LANDmark INTERfeed

Product Definition

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INTRODUCTION

Scope

This document defines the INTERfeed Data Distribution mechanisms to 3rd Party systems.

This is a full and complete functional specification and can facilitate an implementation of a client application. Not covered by this specification are performance criteria, hardware considerations or any other external influences. This specification is strictly restricted to a specification of the protocols involved, the nature of the servers are transparent to the client excepting that it conforms to this specification.

Intended Audience

This specification is intended for 3rd Party Systems development staff. This specification governs the operation of the protocol and makes no references to the operation of the market in certain circumstances.

MARKET DATA OVERVIEW

There are a number of parts to the data feed to be discussed, each of which reflects a different layer of the protocol model. The lower layers are of little relevance, excepting to state that they are provided by the IP family of protocols. This removes the necessity to be concerned about any layers from the session layer downwards.

The Presentation layer defines the protocol that carries the specific data required in an unambiguous manner.

The Application layer defines how the data relates to both the client and the server. The application layer considers issues that relate to the applications running either end of the protocol, such as the nomenclature of instruments, what is a mid-price, etc.

Session Layer

There is more than one session layer protocol used. On initial connection from the client a TCP/IP socket connection is made and is the principle point of contact between the client and the server. The protocol also permits that record updates may be transmitted to the client over a UDP/IP multicast socket. This allows the server to consolidate updates where required by more that one client. This means that the client should be prepared to receive updates to instruments that it is not currently monitoring. The client connects initially over a TCP/IP socket; this socket is used for all Request/Response messages. Depending upon the remote TCP/IP address of the client, the updates for securities requested will switch from the TCP/IP connection to a UDP/IP multicast address. The switch from one mechanism to another will be preceded by some updates being transmitted over both, during the transition. The client must be prepared to receive some duplicate messages and be capable of ignoring duplicate messages. The client should be aware that the transmission delays over UDP are less than TCP, so it is likely that during the switching phase where messages are received by both mechanisms, it is probable that UDP messages will arrive before the TCP ones. It is possible, by configuration to prevent certain remote clients from switching to UDP, and remain on TCP/IP only.

Although the IP protocols do not conform to the ISO 7-layer model, they are supported by most major Operating System. TCP/IP provides a single bi-directional, full duplex error corrected link between the client and the server applications. The interface is a stream-based interface, whereas it is often easier from an application aspect to consider a packet-oriented interface; so **a 4-byte binary message length is inserted before every message in either direction over the TCP/IP socket.** This length is encoded in network byte order (most significant byte first). UDP/IP is not error corrected or reliable and may result in data loss, thus the application layer protocol must make allowance for this. UDP/IP however, is a packet-based protocol and the message length is not a requirement – and is thus not used.

Presentation Layer

The presentation layer protocol is the area of most importance and is required to be easily extensible so that the infrastructure can have the scope widened without compromising the underlying design. It is also intended that the presentation layer protocol may be modified without requiring applications currently using it to be modified to support the new data, unless the application wishes to make use of the data item.

A principal requirement for the protocol is to be able to transmit changes to a derived data record in the most efficient manner possible, i.e. eliminate the transmission of fields that have not altered. This requires the protocol to be able to eliminate any given field from a data record, which in turn requires that the records are ‘self-describing’, i.e. each field within a record identifies itself as a pre-determined data value with a known data-type.

Although each data item describes itself, and the meaning of the data associated with it, the fields are commonly collected together into a record or ‘field-list’. The record is identified by a record type parameter.

In general, messages between the client and server are on a solicited basis. The client sends a request message and the server responds with the data message. A request may be for a single copy

of a message or may be for a record with updates, which are broadcast asynchronously. The server maintains two mechanisms for distribution, there is a single point-to-point connection with the server that is always used for requesting data and receives initial response messages. The server also uses a multicast mechanism for distributing updates where more than one client requires them. Update messages may be sent over the point-to-point connection or the broadcast mechanism as decided by the server on a per update basis.

In addition to the normal record request, wild-card record requests are possible, which will result in all relevant matching records being transmitted and updated (see later for more details about possible wild-card requests).

Application Layer

The function of the application layer is dependant upon the use of the feed data, and as such the decisions rest with the application designer about how the retrieved data should be displayed or presented to the users. There is, however, a single point of interest to any distribution system, which is the naming of the data records.

The instrument requested has to be unique across the entire database, since the request does not indicate any information about the type of the record.

The instruments provided from various exchanges are generally named by the Display code from that exchange, and then postfixed with an exchange denomination. Refer to the record specifications for the specific exchange in question in order to determine the exchange identifier used, and which wildcards are available to facilitate easier message requesting.

A record is requested from the server with real-time updates. The record is added to a watch list maintained by the server to ensure that all subsequent changes are transmitted to the client.

This protocol does not restrict either the number of items that may be watched or the number of outstanding messages within the system.

Record Transaction Level

Record Transaction Level (RTL) is used to enable the user to check synchronisation of messages relating to a record and is akin to sequence numbers. The RTL is stored as a FID within the record. On the initial retrieval of a record the RTL will be set to a variable initial value, subsequently when updates are issued the RTL is incremented in an unbroken sequence. If a message is missed relating to a record, the record should be re-requested, and the contents of the record replaced with the newly provided message.

The RTL increments with the Instrument Code, such that if a wildcard request is made for a number of Instruments collectively, each unique Instrument Code will have its own unique RTL.

If a record is lost and the loss is detected by a gap in the RTL, the records should be restarted for this Instrument Code. Issuing a Halt_Update message for the specific instrument that has lost the record, and requesting a Read_Record request for this specific instrument achieves this. The Read_Record will result in a new copy of the record being issued with all fields populated, and updates will continue for this Instrument. Clients using UDP multicast should be aware that UDP messages may overtake TCP messages during transport; thus during the switchover period for an instrument there is a time during which the record will be sent down both transports. If the client is to process the messages in the correct order, he should buffer all the UDP messages received, until the TCP stream has caught up to the first UDP RTL received. At this point he may then process data from the UDP stream and discard the TCP records. The overlap timer that permits this is separate for each and every instrument, as are the RTLs.

The RTL may be reset to zero at any time, a value of zero always taken to be the correct current sequence number, and the value progresses from there in the normal way.

MARKET DATA MESSAGE HANDLING

The message protocol is implemented at the Presentation Layer in a manner similar to the Reuters SelectFeed protocol, but with significant deviations and variations. Each message consists of a stream of ASCII characters.

General Format

The Presentation Layer uses a general message format as shown:

<FS>FUNCTION<US>TAG<GS>DATA<FS>

Where:

Function is a function number expressed as decimal digit(s) and determines the format, and purpose of a message.

Tag is a user-defined code used to match responses with original requests. This is implemented differently from the SelectFeed protocol. In SelectFeed, the tag is a 2-character code comprised of any characters within the range 20H to 7FH. In this protocol the Tag has been extended to be 4 characters in width allowing for a greater number of messages to be controlled. The tag is returned with all immediate responses, allowing the client to tie up their requests with the response from the server. Once data items have been requested successfully, the tag is dropped and not sent for all subsequent updates.

Data The data element is dependent upon the function code. For requests, the data is typically an instrument code, for response data it is typically the contents of a record. Specific details of the data portion are discussed in more detail later.

A message is encapsulated within two Field Separator characters, <FS>, and is further broken down by the Unit Separator, Group Separator and Record Separator characters (<US>, <GS> and <RS> respectively).

The following table shows the function codes permissible, each of which will be discussed in detail further on.

Function Codes permissible from the Client System.

	Function Code	Action Taken
Command_Request	1	Sends a command to the server.
Read_Record	332	Reads a record and registers for real-time updates
Snap_Record	333	Read a single snapshot for the record
Halt_Updates	348	Stop updates for the record
Status_Request	409	Request status information from the Server

Function Codes permissible from the Server.

Function Name	Function code	Action Taken
Command_Response	2	Response to Read_Record

Function Name	Function code	Action Taken
Record_Response	340	Response to Read_Record
Update_Record	316	Market Activity Update message
Drop_Record	308	A record held in the watchlist has been deleted.
Status_Response	407	Response to any Status Request (or may be asynchronous)

Field Identifiers

Field identifiers identify the data item within the record; this specification contains a full description of all field identifiers available in later chapters. A field consists of a single atomic data item.

Each Field Identifier (FID) is represented as a numeric decimal string and has a descriptive mnemonic associated with it. Since the list of data items is likely to change at short notice, an application should be written in such a manner as to be able to parse FIDs in which it has no interest.

All FIDs need not necessarily be included within the message at all times, since the value of a data item may only be meaningful within certain other constraints, and for example, may not initially exist for an instrument.

Client Messages

This section describes the messages issued by the client system in detail, describing the structure of each in detail.

Command_Request

This message sends a command to the server to instruct different modes of operation.

Format:

<FS> 1 <US> TAG <GS> COMMAND <RS> PARAMETER <RS> PARAMETER <FS>

The number of parameters that may be passed is variable. The number required depends upon the command that has been sent.

The following table is a list of permissible commands, and the parameters required by each.

COMMAND	Meaning	Parameters
-1	Request for transition to Multicast Data.	A single parameter, an integer that specifies the number of seconds for each new record to co-exist on the unicast and multicast transports. This is necessary because the multicast transport is most likely to operate faster than the unicast, unless a period of co-existence occurs, it is possible that not all RTLs for the record will be received.

Read_Record

Requests a copy of a record from the database with updates. If a single record is requested and is successful a Record_Response message is returned. If the request is not successful a Status_Response is returned indicating where the fault lies. If this message is used to request a number of securities using the wildcard request mechanism, a number of Record_Responses will be returned, followed by one or more Status_response messages that will indicate that the wildcard request is complete and how may securities have been added to the watchlist.

Read_Full_Record

Requests a record with real-time updates.

