels and corrections).

Control Number - The ten digit control number which the assigned to the trade when it was accepted by the system. The Control Number is required, in combination with the Control Date, to uniquely identify the record for subsequent processing.

CR LF - Required line delimiter.

Exhibit 5.4 Trade Reversal Acknowledgment (ORHX)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Control Date assigned to the Reversal entry.
Control Number	9-18	9(10)	Control Number assigned to the Reversal entry.
Original Control Date	19-26	9(8)	Control Date of the original trade report being reversed.
Original Control Number	27-36	9(10)	Control Number of the original trade report being reversed.
Reference Reporting Facility	37-37	X(1)	Reflects user input on reversal entry.
Special Processing Flag	38-38	X(1)	Reflects user input on reversal entry.
B/S Indicator (Side)	39-39	X(1)	Reflects user input on reversal entry.
Short Sale Indicator	40-40	X(1)	Reflects user input on reversal entry.
Client Trade Identifier	41-60	X(20)	Reflects user input on reversal entry.
Contra Client Trade Identifier	61-80	X(20)	Reflects user input on reversal entry.
Quantity	81-91	9(11)	Reflects user input on reversal entry.
Symbol	92-105	X(14)	Reflects user input on reversal entry.
Symbol Suffix	106-112	X(7)	Reflects user input on reversal entry.
Security Description	113-113	X(1)	Reflects user input on reversal entry.
Price	114-125	9(12)	Reflects user input on reversal entry.
Price Type	126-126	X(1)	Reflects user input on reversal entry.
Price Override	127-127	X(1)	Reflects user input on reversal entry.

Field Name	Position	Format	Contents/Comments
Clearing Price	128-139	9(12)	Reflects user input on reversal entry.
Trade Modifier 1 (Settlement Modifier)	140-140	X(1)	Reflects user input on reversal entry.
Seller's Option Days	141-142	X(2)	Reflects user input on reversal entry.
Filler	143-144	X(2)	Space-filled.
Trade Modifier 3 (Time Modifier)	145-145	X(1)	Reflects user input on reversal entry.
Trade Modifier 4 (SRO Modifier)	146-146	X(1)	Reflects user input on reversal entry.
Trade Modifier 4 Time	147-155	X(9)	Reflects user input on reversal entry.
CPID	156-159	X(4)	Reflects user input on reversal entry.
CPGU	160-163	X(4)	Reflects user input on reversal entry.
Contra Clearing Number	164-167	9(4)	Reflects user input on reversal entry.
Contra Party Capacity	168-168	X(1)	Reflects user input on reversal entry.
RPID	169-172	X(4)	Reflects user input on reversal entry.
RPGU	173-176	X(4)	Reflects user input on reversal entry.
Reporting Clearing Number	177-180	9(4)	Reflects user input on reversal entry.
Reporting Party Capacity	181-181	X(1)	Reflects user input on reversal entry.
Reporting Obligation	182-182	X(1)	Reflects user input on reversal entry.
As-Of Indicator	183-183	X(1)	Always set to: Y = As-Of trade (T+n)
Execution Date	184-191	9(8)	Reflects user input on reversal entry.
Execution Time	192-200	9(9)	Reflects user input on reversal entry.
Memo	201-210	X(10)	Reflects user input on reversal entry.
Locked-In Indicator	211-211	X(1)	Reflects user input on reversal entry.
OATS Identifier	212-231	X(20)	Reflects user input on reversal entry.
Contra OATS Identifier	232-251	X(20)	Reflects user input on reversal entry.
Branch Sequence	252-259	X(8)	Reflects user input on reversal entry.
Contra Branch Sequence	260-267	X(8)	Reflects user input on reversal entry.
Settlement Date	268-275	9(8)	Reflects user input on reversal entry.
Clearing Indicator	276-276	9(1)	Reflects user input on reversal entry.
Publish Indicator	277-277	X(1)	Reflects user input on reversal entry.
Special Instruction Indicator	278-278	X(1)	Reflects user input on reversal entry.
Related Market Center	279-279	X(1)	Reflects user input on reversal entry.
Trade Reference Number	280-299	X(20)	Reflects user input on reversal entry.
Preparation Time	300-308	9(9)	Reflects user input on reversal entry.
Service Bureau Preparation Time	309-317	9(9)	Reflects user input on reversal entry.
CR LF			Carriage Return, Line Feed

5.5 Trade Correction Acknowledgment Message (ORCR)

Denotes an ORF Trade Correction Notification Message. When a firm corrects a trade and the entry is accepted, this message will be forwarded to both parties on the trade. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORCR *CR LF*
LINE 3: (Original Control Date) (Original Control Number) (Control Date) (Control Number) (Trade Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - The date the system received and processed the submission. The Control Date is required, in combination with the Control Number, to uniquely identify the record for subsequent processing (cancels and corrections).

