

## **Errata for FIX Specification version 4.1**

### **As of June 30, 1999**

#### **Purpose:**

This document contains a list of minor adjustments to the FIX 4.1 Specification document due to typographical errors or ambiguities. The nature and scope of these adjustments do not introduce new functionality, additional fields, new values for existing fields, or new messages. All of the items specified in this document will be incorporated in the next release of the FIX Protocol. The list of items has been reviewed and approved by the FIX Technical Committee and Steering Committees. Implementers of FIX version 4.1 should refer to this document in conjunction with the FIX 4.1 Specification document to ensure the most consistent implementation and clearest understanding of the FIX protocol.

#### **Outstanding Issues:**

Issues with the FIX 4.1 Specification which have not been addressed by the combination of the FIX 4.1 Specification document or this Errata document, should be brought forward via the FIX web site (<http://www.fixprotocol.org>) discussion pages. It is the responsibility of the FIX Technical Committee to see that outstanding issues are addressed. The FIX Technical Committee is co-chaired by Scott Atwell, American Century ([scott\\_atwell@americancentury.com](mailto:scott_atwell@americancentury.com)) and Sam Johnson, Goldman Sachs ([sam.johnson@gs.com](mailto:sam.johnson@gs.com)).

#### **Proposed Changes document:**

A separate Proposed Changes document will be maintained by the FIX Technical Committee which contains the current list of anticipated changes to the protocol. This document addresses adjustments that introduce new functionality, additional fields, new values for existing fields, new messages, etc. It can be found on the FIX web site (<http://www.fixprotocol.org>).

#### **Minor Adjustments to the Protocol Specification Document:**

<b>Adjusted Date</b>	<b>Section</b>	<b>Item / Adjustment</b>
8/24/1998	Field Reference / Order Messages	<b>[E19980824_1] ExecInst field clarification:</b>  Usage of ExecInst=D (percent of volume) needs to be clarified in the specification. This doesn't mean a specific percentage; rather it is an indicator that the sender doesn't want to be all of the volume on the floor.  Add "(indicates that the sender does not want to be all of the volume on the floor vs. a specific percentage)" to the Field Reference ExecInst field description.
5/4/1999	Field Reference / Order State Matrices	<b>[E19990129_1] ExecType field clarification:</b>  Wording in field reference for ExecType doesn't list the enumerations or say same as OrdStatus. Also issues with "Partially Filled" vs. "Partial Fill" and "Replaced" vs. "Replace"

		<p>semantics for matrices and enumeration names.</p> <p>Add the same list of enumerations from ExecType to OrdStatus in the field reference except OrdStatus will use the term “Partially Filled” and “Replaced” and ExecType will use the term “Partial Fill” and “Replace” although the enumerations will be the same. Ensure that the “Order State Matrices” represent those terms.</p>
5/4/1999	Allocation Message	<p><b>[E19990129_2] MiscFees in Allocation message clarification:</b></p> <p>Specify that within a MiscFees repeating group the MiscFeeType field cannot be repeated.</p> <p>Add “(can only occur once within a MiscFee group)” to the Allocation Message “MiscFeeType” listing.</p>
5/4/1999	Allocation Message	<p><b>[E19990129_3] LastCapacity typo in Allocation message:</b></p> <p>LastCapacity in Execs repeating group in Allocation message should be bolded.</p> <p>Bold LastCapacity in Execs repeating group in Allocation message.</p>
5/4/1999	News and Email Messages	<p><b>[E19990129_4] NoRelatedSym typo (should be not required) for News and Email:</b></p> <p>A typo was introduced in version 4.1 when the field NoRelatedSym was added with status of required to News and Email. Since the body of the repeating group is not required, the number of instances field should not be required. This is consistent with the other messages (such as Allocation) which have had optional repeating groups.</p> <p>Change News and Email message’s “Req’d” column to N for NoRelatedSym.</p>
5/4/1999	Field Reference	<p><b>[E19990129_5] Clarification re: number of decimal places for “price” fields:</b></p> <p>The Field Reference of the spec specifies all of the “price” fields as within the range of “0 – 999999999.9999”, however, the number of decimal places are not limited to four. It is important to note that the value should be specified in decimal format vs. scientific notation. The “Data Types” section in the beginning of the FIX spec specifies that float fields have a “15 significant digit” limit. The number of decimal places used should be a factor of business/market needs and mutual agreement between counterparties.</p> <p>Add “(number of decimal places may vary)” to Field Reference. Add “The number of decimal places used should be a factor of business/market needs and mutual agreement between counterparties” to the “Data Types” section.</p>
5/4/1999	Session	<p><b>[E19990129_6] Clarification re: handling of termination without Logout:</b></p>

