

# ITC Specification Version 2.1

Inter-Exchange  
Technical Committee

2005 V1.3

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## 1.00 Preface

### 1.01 Scope of Specification

This Specification describes the communications interface, message formats, and conventions for the transmission of price and other data from commodity exchanges to vendors in a computer readable format emphasizing data integrity and error recovery capability. The messages defined herein are not to be viewed by end users without computer reformatting. Vendors (and other subscribers, hereafter included in the term vendors) may develop their systems to read exchange lines with primary reference to this Specification. Significant particularities of each exchange's implementation of this Specification are enumerated in appendices attached hereto.

### 1.02 Inter-Exchange Technical Committee

This Specification is issued under the auspices of the Inter-Exchange Technical Committee (ITC). The ITC is an informal committee of technical representatives of commodity exchanges meeting on an as-needed basis. An exchange actually or prospectively trading commodity futures or options and anticipates implementing this Specification (whether or not it sets a prospective implementation date) may participate in Committee deliberations. The Current officers of the Committee are:

Chairman:

Michael Boyle  
Chicago Board of Trade  
Room 940A  
141 West Jackson Blvd.  
Chicago, IL 60604

Telephone (312) 435-3566  
Fax (312) 341-7333  
Internet: MBOYLE@CBOT.COM

### **1.03     Commodity Exchanges**

Commodity exchanges, or their designated processors (hereafter included in the term exchanges) which have implemented this Specification, or which anticipate implementing this Specification, are listed below:

Exchange	Actual Date of Implementation
Chicago Board of Trade	September 1997
Chicago Mercantile Exchange	May 2001
Kansas City Board of Trade	September 2004
Minneapolis Grain Exchange	September 2004
New York Mercantile Exchange	September 2004
New York Board of Trade	July 2000
Winnipeg Commodity Exchange	September 2004

A list of individuals at each exchange who are involved with this specification or its implementation is included in Appendix 1.03 (see separate Appendix Document) together with their respective telephone numbers, titles and areas of responsibility as they relate to this Specification.

### **1.04 Vendors**

Actual and prospective subscribers (direct or indirect) who must be able to interpret lines conforming to this Specification are invited to comment thereon. Comments may be supplied at vendor meetings called from time to time by the Inter Exchange Technical Committee or by contacting Committee officers directly by mail or telephone.

### **1.05 Correspondents**

Persons who are not exchanges or vendors (as defined above) but who are interested in this Specification will, at the discretion of the Committee, be placed on the Committee mailing list.

### **1.06 Specification Updates**

Exchanges, vendors and correspondents may obtain a copy of this specification and by contacting:

Mr. Michael Boyle  
Chicago Board of Trade  
Suite 940-A  
141 West Jackson Blvd.

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Chicago, IL 60604  
(312) 435-3566  
Fax (312) 341-7333  
Internet: MBOYLE@CBOT.COM

Exchanges will make a timely submission of any particulars of their implementation of this Specification to the above named individual who will publish and distribute to all exchanges the necessary updates to this Specification.

Updated copies of the specification, as well as the Exchange Appendix document, are also available at the following internet site(s):

- [www.cbot.com/cbot/pub/cont\\_detail/0,3206,1758+22778,00.html](http://www.cbot.com/cbot/pub/cont_detail/0,3206,1758+22778,00.html)
- [www.mgit.com/pubopen/freedown.htm](http://www.mgit.com/pubopen/freedown.htm)  
(provided as a free service by Clearnet)

### 1.07 Organization of Specification

The body of this document describes the common elements of the communications interface between exchanges and vendors. No exchange system will be regarded as conforming to this Specification which is inconsistent with any provision contained in the body of this Specification; however, it is not contemplated that each exchange will at all times implement each aspect of the Specification, nor is it contemplated that aspects of exchange implementation which are not described within the body of this Specification will be common among exchanges.

For example, the definition of message formats and identifying codes are established in the body of this Specification. No exchange will use a message format not identified in this Specification, nor will it use codes inconsistent with those identified in this specification. However, some exchanges may not use certain message formats or types identified in the body of this Specification. Conversely, the communications interface is not defined in the body of this Specification and is not expected to be common among implementing exchanges. The particulars of each exchange's implementation of this Specification are contained in the appendices.

Appendices will be numbered, to the extent possible, with reference to the overlying paragraphs of the body of this Specification.

## 2.00 Communications Interface

Each exchange will define its own communications interface.

The following exchanges have defined their respective interfaces in the appropriate Exchange section of Appendix 7.00 (see separate Appendix Document):

Chicago Board of Trade  
Chicago Mercantile Exchange  
Minneapolis Grain Exchange

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Kansas City Board of Trade  
New York Board of Trade  
New York Mercantile Exchange  
Winnipeg Commodity Exchange

### 3.00 Transmission Characteristics

#### 3.01 Synchronization

Each exchange will define its transmission characteristics. The following exchanges have defined their respective transmission characteristics in the appropriate Exchange section of Appendix 7.00 (see separate Appendix Document):

Chicago Board of Trade  
Chicago Mercantile Exchange  
Minneapolis Grain Exchange  
Kansas City Board of Trade  
New York Board of Trade  
New York Mercantile Exchange  
Winnipeg Commodity Exchange

#### 3.02 Character Set

All transmissions will be in USASCII, unmodified. Each character may consist of seven (7) data bits, plus an eighth (8th) bit for parity (vertical redundancy check) which must be used by each exchange.

The standard ASCII character set will be utilized with the following limitations:

##### Synchronous protocols

Only the following control characters will be utilized:

SOH  
STX  
ETX  
SYN  
US

Lower case characters are permitted. No lower characters will be used for Contract ID codes, Option ID codes

##### Asynchronous protocols

Only the following control characters will be utilized:

CR  
  
SOH  
STX  
ETX

Lower case characters are permitted.  
no lower characters will be used for Contract ID codes, Option ID codes



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or BAT codes

or BAT codes

DEL will not be utilized

DEL will not be utilized

Note that while the foregoing character set limitations are deemed appropriate for the present, certain exchanges' implementation of this Specification may require the utilization of other control characters or the DEL character; in which case, the foregoing limitations would be relaxed.

### **3.03      "P/A Characters" Defined, Justified and Filled**

"P/A Characters" Defined, Justified and Filled Printable ASCII characters including ASCII space will be used for codes within this Specification and will be referred to hereafter as "P/A Characters". All fields containing P/A Characters will be left justified and ASCII space character filled as appropriate.

### **3.04      "C/A Characters" Defined, Justified and Filled**

Capital and lower case alpha characters will be defined as the capital letters A through Z as well as ASCII space. Commodity Codes, Instrument Codes, and Combination ID and Cash Instrument Descriptions may not begin with a space, but may end with multiple spaces.

### **3.05      Numeric Characters Defined, Justified and Filled**

Numeric Characters, Defined, Justified and Filled Numeric characters are defined as the numerals, 0 through 9, as well as ASCII space.

Fields containing numeric characters will be right justified and ASCII zero (0) filled as appropriate.

If there is no data available to fill a numeric field (as contrasted with the case where the appropriate value for the field is zero), then the field will be filled with ASCII space characters. Numeric fields subject to ASCII space character fill will be identified where appropriate.

### **3.06      Retransmission**

Each exchange system will log every message sent, except that retransmissions of previously sent messages, Refresh Messages and Line Integrity Verification control messages will not be logged or available for retransmission. This log will provide a limited facility for message retransmission on the same day.

A vendor may request retransmission of a single message or a group of sequentially numbered messages by placing a telephone call to the exchange control center. The Vendor must specify the first and last Message Sequence Number in the sequence to be retransmitted. (Refer to Appendix 7.0 (see separate Appendix Document) for detailed information concerning a respective exchanges Retransmission-related information, as well as the definition of an exchange's trading day).

Retransmission requests may be honored between the Start of Official Transmissions control message and the End of Official Transmissions control message. Vendors should note, however, that

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Exchanges utilizing a "Set Sequence Number Message" (Control Message, Type K) to reset the Sequence Numbers (typically back to 1 to denote a new trading day, e.g., for the start of an electronic trading session) may not be able to retransmit the previous (trading) days messages once the "reset" message has been sent.

The Vendor Identification field in the message header associated with each message retransmitted will contain two (2) P/A Characters identifying the vendor requesting the retransmission.

Retransmitted messages are received by all vendors. If more than one (1) vendor requests retransmission of the same messages, or where the exchange believes that more than one (1) vendor may have missed the same messages, one (1) retransmission of the same messages will be addressed to "All Vendors" under Vendor ID "AV". Each vendor should process retransmissions addressed to Vendor ID "AV", whether or not such messages are requested by a particular vendor.

In synchronous protocols with multiple message blocking, there will be no mixing of retransmission messages with current messages in any multiple message block.

Messages retrieved for retransmission will be transmitted on a low priority basis so as not to interfere with or significantly delay transmission of current messages.

The Message sequence Number field in the Header associated with each message retransmitted will contain the Message Sequence Number of the message originally transmitted.

A Category Code (K) has been added to support the future use of an interactive facility for Vendors to request retransmissions. (Refer to Appendix 7.0, see separate Appendix Document, to determine if a particular exchange offers this capability.).

### 3.07 Maximum Length of Message

The number of characters in any single message, including control characters, will typically not exceed 200 characters. The transmission of Combination Contract with Legs messages (Product Classification Code "L") will generate variable length messages for which no maximum size has been defined.