Control Number - The ten digit control number which the system had assigned to the trade when it was accepted. The Control Number is required, in combination with the Control Date, to uniquely identify the record for subsequent processing.

CR LF - Required line delimiter.

Notes:

- 1) The ORCR Message will always be forwarded to the updating firm.
- 2) The ORCR Message will be forwarded to the contra party if the contra in the original trade equals the contra in the corrected trade (i.e., no change in the CPID). If the contra is changed in the corrected trade, the original contra will receive a cancel notification (ORCX) and the new contra will receive a trade allege notification (ORAL).

Exhibit 5.5 Trade Correction Acknowledgment (ORCR)

Field Name	Position	Format	Contents/Comments
Line 3			
Original Control Date	1-8	9(8)	Control Date associated with the original trade report.
Original Control Number	9-18	9(10)	Control Number associated with the original trade report.
Control Date	19-26	9(8)	New Control Date assigned to the corrected trade report.
Control Number	27-36	9(10)	New Control Number assigned to the corrected trade report.
Trade Status	37-37	X(1)	Status of trade. T = accepted trade entry.
Special Processing Flag	38-38	X(1)	Reflects user input: P or blank.
B/S Indicator	39-39	X(1)	Reflects user input: B, S or X.
Short Sale Indicator	40-40	X(1)	Reflects user input: S, E or blank.
Client Trade Identifier	41-60	X(20)	Reflects user input: User assigned reference number or blank.

Field Name	Position	Format	Contents/Comments
Contra Client Trade Identifier	61-80	X(20)	Reflects user input: User assigned reference number on the contra side (on Locked-In trade reports) or blank.
Quantity	81-91	9(11)	Reflects user input: Number of shares.
Symbol	92-105	X(14)	Reflects user input.
Symbol Suffix	106-112	X(7)	Reflects user input: Symbol suffix or blank.
Security Description	113-113	X(1)	Reflects user input: P.
Price	114-125	9(12)	Reflects user input: Trade price.
Price Type	126-126	X(1)	Reflects user input: D or C.
Price Override	127-127	X(1)	Reflects user input: O or blank.
Clearing Price	128-139	9(12)	Reflects user input: Clearing price or blank.
Trade Modifier 1	140-140	X(1)	Reflects user input: C, N, R or blank.
Seller's Option Days	141-142	9(2)	Reflects user input: 02, 04 – 60 or blank.
Filler	143-144	X(2)	Reserved for future use. Blank on output.
Trade Modifier 3	145-145	X(1)	Reflects user input: T, U, Z or blank.
FINRA Trade Modifier 3	146-146	X(1)	Time Modifier determined by FINRA. System generated on the outbound acknowledgements: Blank = no system generated modifier T = Trade reported after market hours U = Trade reported after market hours and reported late Z = Trade reported during market hours and reported late
Trade Modifier 4	147-147	X(1)	Reflects user input: W, S, P, X, R or blank.
Trade Modifier 4 Time	148-156	9(9)	Reflects user input: HHMMSSsss or blank.
CPID	157-160	X(4)	Reflects user input: MPID of the Contra Party (or C for Customer).
CPGU	161-164	X(4)	Reflects user input: MPID of the Contra Party Give Up or blank (MPID may only be submitted on a Locked-In trade report).
Contra Clearing Number	165-168	9(4)	Reflects user input: Contra Party's clearing number or blank.
Contra Party Capacity	169-169	X(1)	Reflects user input: A, P, R or blank.
RPID	170-173	X(4)	Reflects user input: MPID of the Reporting Party.
RPGU	174-177	X(4)	Reflects user input: MPID of the Reporting Party's Give Up or blank.
Reporting Clearing Number	178-181	9(4)	Reflects user input: Reporting Party clearing number or blank.
Reporting Party Capacity	182-182	X(1)	Reflects user input: A, P, or R.
Reporting Obligation	183-183	X(1)	Reflects user input: Y or N.
As-Of Indicator	184-184	X(1)	Reflects user input: Y or blank.
Execution Date	185-192	9(8)	Reflects user input: MMDDYYYY.
Execution Time	193-201	9(9)	Reflects user input: HHMMSSsss.
Memo	202-211	X(10)	Reflects user input: User Memo (Will not be displayed to Contra party) or blank.
Locked In Indicator	212-212	X(1)	Reflects user input: A, Q or blank.
OATS Identifier	213-232	X(20)	Reflects user input.
Contra OATS Identifier	233-252	X(20)	Reflects user input or blank.
Branch Sequence	253-260	X(8)	Reflects user input or blank.
Contra Branch Sequence	261-268	X(8)	Reflects user input or blank.
Settlement Date	269-276	9(8)	Reflects user input: MMDDYYYY or blank.
Clearing Indicator	277-277	9(1)	Reflects user input: 0 or 1.