		<p>Session termination without receiving a Logout should assume that the counterparty has logged out.</p> <p>Add "Session termination without receiving a Logout should treat the counterparty as logged out" to the "Logout" portion within the "Session Protocol" section.</p>
5/4/1999	Allocation Message	<p><b>[E19990129_7] Adjust the order of fields in the Execs repeating group of the Allocation message.</b></p> <p>FIX version 4.1 attempted to adjust the order of fields within a repeating group if necessary in order to make the first field of a repeating group required if the repeating group is used. This allows a parser to use the presence of that field as a "delimiter" between instances of the repeating group. It was noted that the "Execs" repeating group in the Allocation Message.</p> <p>Change the order of fields in the Allocation Message "Execs" repeating group so that "LastShares" (required if NoExecs &gt; 0) is listed prior to "ExecID" (not required and currently the first field listed).</p>
5/4/1999	Exchange Appendix	<p><b>[E19990129_9] Additional Exchange Code: Tradepoint</b></p> <p>Value should be "TP" (as defined by Reuters).</p> <p>Add to FIX website listing of exchange codes and Appendix C.</p>
5/4/1999	Exchange Appendix	<p><b>[E19990129_10] Additional Exchange Code: Le Nouveau Marche (France)</b></p> <p>Value should be "LN" (as defined by Reuters).</p> <p>Add to FIX website listing of exchange codes and Appendix C.</p>
5/4/1999	Field Reference	<p><b>[E19990129_11] PossResend field clarification:</b></p> <p>The Field Reference description of the "PossResend" field does not list the valid values.</p> <p>Add to "PossResend" field description in the Field Reference: Valid Values: Y= Possible resend N=Original transmission</p>
5/4/1999	Field Reference	<p><b>[E19990129_12] OpenClose field clarification:</b></p> <p>The Field Reference description of the "OpenClose" field does not list the valid values.</p> <p>Add to "OpenClose" field description in the Field Reference: Valid Values: O=Open C=Close</p>
5/4/1999	IOI Message	<p><b>[E19990129_13] IOI message clarification:</b></p> <p>In the description table for the IOI message, property Side (54) is described as "Side of Indication, Valid values: 1=Buy, 2=Sell". If you look at the table of all field definitions, Side (54) has 2 new values, "7=Undisclosed (for IOIs)" and "8=Cross (orders where</p>

		<p>counterparty is an exchange)". The description table for the IOI message is wrong and should say that "7=Undisclosed" is also a valid value (not just buy and sell).</p> <p>Add "7 = Undisclosed (for IOIs)" to "Side" field note in the Indication of Interest Message.</p>
5/4/1999	Message construction	<p><b>[E19990129_14] Message construction clarification:</b></p> <p>Message construction specifically header + body + trailer vs. "any order" needs clarification. Note the "Message Format" section currently states: "The general format of a FIX message is a standard header followed by the message body fields and terminated with a standard trailer", however it also states "Except where noted, fields within a message can be defined in any sequence...Any exceptions are explicitly defined otherwise..." The first statement should apply as a noted exception but needs to be stressed.</p> <p>Add ", and general message format of standard header followed by body followed by standard trailer." to the list of bolded, stated exceptions to fields in any sequence. Add "Note if encryption used, the SecureData field is a header field and thus the body data will appear between the header and trailer."</p>
5/4/1999	Settlement Instructions	<p><b>[E19990129_15] Settlement Instructions message clarification:</b></p> <p>The use of "broker's" in the Field Reference description for tags 176-187 is misleading. The SettlInstSource field specifies whether the instructions provided are the broker's or institution's. If the SettlInstSource = "Institution's Settlement Instructions" then the SecuritySettlAgentAcctNum (tag 179) would represent the Institution's account at the local agent back not the Broker's. To see both sides of the instructions you would have two Settlement Instruction messages with different SettlInstSource values.</p> <p>Change the Field Reference use of the word "broker" to "SettlInstSource" in tags 176-187.</p>
5/4/1999	Standard Header	<p><b>[E19990129_16] Standard Header addressing clarification:</b></p> <p>Examples regarding the use of SenderCompID, TargetCompID, DeliverToCompID, and OnBehalfOfCompID are needed for clarity.</p> <p>Add the following to the "Message header" section as a diagram:</p> <p>The following provides examples regarding the use of SenderCompID, TargetCompID, DeliverToCompID, and OnBehalfOfCompID when using a single FIX session to represent multiple firms. Assumption (A=sellside, B and C=buyside, Q=third party):</p> <p>a) Without Q involved, sending A to B:  SenderCompID: A    TargetCompID: B  OnBehalfOfCompID:    DeliverToCompID:</p>