### 3.08 SOH, STX and ETX Control Characters

The control characters SOH and STX will be used at the beginning and end of the Header for each message. The ETX control character will follow each message.

### 3.09 Vertical Parity

Even parity is specified for asynchronous protocols. Odd parity is specified for synchronous protocols. Vertical parity is mandatory.

### 3.10 Horizontal Parity

At the option of each exchange, one (1) or more horizontal parity characters may be used

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immediately following the ETX control character. The form of horizontal parity will be defined by each exchange in its appendix to this Specification covering transmission characteristics.

**4.00     Field Groups****4.01     Field Group Definition and Content**

Most messages are comprised of Field Groups defined in this chapter. Each Field Group contains one (1) or more fields defined below. To reduce repetition, Field Groups are descriptively titled and will be referred to hereafter by title alone. To further enhance readability, Groups with multiple fields are included within a "box".

**4.01.1 ITC Header**

<b>Title</b>	<b>Content</b>	<b>Length</b>
Header		
	SOH control character	1
	Exchange ID	2
	Vendor ID	2
	Product Classification Code	1
	Category Code	1
	Type Code	1
	Message Day Code	1
	Message Sequence Number	7
	Message Time Stamp	7
	Session ID	1
	STX Control Character	1
		25

## Chapter 4      Field Group Definition and Content

### 4.01.2 Product Classifications

One of the advantages of this specification is its ability to identify the type of product supported by the particular message type within a Field Group titled "Product Classification". For each of the currently defined Product Classification Codes (see Section 4.02.3), the appropriate Field Group is defined below.

#### 4.01.2.1 Futures ID (PCC Value of F)

Title	Content	Length
	Product Classification Type	1
Futures ID	Commodity Code	3
	Future Day Code	1
	Future Month Code	1
	Future Year Code	2
Futures	Last Trading Date Day Code	1
Information	Last Trading Date Month Code	1
	Last Trading Date Year Code	2
		12

## Chapter 4      Field Group Definition and Content

### Product Classifications (Continued)

#### 4.01.2.2 Options\_(PCC Value of "O")

Title	Content	Length
	Product Classification Type	1
Options Id	Instrument Code	3
	Option Day Code	1
	Option Month Code	1
	Option Year Code	2
	Put/Call Code	1
	Strike Price	7
	Strike Price Sign	1
	Expiration Indicator	1
	Underlying Future Commodity Code	3
	Underlying Future Day Code	1
	Underlying Future Month Code	1
	Underlying Future Year Code	2
Options Information	Last Trading Date Day Code	1
	Last Trading Date Month Code	1
	Last Trading Date Year Code	2
	Strike Price Fractional Indicator	2
	Strike Price Indicator	1
		32

Product Classifications (Continued)

4.01.2.3 Combinations (PCC Value of "C", "L")

Title	Content	Length
	Product Classification Type	1
Combination ID	Description	20
	Combination Type	2
	Number of Combination Legs	2
		25

4.01.2.4. Cash Instruments (PCC Value of "I")

Title	Content	Length
	Product Classification Type	<u>1</u>
Instrument ID	Description	18
	CUSIP #	12
	Yield	5
		<u>36</u>

4.01.2.4 Administrative (PCC of "A")

Administrative (PCC of "A")

See Section 5.03 for Message Structure Description.

## Chapter 4     Field Group Definition and Content

### 4.01.3 Additional Field Groups

Price ID

<u>Title</u>	<u>Content</u>	<u>Length</u>
Price ID		
	Price Fractional Indicator	2
	Price	7
	Price Sign	1
	BAT Code	1
	Price Indicator	1
		12

Combination Occurrences

<b>Title</b>	<b>Content</b>	<b>Length</b>
Combination Occurrences		
	Product Classification Code	1
	Product Classification (dependent on PCC)	
	Buy/Sell Indicator	1
	Price ID	12
	Size/Volume	5
		<b>Greater than 19</b>



## Chapter 4      Field Group Definition and Content

<u>Volume Traded</u>	Volume of contracts traded	5
<u>Volume Traded 7</u>	Volume of contracts traded	7
<u>Bid/Ask Size</u>	Number of contracts bid or asked	5
<u>Bid/Ask Size 7</u>	Number of contracts bid or asked	7
<u>Cumulative Volume</u>	Cumulative volume of contracts traded, or contracts cleared	7
<u>Open Interest</u>	Open Interest	7
<u>As-of Sequence Number</u>	As-of Sequence Number	7
<u>Indicators:</u>	Buy/Sell Indicator	1
	Exceptional Indicator	1
	Market Condition Indicator	1
	Market Direction Indicator	1
	Volume Indicator	1
	Open Interest Indicator	1
	Day Indicator	1
	Special Range Indicator	1
	Request Indicator	1
<u>Market Depth Totals</u>	Bid Price Total	1
	Ask Price Total	1
<u>Text</u>	Free text    80	
<u>ETX</u>	ETX control character	1

### 4.02 Message Header

The Message Header will consist of the following fields:

<u>Content</u>	<u>Length</u>
SOH control character	1
Exchange ID	2
Vendor ID	2
Product Classification Code	1
Category Code	1
Type Code	1
Message Day Code	1
Message Sequence Number	7
Message Time Stamp	7
Session ID	1
STX control character	<u>1</u>
	25

#### 4.02.1 Exchange ID

Two (2)C/A Characters will identify the exchange originating the message. The following Exchange ID codes have been specified:

<b>Code</b>	<b>Exchange</b>
A	American Commodities Corporation
B	Chicago Board of Trade
C	New York Board of Trade
CE	NYBOT ELECTRONIC
D	New York Futures Exchange
D	Sydney Daytime Dealing System
E	Commodities Exchange Inc(COMEX)-RTH Session
EE	COMEX ELECTRONIC
F	ENYMEX
G	Minneapolis Grain Exchange
H	Chicago Mercantile Exchange - GLOBEX Session
I	New York Mercantile Exchange ACCESS <sup>®</sup> System
IE	NYMEX ELECTRONIC
J	Commodities Exchange Inc(COMEX)-ACCESS Session
K	Kansas City Board of Trade
KD	Kansas City Board of Trade - Electronic Trading Market Depth
KU	Kansas City Board of Trade - Electronic Trading
L	New York Board of Trade Commodity Index Ticker
M	Chicago Mercantile Exchange - RTH Session
N	New York Mercantile Exchange - RTH Session
NE	NYMEX Europe Electronic
NL	NYMEX Europe RTH

Code	Exchange
OD	Minneapolis Grain Exchange - Electronic Trading Market Depth
OU	Minneapolis Grain Exchange - Electronic Trading
P	Philadelphia Board of Trade - Price Data
Q	The Montreal Exchange
R	Nymex Access™ ( RTH)
S	Sydney Futures Exchange Limited
T	Toronto Stock Exchange
U	E-CBOT®
UD	e-CBOT® Market Depth
V	NYBOT/Cantor Fitzgerald
W	Winnipeg Commodity Exchange
WD	Winnipeg Commodity Exchange - Electronic Trading Market Depth
Y	Sydney Computerised Overnight Market (SYCOM)
Z	New Zealand Futures and Options Exchange

Exchanges may opt to select more than one (1) Exchange ID to denote transmissions for different trading sessions or venues

#### 4.02.2 Vendor ID

Two (2) P/A Characters will identify the vendor to which a retransmission or Refresh message is addressed. Vendor ID codes are specified in Appendix 4.02.2(see separate Appendix Document).

#### 4.02.3 Product Classification Code ("PCC")

The Product Classification Code refers to the type of product being transmitted in this message, such as; a futures contract, options contract, a combination contract, or a cash instrument.

Each product classification code will reflect the structure and size of the message. The following tables reflect the message sizes as defined by the category code and product classification code. Combinations with legs are variable dependent on the number legs. Sizes per leg are reflected in the second table.

<u>Product Code</u>	<u>Code</u>
Administrative (such as Text or Control Messages)	A
Futures Contract (Also supports Futures Index)	F
Combination Contract - no legs	C
Cash Instrument	I
Combination Contract with legs	L
Options Contract	O

## Chapter 4 Field Group Definition and Content

TABLE I	PRODUCT CLASSIFICATION CODES				
CATEGORY CODES	F	O	C	L	I
A - BID, ASK, TRADE (NO VOLUME)	50	70	63	*	74
B - BID & ASK	72	92	85	*	96
b - BID & ASK (Expanded)	76	96	89	*	100
C - CONTROL - Length = 72	N/A	N/A	N/A	N/A	N/A
D - MARKET DEPTH	40 plus Variable Portion	N/A	N/A	N/A	N/A
d - MARKET DEPTH (Expanded)	42 plus Variable Portion	N/A	N/A	N/A	N/A
E - EXCEPTIONAL	57	77	70	*	81
F - MARKET COND.	39	59	52	N/A	63
G - REQUEST FOR QUOTE	45	65	58	*	69
H - HIGH, LOW, LAST	74	94	87	*	98
I - VOL. & O.I.	55	75	68	N/A	79
J - SUMMARY	147	167	160	*	171
M - BID, ASK, MRKT (W/VOLUME)	90	110	103	*	114
N - BID, ASK, MRKT (NO VOLUME)	80	100	93	*	104
O - MARKET UPDATE	98	118	111	*	114
o - MARKET UPDATE (Expanded)	104	124	117	*	114
Q - SETTLEMENT & LIMITS	75	95	88	*	99
R - REFRESH	99	119	112	*	123
T - BID, ASK, TRADE (W/VOLUME)	56	76	69	*	80
U - RANGE QUOTATIONS	70	90	83	*	94
V - CUMULATIVE VOLUME	46	66	59	N/A	70
X - TEXT Length = 106	N/A	N/A	N/A	N/A	N/A
Y - CASH PRICES	50	70	63	N/A	74
Z - CONTRACT SPECS					
-					
Type C	88	108	101	*	112
Type D	91	111	104	*	115
Type O	N/A	84	N/A	N/A	N/A
Type S	50	70	63	*	74

## Chapter 4      Field Group Definition and Content

The format of any message with a product classification code of "L" is as follows:

- Header
- Combinations Field Group
- Standard message (based on Type Code)
- Occurrences of legs

Each occurrence of a combination leg contains:

- Product Classification Code (can't be a combination)
- Product Classification
- Buy / Sell Indicator
- Price ID
- Size/Volume

As always, refer to Appendix 7.0 (see separate Appendix Document) for information as to how a specific exchange updates the various fields in the Combination Legs.

