



**BATS EUROPE GUIDANCE NOTE
2016 Q2 EXCHANGE RELEASE**

EFFECTIVE 29 APRIL 2016

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1. Introduction

This guidance note is intended to provide contextual detail and background to the changes contained within the Bats Europe (“Bats”) 2016 Q2 Exchange Release going live in Production on Friday 29th April 2016. The 2016 Q2 release contains changes to Bats Production Environments. The changes will impact all Bats platforms (BXE, CXE and TRF). All Participants must be prepared for these changes from start of day on the effective date of this release.

The 2016 Q2 release can be summarised thus:

Mandatory Changes

Market data:

- i. Trade cancellations will be disseminated on market data using the Trade – Extended Message with MMT flag 3.4 Modification Indicator ‘C’, instead of a Trade Break Message
- ii. Two new values XOFF and SINT will be supported in the Execution Venue field for Trade Messages in TRF to indicate OTC and Systematic Internaliser, respectively
- iii. Trade amendments, whether resulting from a trade report or from the order book, will be disseminated on market data as a Trade Message – Extended Form (cancel) followed by a Trade Message – Extended Form (correction)

Symbol file:

- i. Three new columns max_otr_count, max_otr_volume and capped will be added
- ii. A new warning field will be added to the descriptor with the possible value “T”: Time warning (eg. downloaded prior to 7am, so subject to change). Bats recommends retrieving symbol reference data at 7am to ensure it is correct and complete

Removal of support:

- i. The Post Only At Limit order type will no longer be supported
- ii. The Bats Latency Feed will be decommissioned

Optional Changes

FIX & BOE:

- i. OrderCategory will be added as a new BOEv2 optional return bitfield for outbound Trade Capture Reports. It will be used to indicate that the trade utilised the Negotiated Transaction waiver
- ii. A new reject reason code ‘v = MiFID II Double Cap related’ will be added to indicate MiFID II double cap restrictions

New market data feeds:

- i. The Bats Auction Feed (BAF) is a new feed and will disseminate Bats Auction price and size information over TCP PITCH for Opening, Closing and Periodic Auctions.
- ii. The Last Sale Feed is a new feed and will disseminate real-time trade data over TCP PITCH and including price, volume and time while specifically excluding order information. It includes MiFID II-compliant flags for the purpose of post-trade transparency and is available in BETA format.

Intended Audience

This guide is intended to be read by those with responsibility for implementing and supporting interfaces to Bats (typically software engineers, support staff, business analysts and systems administrators).

Reasons for Changes

These changes are being made in order to provide support for new functionality and remove deprecated functionality. A number of these changes represent the first major functionality change related to MiFIR and MiFID II (collectively, "MiFID II") compliance. In particular:

Bats Auction Feed:

- i. MiFID II requires disaggregation of scheduled daily auctions. BAF captures all relevant auction activity in an environment, so for users only interested in consuming scheduled daily auctions, provides a low bandwidth alternative to consuming PITCH feeds. BAF in BXE provides Periodic Auction data and in CXE provides Opening and Closing Auction data.

Last Sale Feed:

- i. MiFID II requires disaggregation of post-trade data from pre-trade. The Last Sale Feed excludes pre-trade data, so for users interested only in post-trade data, provides a low bandwidth alternative to consuming PITCH feeds.
- ii. MiFID II requires post-trade transparent data to be published in a specific format, with a goal of reducing frictional costs of consuming feeds from multiple trading venues. The Last Sale Feed message structure follows the prescribed format.

Market Data:

- iii. MiFID II requires any trade cancellations to be published with a message that contains all of the details of the original trade, plus a specific cancellation flag. Currently, order book trade cancellations are published using a *Trade Break* message, which does not contain sufficient information. These cancellations will transition to use of the *Trade – Extended* message, which provides sufficient granularity to meet this requirement.
- i. MiFID II requires any trade amendments to be published as two messages. The first should represent a cancellation of the original trade and the second should represent the new details of the trade. Currently, trade report amendments are only published with the new details of the trade, but will transition to the prescribed sequence.
- ii. MiFID II requires trades to be published with the Market Identification Code (MIC) of the trading venue, or with *SINT* for trades from Systematic Internalisers and *XOFF* for trades not conducted on a trading venue or a Systematic Internaliser. Within the BXTR Trade Reporting environment, Over The Counter (OTC) and Systematic Internaliser trades are currently published with the *Trade – Extended* message, but with the *Execution Venue* field left blank. This will transition to the prescribed values.