Format:

<FS> 332 <US> TAG <GS> INSTRUMENT_CODE <FS>

The entire set of data for this record is retrieved if available and returned by the Server in a Record_Response message. The record is then subject to unsolicited updates as they occur. If this record is not available for whatever reason a Status_Response message is returned instead. Both these reply messages are outlined later in greater detail. In either response situation the TAG is returned in the message.

Read_Partial_Record

Requests a small subset of data items for a record, which could be a single data item or could be a small collection of data items. The data items are registered for real-time updates.

Format:

<FS> 332 <US> TAG <GS> INSTRUMENT_CODE <RS>FID<RS>FID<FS>

The sequence of Field ID and Record Separator may appear any number of times in the request string, up to the maximum size permitted for a message.

See previous section on permissible values for the Instrument Code.

A request for record results in the original copy of the record, followed by updates as they occur. Therefore a request for all securities in all segments will result in a full security database download, followed by a stream of security changes as the component field's change. A partial request may result in receiving more than, but always at least those FIDs that were selected.

Snap_Record

Requests a single copy of the record.

Snap_Full_Record

Requests a single copy of the full record. Snap_Record requests do not get entered into the watchlist and therefore do not receive subsequent updates to the record.

Format:

<FS> 333 <US> TAG <GS> INSTRUMENT_CODE<FS>

The entire set of data for this record is retrieved if available and returned by the Server in a Record_Response message. If this message is not available for whatever reason a Status_Response message is returned instead. Both these reply messages are outlined later in greater detail.

In either response situation the TAG is returned in the message. No further messages will be transmitted relating to this transaction.

Snap_Partial_Record

Requests a single copy of a small subset of data items for a record, which could be a single data item or could be a collection of data items.

Format:

<FS> 333 <US> TAG <GS> INSTRUMENT_CODE <RS>FID<RS>FID<FS>

The sequence of Field ID and Record Separator may appear any number of times in the request string, up to the maximum size permitted for a message.

The requested set of data for this record is retrieved if available and returned by the Server in a Record_Response message. . If this message is not available for whatever reason a Status_Response message is returned instead. Both these reply messages are outlined later in greater detail.

In either response situation the TAG is returned in the message. No further messages will be transmitted relating to this transaction.

Halt_Updates

Halts the flow of data relating to a specific record. This is used to remove a record from the watch list of the server.

Format:

<FS> 348 <US> TAG <GS> INSTRUMENT_CODE <FS>

The Server always responds with a Status_Response message, which will indicate whether updates were halted successfully, or that the record was not currently in the watch list. It is possible to halt updates on individual instruments where the request was made via a wildcard registration. This will remove the individual instrument from the watch list for all the instruments being updated.

Status_Request

Requests status information from the Server.

Format:

<FS> 409 <US> TAG <GS> CODE <FS>

The CODE is a three-character request code and can take the following values

103 Returns the number of items currently held in the watch list.

The Server with the appropriate information returns a Status_Response message. Further description of the Status_Response message is detailed later. A wild card registration counts as a single data item.

Server Messages

This section describes all the possible messages transmitted by the Server, either as direct responses, or as unsolicited messages.

Command_Response

This message sends a response to a command send by the client, assuming that it was successful. If it were not successful, then a status_response with a failure message would be sent instead.

Format:

<FS> 2 <US> TAG <GS> COMMAND <RS> PARAMETER <RS> PARAMETER <FS>

The number of parameters that may be returned is variable. The number required is dependent upon the command sent.

The following table is a list of permissible commands, and the parameters sent by each.

COMMAND	Meaning	Parameters
-1	Permission for transition to Multicast Data.	This means that the request for multicast data was successful. Two parameters are provided. 1) The I/P address in dot notation. 2) The port number to which the data is bound.

Record_Response

This message is a response to a Read_Record request.

Format:

<FS>340<US>TAG<GS>INSTRUMENT_CODE<US>RECORD_TYPE<US>RTL<RS>FID<US>VALUE<FS>

Where:

RECORD_TYPE	Is an ASCII numeric string indicating the record type, i.e. which fields (if any) are likely to be present.
TAG	Is the TAG value sent in the initial request message.
RTL	Is the Record Transaction Level (or sequence number) as described previously.

The RTL is followed by the field data itself, self-describing derived data as a series of "<RS> FID <US> VALUE" sets where the FID describes the data which is being provided and VALUE is the data item itself.

The RTL is incremented each time a subsequent message is received relating to the same record.

Status_Response

A status message indicating a status or error condition. This may be returned as an error code to a specific request or unsolicited as a general condition indicator, for example to indicate a problem in the source feed to the Server.

Format:

<FS> 407 <US> TAG <GS> CODE <RS> MESSAGE <FS>

The CODE value indicates the error condition that applies. The MESSAGE field is optional additional information about the error. If the MESSAGE field is excluded, the <RS> is also omitted.

If the response is in reply to a request then the original TAG field will be present. If, however, the status message is unsolicited, there will be no TAG information available, and the field will be empty.

The table below indicates the values permitted in the CODE field.

CODE	Severity	Meaning	MESSAGE Content
1	Error	Technical Problem.	INSTRUMENT_CODE
2	Error	Instrument Not Found	INSTRUMENT_CODE
3	Error	No Permission	INSTRUMENT_CODE
4	Error	Record Format Failed	INSTRUMENT_CODE

CODE	Severity	Meaning	MESSAGE Content
5	Error	Update Failed	INSTRUMENT_CODE
6	Error	Invalid Message Received	
7	Error	Unknown Function Code received	
8	Error	Tag received when not expected, or Tag not received when expected	
9	Error	Missing Instrument Code	
31	Information	Server communication link Status change	+CA comms link up -CA comms link down
35	Information	Updates successfully halted	INSTRUMENT_CODE
36	Information	Updates were not active	INSTRUMENT_CODE
105	Information	Error occurred in the Server attempting to format output record	
-22	Information	A wildcard request has completed.	INSTRUMENT_CODE. The specific request string used.
-23	Information	A wildcard request has completed.	INTEGER. Indicates how many items were added to the watchlist.

Update_Record

This message is transmitted when some data items have changed since the last update.

Format:

<FS> 316 <US> <GS> INSTRUMENT_CODE <US> RTL <RS> FID <US> VALUE <FS>

Where:

RTL Is the Record Transaction Level (or sequence number) as described previously.

The RTL is followed by the field data itself, as a series of "<RS> FID <US> VALUE" sets where the FID describes the data that is being provided and VALUE is the data item itself.

The RTL is incremented each time an update is received relating to the same INSTRUMENT_CODE.

Note that there is no tag value in update_record messages.

The update_record message may be transmitted over the initial request channel; or may be multicast to the client, as decided by the server on a time-to-time basis. The client must be capable of receiving the same RTL more than once, and discarding duplicate messages received.

Drop_Record

This message is transmitted when a data item has ceased to exist since the last update. The data item should be deleted upon receipt of this message.

Format:

<FS> 308 <US> TAG <GS> INSTRUMENT_CODE <US> RTL <FS>

Where:

RTL	Is the Record Transaction Level (or sequence number) as described previously.

The tag value is empty in drop_record messages and may not be used to identify the original request.

The drop_record message may be transmitted over the initial request channel; or may be multicast to the client, as decided by the server on a time-to-time basis. The client must be capable of receiving the same RTL more than once, and discarding duplicate messages received.

MARKET DATA TYPES

There is only a small selection of atomic data types, although the number of applications each has is extensive. All the possible FIDs fit into a small set of possible data types that describe how the data is formatted. The data type of a FID is an implicit attribute of the field and not a described attribute; therefore, a list of supported fields has to be available to the Client application in order to derive the data type and the implicit meaning of the information.

FID 259 is a replica of the field list number received in the record response. The advantage of this FID is that the field list number is not transmitted on the record_update message – only on the initial response. Thus FID 259 can be incorporated into each message update as a reminder of the instrument type.

Record Data Types

This section briefly details the primitive data types available for processable Instrument records. The following data types are always represented in the ASCII 7-bit character set.

Date

A Date field is always eleven characters long, and contains the date in the format:

DD-MMM-YYYY

E.g. 06-DEC-1999

Time

A Time field is always five characters in length, and represents the time in 24 hour format:

hh:mm

E.g. 17:30

All dates and times are in the timezone of the local exchange. The timezone designation is broadcast within the record, but for a given exchange will always be a constant value. A complete list of timezones is shown at the end of this document.

Time Seconds

An additional time format is defined which is always 8 characters in length, and includes the number of seconds in the time, over and above the normal Time format:

hh:mm:ss

E.g. 17:30:23

No interpretation is made or attempted on time zones used for generating or processing time values. Time values are always within the local time zone.

Integer

Integer fields have a maximum length of fifteen characters, although it will be less for smaller numbers. Only the characters 0 through 9 are permitted, with an optional leading negative sign.

Price

A Price field has a maximum value of 17 characters. It may contain integer, decimal, fractional or percentage values, with an optional leading negative sign.

Decimals are expressed as:

12.34

Fractional values are represented as:

12 3/4

Percentage values are represented as:

12.5%

Enumerated

An Enumerated field has a fixed list of contents within a defined range. The specification allows for the enumerated fields to be delivered as either the numerical representation or an alphanumeric mnemonic, interchangeably without prior notice. Fields of enumerated type will be either as a numeric value, capable of interpretation, or as a character string representation. For each FID only one type will ever be used. Its usage will be documented in the Record description.

Alphanumeric

A string field is a simple printable character string, taken from the ASCII character set.

Ripple FIDs

A field designated as a Ripple FID, could be any of the above types. The ripple effect is to indicate that a FID takes on the value of a previous one as it is updated. That is, when the initial record request is made, the initial copy of the record will contain a number of fields which are related to each other in a sequential manner, e.g. last trade volume, previous volume, 2nd previous volume, etc. The initial copy of the record will contain ALL fields, however, the subsequent updates will only contain an update to the most recent field – the client must ripple through all other fields in the ripple sequence in order to obtain the correct value for each item. A number of fields in this way operate together. The ripple FIDs primarily relate to TRADEs and the user should be aware that not all FIDs will be updated – but that the ripple should still take place. I.e. if a new TRADE VOLUME is received, this designates that a trade has occurred and all FIDs that relate to the trade should be rippled – i.e. a new TRADE should be created. However, the FIDs that relate to TRADE DATE (for example) may not be re-issued – since the value for the new trade may be the same as for the previous TRADE. Where values are unchanged – they will not be re-issued.