The size of each leg, dependent upon the PCC, is reflected below:

*	<u>TABLE II</u>		
	PCC = F	PCC = O	PCC = I
	SIZE = 31	SIZE = 51	SIZE = 55

## Chapter 4 Field Group Definition and Content

### 4.02.4 Category Code

The Message Category Code will identify the following fundamental message formats and contents.

<u>Code</u>	<u>Message</u>	<u>Section</u>
A	Trade/Bid/Ask- No Volume	5.01
B	Bid & Ask	5.02.1
b	Bid & Ask (Expanded)	5.02.2
C	Control	5.03
D	Market Depth	5.04.1
d	Market Depth (Expanded)	5.04.2
E	Exceptional Quotation	5.05
F	Fast Market	5.06
G	Request For Quote	5.07
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M	Bid and Ask Market	5.13
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O	Market Update	5.15.1
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Q	Settlement Price & Limits	5.17
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U	Range Quotations	5.21
V	Cumulative Volume	5.22
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### 4.02.5 Type Code

Type codes are generally used for insert, delete, and revise capabilities. Type Code "I" = insert, Type Code "D" = delete, Type Code "R" = Revise. An as-of-sequence number is specified before the ETX whenever an insert, revise, or delete message is transmitted. Type Code of Blank indicates a regular message transmitted.

### 4.02.6 Message Day Code

The defined trading day to which the information applies is defined by the following codes:

<u>Code</u>	<u>Day</u>
1 - 9	1 - 9
0	10
A - U	11-31

Note: In cases where the Exchange's defined trading day begins with an afternoon or evening trading session, the Message Day Code will not match the calendar date of the transmission until after midnight.

### 4.02.7 Message Sequence Number

Every message will contain a seven (7) digit numeric Message Sequence Number.

The Message Sequence Number counter will be reset to zero (0) by the generation of the Start of Communications Testing control message. All transmissions (except simulated data from Start of Simulated Data through End of Simulated Data, inclusive) between the Start of Communication Testing control message until the Start of Official Transmissions control message will have a Message Sequence Number of zero (0). The Message Sequence Number will be set to one (1) when the Start of Official Transmissions control message is sent. The Message Sequence Number will be incremented by one (1) as each succeeding message, not a retransmission of a preceding message, a Refresh Message, or a Line Integrity Verification control message is sent.

Note that the set Message Sequence Number control message must increment the Message Sequence Number by at least one (1), but may increment such number by more than one (1). When a message is retransmitted, the Message Sequence Number is not advanced; the Message Sequence Number entered in the message is the same as that which was entered in the original message. When a Line Integrity Verification control message or a Refresh message is sent, the Message Sequence Number is not advanced; the Message Sequence Number of the preceding message is sent.

### 4.02.8 Message Time Stamp

Each message will always contain the exchange time stamp of the event that created the message. Current messages, (i.e., messages which are sent in a timely and sequential manner) will carry the exchange system time at which they were entered. Insert and Delete messages, sent either out of sequence, or in an untimely manner in sequence, will carry the exchange system time as of the time of the original transaction. Time will be represented as HHMMSS.T for the time zone in which the exchange is located. (The "T" represents tenths of a second)

### 4.02.9 Session ID

Each exchange may decide to define various trading sessions to constitute a trading day. The session ID used in a message represents the session to which the data pertains, not necessarily the current session. See Appendix 4.02.9 (see separate Appendix Document).

### 4.03 Product Classification

#### 4.03.1 Futures / Commodity / Instrument Code

The Futures / Commodity Code/Instrument Code is a three (3) C/A Character field containing the Future/Commodity/Instrument Code selected by the exchange for the particular commodity or instrument. No Future/Commodity Code/Instrument Code will have a leading space character (in order to avoid confusion with a Future/Commodity/Instrument Code with a trailing space).

A listing of Future/Commodity/Instrument Codes selected by exchanges is available as a separate document titled "ITC Symbol Reference Guide". Duplications of official exchange Future/Commodity/Instrument Codes by more than one exchange is contemplated by this Specification; however, no duplication of Future/Commodity/Instrument Codes by one exchange (defined by the Exchange ID code) is permitted by this Specification.

An options contract may be identified by an Instrument Code other than that of the underlying futures contract. Alternatively, the Commodity Code of the underlying futures contract may be used for an option contract.

#### 4.03.2 Product Classification Type (PCT)

As a further definition of the type of future or option, the Product Classification Type represents a special type of futures or options contract. Listed below are the type codes with associated definition.

<u>Type Code</u>	<u>Definition</u>
Space	No Further Definition included (See PCC for Product Definition)
D	Delta options
F	Flexible options
I	Index Values
S	Short-dated options
V	Volatility Options

#### 4.03.3 Futures / Options Last Trading Date Day Code

The last day on which a commodity will be traded is defined by the following codes:

<u>Code</u>	<u>Day</u>
Space	Not Applicable
1 - 9	1 - 9
0	10
A - U	11-31



#### 4.03.4 Futures / Options - Last Trading Date Month Code

The month in which a commodity will expire is defined by the following codes:

<u>Month</u>	<u>Code</u>
January	F
February	G
March	H
April	J
May	K
June	M
July	N
August	Q
September	U
October	V
November	X
December	Z
Spot Expiration / Index Information	Y

#### 4.03.5 Futures / Options Last Trading Date Year Code

The last two digits of the year in which the commodity/instrument is to expire is used as the Year Code. For transmissions related to Spot Expiration / Index Information ('Y' Month Code), Maturity (Expiration) Year Code is Blank.

### 4.04 Option ID

#### 4.04.1 Put/Call Code

Puts and calls will be identified by the following codes:

<u>Contract</u>	<u>Code</u>
Put	P
Call	C

#### 4.04.2 Strike Price Fractional Indicator Code

All fractions are expressed as fractions or in decimals as is customary for the particular commodity.

The Strike Price Fractional Indicator Code will be two (2) P/A See Section

## Chapter 4 Field Group Definition and Content

### 4.04.3 Strike Price

The Strike Price field will be a seven (7) character numeric field. The delineation of the whole number portion of the price and the decimal / fractional portion of the price will be defined by the Strike Price Fractional Indicator Code (e.g., a price of 123 4/8th cents will be displayed as 0001234).

### 4.04.4 Strike Price Sign

This is a one character code which represents a "+" for a positive number (including Zero where appropriate) and "-" for negative number.

### 4.04.5 Expiration Indicator

This is a one character P/A code identifying the style of Expiration for the Option.

<u>Code</u>	<u>Definition</u>
A	American Style
E	European Style

### 4.04.6 Strike Price Indicator

This is a one character P/A code which identifies the manner in which the Strike Prices are coded.

<u>Code</u>	<u>Definition</u>
Space	Normal
D	Differential
P	Percentage

## 4.05 Combination ID

### 4.05.1 Description

The description field will be a twenty (20) character alpha/numeric field which will be used to define the type of combination being traded.

### 4.05.2 Combination Type

The combination type field will be a two (2) character alphanumeric field which represents the type of combination traded. See appendix 4.05.2 for these codes (see separate Appendix Document).

## Chapter 4 Field Group Definition and Content

### 4.06 Cash Instrument

#### 4.06.1 Description

The Description field includes an alphanumeric field that is used to identify, in a standard industry-common format, the specific Cash Instrument being traded. Additional information will be provided as it becomes available.

#### 4.06.2 CUSIP #

CUSIP Number is comprised of 12 characters (9 characters is standard CUSIP length, and 3 additional characters are added for future expansion). The base number of 6 digits is known as the Issuer Number, the 6th digit of which may be alpha or numeric, and a 2 character suffix (either numeric, alphabetic, or both) known as the Issue Number. The 9th character is a check digit. Additional information on the CUSIP Numbering System is available under separate copy.

#### 4.06.3 Yield

Yield is a 5 digit field containing Cash Instrument yield in 99.999 format (decimal is implied). The Yield is calculated from the Dollar Price via the Securities Industry Association (SIA).