Symbol File:

- i. MiFID II requires trading venues to have an unexecuted order to transaction ratio (OTR), calculated on a number of orders basis and a volume of shares basis, as part of their system of controls to prevent disorderly trading conditions. Whilst Bats is not seeking to introduce an OTR at this time, when it does, Bats will set the maximum acceptable OTR at the symbol

level. New columns added to the file allow Participants to be aware of the relevant thresholds, when they're introduced.

- ii. MiFID II imposes a limit on the volume of transactions that can be conducted that utilise certain pre-trade transparency waivers. Should those thresholds be breached, various market segments will not be available. MiFID II also requires trading venues to make efforts to ensure that they do not permit activity to occur that would breach the thresholds. Accordingly, Bats may also choose to close certain segments ahead of any such breach. New columns added to the file allow Participants to be aware of when certain market segments are closed due to such reasons.

FIX/BOE:

- i. MiFID II imposes a limit on the volume of transactions that can be conducted that utilise certain pre-trade transparency waivers. Should various market segments not be available due to this requirement, any orders or trade reports entered that might utilise such waiver will be rejected with the relevant reject reason set to one indicating such.
- ii. MiFID II imposes a limit on the volume of transactions that can be conducted that utilise certain pre-trade transparency waivers. On Exchange Trade Reports (ETRs) entered into BXE or CXE, customers currently set the *OrderCategory* input field to indicate that the trade is being conducted as a Negotiated Transaction under Bats rules. Within FIX, any trade acknowledgements and confirmations include the field confirming first that Bats acknowledges that the Participant believes it to be a trade conducted as a Negotiated Transaction under Bats rules and then that the trade is indeed regarded as a Negotiated Transaction (and accordingly, utilises one of the Negotiated Transaction waivers). This field is being added to BOEv2 to allow similar information to be communicated within this protocol.

Reference

For an online version of this guide please see <http://www.batstrading.co.uk/support/#menu-resources>.

For a summary of all upcoming major technical changes, please refer to the [Technical Change Calendar](#).

2. FIX

Change Details

- i. Value of 'Q' (Bats Only – Post Only At Limit) in RoutingInst (9303) and MaxRemovePct (9618) will be removed from New Order – Single Message
- ii. New value 'v = MiFID II Double Cap related' will be added to Text (58) in Execution Report Message, Trade Capture Report Ack Message (Outbound) and Trade Capture Report Message (Outbound)

Summary of Changes

Please note: grey highlight indicates aspect that has changed. Yellow indicates aspect that has been deprecated.

From:				To:			
Field	MsgType	Tag	Contents	Field	MsgType	Tag	Contents
<i>RoutingInst</i>	In 35=D	9303	B = Bats Only P = Bats Only — Post Only Q = Bats Only — Post Only At Limit U = Dark Sweep u = Dark Lit Sweep W = Lit Sweep X = Lit Sweep BD = Bats Dark Book Only BA = Bats Automatic Dark BP = Bats Periodic Auction Book	<i>RoutingInst</i>	In 35=D New Order - Single	9303	B = Bats Only P = Bats Only — Post Only U = Dark Sweep u = Dark Lit Sweep W = Lit Sweep X = Lit Sweep BD = Bats Dark Book Only BA = Bats Automatic Dark BP = Bats Periodic Auction Book
<i>MaxRemovePct</i>	In 35=D	9618	For Post Only At Limit (RoutingInst (9303) = Q), what percentage of the order quantity which remains after price improvement may be removed at the limit price				
<i>Text</i>	In 35=8	58	A = Admin D = Duplicate ClOrdID H = Halted K = Order Rate Threshold Exceeded L = Price Exceeds Cross Range N = Ran Out of Liquidity to Execute Against O = ClOrdID Doesn't Match a Known Order P = Can't Modify an Order That is Pending Fill Q = Waiting For First Trade R = Routing Unavailable T = Routing order would trade through an away destination	<i>Text</i>	In 35=8	58	A = Admin D = Duplicate ClOrdID H = Halted K = Order Rate Threshold Exceeded L = Price Exceeds Cross Range N = Ran Out of Liquidity to Execute Against O = ClOrdID Doesn't Match a Known Order P = Can't Modify an Order That is Pending Fill Q = Waiting For First Trade R = Routing Unavailable