Timezones

A specific stock or instrument belongs to an exchange. An exchange usually is located in a specific geographic and political location. Thus, normally a stock will be located within a discrete timezone. All times and dates broadcast on a stock or index are in the local time of the originating exchange. AN exchange will typically open during the morning and close in the afternoon within its own timezone. An obvious exception to this is Foreign Exchange information, which is comprised of a number of contributing inter-bank quotes, which are collected from various banks around the world, are not based on a specific exchange, and do not have a specific start or end time. In this scenario, where there is no originating exchange the timezone used will be UTC or GMT. The following table lists all permissible timezones, and the code number allocated with each.

Region/Location	Code
Africa/Abidjan	0
Africa/Bujumbura	1
Africa/Gaborone	2
Africa/Lubumbashi	3

Africa/Nouakchott	4
Africa/Accra	5
Africa/Cairo	6
Africa/Harare	7
Africa/Lusaka	8
Africa/Ouagadougou	9
Africa/Addis_Ababa	10
Africa/Casablanca	11
Africa/Johannesburg	12
Africa/Malabo	13
Africa/Porto-Novo	14
Africa/Algiers	15
Africa/Ceuta	16
Africa/Kampala	17
Africa/Maputo	18
Africa/Sao_Tome	19
Africa/Asmera	20
Africa/Conakry	21
Africa/Khartoum	22
Africa/Maseru	23
Africa/Timbuktu	24
Africa/Bamako	25
Africa/Dakar	26
Africa/Kigali	27
Africa/Mbabane	28
Africa/Tripoli	29
Africa/Bangui	30
Africa/Dar_es_Salaam	31
Africa/Kinshasa	32
Africa/Mogadishu	33
Africa/Tunis	34
Africa/Banjul	35
Africa/Djibouti	36
Africa/Lagos	37
Africa/Monrovia	38
Africa/Windhoek	39

Africa/Bissau	40
Africa/Douala	41
Africa/Libreville	42
Africa/Nairobi	43
Africa/Blantyre	44
Africa/El_Aaiun	45
Africa/Lome	46
Africa/Ndjamena	47
Africa/Brazzaville	48
Africa/Freetown	49
Africa/Luanda	50
Africa/Niamey	51
America/Adak	52
America/Dawson	53
America/Montevideo	54
America/Santo_Domingo	55
America/Anchorage	56
America/Dawson_Creek	57
America/Indianapolis	58
America/Montreal	59
America/Sao_Paulo	60
America/Anguilla	61
America/Denver	62
America/Inuvik	63
America/Montserrat	64
America/Scoresbysund	65
America/Antigua	66
America/Detroit	67
America/Iqaluit	68
America/Nassau	69
America/Shiprock	70
America/Aruba	71
America/Dominica	72
America/Jamaica	73
America/New_York	74
America/St_Johns	75

America/Asuncion	76
America/Edmonton	77
America/Jujuy	78
America/Nipigon	79
America/St_Kitts	80
America/Atka	81
America/El_Salvador	82
America/Juneau	83
America/Nome	84
America/St_Lucia	85
America/Barbados	86
America/Ensenada	87
America/Knox_IN	88
America/Noronha	89
America/St_Thomas	90
America/Belize	91
America/Fort_Wayne	92
America/La_Paz	93
America/Panama	94
America/St_Vincent	95
America/Bogota	96
America/Fortaleza	97
America/Lima	98
America/Pangnirtung	99
America/Swift_Current	100
America/Boise	101
America/Glace_Bay	102
America/Los_Angeles	103
America/Paramaribo	104
America/Tegucigalpa	105
America/Buenos_Aires	106
America/Godthab	107
America/Louisville	108
America/Phoenix	109
America/Thule	110
America/Caracas	111

America/Goose_Bay	112
America/Maceio	113
America/Port-au-Prince	114
America/Thunder_Bay	115
America/Catamarca	116
America/Grand_Turk	117
America/Managua	118
America/Port_of_Spain	119
America/Tijuana	120
America/Cayenne	121
America/Grenada	122
America/Manaus	123
America/Porto_Acre	124
America/Tortola	125
America/Cayman	126
America/Guadeloupe	127
America/Martinique	128
America/Puerto_Rico	129
America/Vancouver	130
America/Chicago	131
America/Guatemala	132
America/Mazatlan	133
America/Rainy_River	134
America/Virgin	135
America/Cordoba	136
America/Guayaquil	137
America/Mendoza	138
America/Rankin_Inlet	139
America/Whitehorse	140
America/Costa_Rica	141
America/Guyana	142
America/Menominee	143
America/Regina	144
America/Winnipeg	145
America/Cuiaba	146
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America/Rosario	149
America/Yakutat	150
America/Curacao	151
America/Havana	152
America/Miquelon	153
America/Santiago	154
America/Yellowknife	155
Antarctica/Casey	156
Antarctica/DumontDUrville	157
Antarctica/McMurdo	158
Antarctica/South_Pole	159
Antarctica/Davis	160
Antarctica/Mawson	161
Antarctica/Palmer	162
Arctic/Longyearbyen	163
Asia/Aden	164
Asia/Chungking	165
Asia/Kabul	166
Asia/Omsk	167
Asia/Tbilisi	168
Asia/Alma-Ata	169
Asia/Colombo	170
Asia/Kamchatka	171
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MARKET DATA RECORD DEFINITIONS

CASH_EQUITIES

This record is used to convey Reference data and Level 1 price data on Cash Equities. The FIDs listed are those that are supported by this implementation. Not all FIDs are available on all securities or across all exchanges, in which case unavailable FIDs will be omitted. FIDs that may not always be present are indicated with a ϕ symbol.

The instruments provided are named by symbol code and the designated exchange code. The following example illustrates the code used to identify the ordinary shares in 'Barclays Bank PLC', traded on the London Stock Exchange.

BARC.L

Wild cards are permitted to enable quicker requesting of many data instruments. Typically, the exchange code is then used as a prefix to the wildcard. A request for four asterisks (e.g. ****) is interpreted as a request for all securities. Additionally, securities maybe requested by pattern matching the provided pattern with the target securities.

PA.****	A request for all securities on Euronext/Paris
L.****	A request for all securities on London Stock Exchange.
XE.N***	A request for all securities beginning with N on Xetra

RECORD_NAME: EQUITIES

RECORD_TYPE: 41

ACRONYM	FID	Field Type	Description
TRDPRC_1 ϕ	6	PRICE	Most Recent Trade Price
TRDPRC_2 ϕ	7	* PRICE	2nd Most Recent Trade Price
TRDPRC_3 ϕ	8	* PRICE	3rd Most Recent Trade Price
TRDPRC_4 ϕ	9	* PRICE	4th Most Recent Trade Price
TRDPRC_5 ϕ	10	* PRICE	5th Most Recent Trade Price
TRD_HIGH	12	PRICE	Highest trade price today

ACRONYM	FID	Field Type	Description
TRD_LOW	13	PRICE	Lowest Trade price today
TRD_TICK_1	14	ALPHANUMERIC	Movement of current TRADE price over previous value = + or –
CURRENCY	15	ENUMERATED	Currency of Quotation
TRADE_DATE ϕ	16	DATE	Date of Most recent Trade
TRDTIM_1 ϕ	18	TIME	Time of Most Recent Trade
OPEN_PRC ϕ	19	PRICE	Today's Opening price
BID ϕ	22	PRICE	Current BID price on security
ASK ϕ	25	PRICE	Current ASK price on security
ACVOL_1	32	INTEGER	Today's total trading volume
PE_RATIO	33	PRICE	Price to earnings ratio, based on current price.
EARNINGS	34	PRICE	Last reported earnings per share.
YIELD	35	PRICE	Yield %, The last reported dividend as a percentage of the current price.
MID_CLOSE	36	PRICE	Last Closing price
OPEN_BID	57	PRICE	BID price at time of open
OPEN_ASK	58	PRICE	ASK price at time of open
CLOSE_BID	60	PRICE	BID price at last close
CLOSE_ASK	61	PRICE	ASK price at last close
DIVIDEND	71	PRICE	The last reported dividend per share.
NUM_TRADES	77	INTEGER	Number of Trades
OFFCL_CODE	78	ALPHANUMERIC	ISIN Code of security
CLOSE_DATE	79	DATE	Date of closing prices
YRHIGH ϕ	90	PRICE	Highest price achieved preceding year
YRLOW ϕ	91	DATE	Lowest price achieved in preceding year
DAY_TURNOVER	100	PRICE	Total value of all trades reported today.
BID_NET_CH ϕ	114	PRICE	Difference between current BID and last close price

ACRONYM	FID	Field Type	Description
BID_TICK_1 ϕ	115	ALPHANUMERIC	Movement of current BID price over previous value = + or –
MID_PRICE ϕ	134	PRICE	Current price of security
MID_NET_CH ϕ	135	PRICE	Difference between current price and last close price
RECORDTYPE	259	INTEGER	Replication of the field list number.
OPEN_TIME	285	TIME-SECONDS	Time that the Open price was taken.
HIGH_TIME	286	TIME-SECONDS	Time that the highest Trade price was reached.
LOW_TIME	287	TIME-SECONDS	Time that the lowest Trade price was reached.
YRHIGHDAT	350	DATE	Date that the highest price was reached in the last year.
YRLOWDAT	351	DATE	Date that the lowest price was reached in the last year.
HIST_VOL	383	INTEGER	Previous trading day's Accumulated Volume.
DEALT_VL1 ϕ	791	INTEGER	Volume of most recent Trade
DEALT_VL2 ϕ	792	* INTEGER	Volume of 2nd most recent Trade
DEALT_VL3 ϕ	793	* INTEGER	Volume of 3rd most recent Trade
DEALT_VL4 ϕ	794	* INTEGER	Volume of 4th most recent Trade
DEALT_VL5 ϕ	795	* INTEGER	Volume of 5th most recent Trade
VOL_TP1 ϕ	990	ALPHANUMERIC	Type of most recent trade, as displayable character string. a Automatic execution M Market maker to m.m. B Broker to broker N NonProtected Portfolio F Non risk P Protected Portfolio R Risk Trade E Result of Option r Riskless Principal S Stock Swap A Cross at same price T Single protected transaction n Worked notification w Worked Trade p Worked portfolio trade q SEAQ Trade u Uncrossing Trade