### 4.07 Price ID

#### 4.07.1 Price Fractional Indicator Code

Fraction	Code (Left aligned)	Explanations as needed, where W = Whole Number.
1/1	0	
1/10	1	
1/100	2	
1/1000	3	
1/10000	4	
1/100000	5	
1/1000000	6	
1/10000000	7	
1/100,000,000	8	
1/1,000,000,000	9	
1/2	H	WWWWWWF where F = 0 or 1
1/4	Q	WWWWWWF where F = 0 - 3
1/8	E	WWWWWWF where F = 0 - 7
1/16	S	WWWWWWFF where FF = 00 - 15
1/32	T	WWWWWWFF where FF = 00 - 31
1/64	X	WWWWWWFF where FF = 00 - 63

## Chapter 4 Field Group Definition and Content

Fraction	Code (Left aligned)	Explanations as needed, where W = Whole Number.
1/128	O	WWWFFFF where FFF = 000 - 127
Half 64ths	Y	WWWFFFH where FF = 00 - 63, H = 0 or 5
1/256	F	WWWFFFF where FFF = 000 - 255
Half 32nds	U	WWWFFFH where FF = 00 - 31, H = 0 or 5
Quarter 32nds	V	WWWFFFH where FF = 00 - 31, H = 0,2,5, or 7
2 1/2 point increments (.00025) Effective Fractional Indicator of 4	R	WWWWWWF F = 0, price is WWWW.WWF0 F = 2, price is WWWW.WWF5 F = 5, price is WWWW.WWF0 F = 7, price is WWWW.WWF5
1/8 Point Increments (.00125), Effective Fractional Indicator of 5	C	WWWWWWF F = 0, price is WWWW.WW000 F = 1, price is WWWW.WW125 F = 2, price is WWWW.WW250 F = 3, price is WWWW.WW375 F = 4, price is WWWW.WW500 F = 5, price is WWWW.WW625 F = 6, price is WWWW.WW750 F = 7, price is WWWW.WW875
1/4 Point Increments, Effective Fractional Indicator of 6	W	WWWWWWF F = 0, price is WW.WWWWF0 F = 2, price is WW.WWWWF5 F = 5, price is WW.WWWWF0 F = 7, price is WW.WWWWF5
1/4 Point Increments, Effective Fractional Indicator of 4	J	WWWWWWF F = 0, price is WWWW.WWF0 F = 2, price is WWWW.WWF5 F = 5, price is WWWW.WWF0 F = 7, price is WWWW.WWF5
1/4 Point Increments, Effective Fractional Indicator of 3	K	WWWWWWF F = 0, price is WWWWW.WF0 F = 2, price is WWWWW.WF5 F = 5, price is WWWWW.WF0 F = 7, price is WWWWW.WF5
1/4 Point Increments, Effective Fractional Indicator of 2	L	WWWWWWF F = 0, price is WWWWWW.F0 F = 2, price is WWWWWW.F5 F = 5, price is WWWWWW.F0 F = 7, price is WWWWWW.F5
Decimalized 32nds	Z	WWWWWHH where HH = 00,25,50,or 75
Extended Decimal 32nds, 4 Decimal positions	T4	WWWFFFF where F = 0 - 9
Reserved	M	Reserved

#### 4.07.2 Price

The Price field will be a seven (7) character numeric field. The delineation of the whole number portion of the price, and the decimal/fractional portion of the price, will be defined by the Price Fractional Indicator Code (e.g., a price of 123 4/8th cents will be displayed as 0001234).

No truncation of price data is permitted by this Specification except for high order zeros for commodities which trade in fractions of 1/10,000,000 or smaller. Therefore, commodities such as livestock which are customarily traded in increments of 2 1/2 per hundredweight with the 1/2 being implicit, will be quoted in increments of .025 with the .005 always explicit.

This Specification contemplates the quotation without truncation of commodities which trade in increments as small as 1/1,000,000 such as Japanese Yen where one (1) yen is worth approximately U.S. \$0.004288. Any commodity traded in smaller increments will have truncated leading zeros, such as Italian lire where one (1) lire is worth approximately U.S. \$0.0008285. Italian lire, traded in four (4) non-zero digits will be quoted with the first leading zero (0) truncated. Such truncation would be implicit from the Price Fractional Indicator Code, which, in the case of a price with seven (7) digits to the right of the decimal place, is defined as seven (7).

#### 4.07.3 Price Sign

This is a one character code which represents a "+" for a positive number (or Zero) and "-" for negative number. A blank will be used when the Price itself is blank.

**4.07.4 BAT Code**

Associated with any price field will be a BAT code to designate the price as a Bid, Ask, or Trade, as defined below. It is the policy of some exchanges to include bids and asks in the official high and low price range of the day or among the "last price changes" during the day. Other exchanges exclude such quotations from the official high and low range of the day or, from among the "last price changes" during the day. Exchanges will express their policies in this regard in the appropriate Exchange section of Appendix 7.00(see separate Appendix Document).

<b><u>Code</u></b>	<b><u>Indication</u></b>
B	Bid
A	Ask
T	Trade
Space	Other types of prices (e.g., Settlements, Index Levels, etc).

**4.07.5 Price Indicator**

Price indicators are used to specify unusual pricing conventions. Current definitions include:

<b><u>Code</u></b>	<b><u>Indication</u></b>
Space	Normal
B	Blank out the associated price
C	Cabinet
D	Differential
E	Exchange for Physical
F	Fast
G	Exchange for Physical / Cross Trade
H	Hit
I	Implied
J	Large Order
K	Small Order
L	Late (Time may not be exact)
M	Match/Cross Trade
N	Nominal / Notional
O	Option Exercise
P	Percentage
Q	Auto Quotes
R	Indicative
S	Exchange for Swaps
T	Take
U	Exchange for Options
V	Nominal Cabinet
X	Changing Transaction

## **Chapter 4      Field Group Definition and Content**

### **4.08 Number of Combination Legs**

This field indicates the number of legs associated with a combination message. This field will only be used when the Product Classification Code is an "L" (combination with legs). The specific size of each leg is dependent on the PCC specified under each leg. See Table II under Product Classification Codes, 4.02.3, for specific message sizes.

### **4.09 Volume Traded**

The volume of contracts (reported or estimated) which were traded with respect to a particular transaction may be indicated in a five (5) digit numeric field. If volume is not provided this field will be space filled. Associated with many Volume Traded fields will be an indicator to designate the volume reported as either estimated or actual volume.

#### **4.09a Volume Traded 7**

The volume of contracts (reported or estimated) which were traded with respect to a particular transaction may be indicated in a seven (7) digit numeric field. If volume is not provided this field will be space filled. Associated with many Volume Traded fields will be an indicator to designate the volume reported as either estimated or actual volume.

### **4.10 Bid/Ask Size**

The number of contracts bid, or the number of contracts asked, with respect to a given bid or ask may be indicated in a five (5) digit numeric field. If size is not provided, this field will be space filled.

#### **4.10a Bid/Ask Size 7**

The number of contracts bid, or the number of contracts asked, with respect to a given bid or ask may be indicated in a seven (7) digit numeric field. If size is not provided, this field will be space filled.

### **4.11 Cumulative Volume**

The Cumulative Volume traded during the day or volume cleared or the previous day may be indicated in a seven (7) digit numeric field. Associated with many Cumulative Volume fields will be an indicator to designate the volume reported as either estimated or actual volume. If Cumulative Volume is not provided this field will be space filled.

### **4.12 Open Interest**

The number of contracts, which were open as of the close of business on the previous day, may be indicated in a seven (7) digit numeric field. If open interest is not provided, this field will be space filled.

## Chapter 4 Field Group Definition and Content

### 4.13 As-of Sequence Number

For an Insert or Delete message reference will be made to the As-of Sequence Number to indicate the sequence as of when the transaction occurred.

The message Type Code "I" will indicate that the message is to be inserted; the As-of Sequence Number will indicate the Message Sequence Number immediately preceding the message to be inserted. The As-of Message Sequence Number may be filled with the Message Sequence Number of the immediately preceding message for the same contract, or for any message of any Category or Type. For example, if a May wheat contract message sent at 08:08:08.5 AM with a Message Sequence Number of 080008 is followed by a Text message at 08:08:09.1 with a Message Sequence Number of 080009, a May wheat transaction which occurred at 08:08:10.2 AM may be inserted with an As-of Sequence Number of either 080008 or 080009, at the option of the exchange. If more than one (1) message is inserted with the same As-of Sequence Number reference, the sequence of the inserted messages will be indicated by their respective time stamps. However, for vendors who do not store (and therefore cannot compare) time stamps, it is recommended that the messages be deemed to be inserted in the sequence transmitted by the exchange.

The Message Type Code "D" will indicate that the message is to be deleted; the As-of Sequence Number will indicate the Message Sequence Number of the original message to be deleted.

The As-of Sequence Number will be a seven (7) digit numeric field.

### 4.14 Indicators

Indicators can be used for various purposes depending on the type of message. If there is an indicator designated for a message, it will be described in the field group definition of each message in Chapter 5. Following is a list of each type of indicator, its possible values along with its associated definition.