			<p>U = User Requested V = Would Wash W = Add Liquidity Only Order Would Remove X = Order Expired Y = Symbol Not Supported Z = Unforeseen Reason l = Large in Scale r = Reserve Reload m = Market Access Risk Limit Exceeded o = Max Open Orders Count Exceeded p = Static Collar Breach s = Symbol Level Risk Management</p>				<p>T = Routing order would trade through an away destination U = User Requested V = Would Wash W = Add Liquidity Only Order Would Remove X = Order Expired Y = Symbol Not Supported Z = Unforeseen Reason l = Large in Scale r = Reserve Reload m = Market Access Risk Limit Exceeded o = Max Open Orders Count Exceeded p = Static Collar Breach s = Symbol Level Risk Management v = MiFID II Double Cap related.</p>
<i>Text</i>	35=AR & 35=AE Outbound	58	<p>A = Admin D = Duplicate TradeReportID H = Halted U = User Requested Y = Symbol Not Supported X = Expired Z = Unforeseen Reason m = Market Access Risk Limit Exceeded o = Max Open Trade Count Exceeded</p>	<i>Text</i>	35=AR & 35=AE Outbound	58	<p>A = Admin D = Duplicate TradeReportID H = Halted U = User Requested Y = Symbol Not Supported X = Expired Z = Unforeseen Reason m = Market Access Risk Limit Exceeded o = Max Open Trade Count Exceeded v = MiFID II Double Cap related.</p>

3. BOE

Change Details

- i. OrderCategory in Trade Capture Reports (outbound) will be added as a new optional return bitfield. It will be sent to indicate a Negotiated Trade;
- ii. New reject reason code 'v = MiFID II Double Cap related' added to indicate MiFID II dark pool cap restrictions.

Summary of Changes

Please note: grey highlight indicates aspect that has changed. Yellow indicates aspect that has been deprecated.

From:				To:			
Field	Length	Data Type	Contents	Field	Length	Data Type	Contents
				OrderCategory	1	Binary	This field corresponds to the MMT Level 3.2 field 'Negotiated Transaction Indicator'. On return fields, indicates whether Bats deems the trade as utilizing the Negotiated Transaction waiver under MiFID.

The new reject reason code is applicable to the following Bats to Participant messages:

- i. Order Rejected V2
- ii. User Modify Rejected V2
- iii. Trade Capture Report Reject V2

From:				To:			
Field	Length	Data Type	Contents	Field	Length	Data Type	Contents
Text	60	Text	A = Admin D = Duplicate Identifier (e.g., ClOrdID) H = Halted	Text	60	Text	A = Admin D = Duplicate Identifier (e.g., ClOrdID) H = Halted

		<p>I = Incorrect Data Center J = Too late to cancel K = Order Rate Threshold Exceeded L = Price Exceeds Cross Range M = Liquidity Available Exceeds Order Size N = Ran Out of Liquidity to Execute Against O = ClOrdID Doesn't Match a Known Order P = Can't Modify an Order That is Pending Fill Q = Waiting For First Trade R = Routing Unavailable T = Routing Order Would Trade Through an Away Destination U = User Requested V = Would Wash W = Add Liquidity Only Order Would Remove X = Order Expired Y = Symbol Not Supported Z = Unforeseen Reason m = Market Access Risk Limit Exceeded o = Max Open Orders Count Exceeded p = Static Collar Breach s = Risk Management Symbol Level x = Crossed Market y = Order Received by Bats During Replay</p>				<p>I = Incorrect Data Center J = Too late to cancel K = Order Rate Threshold Exceeded L = Price Exceeds Cross Range M = Liquidity Available Exceeds Order Size N = Ran Out of Liquidity to Execute Against O = ClOrdID Doesn't Match a Known Order P = Can't Modify an Order That is Pending Fill Q = Waiting For First Trade R = Routing Unavailable T = Routing Order Would Trade Through an Away Destination U = User Requested V = Would Wash W = Add Liquidity Only Order Would Remove X = Order Expired Y = Symbol Not Supported Z = Unforeseen Reason m = Market Access Risk Limit Exceeded o = Max Open Orders Count Exceeded p = Static Collar Breach s = Risk Management Symbol Level x = Crossed Market v = MiFID II Double Cap related y = Order Received by Bats During Replay</p>
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4. Multicast Pitch