ACRONYM	FID	Field Type	Description
			U Block Trade – today V Block trade delayed 1 day W Block trade delayed 2 days X Block trade delayed 3 days Y Block trade delayed 4 days Z Block trade delayed 5 days NT Negotiated Trade In addition d Delayed publication C Bargain Conditions apply L Late reported o Overnight trade - (negative sign) Deletion H Historical – date is not today OTC was reported as OTC SI Trade was executed as an SI
VOL_TP2 ϕ	991	* ALPHANUMERIC	Type of 2nd most recent trade, as displayable character string
VOL_TP3 ϕ	992	* ALPHANUMERIC	Type of 3rd most recent trade, as displayable character string
VOL_TP4 ϕ	993	* ALPHANUMERIC	Type of 4th most recent trade, as displayable character string
VOL_TP5 ϕ	994	* ALPHANUMERIC	Type of 5th most recent trade, as displayable character string
UNDERLYING_CODE	1026	ALPHANUMERIC	The security code of the ordinary share for this company.
MARKET_CAP	1238	PRICE	Total market capitalisation, based on the current price.
SHARES_IN_ISSUE	1246	INTEGER	The number of shares in issue
ASK_TICK_1 ϕ	1629	ALPHANUMERIC	Movement of current ASK price over previous value. Value = + or –
COUNTRY_OF_ISSUE	1653	ALPHANUMERIC	Country Code.
AUTOMATIC_TURNOVER	-1	PRICE	Total value of all automatically executed trades today.
AUTOMATIC_VOLUME	-2	INTEGER	Cumulative volume today, of all automatic executions on the LSE trading system.
INDUSTRY_SECTOR	-6	ALPHANUMERIC	Industry Sector Classification. Values are assigned by the “Institute of Actuaries”.
PUBLICATION_LIMIT	-7	INTEGER	Size of a trade, greater than which the exchange will delay reporting.
ISSUER_CODE	-8	ALPHANUMERIC	Identification code of the Issuing company
ISSUER_NAME	-9	ALPHANUMERIC	Company Name of the Issuer. This is also a substring of the Security Long name.

ACRONYM	FID	Field Type	Description
LONG_NAME	-10	ALPHANUMERIC	Security Long Name
SHORT_NAME	-11	ALPHANUMERIC	Short form of Security Name
QUOTE_SIZE	-12	INTEGER	Minimum division of quote volume
ORDERLOT_SIZE	-13	INTEGER	Minimum division of order volume
MIN_PORD	-14	INTEGER	Minimum Principal order size.
MIN_AORD	-15	INTEGER	Minimum agent order size
MKT_SIZE	-16	INTEGER	Normal Market Size
SEDOL	-17	INTEGER	SEDOL Number
TIDM	-18	ALPHANUMERIC	Tradable Instrument Display Mnemonic
TICKSIZE	-19	PRICE	Minimum division of a valid price. Permitted values are: 1 Whole numbers only 2 Halves 4 Quarters 8 Eighths 10 Tenths 16 Sixteenths 32 Thirty-seconds 64 Sixty Fourths 100 One Hundredths 128 One hundred and 28ths 200 Two hundredths 256 Two hundred and 56ths 400 Four hundredths 1000 Decimal 10000 Ten thousandths
SECTOR	-20	ALPHANUMERIC	Market Sector code
SEGMENT	-21	ALPHANUMERIC	Market Segment code
STOCK_STS	-22	INTEGER	Bitmask of security status (HEX) News Item published today 1 Auto execution period 2 Execution halted. 4 Security closed. 8 Security suspended 10 Quote Entry allowed 20 Order Entry allowed 40

ACRONYM	FID	Field Type	Description
			Order Deletions allowed 80 Trade Reports allowed 100 Bid Situation 200 X dividend Today 400 X dividend 800 X capitalisation Today 1000 X capitalisation 2000 X Rights Today 4000 X Rights 8000 X Liquid Today 10000 X Liquid 20000 X Stock Today 40000 X Stock 80000 X Repayment Today 100000 X Repayment 200000 Stabilisation Set Today 400000 Stabilisation Set 800000 X Other Today 1000000 X Other 2000000 Announcement Today 4000000 Announcement Pending 8000000 International Security 10000000 No Price available 20000000 Dutch Trading Service 40000000 Dematerialised 80000000
ENTRY_TYPE	-23	INTEGER	Bitmask of allowed entry/dissemination types. (HEX) Firm Quotes 1 Indicative Quotes 2 Firm Exposure Order 4 Indicative Exposure Order 8 Hit Order 10 Limit Order 20 Aggressive Type A Order 40 Aggressive Type B Order 80 Committed Principal Order 100 Priced Interaction Order 200 Market Order 400 Iceberg Order 800

ACRONYM	FID	Field Type	Description
			Publish Firm Quotes 10000 Publish Indicative Quotes 20000 Publish Firm Exposure Order 40000 Publish Ind. Exposure Order 80000 Publish Limit Order 100000 Publish Comm. Princ. Order 200000 Publish Market Order 400000 Auction Call Period 800000 Stock Opening Period 1000000 Best Price is Automatic Trade 2000000 Two-Way Trade Reports 4000000
UNCROSS_PRICE ϕ	-24	PRICE	Uncrossing price of most recent suspension of trading.
MAX_PORD	-25	INTEGER	Maximum Principal order size.
MAX_AORD	-26	INTEGER	Maximum agent order size
MIN_QUOTE	-27	INTEGER	Minimum Quote size.
MAX_QUOTE	-28	INTEGER	Maximum Quote size.
PERIOD_NAME	-29	ALPHANUMERIC	Period code of current period
INST_TYPE	-30	INTEGER	Type of the instrument 1 = Domestic Equity 2 = British Gilts 7 = Depository Receipts 9 = International Equity 10 = Equity Warrant 11 = Rights 12 = Allotment Letters 13 = Bulldogs 14 = Foreign Bonds 15 = Debentures 16 = Loan Stock 17 = Convertibles 18 = Zero Coupon Bonds 19 = Gilt Warrants 20 = Medium Term Loan 21 = Bonds 22 = Preference Shares

ACRONYM	FID	Field Type	Description
			23 = Package Units 24 = Covered Warrants 25 = Miscellaneous Warrants 26 = Portfolio Notification 27 = Auto Input Facility 78 = UK Traded Dutch Stock
TRADE_TYPE	-31	INTEGER	Attributes of most recent trade Bitmask (in Hex) Ordinary 1 Cross 2 Broker to Broker 4 Market Maker to Market Maker 8 Not to Mark 10 Block Trade 20 NonProtected Portfolio 40 Protected Portfolio 80 Result of Exercising Option 100 Riskless Principal 200 SI Trade 400 Risk Trade 800 NonRisk Trade 1000 Automatic Execution 2000 Suspected BUY Trade 4000 Protection Applied 8000 Average Price 10000 Correction 20000 Bargain Conditions Apply 40000 Late Reported Trade 80000 Currency Conversion 100000 Significant Trade 200000 Worked Principle Trade 400000 Single Protected Trade 800000 Negotiated Trade 1000000 Overnight trade 2000000 Uncrossing Trade 4000000 SEAQ Trade 8000000 Suspected SELL Trade 10000000 Virt-x 20000000 OTC Trade 40000000 SI trade 80000000
ASK_NET_CH ϕ	-32	PRICE	Difference between current ASK and last close price
MAX_ORDER_DAYS	-33	INTEGER	Maximum number of permitted days that an order may be valid for when entered.

ACRONYM	FID	Field Type	Description
UPDATE_TIME	-34	TIME-SECONDS	Time the update was issued.
TRADE_TYPE_2 ϕ	-35	INTEGER	Attributes of most recent trade Bitmask (From TRADE_TYPE) *
TRADE_TYPE_3 ϕ	-36	INTEGER	Attributes of most recent trade Bitmask (From TRADE_TYPE_2) *
TRADE_TYPE_4 ϕ	-37	INTEGER	Attributes of most recent trade Bitmask (From TRADE_TYPE_3) *
TRADE_TYPE_5 ϕ	-38	INTEGER	Attributes of most recent trade Bitmask (From TRADE_TYPE_4) *
UNCROSS_TIME ϕ	-39	TIME	Time that the most recent uncrossing price was received.
UNCROSS_VOL ϕ	-40	INTEGER	Executed volume of most recent suspension of trading.
SUSPENSION_PRICE ϕ	-49	PRICE	Mid Price in force at time of suspension (Only set if stock is suspended).
MID_HIGH	-51	PRICE	Highest price reached during Firm market hours
MID_LOW	-52	PRICE	Lowest price reached during Firm market hours
MID_LOW_TIME ϕ	-53	TIME-SECONDS	Time that the lowest price was reached.
MID_HIGH_TIME ϕ	-54	TIME-SECONDS	Time that the highest price was reached.
MID_TIME ϕ	-55	TIME-SECONDS	Time that the current price value was set.
BID_PCT_CHG ϕ	-56	PRICE	Percentage change in bid price over previous close value.
ASK_PCT_CHG ϕ	-57	PRICE	Percentage change in offer price over previous close value.
MID_PCT_CHG ϕ	-58	PRICE	Percentage change in price over previous close value.
VWAP_ALLTRD	-59	PRICE	Volume Weighted Average Price of ALL trades made today.
VWAP_AUTOTRD	-60	PRICE	Volume Weighted Average Price of automatically executed Trades.
MID_TICK_1 ϕ	-61	ALPHANUMERIC	Movement of current price over previous value = + or –
TRDTIM_2 ϕ	-72	TIME *	Time of 2nd Most Recent Trade *
TRDTIM_3 ϕ	-73	TIME *	Time of 3rd Most Recent Trade *
TRDTIM_4 ϕ	-74	TIME *	Time of 4th Most Recent Trade *
TRDTIM_5 ϕ	-75	TIME *	Time of 5th Most Recent Trade *
TRADE_DATE_2 ϕ	-76	DATE *	Date of 2nd Most Recent Trade *
TRADE_DATE_3 ϕ	-77	DATE *	Date of 3rd Most Recent Trade *