#### Buy / Sell Indicator:

<u>Code</u>	<u>Definition</u>
Space	Not Specified
B	Buy
S	Sell

#### Exceptional Indicator:

<u>Code</u>	<u>Definition</u>
A	Asset Allocation
B	Wholesale (Block) Trading
E	Exchange for Physical
F	Average price for five minute session
G	Against Actual
H	Match/Cross Trade
O	Average price for one minute session



**Chapter 4      Field Group Definition and Content**

P	Exchange for Physical
R	Exchange for Risk
S	Basis
U	Exchange for Option
W	Exchange for Swaps

**Market Condition Indicator:**

<u>Code</u>	<u>Definition</u>
A	Halt Trading
B	Resume Trading
E	End Fast Market
F	Start Fast Market
L	Start Late Market (Time may not be exact)
M	End Late Market
P	Start Post Suspension/Close/Settle Session
Q	End Post Suspension/Close/Settle Session

**Market Direction Indicator:**

<u>Code</u>	<u>Definition</u>
+	Up
-	Down
S	Stable
Space	Market direction not indicated by Exchange

**Day Indicator:**

See Last Trading Date Day Code (Section 4.03.3)

**Volume Indicator:**

<u>Code</u>	<u>Definition</u>
Space	Volume Field Not Updated
A	Actual
E	Estimated

**Open Interest Indicator:**

<u>Code</u>	<u>Definition</u>
Space	Open Interest Field Not Updated
A	Actual
E	Estimated

**Request Indicator:**

## Chapter 4 Field Group Definition and Content

<u>Code</u>	<u>Definition</u>
D	End Request for Quote
R	Start Request for Quote

### Range Indicator:

<u>Code</u>	<u>Definition</u>
B	Indicative Bid/Ask with Delta
C	Close
D	Day Open
I	Indicative Open
O	Open
P	Post Close / Suspension
R	Resumption of Trading
S	Suspension of Trading

#### Indicative Bid/Ask with Delta

- Refers to a quotation based upon the theoretical value of an Option. Refer to Appendix 7.0 (see separate Document) for information as to how a particular exchange may utilize this capability.

#### Indicative Opening

- Refers to a quotation, sent at periodic intervals, used to provide indications of where the market will open. Typically used by electronic trading systems.

#### Day Opening

- Refers to a quotation used to represent market activity occurring in the open outcry session prior to the electronic session. Typically used by electronic trading systems.

#### Suspension of Trading

- Refers to a quotation used to report market activity at the end of trading of a session (similar to closing range)
- May contain a single price or range
- May contain any of the BAT codes currently available

#### Resumption of Trading

- Refers to a quotation used to report market activity at the beginning of a session immediately following another session which is also part of the defined trading day (similar to an opening range)
- May contain a single price or range
- May contain any of the BAT codes currently available

#### Post Close / Suspension

- Refers to a quotation used to report market activity during a period of trading occurring after the close (or Suspension) of a particular contract.

## **Chapter 4      Field Group Definition and Content**

Open

- Refers to the first trade or trading activity for each product

Close

- Refers to the last trade or trading activity for each product

### **4.15 Text**

Text messages will be 80 P/A Characters.

### **4.16 ETX Control Character**

Each message will end with an ETX control character.

## Chapter 5 Message Definitions

### 5.00 Message Definitions

#### 5.01 Category Code A - Bid/Ask/Trade - No Volume

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Bid, Ask, or Trade Price
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

This message is an abbreviated form of message Category Code T Bid/Ask/Trade - General Form. Since many such messages are transmitted for products without volume, this abbreviated form of message has been provided without Volume Traded and Volume Indicator Field Groups.

#### 5.02 Bid & Ask Message

The Bid or Ask size fields may be filled at the option of the exchange; if size is not provided these fields will be space filled. Both the bid price and the ask price will be provided in each message; if either or both fields are ASCII space filled, the respective fields of the vendor's display should be blanked. An Exchange's use of the "B" value in the Price Indicator field within the Price ID will further distinguish the need to blank the relevant price display.

Two Bid & Ask messages have been defined, with the only difference being the SIZE field lengths.

##### 5.02.1 Category Code B - Bid & Ask

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Bid Price
Bid/Ask Size	Bid Size
Price ID	Ask Price

## Chapter 5 Message Definitions

Bid/Ask Size	Ask Size
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

### 5.02.2 Category Code b - Bid & Ask (Expanded Size)

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Bid Price
Bid/Ask Size 7	Bid Size
Price ID	Ask Price
Bid/Ask Size 7	Ask Size
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

### 5.03 Category Code C - Control Messages

Control messages are provided to update vendors' systems with notification of significant exchange system status changes and to test system integrity.

Control messages will consist of a standard Header including a Category Code and a Type Code, which explicitly identifies the system control message. The text of a control message will consist of 46 P/A Characters, plus a 47th ETX control character, and will contain a specified message structure which is subject to processing by vendors' systems.

<u>Field Group</u>	<u>Fill</u>
Header	Header

Control Message	46 Bytes
ETX	ETX

Valid message Type Codes are as follows:

### **5.03.1    Type Code A - Start of Simulated Data**

Simulated data streams are to be used primarily to test software modifications. Simulated data will be representative of genuine data; therefore; vendors must provide adequate controls to insure that their data base is not updated by simulated data.

The Start of Simulated Data message will be transmitted at least three times prior to the transmission of simulated data. The first transmission will be made in lieu of the Official Transmission message; therefore, the first Start of Simulated Data message will have a Message Sequence Number of one (1). All subsequent Start of Simulated Data messages will also be sent with Message Sequence Numbers of one (1), and the Vendor ID field will be filled with "AV" in accordance with the retransmission protocol. Alternatively, the Vendor ID field may be filled with "TV" or a specific Vendor's ID if all simulated data to be transmitted is to be addressed to the respective Vendor ID.

In lieu of the Line Integrity Verification control message a Simulated Data Warning control message will be sent each minute with simulated data. Therefore, vendors who program to recognize the Simulated Data Warning control message should process no more than one or two (2) minutes of simulated data even if the Start of Simulated Data messages are missed.

never possible, testing will be conducted off-line (with the ticker line disconnected), with dummy Commodity Codes, or with retransmissions addressed to a particular vendor or to "Test Vendor" (Vendor ID, TV). However, these precautions are subject to human failure and may not be practical in all circumstances. Therefore, vendors are expected to program to recognize the Start of Simulated Data and Simulated Data Warning control messages.

### **5.03.2    Type Code B - End of Simulated Data**

Each cycle of simulated data will be followed by the End of Simulated Data message. The End of Simulated Data message will be transmitted at least three (3) times after each cycle of simulated data. The first transmission will be made in lieu of the End of Official Transmissions message. All subsequent End of Simulated Data messages will be sent with the same Message Sequence Number as was sent with the first such message, and the Vendor ID field will

## Chapter 5      Message Definitions

be filled with "AV" in accordance with the retransmission protocol.  
Alternatively, the Vendor ID field may be filled with "TV" or a specific Vendor's ID if all simulated data was addressed to the respective Vendor ID.

Vendors must provide adequate controls to insure that the End of Simulated Data message is registered in their systems to insure that genuine data transmitted thereafter is properly updated in their database.

Any of the following should indicate an error condition while vendor's system is in "Simulated Data" mode:

1.            Receipt of the Line Integrity Verification control message.
2.            Reversion of the Message Sequence Number to one (1).
3.            Passing of the time by which the first market is open on the exchange.

Recovery from any such error will be facilitated by retransmission of the valid messages missed, provided that the error is detected promptly.

### 5.03.3    Type C - Start of Communications Testing

The Start of Communications Testing message indicates that the exchange system has been turned on and that communications testing will be initiated promptly. The Start of Communications Testing message does not imply that the exchange will open.

The Start of Communications Testing control message will reset the Message Sequence Number to zero (0).

Only the Line Integrity Verification control message (Type T), the Character Test Pattern control messages (Type N and Type O), Start of Simulated Data (Type A), simulated data, Simulated Data Warning (Type S) and End of Simulated Data (Type B) will be sent between the Start of Communications Testing Message and the Start of Official Transmissions message.

All messages sent after Start of Communications Testing and before Start of Official Transmissions (except simulated data) will contain a Message Sequence Number of zero (0).

No message between the Start of Communications Testing and Start of Official Transmissions messages will be logged or available for retransmission.

In normal processing, the Start of Communications Testing message will be sent

at least 30 minutes prior to the opening of the first contract.

#### **5.03.4    Type Code D - Start Of Official Transmissions**

The Start of Official Transmissions control message indicates that the messages to follow will contain official exchange information including text messages and trading data.

In normal processing, the Start of Official Transmissions message will be sent not sooner than 60 minutes, nor later than five (5) minutes, prior to the opening of the first contract.

The Message Sequence Number for Start of Official Transmissions will always be one (1).

#### **5.03.5    Type Code E - Market Opening Imminent**

Two (2) minutes before, or later than one (1) minute before, the opening of the first market of the day, the Market Opening Imminent message will be sent.

#### **5.03.6    Reserved**

#### **5.03.7    Reserved**

#### **5.03.8    Type Code H - End of Transaction Reporting**

End of Transaction Reporting indicates that the exchange has terminated all normal transmissions and all Inserts and Deletes.

#### **5.03.9    Type Code I - End of Official Transmissions**

End of Official Transmissions message is transmitted to indicate that the exchange has terminated all official transmissions for the day. After the End of Official Transmissions message has been transmitted, no further messages will be transmitted except for Type T - Line Integrity Verification, Type A - Start of Simulated Data, simulated data, Type S - Simulated Data Warning, Type B - End of Simulated Data, and the Character Test Pattern control messages Types N and O.

#### **5.03.10    Type Code J - End of Communications Testing**

The End of Communications Testing message will be transmitted to indicate that the system has terminated all transmissions, including Type T - Line Integrity Verification. (A failure to receive a Line Integrity Verification



## **Chapter 5      Message Definitions**

Message for more than one (1) minute, without having received an End of Communications Testing Message implies an exchange system or line failure.)