Field Name	Position	Format	Contents/Comments
Publish Indicator	278-278	X(1)	Reflects user input: Y or N.
Special Instruction Indicator	279-279	X(1)	Reflects user input: Y, S, X or blank.
Related Market Center	280-280	X(1)	Reflects user input: O, U, 0, F or blank.
Trade Reference Number	281-300	X(20)	Reflects user input or blank.
Preparation Time	301-309	9(9)	Reflects user input: HHMMSSsss or blank.
Service Bureau Preparation Time	310-318	9(9)	Reflects user input: HHMMSSsss or blank.
CR LF			Carriage Return, Line Feed

5.6 Trade Accept Notification (ORAC)

Denotes an ORF Trade Acceptance Notification Message. When a contra party accepts a trade alleged against them, this message will be forwarded to both parties on the trade. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORAC *CR LF*
LINE 3: (Control Date) (Control Number) (Accept Entry Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - Control Date of the accepted trade report.

Control Number - Control Number of the accepted trade report.

CR LF - Required line delimiter.

Exhibit 5.6 Trade Accept Acknowledgment (ORAC)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Control Date associated with the accepted trade report.
Control Number	9-18	9(10)	Control Number associated with the accepted trade report.
Client Trade Identifier	19-38	X(20)	User reference number entered by the contra party on the Accept message.
Symbol	39-52	X(14)	Symbol entered on the Trade Accept message.
B/S Indicator	53-53	X(1)	Side entered on the Trade Accept message.
Short Sale Indicator	54-54	X(1)	Short Sale Indicator entered on the Trade Accept message.
CPID	55-58	X(4)	CPID entered on the Trade Accept message.
Clearing Number	59-62	9(4)	Clearing Number entered on the Trade Accept message.
Capacity	63-63	X(1)	Capacity entered on the Trade Accept message.
OATS Identifier	64-83	X(20)	OATS ID entered on the Trade Accept message.
CR LF			Carriage Return, Line Feed

5.7 Trade Decline Notification (ORDK)

Denotes an ORF Trade Decline Notification Message. When a contra party declines a trade alleged against them, this message will be forwarded to both parties on the trade. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORDK *CR LF*
LINE 3: (Control Date) (Control Number) (Trade Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - Control Date of the declined trade report.

Control Number - Control Number of the declined trade report.

CR LF - Required line delimiter.

Exhibit 5.7 Trade Decline Acknowledgment (ORDK)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Control Date associated with the declined trade report.
Control Number	9-18	9(10)	Control Number associated with the declined trade report.
Client Trade Identifier	19-38	X(20)	User reference number entered by the contra party on the Decline message.
Decline Reason Code	39-39	X(1)	Reflects reason code submitted on the Decline message.
Memo	40-49	X(10)	Reflects Memo submitted on the Decline message.
CR LF			Carriage Return, Line Feed

5.8 Trade Match Notification (ORMA)

Denotes an ORF Trade Match Notification Message. When a trade is accepted by the contra party, or two trade reports are matched against each other, ORF locks in the trade and this message will be forwarded to both parties on the trade. Trade matching is performed for clearing purposes only. This message is formatted as follows:

LINE 1: OTHER MPID *CR LF*
LINE 2: ORMA *CR LF*
LINE 3: (Control Date) (Control Number) (Match Text) *CR LF*

Where:

MPID - Receiving firm MPID.

Control Date - Control Date of the trade report with the Reporting Obligation.

Control Number - Control Number of the trade report with the Reporting Obligation.

CR LF - Required line delimiter.