ACRONYM	FID	Field Type	Description
TRADE_DATE_4 ϕ	-78	DATE *	Date of 4th Most Recent Trade *
TRADE_DATE_5 ϕ	-79	DATE *	Date of 5th Most Recent Trade *
FIRST_AUC_PRICE ϕ	-80	PRICE	Execution price of first scheduled auction.
FIRST_AUC_TIME ϕ	-81	TIME	Time that the auction price was received.
FIRST_AUC_VOL ϕ	-82	INTEGER	Executed volume of first scheduled auction.
THIRD_AUC_PRICE ϕ	-83	PRICE	Execution price of the third scheduled auction.
THIRD_AUC_TIME ϕ	-84	TIME	Time that the auction price was received
THIRD_AUC_VOL ϕ	-85	INTEGER	Executed volume of the third scheduled auction.
LAST_AUC_PRICE ϕ	-86	PRICE	Execution price of the last scheduled auction
LAST_AUC_TIME ϕ	-87	TIME	Time that the auction price was received.
LAST_AUC_VOL ϕ	-88	INTEGER	Executed volume of the last scheduled auction.
SECOND_AUC_PRICE ϕ	-91	PRICE	Execution price of the second scheduled auction.
SECOND_AUC_TIME ϕ	-92	TIME	Time that the auction price was received.
SECOND_AUC_VOL ϕ	-93	INTEGER	Executed volume of the second scheduled auction.
TIMEZONE	-97	ENUMERATED	Value taken from list above.
SOLD_VOL	-98	INTEGER	Total volume of shares estimated as sold today.
BOUGHT_VOL	-99	INTEGER	Total volume of shares estimated as bought today.
TRADE_ID	-108	STRING	Exchange allocated trade identifier for most recent trade.
SUSPEND_DATE	-114	DATE	Date of most recent security suspension.
SUSPEND_TIME	-115	TIME	Time of most recent security suspension
PERIOD_END_TIME	-118	TIME	Time that the current period is scheduled to end. This may not be strictly adhered to, due to randomising of period ends at the exchange. This means that any period may end some seconds after the published time.
YEST_CLOSE_BID	-119	PRICE	BID price at yesterday's close. This does not update to reflect the new close for today.
YEST_CLOSE_ASK	-120	PRICE	ASK price at yesterday's close. This does not update to reflect the new close for

ACRONYM	FID	Field Type	Description
			today.
YEST_CLOSE_MID	-121	PRICE	Official price at last close. This does not update to reflect the new close for today.
COVER_RATIO	-122	INTEGER	If a covered warrant, this indicates the number of warrants necessary to convert into a single share.
ALT_EXCHANGE_1	-125	INTEGER	If this line of stock is traded on more than 1 exchange, this will contain the instrument code on another exchange.
COUPON_RATE	-129	PRICE	The annual interest the bond pays.
FIRST_INT_PAYDATE	-131	DATE	The first interest payment date (Date of Next payment).
XDIV_DATE	-133	DATE	Date of next ex-dividend event
ACCRUED_INTEREST	-136	PRICE	The accrued interest is the value of elapsed days in price terms.
COUPON_DAYS	-134	INTEGER	Days in the coupon period are the total number of days between the previous interest date and the next interest payment.
ACCRUED_DAYS	-135	INTEGER	The price at which bonds are bought and sold does not include the interest that has accrued. Bonds accrue interest on a daily basis, and when the bond is bought or sold the value of the accrued interest is then added on. The accrued days contains the number of days that have elapsed since the last coupon payment. The accrued days are negative during the XD period.
EX2_TRDPRC_1 ϕ	-173	PRICE	Most Recent Trade Price (exchange 2)
EX2_TRDPRC_2 ϕ	-174	PRICE	2nd Most Recent Trade Price (exchange 2)
EX2_TRDPRC_3 ϕ	-175	PRICE	3rd Most Recent Trade Price (exchange 2)
EX2_TRDPRC_4 ϕ	-176	PRICE	4th Most Recent Trade Price (exchange 2)
EX2_TRDPRC_5 ϕ	-177	PRICE	5th Most Recent Trade Price (exchange 2)
EX2_TRADE_DATE ϕ	-178	DATE	Date of Most recent Trade (exchange 2)
EX2_TRADE_DATE _2 ϕ	-179	DATE	Date of 2nd Most recent Trade (exchange 2)
EX2_TRADE_DATE _3 ϕ	-180	DATE	Date of 3rd Most recent Trade (exchange 2)
EX2_TRADE_DATE _4 ϕ	-181	DATE	Date of 4th Most recent Trade (exchange 2)
EX2_TRADE_DATE _5 ϕ	-182	DATE	Date of 5th Most recent Trade (exchange 2)

ACRONYM	FID	Field Type	Description
EX2_TRDTIM_1 ϕ	-183	TIME	Time of Most Recent Trade (exchange 2)
EX2_TRDTIM_2 ϕ	-184	TIME	Time of 2nd Most Recent Trade (exchange 2)
EX2_TRDTIM_3 ϕ	-185	TIME	Time of 3rd Most Recent Trade (exchange 2)
EX2_TRDTIM_4 ϕ	-186	TIME	Time of 4th Most Recent Trade (exchange 2)
EX2_TRDTIM_5 ϕ	-187	TIME	Time of 5th Most Recent Trade (exchange 2)
EX2_DEALT_VL1 ϕ	-188	INTEGER	Volume of most recent Trade (exchange 2)
EX2_DEALT_VL2 ϕ	-189	INTEGER	Volume of 2nd most recent Trade (exchange 2)
EX2_DEALT_VL3 ϕ	-190	INTEGER	Volume of 3rd most recent Trade (exchange 2)
EX2_DEALT_VL4 ϕ	-191	INTEGER	Volume of 4th most recent Trade (exchange 2)
EX2_DEALT_VL5 ϕ	-192	INTEGER	Volume of 5th most recent Trade (exchange 2)
EX2_VOL_TP1 ϕ	-193	* ALPHANUMERIC	Type of most recent trade, as displayable character string (exchange 2)
EX2_VOL_TP2 ϕ	-194	* ALPHANUMERIC	Type of 2nd most recent trade, as displayable character string (exchange 2)
EX2_VOL_TP3 ϕ	-195	* ALPHANUMERIC	Type of 3rd most recent trade, as displayable character string (exchange 2)
EX2_VOL_TP4 ϕ	-196	* ALPHANUMERIC	Type of 4th most recent trade, as displayable character string (exchange 2)
EX2_VOL_TP5 ϕ	-197	* ALPHANUMERIC	Type of 5th most recent trade, as displayable character string (exchange 2)
EX2_TRADE_TYPE_1 ϕ	-198	INTEGER	Attributes of most recent trade Bitmask (From TRADE_TYPE) (exchange 2) *
EX2_TRADE_TYPE_2 ϕ	-199	INTEGER	Attributes of 2nd most recent trade Bitmask (From TRADE_TYPE) (exchange 2) *
EX2_TRADE_TYPE_3 ϕ	-200	INTEGER	Attributes of 3rd most recent trade Bitmask (From TRADE_TYPE) (exchange 2) *
EX2_TRADE_TYPE_4 ϕ	-201	INTEGER	Attributes of 4th most recent trade Bitmask (From TRADE_TYPE) (exchange 2) *
EX2_TRADE_TYPE_5 ϕ	-202	INTEGER	Attributes of 5th most recent trade Bitmask (From TRADE_TYPE) (exchange 2) *
EX2_TRADE_ID	-203	STRING	Exchange 2 allocated trade identifier for most recent trade.
EX2_ACVOL_1	-204	INTEGER	Today's total trading volume (exchange 2)
EX2_NUM_TRADES	-205	INTEGER	Number of Trades (exchange 2)

ACRONYM	FID	Field Type	Description
EX2_DAY_TURNOVER	-206	PRICE	Total value of all trades reported today (exchange 2)
EX2_HIST_VOL	-207	INTEGER	Previous trading day's Accumulated Volume (exchange 2)
EX2_VWAP_ALLTRD	-208	PRICE	Volume Weighted Average Price of ALL trades made today (exchange 2)
EX2_SOLD_VOL	-209	INTEGER	Total volume of shares estimated as sold today (exchange 2)
EX2_BOUGHT_VOL	-210	INTEGER	Total volume of shares estimated as bought today (exchange 2)
EX2_TRD_HIGH	-211	PRICE	Highest trade price today (exchange 2)
EX2_TRD_LOW	-212	PRICE	Lowest Trade price today (exchange 2)
EX2_TRD_TICK_1	-213	ALPHANUMERIC	Movement of current TRADE price over previous value = + or – (exchange 2)
TICKSIZEMATRIX_TS_1	-260	PRICE	Minimum division of a valid price for price within tick size range.
TICKSIZEMATRIX_UB_1	-261	PRICE	Upper limit(price) for tick size range.
TICKSIZEMATRIX_LB_1	-262	PRICE	Lower limit(price) for tick size range.
TICKSIZEMATRIX_TS_2	-263	PRICE	Minimum division of a valid price for price within tick size range.
TICKSIZEMATRIX_UB_2	-264	PRICE	Upper limit(price) for tick size range.
TICKSIZEMATRIX_LB_2	-265	PRICE	Lower limit(price) for tick size range.
TICKSIZEMATRIX_TS_3	-266	PRICE	Minimum division of a valid price for price within tick size range.
TICKSIZEMATRIX_UB_3	-267	PRICE	Upper limit(price) for tick size range.
TICKSIZEMATRIX_LB_3	-268	PRICE	Lower limit(price) for tick size range.
TICKSIZEMATRIX_TS_4	-269	PRICE	Minimum division of a valid price for price within tick size range.
TICKSIZEMATRIX_UB_4	-270	PRICE	Upper limit(price) for tick size range.
TICKSIZEMATRIX_LB_4	-271	PRICE	Lower limit(price) for tick size range.
TICKSIZEMATRIX_TS_5	-272	PRICE	Minimum division of a valid price for price within tick size range.
TICKSIZEMATRIX_UB_5	-273	PRICE	Upper limit(price) for tick size range.
TICKSIZEMATRIX_LB_5	-274	PRICE	Lower limit(price) for tick size range.