### **5.03.11 Type Code K - Set Sequence Number**

The Set Sequence Number message will be transmitted to advise vendors that the Message Sequence Number is to be reset to the value registered in the Message Sequence Number in the Header Field Group of the message.

This message is often used by exchanges that support afternoon or evening trading sessions (electronic or open outcry) that begin a new trading day. It may often be used to reset the sequence number to 1 once all end-of-day processing and transmissions for the final open outcry session are completed.

### **5.03.12 Reserved**

### **5.03.13 Reserved**

### **5.03.14 Type Code N - Character Test Pattern - Part I**

Two (2) Character Test Pattern control messages have been defined to verify the integrity of the exchange and vendors' systems. In addition, the principal characters utilized in the system specification are also identified. The set of P/A Characters specified in this document is broken down into the two (2) message Types N and O which will be sent serially in a testing sequence.

### **5.03.15 Type Code O - Character Test Pattern - Part II**

**See Type N.**

### **5.03.16 Reserved**

### **5.03.17 Reserved**

### **5.03.18 Reserved**

### **5.03.19 Type Code S - Simulated Data Warning**

The Simulated Data Warning control message will be sent with simulated data in lieu of the Line Integrity Verification Control message; that is, generation of the Start of Simulated Data by the exchange system should toggle on the routine (each minute) generation of Simulated Data Warning messages, and toggle off the generation of Line Integrity Verification message, Generation of the End of Simulated Data Message by the exchange should toggle off the

generation of Simulated Data Warning messages, and toggle on the generation of Line Integrity Verification messages. "Start" and "End" of Simulated Data messages should set vendors' systems in "Simulated Data" and "Normal Data" modes respectively. Receipt of the Simulated Data Warning Message while a vendor's system is in "Normal Data" mode, or receipt of the Line Integrity Verification message while a vendor's system is in "Simulated Data" mode, implies an error condition.

Other than the Type Code and text, the Simulated Data Warning message will be used in the context of simulated data in a manner analogous to that of the Line Integrity Verification message.

### **5.03.20 Type Code T - Line Integrity Verification**

The Line Integrity Verification message will be transmitted each minute to verify continued integrity of the communications line. The Line Integrity Verification message will not interrupt a transmission in progress but may be transmitted whether or not additional messages are queued for transmission.

### **5.03.21 Reserved**

### **5.03.22 Reserved**

### **5.03.23 Reserved**

### **5.03.24 Reserved**

### **5.03.25 Reserved**

### **5.03.26 Reserved**

### **5.03.27 Formats of Control Messages**

## Chapter 5 Message Definitions

Control messages will be formatted as follows:

```
0000000001111111112222222222333333333344444444
1234567890123456789012345678901234567890123456
```

### Type Code

A	START OF SIMULATED DATA
B	END OF SIMULATED DATA
C	START OF COMMUNICATIONS TESTING MMDDYY HHMMSS
D	START OF OFFICIAL TRANSMISSIONS MMDDYY HHMMSS
E	MARKET OPENING IMMINENT MMDDYY HHMMSS
H	END OF TRANSACTION REPORTING MMDDYY HHMMSS
I	END OF OFFICIAL TRANSMISSIONS MMDDYY HHMMSS
J	END OF COMMUNICATIONS TESTING MMDDYY HHMMSS
K	SET SEQUENCE NUMBER
N	!"#\$%&'()*+,-./0123456789:;=?@
O	ABCDEFGHIJKLMNOPQRSTUVWXYZ0123456789/
S	SIMULATED DATA WARNING MMDDYY HHMMSS
T	LINE INTEGRITY VERIFICATION MMDDYY HHMMSS

### 5.04 Market Depth

Two Market Depth messages have been defined, with the only difference being the SIZE field length.

#### 5.04.1 Category Code D - Market Depth

The Market Depth (Category Code D) message structure is as follows:

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Bid Price Total	Number of Bid Prices in the "book". Values from '0' to '9' acceptable. The Value of "A" represents a depth of 10.
Ask Price Total	Number of Bid Prices in the "book". Values from '0' to '9' acceptable. The Value of "A" represents a depth of 10.
	<b>Fields Groupings Below (Bid/Ask Price Number, Price ID, Bid/Ask Size) can occur up to Bid Price Total + Ask Price Total</b>

	<b>times, depending upon the specific book update</b>
Bid/Ask Price Number	Identifies which Bid (or Ask) price in the book is being updated.
Price ID	Fractional Indicator, Price ID for respective Bid (or Ask). The BAT Code within Price ID used to determine if BID or ASK Side of 'Book'
Bid/Ask Size	Bid/Ask Size for respective Bid (or Ask) Price
ETX	ETX

#### 5.04.2    Category Code d – Market Depth (Expanded)

The Market Depth (Category Code d) message structure is as follows:

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Bid Price Total	Number of Bid Prices in the "book". Values from '0' to '9' acceptable. The Value of "A" represents a depth of 10.
Ask Price Total	Number of Bid Prices in the "book". Values from '0' to '9' acceptable. The Value of "A" represents a depth of 10.
	<b>Fields Groupings Below (Bid/Ask Price Number, Price ID, Bid/Ask Size) can occur up to <u>Bid Price Total + Ask Price Total</u> times, depending upon the specific book update</b>
Bid/Ask Price Number	Identifies which Bid (or Ask) price in the book is being updated.
Price ID	Fractional Indicator, Price ID for respective Bid (or Ask). The BAT Code within Price ID used to determine if BID or ASK Side of 'Book'
Bid/Ask Size 7	Bid/Ask Size for respective Bid (or Ask) Price
ETX	ETX

Refer to Appendix 7.0 for a more detailed description of how a respective exchange might utilize this message.

## 5.05     Category Code E - Exceptional Quotation

<b>Field Group</b>	<b>Fill</b>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Bid, Ask or Trade Price
Volume Traded	Volume Traded
Volume Indicator	Volume Indicator
Exceptional Indicator	Exceptional Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

The Exceptional Quotation message will be used to report unusual quotes which an exchange may wish to distinguish from other categories of messages. The nature of the quote will be indicated in the Exceptional Indicator.

Each exchange may specify special processing for its Exceptional Quotations. For example, one (1) exchange may specify that Exchanges For Physicals are to be included in volume but not in the day's high/low range; another exchange may specify that its Exchanges For Physicals are to be excluded from volume but included in the day's high/low range. A given Exceptional Indicator may have different meanings and special processing rules from one exchange to another, as indicated by the Exchange ID, but will have a unique meaning and special processing rules whenever used by a particular exchange. Particular exchange specifications for special processing of Exceptional Quotations are included in Appendix 5.05(see separate Appendix Document).

## 5.06     Category Code F - Market Condition

<b>Field Group</b>	<b>Fill</b>
Header	Header
Product Classification	Dependent upon PCC field value
Market Condition Indicator	Market Condition Indicator
(Combination Occurrences)	When PCC = L

ETX	ETX
-----	-----

### 5.07      Category Code G - Request For Quote

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Buy/Sell Indicator	Buy/Sell Indicator
Bid/Ask Size	Bid/Ask Size
Request Indicator	Request Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

This message provides a mechanism to initiate (and terminate) a Request For Quote activity for a specific product, or set of products. Included within the RFQ may also be a distinction as to whether the intent is to buy or sell the product, and at what size.

### 5.08      Category Code H - High-Low-Last Messages

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	High Price
Price ID	Low Price
Price ID	Last Price
(Combination Occurrences)	When PCC = L
ETX	ETX

The High-Low-Last message may be sent (but is not required to be sent) following the deletion of

## Chapter 5      Message Definitions

any message numerically equal to the high or low price of the day or the last price. Although use of the High-Low-Last message is at the option of each exchange, an exchange which elects to utilize the High-Low-Last message should constantly send it after each deletion and without regard to whether the transaction to be deleted was the particular transaction which set the high or low price for the day and without regard to whether the deletion results in a change in the high-low range.

The High-Low-Last message may also be sent at any time at the discretion of the exchange. For example, an exchange may send a High-Low-Last message for one (1) contract each minute, or whenever the ticker line has been idle for ten (10) seconds. However, exchanges should avoid sending High-Low-Last messages in bursts to avoid full-line loading. The High-Low-Last message may also be used to correct the high-low range where the particular message which should have updated the range cannot readily be identified for processing as an Insert or Delete message.

No High-Low-Last message will be prepared and queued for transmission such that it may follow other messages superseding the High-Low-Last message. For example, if a High-Low-Last message is prepared at 12:00:00 and a transaction is entered at 12:00:01 at a price higher than the high price in the High-Low-Last message, the High-Low-Last message should be sent prior to the subsequent message setting a new high.

Exchanges may elect to utilize this message to send High-Low-Last for a particular trading session (denoted by the Session ID in the Header), as well as for the composite trading day. If used for Session High-Low-Last, any/all prices included would represent trading activity only within that session.

### 5.09      Category Code I - Volume & Open Interest

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Cumulative Volume	Volume Cleared (as of date noted by Day Indicator)
Volume Indicator	Volume Indicator
Day Indicator	Day Indicator
Open Interest	Open Interest (as of date noted by Day Indicator)
Open Interest Indicator	Open Interest Indicator
Day Indicator	Day Indicator

## Chapter 5      Message Definitions

ETX	ETX
-----	-----

Volume cleared on the date indicated, open interest as of the close of the date indicated, may be filled in the associated fields. If no data is available for a particular field, the field will be space filled.