Change Details

- i. In TRF, values 'SINT' (Systematic Internaliser) and 'XOFF' (OTC) will be added to the Execution Venue field in Trade – Extended Message
- ii. The Trade Break Message will be removed and replaced by the Trade – Extended Message with MMT flag 3.4 Modification Indicator 'C' indicating a trade cancellation
- iii. Amendments of order-book or reported trades will result in two Trade - Extended Form messages being sent. The first trade will be sent using all of the details of the original trade with MMT flag 3.4 Modification Indicator set to 'C'. The second trade will be sent using the amended details with MMT flag 3.4 Modification Indicator set to 'A'.

Summary of Changes

Please note: grey highlight indicates aspect that has changed. Yellow indicates aspect that has been deprecated.

From:			To:		
Description	Type	Length	Description	Type	Length
Possible values for Execution Venue field in Trade — Extended Message : The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. e.g. for Bats NT trades, this shall be BATE or CHIX as applicable. Where no MIC is applicable, this field will be blank.	In 0x32	64 bytes	Possible values for Execution Venue field in Trade — Extended Message : The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. eg. for Bats NT trades, this shall be BATE or CHIX as applicable. New values will be SINT if the trade occurred on a Systematic Internaliser or XOFF if OTC.	In 0x32	64 bytes
Trade Break Message	0x2C	14	Trade — Extended Message	0x32	64 bytes
<i>For trade amendments:</i> Trade — Extended Message with Extended Trade Flag 'Modification Indicator' value 'A' and details of the new price and size	0x32	64 bytes	<i>For trade amendments:</i> Trade — Extended Message with Extended Trade Flag 'Modification Indicator' value 'C' and details of the old price and size <i>then</i> Trade — Extended Message with Extended Trade Flag 'Modification Indicator' value 'A' and details of the new price and size	0x32 0x32	64 bytes 64 bytes

5. TCP Pitch

Change Details

- i. In TRF, values 'SINT' (Systematic Internaliser) and 'XOFF' (OTC) will be added for Execution Venue field in Trade Message – Extended Form
- ii. Trade Break Message will be removed and replaced by the Trade – Extended Message with MMT flag 3.4 Modification Indicator 'C' to indicate a trade cancellation
- iii. Amendments of order-book or reported trades will result in two Trade - Extended Form messages being sent. The first trade will be sent using all of the details of the original trade with MMT flag 3.4 Modification Indicator set to 'C'. The second trade will be transmitted using the amended details with MMT flag 3.4 Modification Indicator set to 'A'.

Summary of Changes

Please note: grey highlight indicates aspect that has changed. Yellow indicates aspect that has been deprecated.

From:			To:		
Description	Type	Length	Description	Type	Length
Possible values for Execution Venue field in Trade Message — Extended Form The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. e.g. for Bats NT trades, this shall be BATE or CHIX as applicable. Where no MIC is applicable, this field will be blank.	"O"	94 bytes	Possible values for Execution Venue field in Trade Message — Extended Form : The venue on which the trade executed, when applicable. This will contain the MIC representing the venue on which the trade occurred, where applicable. e.g. for Bats NT trades, this shall be BATE or CHIX as applicable. New values will be SINT if the trade occurred on a Systematic Internaliser or XOFF if OTC.	"O"	94 bytes
Trade Break Message	0x2C	21	Trade Message — Extended Form	0x32	94 bytes
<i>For trade amendments:</i> Trade Message — Extended Form with Extended Trade Flag 'Modification Indicator' value 'A' and details of the new price and size	0x32	94 bytes	<i>For trade amendments:</i> Trade Message — Extended Form with Extended Trade Flag 'Modification Indicator' value 'C' and details of the old price and size <i>then</i> Trade Message — Extended Form with Extended Trade Flag 'Modification Indicator' value 'A' and details of the new price and size	0x32 0x32	94 bytes 94 bytes

6. Symbol Files

Change Details

- i. New column header 'max_otr_count' will be added to indicate maximum unexecuted order to trade ratio count
- ii. New column header 'max_otr_volume' will be added to indicate maximum unexecuted order to trade ratio volume
- iii. New column header 'capped' will be added to indicate whether a volume cap is in place. This may be regulatory driven or voluntarily entered into.
- iv. New 'warning' field will be added to the descriptor with the possible value 'T: Time warning' if symbol reference data is downloaded prior to 7am.