* Ripple FIDs - See earlier discussion.

PARTICIPANT

This record is used to convey data on Participants where available. The FIDs listed are those which are possible within this record.

RECORD_NAME: PARTICIPANT

RECORD_TYPE: -2

The Instrument name in this record is the Participant code. This is the 11 character ISO 9362, Banker Identifier Code. Wild card selection of all Participants is possible by requesting a participant code of all Asterisks.

ACRONYM	FID	Field Type	Description
RECORDTYPE	259	INTEGER	Replication of the field list value.
UPDATE_TIME	-34	TIME-SECONDS	Time the update was issued
PART_DISPLAY	-41	ALPHANUMERIC	The four character Participant Display Mnemonic.
PART_NAME	-42	ALPHANUMERIC	The Name (in formatted text) of the participant
PART_TYPE	-43	ALPHANUMERIC	The Type of participant defined. Permissible values are: BROK - Broker/Dealer IDB - Inter-Dealer Broker CUST - Custodian SETT - Settlement Agent SUBS - Subscriber Only BORR - Stock Borrowing Agent FUND - Fund manager DUMM - Dummy Participant DTS - Dutch Trading Subscriber
PART_PHONE	-44	ALPHANUMERIC	The Main telephone number of the participant.

LEVEL2

This record is used to convey Level 2 quote, order and summary data. The FIDs listed are those that are supported by this implementation. Not all FIDs are available on all securities, in which case unavailable FIDs will be omitted. FIDs that may not be present are indicated by the ϕ symbol. Registering for level-2 information will result in a number of records being returned. Firstly there will be the level 2 summary information record, which is actually the record requested. However, a request for the level-2 information will also commence a stream of other records, namely the quote or order records for the security.

The quote or order records contain the information specific to a single Quote or a single Order, depending upon the security. Each quote or order has its own identification key, which uniquely defines it across the entire database. Each record will be subject to updates as the information changes. However, for a given security, a single RTL is used, so that the level 2 summary information, the quotes and the orders for a given security will appear as a single stream of records, albeit of different record types.

The request key is formatted in a manner similar to requesting Level1 information, with the addition of ":L2" on the end of the request string. The following example illustrates the code used to identify the Level2 information for ordinary shares in 'Barclays Bank PLC'.

BARC.L:L2

Wild cards are permitted to enable quicker requesting of many data instruments. Typically, the exchange code is then used as a prefix to the wildcard. Wildcards permitted are – exchange identifiers followed by any four-character requests are interpreted as a request for L2 data on all securities within the requested Market Segment. A request for four asterisks (e.g. L.****) is interpreted as a request for all securities in that exchange

The records returned will depend upon the type of operations permitted with the security. Firstly a Level 2 status record will ALWAYS be returned. This is named the same name as the request made, e.g.

Whereas basic Level2 summary information for Barclays would be referenced as:

BARC.L:L2

The naming of quote or order records returned in response will be the Level2 security identifier, with a unique order or quote identification appended. For example a quote by Merrill Lynch on Radamec ordinary shares will be:

RDM.L:L2:MLSB Where MLSB is the identification code for Merrill Lynch.

An order on the order book for Barclays ordinary shares might be:

BARC.L:L2:AA9Q7RTY76 Where the code appended is a unique identification of the specific order.

RECORD_NAME: LEVEL2

RECORD_TYPE: -3

ACRONYM	FID	Field Type	Description
RECORDTYPE	259	INTEGER	Replication of the field list number.
NO_BIDMMKR ϕ	291	INTEGER	The number of market makers making the best bid price.
NO_ASKMMKR ϕ	292	INTEGER	The number of market makers making the best ask price.
BID_MMID1 ϕ	293	ALPHANUMERIC	The ID of the market maker quoting the best bid price.
BID_MMID2 ϕ	294	ALPHANUMERIC	The ID of the 2nd market maker quoting the best bid price.
BID_MMID3 ϕ	295	ALPHANUMERIC	The ID of the 3rd market maker quoting the best bid price.
ASK_MMID1 ϕ	296	ALPHANUMERIC	The ID of the market maker quoting the best ask price.
ASK_MMID2 ϕ	297	ALPHANUMERIC	The ID of the 2nd market maker quoting the best ask price.
ASK_MMID3 ϕ	298	ALPHANUMERIC	The ID of the 3rd market maker quoting the best ask price.
BEST_BSIZ1 ϕ	730	INTEGER	The bid size being quoted by the best Market Maker .
BEST_BSIZ2 ϕ	731	INTEGER	The bid size being quoted by the 2nd best Market Maker.
BEST_BSIZ3 ϕ	732	INTEGER	The bid size being quoted by the 3rd best Market Maker.
BEST_ASIZ1 ϕ	735	INTEGER	The ask size being quoted by the best Market Maker.
BEST_ASIZ2 ϕ	736	INTEGER	The ask size being quoted by the 2nd best Market Maker.
BEST_ASIZ3 ϕ	737	INTEGER	The ask size being quoted by the 3rd best Market Maker.
UPDATE_TIME	-34	TIME-SECONDS	Time the update was issued
BID_2 ϕ	-64	PRICE	2nd best bid price on the order book (Orders Only)
ASK_2 ϕ	-65	PRICE	2nd best ask price on the order book (Orders Only)
NO_BUYERS_2 ϕ	-66	INTEGER	The number of buy orders available at the 2nd best bid price. (Orders Only)
NO_SELLERS_2 ϕ	-67	INTEGER	The number of sell orders available at the 2nd best ask price. (Orders Only)
QTY_BUY_2 ϕ	-68	INTEGER	Aggregate volume available to buy at the 2nd best bid price (Orders Only)
QTY_SELL_2 ϕ	-69	INTEGER	Aggregate volume available to sell at the 2nd best ask price (Orders Only)
TIMEZONE	-97	ENUMERATED	Value from list above

RECORD_NAME: QUOTE
RECORD_TYPE: -4

ACRONYM	FID	Field Type	Description
BID	22	PRICE	Bid Price
ASK	25	PRICE	Offer Price
BIDSIZE	30	INTEGER	Initial Bid Volume – for non-executable quotes this is the quote bid volume
ASKSIZE	31	INTEGER	Initial Offer Volume – for non-executable quotes this is the quote offer volume
BID_TICK_1	115	ALPHANUMERIC	Movement of Bid price over previous Value, =, + or -
MKT_MKR_ID	212	ALPHANUMERIC	Participant ID of Market Maker
RECORDTYPE	259	INTEGER	Replication of the field list number.
BID_TIME	266	TIME_SECONDS	Time that Bid was changed
ASK_TIME	267	TIME_SECONDS	Time that offer was changed
ASK_VOLUME	289	INTEGER	Amount of stock available for execution at the ASK Price
ASK_TICK_1	1629	ALPHANUMERIC	Movement of ASK price over previous Value, =, + or -
BID_VOLUME	-45	INTEGER	Amount of stock available for execution at the BID price.
QUOTE_FLAGS	-47	INTEGER	Bit Mask of options relating to the record (In Hex) FIRM QUOTE 1 IND QUOTE 2 OPEN 4 NO QUOTE 8 UNABLE TO QUOTE 10 SUSPENDED 20 FORCED SPREAD 40 FORCED PRICE 80
TIMEZONE	-97	ENUMERATED	Value taken from previous list

RECORD_NAME: ORDER
RECORD_TYPE: -5

The Order record will have a number of the following fields not provided – since only one price is relevant either the bid or the offer price, not both.

ACRONYM	FID	Field Type	Description
BID	22	PRICE	Bid Price
ASK	25	PRICE	Offer Price
BIDSIZE	30	INTEGER	Initial Bid Volume – not the amount necessarily currently available.
ASKSIZE	31	INTEGER	Initial Offer Volume - not the amount necessarily currently available.
MKT_MKR_ID	212	ALPHANUMERIC	Participant ID of Market Maker. (May not be populated)
RECORDTYPE	259	INTEGER	Replication of the field list number.
ASK_VOLUME	289	INTEGER	Amount of stock currently available on this order at the ASK Price
UPDATE_TIME	-34	TIME-SECONDS	Time of the last update to the order
BID_VOLUME	-45	INTEGER	Amount of stock currently available on this order at the BID price.
ORDER_CODE	-46	ALPHANUMERIC	Unique identification of the Order
ORDER_DATE	-62	DATE	Date of creation of the Order
ORDER_TIME	-63	TIME-SECONDS	Time of creation of the Order
ORDER_FLAGS	-48	INTEGER	Bit Mask of options relating to the record (In Hex) FIRM EXPOSURE ORDER 1 IND EXPOSURE ORDER 2 LIMIT ORDER 4 COMM. PRINC. ORDER 8 AGENT DEAL 10 PRINCIPAL DEAL 20 SINGLE FILL 40 MARKET ORDER 80
TIMEZONE	-97	ENUMERATED	Value taken from previous list.
ORDER RANKING	-123	INTEGER	If the price of 2 orders is identical, and the date/time of creation is identical also – this field can be used to rank the orders by execution sequence. The lowest rank of identical orders will be executed first, and must be positioned higher up the visual display of the order book.
UPDATE_DATE	-124	DATE	Date of the last update to the order

MARKET_INDEX

This record is used to convey data on the Index valuations. The FIDs listed are those that are permissible within this record.