Exhibit 5.7 Trade Decline Acknowledgment (ORDK)

Field Name	Position	Format	Contents/Comments
Line 3			
Control Date	1-8	9(8)	Control Date associated with the trade report submitted by the firm with the reporting obligation (Reporting Obligation = Y).
Control Number	9-18	9(10)	Control Number associated with the trade report submitted by the party with the reporting obligation.
Match Control Date	19-26	9(8)	If the above referenced trade was matched against a trade report where the Reporting Obligation = N, this field will contain the Control Date of the trade that does not have the reporting obligation. If the above referenced trade was accepted by the contra party, this field will not be populated.
Match Control Number	27-36	9(10)	If the above referenced trade was matched against a trade report where the Reporting Obligation = N, this field will contain the Control Number of the trade that does not have the reporting obligation. If the above referenced trade was accepted by the contra party, this field will not be populated.
Symbol	37-50	X(14)	Symbol of the matched trade.
Locked In Method	51-51	X(1)	Indicates the method in which the trade was locked in. Valid values: A = trade locked in by trade acceptance. L = trade locked in by trade matching/comparison.
CR LF			Carriage Return, Line Feed

APPENDIX A: TCP/IP Connection and IBM WebSphere MQ

For information concerning TCP/IP Connectivity and IBM WebSphere MQ, please refer to the CTCI for Trade Reporting Specifications published by NASDAQ on www.nasdaqtrader.com.

APPENDIX B: CTCI Rejection Messages

The following is a partial list of CTCI rejection messages. These messages may occur as a result of invalid data entry, lack of data or invalid action taken on the trade. Please note this is not a complete list and is subject to frequent updates over time.

!REJ - FUNCTION NOT ALLOWED
!REJ - INVALID ENTRY
!REJ - INVALID RPID
!REJ - INVALID DATE
!REJ - INVALID PRICE
!REJ - INVALID PRICE OVERRIDE
!REJ - INVALID TIME
!REJ - RPID REQUIRED
!REJ - TRADE ENTRY SUSPENDED
!REJ - INVALID REASON CODE
!REJ - INVALID SIDE
!REJ - NOT WITHIN ALLOWABLE TIME
!REJ - PRICE OUT OF RANGE
!REJ - PRICE OUT OF OVERRIDE RANGE
!REJ - TERMINAL NOT AUTHORIZED
!REJ - INVALID MMID
!REJ - UPDATE OF FIELD REQUIRED
!REJ - NOT CUSIP AND SYMBOL
!REJ - THIS SECURITY HAS BEEN DELETED
!REJ - INVALID FUNCTION CODE
!REJ - INVALID TRADE DATE
!REJ - PRICE REQUIRED
!REJ - INVALID SYMBOL
!REJ - SECURITY NOT FOUND
!REJ - INVALID QUANTITY ENTERED
!REJ - INVALID AS-OF
!REJ - RPID NOT AUTHORIZED
!REJ - CPID NOT AUTHORIZED
!REJ - CANNOT CHANGE SYMBOL
!REJ - INVALID RP EXECUTING PARTY
!REJ - INVALID CP EXECUTING PARTY
!REJ - RP EXECUTING PARTY NOT AUTHORIZED
!REJ - CP EXECUTING PARTY NOT AUTHORIZED
!REJ - MUST ENTER SYMBOL
!REJ - INVALID TRADE MODIFIER
!REJ - INVALID P/A
!REJ - CPID REQUIRED

!REJ - INVALID REPORT FLAG
!REJ - INVALID SPECIAL TRADE INDICATOR
!REJ - SECURITY NOT AUTHORIZED
!REJ - NO CONTROL NUMBER
!REJ - TRADE ALREADY CANCELED
!REJ - INVALID BRANCH SEQUENCE NUMBER
!REJ - INVALID CONTRA BRANCH SEQUENCE NUMBER
!REJ - INVALID AS-OF DATE
!REJ - NOT AN OPEN TRADE
!REJ - INVALID CPID
!REJ - RPID INTRODUCING BROKER SUSPENDED
!REJ - CPID INTRODUCING BROKER SUSPENDED
!REJ - EXECUTION TIME GREATER THAN TRADE REPORT TIME
!REJ - NOT TRADE SUBMITTER
!REJ - CORRECTION MAY NOT CHANGE AS-OF FLAG

Revision History

Revision	Date	Comment
1.0	1/25/2013	Initial version.