Summary of Changes

Please note: grey highlight indicates aspect that has changed. Yellow indicates aspect that has been deprecated.

From:			To:		
Content	Column / Field	Value	Content	Column / Field	Value
Heading and Data	(existing columns)	(existing values)	Heading and Data	<i>max_otr_count</i> column	Maximum unexecuted order to trade ratio count
				<i>max_otr_volume</i> column	Maximum unexecuted order to trade ratio volume
				<i>capped</i> column	0 - No caps in place 1 - Dark pool cap in place 2 - NT cap in place 3 - Dark and NT caps in place
Descriptor	(existing fields)	(existing values)	Descriptor	<i>warning</i> field	"T" - Time warning

7. Bats Auction Feed

Change Details

- i. The Bats Auction Feed (BAF) is a new feed and will disseminate Bats Auction price and size information over TCP PITCH between the following times:
 - a. 07:50 and 08:00 London time for CXE Opening Auctions
 - b. 16:30 and 16:35 London time for CXE Closing Auctions
 - c. 08:00 and 16:30 London time for BXE Periodic Auctions
- ii. The BAF will comprise the following existing message types:
 - a. System Event Message
 - b. Auction Update Message
 - c. Auction Summary Message

8. Last Sale Feed (BETA)

Change Details

- i. The Last Sale Feed is a new feed, currently available in BETA, which will disseminate real-time trade data over TCP and including price, volume and time while specifically excluding order information. It is in the prescribed MiFID II format and includes MiFID II-compliant flags for the purpose of post-trade transparency.
- ii. The Last Sale feed covers all of the following trade/execution events:
 - a. On-book executions, and their amendments and breaks. This includes both the integrated order book and dark order book.
 - b. Auction uncrossings, from both self-listed symbols on CXE and periodic auctions on BXE
 - c. Confirmed ETRs on BXE and CXE and their amendments or cancellations.
 - d. Trade Reports confirmed on TRF, and their amendments or cancellations.
- iii. The Last Sale Feed will comprise the following existing message types:
 - a. System Event Message
 - b. Last Sale Europe Message

9. Latency Feed

Change Details

- i. The Latency Feed will be decommissioned
- ii. The relevant Latency Feed distribution addressing to be removed is as follows:

Data Centre/Environment	IP Port	Multicast (and Source) IP Addresses
CXE LD4 Production	31101	224.0.82.255 (95.130.108.177)
BXE LD4 Production	31201	224.0.83.255 (95.130.109.177)

10. Certification (UAT)

- i. The removal of the Bats Latency feed and addition of the Bats Last Sale and Bats Auction Feeds will be effective in CERTIFICATION environments on Tuesday 1st March, 2016 and in PRODUCTION environments on Friday 1st April, 2016.
- ii. All other changes highlighted above will be effective in the BXE and TRF CERTIFICATION environments on Tuesday 1st March, 2016, the CXE CERTIFICATION environment on Tuesday 29th March, 2016 and in PRODUCTION environments on Friday 29th April, 2016.

11. Documentation

- i. Q2 2016 Guidance Note:
http://cdn.batstrading.com/resources/participant_resources/BCE-GuidanceNote-Q22016Release_Final.pdf
- ii. BXE/CXE
FIX: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_FIX_Specification.pdf
- iii. BAF: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_Auction_Feed_Specification.pdf
- iv. LastSale
Feed: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_Last_Sale_Specification.pdf
- v. Reference
Data: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_Reference_Data_Effective2.pdf
- vi. BXE/CXE
BOEv2: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_BOE2_Specification.pdf
- vii. TRF BOEv2:
http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_TRF_BOE2_Specification.pdf
- viii. TCP
PITCH: http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_PITCH_Specification.pdf
- ix. MC PITCH:
http://cdn.batstrading.com/resources/participant_resources/BATS_Europe_MC_PITCH_Specification.pdf

12. Further Resources and Contact

Please refer to the [Technical Change Calendar](#), which summarises all upcoming major technical changes.

Please contact the [Trade Desk](#) or your [Account Manager](#) if you have any questions.