RECORD_NAME: MARKET_INDEX

RECORD_TYPE: 77

The Instrument name in this record is comprised by the following mechanism :

IDX : IDENTIFIER

The Prefix "IDX:" is required, and identifies the requested item as an Index. All following data is interpreted as the Index identifier.

A wild card request for all indices is made by replacing the index identifier with 4 asterisks, i.e.

"IDX:****"

ACRONYM	FID	Field Type	Description
PERMISSION	1	ALPHANUMERIC	Permission Name required for the Index
DSPLY_NAME	3	ALPHANUMERIC	Display Name of the Index
EXCH_ID	4	ENUMERATED	Exchange source of the Index
NETCHNG_1	11	PRICE	Change in value
HIGH_1	12	PRICE	Highest value today
LOW_1	13	PRICE	Lowest Value Today
OPEN_PRC ϕ	19	PRICE	Today's Opening price
HST_CLOSE	21	PRICE	Most recent closing price.
OFFCL_CODE	78	ALPHANUMERIC	Official Identification code
YRHIGH ϕ	90	PRICE	Highest price achieved preceding year
YRLOW ϕ	91	DATE	Lowest price achieved in preceding year
RECORDTYPE	259	INTEGER	Replication of the field list identifier.
HIGH_TIME	286	TIME-SECONDS	Time that the highest Index value was reached.
LOW_TIME	287	TIME-SECONDS	Time that the lowest Index value was reached.
YRHIGHDAT	350	DATE	Date that the highest price was reached in the last year.
YRLOWDAT	351	DATE	Date that the lowest price was reached in the last year.
GEN_VAL1	996	PRICE	General (Current) Value

ACRONYM	FID	Field Type	Description
EXCHTIM	1067	TIME-SECONDS	Exchange Time
INDEX STATUS	-50	INTEGER	Value of Status: Live 1, Closed 2, Held 3, PRE_MQP 4, POST_MQP 5, Part 6, Indicative 7
TIMEZONE	-97	ENUMERATED	Value varies, and is taken from the section TIMEZONES.

FOREX_RATES

This record is used to convey Foreign exchange price data, which is cross rates between one currency and another. The FIDs listed are those that are supported by this implementation. The currencies are identified by the two ISO currency codes, separated by the forward slash notation.

The following example illustrates the code used to identify the currency pair.

USD/GBP

This is the instrument identifier for the Spot rate between the two currencies, the amount of the second currency that corresponds to 1 unit of the first currency.

A request for two asterisks separated by the forward slash (e.g. */*) is interpreted as a request for all available currency rates.

The times provided are the time in London, at the point at which the price was made.

RECORD_NAME: FOREX_RATES

RECORD_TYPE: -6

ACRONYM	FID	Field Type	Description
OPEN_PRC	19	PRICE	Today's Opening price
BID	22	PRICE	Current BID price on security
ASK	25	PRICE	Current ASK price on security
MID_CLOSE	36	PRICE	Last Closing price
CLOSE_BID	60	PRICE	BID price at last close
CLOSE_ASK	61	PRICE	ASK price at last close
CLOSE_DATE	79	DATE	Date of closing prices
YRHIGH ϕ	90	PRICE	Highest price achieved preceding year
YRLOW ϕ	91	DATE	Lowest price achieved in preceding year
BID_NET_CH	114	PRICE	Difference between current BID and last close price
BID_TICK_1	115	ALPHANUMERIC	Movement of current BID price over previous value = + or –
MID_PRICE	134	PRICE	Current price of security
MID_NET_CH	135	PRICE	Difference between current price and last close price
RECORDTYPE	259	INTEGER	Replication of the field list number.
OPEN_TIME	285	TIME-SECONDS	Time that the Open price was taken.

ACRONYM	FID	Field Type	Description
YRHIGHDAT	350	DATE	Date that the highest price was reached in the last year.
YRLOWDAT	351	DATE	Date that the lowest price was reached in the last year.
ASK_TICK_1 ϕ	1629	ALPHANUMERIC	Movement of current ASK price over previous value. Value = + or –
LONG_NAME	-10	ALPHANUMERIC	Security Long Name
ASK_NET_CH	-32	PRICE	Difference between current ASK and last close price
UPDATE_TIME	-34	TIME-SECONDS	Time the update was issued.
MID_HIGH	-51	PRICE	Highest price reached during Firm market hours
MID_LOW	-52	PRICE	Lowest price reached during Firm market ours
MID_LOW_TIME	-53	TIME-SECONDS	Time that the lowest price was reached.
MID_HIGH_TIME	-54	TIME-SECONDS	Time that the highest price was reached.
MID_TIME	-55	TIME-SECONDS	Time that the current price value was set.
BID_PCT_CHG	-56	PRICE	Percentage change in bid price over previous close value.
ASK_PCT_CHG	-57	PRICE	Percentage change in offer price over previous close value.
MID_PCT_CHG	-58	PRICE	Percentage change in price over previous close value.
MID_TICK_1	-61	ALPHANUMERIC	Movement of current price over previous value = + or –
TIMEZONE	-97	ENUMERATED	Value is always 398 (UTC)

FUTURES AND OPTIONS

This record is used to convey Level 1 price data on a range of futures and options from LIFFE. Not all FIDs are available on all records, since it depends upon the type of future or option. Whilst it is possible to request an instrument individually, it is unlikely that this will happen often owing to the sometimes cryptic naming of options and futures. Instrument naming follows a simple pattern matching. The exchange identifier will be appended on to the instrument name, e.g. .LF for the London Financial Futures and Options Exchange. A left part substring may be used, and then wildcarded. As in other instruments, the exchange identifier is placed at the start of the string for Wildcard requests, anything else is determined to be a request for a specific instrument.

For example

LF.**

Where an asterisk refers to any number of characters will request all instruments from LIFFE.

LF.BARC.L*

Will request all options for Barclays Bank on LIFFE.

When using a wildcard request it is important to always specify at least three characters for the actual instrument – even if it is 3 asterisks.

RECORD_TYPE: 91

The FID list that is used for any future and option records is shown below.

ACRONYM	FID	Field Type	Description
TRDPRC_1 ϕ	6	PRICE	Most Recent Trade Price
TRDPRC_2 ϕ	7	* PRICE	2nd Most Recent Trade Price
TRDPRC_3 ϕ	8	* PRICE	3rd Most Recent Trade Price
TRDPRC_4 ϕ	9	* PRICE	4th Most Recent Trade Price
TRDPRC_5 ϕ	10	* PRICE	5th Most Recent Trade Price
TRD_HIGH	12	PRICE	Highest trade price today
TRD_LOW	13	PRICE	Lowest Trade price today
TRD_TICK_1	14	ALPHANUMERIC	Movement of current TRADE price over previous value = + or –
TRADE_DATE ϕ	16	DATE	Date of Most recent Trade
TRDTIM_1 ϕ	18	TIME	Time of Most Recent Trade

ACRONYM	FID	Field Type	Description
OPEN_PRC ϕ	19	PRICE	Today's Opening price
BID ϕ	22	PRICE	Current BID price
ASK ϕ	25	PRICE	Current ASK price
BIDSIZE ϕ	30	INTEGER	Volume available at current BID
ASKSIZE ϕ	31	INTEGER	Volume available at current ASK
ACVOL_1	32	INTEGER	Today's total trading volume
SETTLE	36	PRICE	Last settle or official closing price
LOTSZUNITS	54	INTEGER	Lot size units. Defines physical units in which a contract trades.
OPEN_BID	57	PRICE	BID price at time of open
OPEN_ASK	58	PRICE	ASK price at time of open
CLOSE_BID	60	PRICE	BID price at last close
CLOSE_ASK	61	PRICE	ASK price at last close
OPEN_INTEREST	64	INTEGER	Open interest. The total number of option or futures contracts that have not been closed, or in the case of commodities, liquidated or offset by delivery.
OPINT_NETCHG	65	INTEGER	Net change in open interest over previous open interest.
STRIKE_PRC	66	PRICE	The price at which the option is exercisable.
EXPIRY_DATE	67	DATE	The date on which the option, future or warrant expires.
CLOSE_DATE	79	DATE	Date of closing/settle prices
PUTCALLIND	109	ALPHANUMERIC	PUT/CALL Indicator value = P or C
BID_NET_CH ϕ	114	PRICE	Difference between current BID and last close bid price
BID_TICK_1 ϕ	115	ALPHANUMERIC	Movement of current BID price over previous value = + or –
CURR_PRICE ϕ	134	PRICE	Current price defined by trading activity.
NET_PRC_CH ϕ	135	PRICE	Difference between current price and last close/settle price
RECORDTYPE	259	INTEGER	Replication of the field list number.
OPEN_TIME	285	TIME-SECONDS	Time that the Open price was taken.