		<p>b) Without Q involved, sending B to A:  SenderComplD: B    TargetComplD: A  OnBehalfOfComplD:    DeliverToComplD:</p> <p>c) Send from A to B via Q  1) A sends to Q:  SenderComplD: A    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: B  2) Then Q will send to B:  SenderComplD: Q    TargetComplD: B  OnBehalfOfComplD: A DeliverToComplD:</p> <p>d) B responds to A via Q:  1) B sends to Q:  SenderComplD: B    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: A  2) Then Q will send to A:  SenderComplD: Q    TargetComplD: A  OnBehalfOfComplD: B DeliverToComplD:</p> <p>e) Send from A to B *AND* C via Q  1) A sends to Q:  SenderComplD: A    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: B  2) Then Q will send to B:  SenderComplD: Q    TargetComplD: B  OnBehalfOfComplD: A DeliverToComplD:  3) A sends to Q:  SenderComplD: A    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: C  4) Then Q will send to C:  SenderComplD: Q    TargetComplD: C  OnBehalfOfComplD: A DeliverToComplD:</p> <p>f) B *AND* C send to A via Q  1) B sends to Q:  SenderComplD: B    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: A  3) Then Q will send to A:  SenderComplD: Q    TargetComplD: A  OnBehalfOfComplD: B DeliverToComplD:  2) C sends to Q:  SenderComplD: C    TargetComplD: Q  OnBehalfOfComplD:    DeliverToComplD: A  4) Then Q will send to A:  SenderComplD: Q    TargetComplD: A  OnBehalfOfComplD: B DeliverToComplD:</p>
5/4/1999	Session Protocol Section	<p><b>[E19990129_17] Clarification re: session initiation:</b></p> <p>Add language to the “Logon” sub-section within the “SESSION PROTOCOL” section to stress the fact that both initiator and acceptor must ensure that sequence numbers have been synchronized before sending any queued or new messages. Recommend waiting a short period of time or sending a TestRequest and waiting for response to it in order to allow both</p>

		<p>sides to handle resend request processing before sending queued and new messages. Recommend that an engine should store out of sequence messages in a temp queue and process them in order when the gap is closed. This prevents generating resend requests for n-&gt;m, n-&gt;m+1, n-&gt;m+2, ... which would result in many resent PossDupFlag=Y messages.</p> <p>Add to the "Logon" sub-section within the "SESSION PROTOCOL": " before sending any queued or new messages" to "After authentication, the initiator and acceptor must synchronize their messages through the interrogation of the MsgSeqNum field" and bold the sentence. Add "It is recommended to wait a short period of time following the Logon or to send a TestRequest and wait for a response to it before sending queued or new messages in order to allow both sides to handle resend request processing. Failure to do this could result in a ResendRequest message being issued by one's counterparty for each queued or new message sent." Add "It is also recommended that an engine should store out of sequence messages in a temp queue and process them in order when the gap is closed. This prevents generating resend requests for n-&gt;m, n-&gt;m+1, n-&gt;m+2, ... which can result in many resent PossDupFlag=Y messages."</p>
5/4/1999	Session Protocol Section	<p><b>[E19990129_19] ResetSeqNumFlag processing clarification:</b></p> <p>The description of ResetSeqNum processing within the "Logon" sub-section within the "SESSION PROTOCOL" section uses the terms "initiator" and "acceptor" with a different context than the prior bullet points in the section.</p> <p>Replace "Both sides should be agree on a reset time" with "Both sides should agree upon on a reset time and the party that will be the initiator of the process. Note that the initiator of the ResetSeqNum process may be different than the initiator of the Logon process."</p>
5/4/1999	Field Reference / Business Messages	<p><b>[E19990129_20] Side field clarification:</b></p> <p>FIX version 4.1 introduced two new enumerations for the Side field. Clarification is necessary to specify that "7=Undisclosed" is only valid for IOI messages and that "8=Cross" is valid for all messages other than IOIs.</p> <p>Modify the field reference for the Side field adding "(valid for IOI messages only)" after "7=Undisclosed" and adding "(valid for all messages except IOIs)" after "8=Cross".</p>
5/4/1999	Order Messages / Order State Matrices	<p><b>[E19990129_22] Order Messages/Matrix Clarifications:</b></p> <p>Clarify that when a "Fill Or Kill" (FOK) order cannot be filled or an "Immediate Or Cancel" (IOC) order cannot be immediately hit, the proper response to "kill" the order is an ExecutionRpt with ExecType="Cancelled". Note that this is the equivalent of an "UNSOLICITED UR OUT" CMS message.</p> <p>Clarify that the equivalent of a "NOTHING DONE" CMS</p>