Exchanges may elect to utilize this message to send Volume & Open Interest information for a particular trading session (denoted by the Session ID in the Header), as well as for the composite trading day. If used for Session Volume & Open Interest, any/all values included would represent trading activity only within that session.

### 5.10      Category Code J - Summary Messages

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	First Opening Price
Price ID	Second Opening Price
Range Indicator	Opening Price Range Indicator
Market Direction Indicator	Opening Market Direction Indicator
Price ID	High Price
Price ID	Low Price
Price ID	Settlement Price
Price ID	First Closing Price
Price ID	Second Closing Price
Range Indicator	Closing Price Range Indicator
Market Direction Indicator	Closing Market Direction Indicator
Price ID	Net Change
Market Direction Indicator	Net Change Indicator
Cumulative Volume	Cumulative Volume
Volume Indicator	Volume Indicator



## Chapter 5 Message Definitions

Day Indicator	Day Indicator
(Combination Occurrences)	When PCC = L
ETX	ETX

Within the Summary message, fields identified as Opening or Closing may also be utilized to include Resumption or Suspension quotation information. The Range Indicator fields within this message should be carefully examined to identify the type of quotation included within these fields.

Exchanges that support multiple trading sessions, typically including an electronic trading session, will anticipate being able to provide Session related Summary messages, as well as Composite Trading Day Summary messages (Session ID of blank). Within this environment, Resumptions and Suspensions would be utilized to provide support for opening or Closing a particular session.

### 5.11 Category K - Retransmissions Request Message

Support within the specification is provided for an exchange to consider the creation of an interactive facility for vendors to request retransmissions via a computer-to-computer interface connection. This message would be sent by a vendor computer system to an exchange, filling in necessary fields within the header (especially the Vendor ID), and completing the body of the message by identifying the missing sequence number range(s). The exchange would process the request and follow its normal convention for message retransmission.

<u>Field Group</u>	<u>Fill</u>
Header	Header
Number of Sequence Gaps	2 digit field identifying number of occurrences that follow
(Beginning Sequence Number)	Message Sequence Number
(Ending Sequence Number)	Message Sequence Number
ETX	ETX

### 5.12 Reserved

### 5.13 Category M - Bid & Ask Market; Bid/Ask/Trade Message

<u>Field Group</u>	<u>Fill</u>
Header	Header

## Chapter 5 Message Definitions

Product Classification	Dependent upon PCC field value
Price ID	Market Bid Price
Bid/Ask Size	Market Bid Size
Price ID	Market Ask Price
Bid/Ask Size	Market Ask Size
Price ID	Market Last Price
Volume Traded	Volume Traded
Volume Indicator	Volume Indicator
( Combination Occurrences )	When PCC = L
( As-of-Sequence Number )	For TYPE I or D Messages Only
ETX	ETX

Market Bid Price and Market Ask Price will **always** contain the most current quote, even where an Insert/Delete TYPE code is used. If either or both of these prices contain spaces, then the respective display should be blanked out. The current Market Bid Price and Ask Price will be present in every category "M" or "N" message even if they have not changed since the last transmission.

The Last Price establishes the official time and sales record for the Exchange, and represents a sale, a Bid higher or an Ask lower than the previous Last Price. A Last that is a Bid Price or an Ask Price will also be reflected in the Market Bid or Market Ask Price. Spaces in the Last Price indicate that no new Last has been established.

### 5.14 Category Code N Bid & Ask Market; Bid/Ask/Trade—Abbreviated Message (No Size)

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Market Bid Price
Price ID	Market Ask Price
Price ID	Market Last Price
Volume Traded	Volume Traded

## Chapter 5      Message Definitions

Volume Indicator	Volume Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

Market Bid Price and Market Ask Price will **always** contain the most current quote, even where an Insert/Delete TYPE code is used. If either or both of these prices contain spaces, then the respective display should be blanked out. The current Market Bid Price and Ask Price will be present in every category "M" or "N" message even if they have not changed since the last transmission.

The Last Price establishes the official time and sales record for the Exchange, and represents a sale, a Bid higher or an Ask lower than the previous Last Price. A Last that is a Bid Price or an Ask Price will also be reflected in the Market Bid or Market Ask Price. Spaces in the Last price indicate that no new Last has been established.

### 5.15      **Market Update Message - Bid/Ask/Trade Price, Cumulative Volume Update**

Two Market Update messages have been defined, with the only difference being the SIZE, Volume Traded field lengths.

#### 5.15.1      **Category O - Market Update - Bid/Ask/Trade Price, Cumulative Volume Update**

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Market Bid Price
Bid/Ask Size	Market Bid Size
Price ID	Market Ask Price
Bid/Ask Size	Market Ask Size
Price ID	Market Last Price
Volume Traded	Volume Traded
Volume Indicator	Volume Indicator

## Chapter 5      Message Definitions

Cumulative Volume	Cumulative Volume
Volume Indicator	Volume Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

Market Bid Price and Market Ask Price will **always** contain the most current quote, even where an Insert/Delete TYPE code is used. If either or both of these prices contain spaces, then the respective display should be blanked out. The current Market Bid Price and Ask Price will be present in every category "M, N, O, B, b, or o" message even if they have not changed since the last transmission.

The Last Price establishes the official time and sales record for the Exchange, and always represents a sale.

The Cumulative Volume field, along with the Volume Indicator, will be a reflection of the total volume for the given contract at the time of the message transmission.

### 5.15.2      Category o – Market Update – Bid/Ask/Trade Price (Expanded Size, Traded Volume) Cumulative Volume Update

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Market Bid Price
Bid/Ask Size 7	Market Bid Size
Price ID	Market Ask Price
Bid/Ask Size 7	Market Ask Size
Price ID	Market Last Price
Volume Traded 7	Volume Traded
Volume Indicator	Volume Indicator
Cumulative Volume	Cumulative Volume
Volume Indicator	Volume Indicator

## Chapter 5      Message Definitions

(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

Market Bid Price and Market Ask Price will **always** contain the most current quote, even where an Insert/Delete TYPE code is used. If either or both of these prices contain spaces, then the respective display should be blanked out. The current Market Bid Price and Ask Price will be present in every category "M" or "N" or "O" or "o" message even if they have not changed since the last transmission.

The Last Price establishes the official time and sales record for the Exchange, and always represents a sale. Spaces in the Last Price indicate that no new Last has been established.

The Cumulative Volume field, along with the Volume Indicator, will be a reflection of the total volume for the given contract at the time of the message transmission.

### 5.16      Reserved

### 5.17      Category Code Q - Settlement Price & Limits

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Settlement
Day Indicator	Day Indicator
Price ID	High Limit
Price ID	Low Limit
Day Indicator	Day Indicator
(Combination Occurrences)	When PCC = L
ETX	ETX

The Settlement Price & Limits messages will be sent following the close of trading in the particular contract. The fields will be filled with the settlement price for the current day and the highest price and lowest price at which trading will be permitted on the following day. In the event that no

## Chapter 5      Message Definitions

limits are established for the particular contract on the following day, the high and low limit price field will be space filled. In the event that no settlement price is reported for the particular contract, the settlement price will be space filled.

For those exchanges that provide electronic trading solutions during various trading sessions, the Settlement Price & Limits messages may also be used for transmissions of settlement (also referred to as Reference Prices) and limits applicable to a specific session. At the option of the exchange, the Settlement or Limits fields may be space filled.

No Insert or Delete message format is specified for the Settlement Price & Limits message; in the event that an erroneous Settlement Price & Limits message is sent, it will be followed by a Settlement Price & Limits message with the correct data or fields which are space filled in order to delete erroneous data. No special coding will identify the corrected message.

### 5.18      Category Code R - Refresh

Refresh messages will be used in the event that an exchange or a vendor has had a significant system failure, and it is impractical to retransmit all previous messages in order to restore the basic elements of a vendor's data base. The design of Refresh messages required compromising considerations of message length, line speeds, data base integrity, and exchange data base design.

The Message Sequence Number will not be advanced when a Refresh message is sent nor will a Refresh message be retransmitted. Refresh messages will contain current information as of the time they are transmitted; i.e., Refresh messages will not be prepared and queued for transmission after subsequent transactions have been reported on the ticker line.

The last prices may, at the option of the exchange, include the last trade prices or the last price changes (i.e. trades, bids higher than the preceding price change, and asks lower than the preceding price change).

In view of the time required to transmit a full run of Refresh messages, exchanges may wish to implement an indexing scheme to permit their most active contracts to be "refreshed" first.

Exchanges may delay or limit the number of Refresh messages transmitted in accordance with line load conditions.

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	First "Opening" Range Price
Price ID	Second "Opening" Range Price

## Chapter 5 Message Definitions

Range Indicator	Opening Price Range Indicator
Price ID	High Price
Price ID	Low Price
Price ID	Last Price
(Combination Occurrences)	When PCC = L
ETX	ETX

In the case where the Refresh Message is used to provide session related information, the Opening price fields may actually contain the session opening (typically referred to as a Resumption), and the High and Low prices will be Session High/Lows.