ACRONYM	FID	Field Type	Description
HIGH_TIME	286	TIME-SECONDS	Time that the highest Trade price was reached.
LOW_TIME	287	TIME-SECONDS	Time that the lowest Trade price was reached.
DEALT_VL1 ϕ	791	INTEGER	Volume of most recent Trade
DEALT_VL2 ϕ	792	* INTEGER	Volume of 2nd most recent Trade
DEALT_VL3 ϕ	793	* INTEGER	Volume of 3rd most recent Trade
DEALT_VL4 ϕ	794	* INTEGER	Volume of 4th most recent Trade
DEALT_VL5 ϕ	795	* INTEGER	Volume of 5th most recent Trade
UNDERLYING_CODE	1026	ALPHANUMERIC	The security code of the underlying security or instrument.
ASK_TICK_1 ϕ	1629	ALPHANUMERIC	Movement of current ASK price over previous value. Value = + or –
LONG_NAME	-10	ALPHANUMERIC	Security Long Name
INST_TYPE	-30	INTEGER	Type of the instrument 29 Bond Future 30 Euro LIBOR financed Bond future 31 Euro Bond future 32 Index future 33 Short term interest rate future 34 Stock option 35 Index option 36 Bond future option 37 Euro LIBOR financed bond future option 38 Euro bond future option 39 Index future option 40 Short term interest rate future option 42 Short term interest rate option 46 Universal stock future
ASK_NET_CH ϕ	-32	PRICE	Difference between current ASK and last close price
UPDATE_TIME	-34	TIME-SECONDS	Time the update was issued.
PRICE_HIGH	-51	PRICE	Highest price reached during Firm market hours
PRICE_LOW	-52	PRICE	Lowest price reached during Firm market hours
PRICE_LOW_TIME ϕ	-53	TIME-SECONDS	Time that the lowest price was reached.
PRICE_HIGH_TIME ϕ	-54	TIME-SECONDS	Time that the highest price was reached.

ACRONYM	FID	Field Type	Description
PRICE_TIME ϕ	-55	TIME-SECONDS	Time that the current price value was set.
BID_PCT_CHG ϕ	-56	PRICE	Percentage change in bid price over previous close value.
ASK_PCT_CHG ϕ	-57	PRICE	Percentage change in offer price over previous close value.
PRICE_PCT_CHG ϕ	-58	PRICE	Percentage change in price over previous close value.
VWAP_ALLTRD	-59	PRICE	Volume Weighted Average Price of ALL trades made today.
PRICE_TICK_1 ϕ	-61	ALPHANUMERIC	Movement of current price over previous value = + or –
TRDTIM_2 ϕ	-72	TIME *	Time of 2nd Most Recent Trade *
TRDTIM_3 ϕ	-73	TIME *	Time of 3rd Most Recent Trade *
TRDTIM_4 ϕ	-74	TIME *	Time of 4th Most Recent Trade *
TRDTIM_5 ϕ	-75	TIME *	Time of 5th Most Recent Trade *
TRADE_DATE_2 ϕ	-76	DATE *	Date of 2nd Most Recent Trade *
TRADE_DATE_3 ϕ	-77	DATE *	Date of 3rd Most Recent Trade *
TRADE_DATE_4 ϕ	-78	DATE *	Date of 4th Most Recent Trade *
TRADE_DATE_5 ϕ	-79	DATE *	Date of 5th Most Recent Trade *
THEORETICAL_BID	-89	PRICE	Theoretical price calculated from the price of the underlying security, volatility, duration to expiry etc.
THEORETICAL_ASK	-90	PRICE	Theoretical price calculated from the price of the underlying security, volatility, duration to expiry etc.
TIMEZONE	-97	ENUMERATED	Value taken from previously declared table.

* Ripple Fids - See earlier discussion.

NEWS_HEADLINES

This record is used to convey news headlines to the client. There is no security specific registration required by the client. The registration once carried out, enables the client for all news headlines. There will always be only a single registration necessary. It is not possible to snapshot the news headlines, as this would have no meaning. The news headlines only makes sense as an updating service.

The object required for news registration is:

ALL_NEWS

A registration for this object will provide no initial snapshot

RECORD_NAME: NEWS_HEADLINES
RECORD_TYPE: -7

ACRONYM	FID	Field Type	Description
RECORDTYPE	259	INTEGER	Replication of the field list number.
PREVIOUS_TAKE	261	ALPHANUMERIC	Story Identification of the previous take of this story. This unique identification indicates that there was a previous take of this story.
STORY_ID	715	ALPHANUMERIC	Story Identification. This unique identification allows a complete identification of this news story.
ATTRIBUTION	725	ALPHANUMERIC	Identification of the news provider. 5MK = LSE market notifications AFX = AFX News services
AUTHOR	726	ALPHANUMERIC	Identification of the creator or originator of the news article. If private news this will be the company closed user group to which it belongs.
PRODUCT_CODE	749	ALPHANUMERIC	The product offered by the news provider. This represents a classification and/or pricing category of the news service provider.
TOPIC_CODE	750	ALPHANUMERIC	Code indicating the Topic of the news story. The code may be one of the following list, though this list is subject to change. AFG Afghanistan AFR Africa (except Egypt) ALB Albania ARG Argentina

ACRONYM	FID	Field Type	Description
			ASI Asia AST Australia AUS Austria BAL Baltic States BAN Bangladesh BEL Belgium BOL Bolivia BOS Bosnia BRA Brazil BRM Burma BRU Brunei Darussalam BUL Bulgaria CAN Canada CBA Cambodia CEN Other Central Americas CHI China CHL Chile CIS Commonwealth of Independent States COL Colombia CRO Croatia CYP Cyprus CZE Czech Republic DEN Denmark FND Finland FRA France GBR United Kingdom GER Germany GRC Greece GUL Gulf States HKG Hong Kong HNG Hungary INA India INO Indonesia IRL Ireland ISL Iceland ITA Italy JPN Japan KOR Korea(South) LAO Laos LIC Liechtenstein LUX Luxembourg MAL Malaysia MEX Mexico MID Middle East/Egypt/Israel/Syria/Lebanon/Jordan

ACRONYM	FID	Field Type	Description
			MLT Malta MNG Mongolia NAF North Africa/Morocco/Tunisia/Algeria NED Netherlands NKO Korea(North) NOR Norway NPL Nepal NZD New Zealand PAC Other Pacific Countries PAK Pakistan PER Peru PHI Philippines PLD Poland POR Portugal ROM Romania RUS Russia SAF South Africa SAM South America SIN Singapore SLK Sri Lanka SLO Slovakia SLV Slovenia SPA Spain SRB Serbia SWE Sweden SWI Switzerland THA Thailand TUR Turkey TWN Taiwan UKR Ukraine USA United States URY Uruguay VEN Venezuela VIE Vietnam AIR aerospace AUT automotive CHM chemicals CMP computers,electronics,avionics CON construction CSM consumer goods ENG engineering FBT food,beverages and tobacco FIN financial services HTH health care INS insurance

ACRONYM	FID	Field Type	Description
			INT internet companies LEI leisure MET metals and mining OIL oil,oil services PAP paper PRO property PUB publishing RET retailing SVS financial and corporate services TEL telecommunications TEX textiles TLE telecommunications equipment TRN transport TRO trading companies TST investment trusts UTI utilities AAG At a Glance Share Guide AGM AGM/EGM statements and meetings ANL Analysis BND bonds, money BNK bankruptcies,receiverships,liquidations BOA board meetings BUS Business News Headlines CAL business calendar/diary features CBK central banks CHK check message CLM contributed data - coloumnists CLO closing market report COM commodities CRU oil,oil products DBT foreign debt,IMF DIR director's shareholdings DIV dividend announcements DRV derivatives ECO macroeconomic stories,OECD reports ERN earnings, profit forecasts EUC European Commission rulings EUE Eastern European rulings EUR European Community FIS fiscal policy, taxes, budgets FIX price fixing FNG financings and investments FOC Focus stories

ACRONYM	FID	Field Type	Description
			FRX foreign exchange FUT futures FWD Forward Diary of Events GEN re-organisations,re-structurings,name changes GLD gold and precious metals GOV government ministries IND indicators IPO new issues ITW Interviews JNV joint ventures KEY full summary LAB strikes, layoffs, suspensions, wages LAT Latin America stories MGT management changes MNA mergers & acquisitions MON monetary policy NAV net asset values NEW general news OPE opening market report ORD new orders OUT Outlooks POL other political news PRD production or sales statistics PRE preview REG government regulatory actions RND Roundup RTG credit ratings SHA Sharestakes SPO AFP sport STA shareholding announcements STB Broker recommendations STF stock market feature movements STK equities STW Stockwatch SUM summaries and roundups SVC service message TEC Technology stocks TRA trade policy TRS trading statements WOR world story
COMPANY_ID	751	ALPHANUMERIC	Related Instrument. Instrument ID of a company affected by the news item. .
HEADLINE	756	ALPHANUMERIC	Headline of the news story.

ACRONYM	FID	Field Type	Description
STORY_TIME	1024	TIME	Time that the story was received.
STORY_DATE	1027	DATE	Date that the story was received.
TIMEZONE	-97	ENUMERATED	Timezone of the source location of the story.
COMPANY_ID_2	-100	ALPHANUMERIC	Related Instrument. Instrument ID of a company affected by the news item. .
COMPANY_ID_3	-101	ALPHANUMERIC	Related Instrument. Instrument ID of a company affected by the news item. .
COMPANY_ID_4	-102	ALPHANUMERIC	Related Instrument. Instrument ID of a company affected by the news item. .
COMPANY_ID_5	-103	ALPHANUMERIC	Related Instrument. Instrument ID of a company affected by the news item. .
NEWS_STATUS	-104	INTEGER	Flags relating to this news headline. This is a mask of options where the bit which is set has the following meaning:- 1 The headline has been truncated. 2 This is a new news headline. If not set this may indicate an update to a previously announced headline. 3 The headline has or will have a full news story associated with it. 4 The associated news story is now available. (This may be set at the point of the headline receipt – or may be re-issued later if there is a delay in obtaining the whole news article. 5 The article has been replaced 6 Headline is marked as deleted 7 Headline text has been updated 8 Article text has been updated 9 Related TIDMs and/or subjects have been updated
TOPIC_CODE_2	-105	ALPHANUMERIC	News topic code taken from the previous list.
TOPIC_CODE_3	-106	ALPHANUMERIC	News topic code taken from the previous list.
TOPIC_CODE_4	-107	ALPHANUMERIC	News topic code taken from the previous list.

ACRONYM	FID	Field Type	Description
COMPANY_LIST	-127	ALPHANUMERIC	Comma-separated list of related companys
SUBJECT_LIST	-128	ALPHANUMERIC	Comma-separated list of related subject codes.