		<p>message should be sent as a “status report”, i.e. an ExecutionRpt message with ExecTransType=“Status” and ExecType/OrdStatus that of the previous ExecutionRpt message for this order (usually “New” or “Replaced” when “nothing has been done”).</p> <p>Add the above to the Order State Matrices.</p>
5/4/1999	ExecutionRpt Message	<p><b>[E19990129_23] ExecutionRpt message clarification:</b></p> <p>In the ExecutionRpt message, LastShares is defined as "Quantity of shares bought/sold on this fill" and LastPx is "Price of last fill". "This fill" and "last fill" in these two phrases relate to LAST ExecutionReport of THIS fill. The ExecutionRpt could be sent just to inform status of the order (in this case LastPx and LastShares both will be set to zero).</p> <p>Modify LastShares comment to state “Quantity of shares bought/sold on this (last) fill”. Modify LastPx comment to state “Price of this (last) fill”.</p>
5/4/1999	Field Reference	<p><b>[E19990129_24] ExecInst field clarification:</b></p> <p>Clarification is necessary for the “ExecInst” field and two of its values: “No cross” and “OK to cross”. If a customer specifies “No cross” then the broker is forbidden to cross even if in certain circumstances (i.e. a cross reported to the exchange within the spread using electronic interfaces could meet or better the customer’s order).</p> <p>Add “(cross is forbidden)” to “ExecInst” field’s value “A=No cross” in the Field Reference.</p>
5/4/1999	Order messages / Order State Matrices	<p><b>[E19990129_25] Order message handling clarification:</b></p> <p>Clarification is necessary regarding how partial or complete fills should be communicated back to the customer while the customer’s order is in a “pending” state. Specifically it needs to be clarified as to whether or not the partials should be reported against the “original” or “replaced” order while the “original” is pending and waiting to achieve the “replaced” status. Description of the OrigClOrdID field within the ExecutionRpt message should indicate that it is conditionally required for “Pending Cancel, Replace, or Canceled ExecType values” vs. “OrdStatus”.</p> <p>Add and bold: “Any fills which occur and need to be communicated to the customer while an order is “pending” and waiting to achieve a new state (i.e. via a Order Cancel Replace (aka Order Modification) Request) must contain the “original” (current order prior to state change request) order parameters (i.e. ClOrdID, OrderQty, LeavesQty, Price, etc). An order cannot be considered replaced until it has been explicitly accepted and confirmed to have reached the replaced status (i.e OrdStatus = “Replaced”)--Care should be taken as the replaced order could still have reports coming which will update the CumQty and AvgPx of both the original and replacement, however, the effect on the replacement (ClOrdID, new quantity or limit price, etc.)</p>

		will not be seen until a report on the replacement has been generated.” to the ExecutionRpt message. Add to Order State Matrices. Modify the description of the OrigClOrdID field within the ExecutionRpt message replacing “Pending Cancel, Replaced, or Canceled OrdStatus values” with “Pending Cancel, Replace, or Canceled ExecType values”.
5/4/1999	Field Reference / Business Messages	<p><b>[E19990430_2] Currency field reference:</b></p> <p>The Currency field in the field reference and Allocation Message currently states that absence of the field should be interpreted as US Dollars.</p> <p>Replace “Absence of this field is interpreted as US dollars” with “Absence of this field is interpreted as the default for the security. It is recommended that systems provide the currency value whenever possible.” in the Field Reference. Remove “Absence of this field in a message is interpreted as US dollars” from the various business message’s “Currency” listing.</p>
5/4/1999	Field Reference / Appendix	<p><b>[E19990430_4] Clarify Rule80A field as OrderCapacity:</b></p> <p>Rule80A was originally created as a New York Stock Exchange-specific field. Other markets need to convey similar values, however, each market may have specific rules which govern the applicable values. This field would have been better named “OrderCapacity”. Thus “(aka OrderCapacity)” should be added to the “Rule80A” references in the Field Reference and elsewhere in the spec. Note that for US trading, Rule80A’s values and usage details are documented in SEC Rule11Ac1-1/4. Also note the purpose behind the rule is to restrict prices from rising or falling too fast providing more stability in the market.</p> <p>Add “(aka OrderCapacity)” to the “Rule80A” entry in the Field Reference and elsewhere in the spec. Add note to see “Rule80A (aka OrderCapacity) Usage by Market” appendix. Add an appendix section for “Rule80A (aka OrderCapacity) Usage by Market”. Note that for US trading, Rule80A’s values and usage details are documented in SEC Rule11Ac1-1/4. Add “Note the purpose behind the rule is to restrict prices from rising or falling too fast providing more stability in the market. See <u>Investments by Sharpe</u>, 6<sup>th</sup> edition p. 50.” Add Japanese-specific implementation values recommended by the local Japanese FIX working group for Japanese markets.</p>
5/4/1999	Exchange Appendix	<p><b>[E19990430_7] Additional Exchange Code: Lisbon Stock Exchange (Portugal)</b></p> <p>Value should be “LS” (as defined by Reuters)</p> <p>Add to FIX website listing of exchange codes and Appendix C.</p>
5/4/1999	Exchange Appendix	<p><b>[E19990430_8] Additional Exchange Code: Interbolsa (Portugal)</b></p> <p>Value should be “IN” (as defined by Reuters).</p>