### 5.19 Reserved

### 5.20 Category Code T - Bid/Ask/Trade - General Form

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Bid, Ask, or Trade Price
Volume Traded	Volume Traded
Volume Indicator	Volume Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

This message is a general form of the Bid/Ask/Trade - No Volume message. See remarks under Section 5.01. The 'volume traded' field may be filled at the option of the exchange. Refer to Appendix 7.0 (see separate Appendix Document) to determine if a particular Exchange reports volume information.

### 5.21 Category Code U - Range Quotations

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## Chapter 5 Message Definitions

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	First Price
Price ID	Second Price
Market Direction Indicator	Market Direction Indicator
Volume Traded	Volume Traded
Volume Indicator	Volume Indicator
Range Indicator	Range Indicator
(Combination Occurrences)	When PCC = L
(As-of-Sequence Number)	For TYPE I or D Messages Only
ETX	ETX

In the event that the range quotation is being used for a particular type of quotation with only a single price, that price and associated information will appear in the First Price ID fields; the Second Price ID of the message will be space filled.

The Market Direction Indicator will indicate that the market was rising (+) or falling (-) from the first to last quotations occurring during the particular range's trading time interval. A Market Direction Indicator, "S", will connote that the market was stable during this interval. A space character in the Market Direction Indicator field indicates that the exchange elected not to report the direction of the market.

The volume traded may be reported at the option of the exchange. Volume reported in this message will exclude all volume which may have been reported in other messages pertaining to transactions which occurred during this interval. If volume is not reported, the field will be space filled.

### 5.22 Category Code V - Cumulative Volume

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Cumulative Volume	Cumulative Volume



## Chapter 5      Message Definitions

Volume Indicator	Volume Indicator
ETX	ETX

The Cumulative Volume message may be used by an exchange to correct its reported Cumulative Volume (Actual or Estimated) during the current trading day (or the trading session indicated by the Session ID). Note, in particular, that where an exchange revises its opening (or closing) range, any revision to the Cumulative Volume may not be processed by vendors which do not retain a separate record of the volume reported on the opening (or closing) range. To insure the correct processing of volume information under such circumstances, exchanges may use the Cumulative Volume message.

An exchange may elect to send cumulative volume grouped by either Exchange, Product, Future, or Strike depending on information provided within the Product Classification. For example, if Cumulative Volume for an entire exchange is to be sent, all fields in Product Classification would be filled with spaces. Additionally, if Cumulative Volume for a particular maturity month and year is to be sent, the Commodity code, Contract Month, and Contract Year fields in the Product Classification would be filled with the appropriate values and all other fields in the Product Classification would be filled with spaces.

### 5.24      Category Code X - Text

<u>Field Group</u>	<u>Fill</u>
Header	Header
Text	Text
ETX	ETX

The Text message format will be used to transmit messages that cannot be expressed within other formats specified within this document. Text messages will not be formatted in any way that will permit interpretation by vendors' systems. Each Text message, or portion of a Text message, will be inserted in a fixed field of 80 P/A Characters.

Text messages may be transmitted with descriptive Type Codes; in which case, vendors will be expected to detect and print pertinent Text messages and take appropriate action. Valid Type Codes for Text messages are as follows:

**Type**

**Code** \_\_\_\_\_

**Message**

Space

General Text

## Chapter 5      Message Definitions

A	Trading Authorized in New Delivery Months
D	Deliveries and Intentions
E	Option Exercises and Assignments
F	Fix High Low
G	Good Morning (courtesy message only, no system control indicated)
I	Volume & Open Interest (Text format)
K	Lead Month Identification
L	Last Day of Trading in Delivery Months
M	Margin Changes
N	New Commodity Listings
P	Cash Prices
R	Receipts and Shipments
S	System Changes
T	Opening/Closing Time Changes, Permanent and Emergency
U	Crop Reports
V	Variable Limits Effective
W	Warehousing Information
X	Globex
Z	Flexible Options Text

### 5.25      Category Code Y - Cash Prices

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Price ID	Price
ETX	ETX

This message is to be used primarily for the dissemination of current cash values of Stock Index Futures, or other Index Type Futures Contracts. An Exchange may specify a Expiration Month Code (within the appropriate Product Classification ID) other than the value "Y" typically defined for Spot Delivery/Index Information (Section 4.03.2). Refer to Appendix 7.0 (see separate Appendix Document) for the Expiration Month Code selected by the respective exchange when the value of "Y" is not used.

### 5.26      Category Code Z - Contract Specifications

Contract Specifications messages may be used to supply vendors with basic information of interest to their data base managers and operators as well as their subscribers.

## Chapter 5      Message Definitions

Seven (7) messages are provided:

Type C - Commodity

Type D - Date

Type L - Combinations

Type O - Option

Type S - Session

Type M - Margins

Type J - Life of Contract High/Low

Contract Specifications (Type C) includes information common to all contracts for a particular commodity (defined by the Commodity Code) and contract type (defined by the Future/Put/Call code). Date Specifications (Type D) includes information that which may vary from month to month, or from strike price to strike price, for a commodity within a particular type of contract.

Contract Specifications messages may be sent, at the option of the exchange: 1) on the day trading is announced in the contract (before effective date); 2) whenever one (1) or more elements of the message is changed; or, 3) routinely a, such as daily, the first day of the month or the last day of the month.

Vendors should note that certain data in the messages is subject to change over the life of the contract. For example, the closing time for some contracts is changed on the last day of trading.

### 5.26.1    Category Code Z - Type C      Commodity Specifications

The format of the Commodity Specifications message is as follows:

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
Listing Code L = List new commodity D = Delist inactive commodity M = Maintenance of existing commodity	Length of 1
Contract Description	Length of 11
Contract Size	Length of 10
Pricing Units 01 = Bushels 02 = Pounds 03 = Troy Ounces	Length of 2

## Chapter 5 Message Definitions

04 = Fine Troy Ounces 05 = Hundredweight, 100 lbs. 06 = Hundredweight, 112 lbs. 07 = Short Tons, 2,000 lbs. 08 = Long Tons, 2,240 lbs. 09 = Metric Tons, 2,204.6 lbs. 10 = Index Points 11 = Percent of Par 12 = Gallons	
Price per Unit \$ = Dollars C = cents Space = Index or percent	Length of 1
Currency of Contract 1 = U.S. dollars 2 = Canadian Dollars 3 = British Pounds	Length of 1
Maximum Daily Price Fluctuation	Price ID
Minimum Daily Price Fluctuation	Price ID
ETX	ETX

### 5.26.2 Category Code Z - Type D Date Specifications

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC field value
First Day of Trading	MMDDYYYY
List Code	See Category Z, Code C
First Notice Day	MMDDYYYY
First Delivery Day	MMDDYYYY
First Trading Day	MMDDYYYY
Last Notice Day	MMDDYYYY
Last Delivery Day	MMDDYYYY
Time to Exercise on Last Day	HHMM

ETX	ETX
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For Options, Product Classification fields should include information specified up to and including, Put/Call Code, but should leave Strike Price specific fields blank.

### 5.26.3    Category Code Z - Type O Option Strike Price Specifications

<u>Field Group</u>	<u>Fill</u>
Header	Header
Option ID	Option ID (Numeric Strike Price Blank, Put/Call Indicator filled in)
# of Intervals	Length of 2
(Strike Price)	Lowest value Strike Price
(Strike Price Sign)	Lowest value Strike Sign
(Strike Price)	Highest value Strike Price
(Strike Price Sign)	Highest value Strike Sign
(Strike Price Interval)	To calculate Strike Prices (length of 2)
Last Delivery Day	MMDDYYYY
Time to Exercise on Last Day	HHMM
ETX	ETX

The # of Intervals field defines the number of occurrences of the strike price related fields in parentheses that follow in the message layout, (I.e., Lowest Strike Price, sign, Highest Strike Price, Sign, Strike Price Interval). This facility is typically used if an exchange has varying strike price intervals depending upon the actual value of the strike price itself.

### 5.26.4    Category Code Z - Type S Session Open/Close Time Definition

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC Field Value
# of Sessions	Length of 1

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(Session ID)	Session ID
(Session Opening Time)	Opening Time in HHMM Format
(Day Indicator)	Futures / Options Last Trading Date Day Code
(Session Closing Time)	Closing Time in HHMM Format
(Day Indicator)	Futures / Options Last Trading Date Day Code
ETX	ETX

Message is used for Futures, Options, and Cash Instruments only. It is not to be used for Combination Products. Day Indicator may be blank if the session times apply to typical trading day. Day Indicator may also contain non-blank if session times are changed for a specific trading day or session, such as for pre-holiday trading.

### 5.26.5    Category Code Z - Type L Combination Legs Definition

<u>Field Group</u>	<u>Fill</u>
Header	Header
Combination ID	Combination ID
(Combination Occurrences)	(Combination Occurrences)
ETX	ETX

Message is to be used for Combination Instruments only.

### 5.26.6    Category Code Z - Type M Margins Specification

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC Field Value
Initial Margin	Price ID
Maintenance Margin	Price ID
Hedge Margin	Price ID
ETX	ETX

## Chapter 5 Message Definitions

### 5.26.7 Category Code Z - Type J

#### Life of Contract High/Low Specification

<u>Field Group</u>	<u>Fill</u>
Header	Header
Product Classification	Dependent upon PCC Field Value
Contract Lifetime High Price	Price ID
Contract Lifetime High Date	MMDDYYYY
Contract Lifetime Low Price	Price ID
Contract Lifetime Low Date	MMDDYYYY
ETX	ETX