		Add to FIX website listing of exchange codes and Appendix C.
5/4/1999	Session Protocol Section	<p><b>[E19990430_9] Typographical Error in Session Protocol Section—Logout:</b></p> <p>The “Logout” sub-section within the “SESSION PROTOCOL” has a typographical error “acceptora” which should read “acceptor a”.</p> <p>Correct typographical error in the “Logout” sub-section within the “SESSION PROTOCOL” replacing “acceptora” with “acceptor a”.</p>
5/4/1999	Field Reference / Appendix	<p><b>[E19990504_1] Rule80A field clarification and missing values for usage with the NYSE:</b></p> <p>Several values used to specify “short exempt transactions” to the NYSE or other US listed equity exchanges are valid but were missed when version 4.1 was released for the Rule80A (aka OrderCapacity) field. Note that certain markets may only support a subset of these values. The valid values and usage for the Rule80A (aka OrderCapacity) field need to be documented in the “Rule80A (aka OrderCapacity) Usage by Market” appendix.</p> <p>Add “Note certain markets may only support a subset of these values. See the “Rule80A (aka OrderCapacity) Usage by Market” appendix for market-specific details.” to the Rule80A (aka OrderCapacity) field in the Field Reference.</p> <p>Add the following to the Rule80A (aka OrderCapacity) field in the Field Reference.</p> <ul style="list-style-type: none"> <li>B = Short exempt transaction (refer to A type)</li> <li>F = Short exempt transaction (refer to W type)</li> <li>H = Short exempt transaction (refer to I type)</li> <li>L = Short exempt transaction for member competing market-maker affiliated with the firm clearing the trade (refer to P and O types)</li> <li>X = Short exempt transaction for member competing market-maker not Affiliated with the firm clearing the trade (refer to W and T types)</li> <li>Z = Short exempt transaction for non-member competing market-maker (refer to A and R types)</li> </ul> <p>Add the following to the “Rule80A (aka OrderCapacity) Usage by Market” appendix’s NYSE or other US listed equity exchanges usage section.</p> <p>The following values are valid and applicable when using FIX to communicate with the New York Stock Exchange (NYSE) or other US listed equity exchanges per the SuperDOT Notification document. The values and usage details when used for US trading are documented in SEC Rule11Ac1-1/4.:</p>

		<p> A = Agency single order  B = Short exempt transaction (refer to A type)  C = Program Order, non-index arb, for Member firm/org  D = Program Order, index arb, for Member firm/org  E = Registered Equity Market Maker trades  F = Short exempt transaction (refer to W type)  H = Short exempt transaction (refer to I type)  I = Individual Investor, single order  J = Program Order, index arb, for individual customer  K = Program Order, non-index arb, for individual customer  L = Short exempt transaction for member competing market-maker affiliated with the firm clearing the trade (refer to P and O types)  M = Program Order, index arb, for other member  N = Program Order, non-index arb, for other member  O = Competing dealer trades  P = Principal  R = Competing dealer trades  S = Specialist trades  T = Competing dealer trades  U = Program Order, index arb, for other agency  W = All other orders as agent for other member  X = Short exempt transaction for member competing market-maker not Affiliated with the firm clearing the trade (refer to W and T types)  Y = Program Order, non-index arb, for other agency  Z = Short exempt transaction for non-member competing market-maker (refer to A and R types) </p>