#FIXEMEA2018

FIX TRADING COMMUNITY™
INDUSTRY-DRIVEN • INDEPENDENT • NEUTRAL
EMEA TRADING CONFERENCE
2018
CELEBRATING 10 YEARS

GTC Update – What is happening?

Hanno Klein
Co-Chair Global Technical Committee and Co-Chair High Performance Working Group, **FIX Trading Community,** Senior Vice President, **Deutsche Börse Group**

Marc Berthoud
Co-Chair MMT Technical Committee, **FIX Trading Community**, Executive Director, Head Data Strategy, **SIX Swiss Exchange Ltd**

Jim Northey, Co-Chair Global Technical Committee, Americas Region**, FIX Trading Community,** Chair Elect, ISO TC68 Financial Services Technical Committee, and Consultant and Industry Standards Liaison**, Itiviti**

#FIXEMEA2018

FIX Global Technical Committee Updates 2018

FIX Trading Community EMEA Trading Conference

Hanno Klein, Global Technical Committee co-chair for EMEA
Senior Vice President, Deutsche Börse Group

Jim Northey, Global Technical Committee co-chair for the Americas

Marc Berthoud, MMT Technical Committee co-chair
Executive Director, Head Data Strategy at SIX Swiss Exchange

March 15, 2018

Topics

- FIX Support for MiFID II
- MMT Support for MiFID II
- FIX Application Layer Extensions
- FIX Technical Standards
- New FIX Website
- New FIX Discussion Forum

FIX Support for MiFID II – Extension Packs

- More than 10 Extension Packs (started in 2016), see https://www.fixtrading.org/extension-packs/

  - EP206 – Clock Synchronization Datatype Enhancement
    Enhancement of the precision of time stamp data types with higher resolution and greater granularity in order to meet MIFID II and MiFIR regulatory reporting requirements.

  - EP216 – MMT v3 Support
    Supports MMT version 3.01 and the MiFID II post-trade flagging obligations.

  - EP222/228/229/237 – MiFID II and MiFIR Extensions, Parts 1/2/3/4
    Extensions to support ESMA requirements for transparency and order record keeping.

  - EP231/232/235/236 – ESMA RTS 22/27/2+23/28 Extensions
    Extensions to support ESMA best execution reporting (RTS 27, RTS 28), transaction reporting (RTS 22), data standards and formats for financial instrument reference data (RTS 2, RTS 23).

  - EP233 – MiFID II Commission Unbundling
    New values and fields for the CommissionDataGrp to support the separation of different types of commissions.

  - EP238 – ESMA RTS 2 Segmentation Criteria
    Extensions to support requirements related to ESMA RTS 2 Annex III Sections 2 to 11 (Segmentation Criteria).

FIX Support for MiFID II – Implementation Guidelines

- Subgroups of the EMEA Regulatory Subcommittee developed a number of guidelines (https://www.fixtrading.org/fix-and-mifid/mifid-implementation-guidelines/)

  - MiFID/MiFIR II Trade Reporting Implementation Guidelines
  - MiFID II Commission Unbundling Recommended Practices
  - Best Execution Implementation Guidelines
  - AFME_FIX Hand Offs Implementation Guidelines
  - Inter-Firm Data Communication for Transaction Reporting Implementation Guidelines
  - MiFID II Order Record Keeping Venue Subgroup – Short Code Standard
  - MiFID Trading Capacity & FIX Tag 29
  - Recommendations for Algorithmic Testing Test Cases
  - RTS 1/RTS 2 Tree – scenarios for post-trade transparency flags
  - Mapping Tables – MiFID Fields to FIX Fields

- In case of deviations, please refer to section *2.1 Summary of the Proposed Solution* in the Extension Packs for MiFID II and MiFIR, Parts 1-4 and FIXimate (http://fiximate.fixtrading.org/latestEP).

FIX Market Model Typology (MMT) Progress Report

Marc Berthoud, Co Chair MMT Technical Committee

Why do we have FIX MMT?

- **Industry Demand :** A demand for standardisation of trade data, which is a prerequisite for efficient data aggregation. MiFID/MiFIR is a great push towards much more data standardisation across financial markets.

- **MMT Mission :** Proactive and rapid adoption of a *de facto* standard for trade reporting across all equity and non-equity markets, especially in Europe.

- **Benefit :** There are obvious operational benefits by having the same trade data standards flow through financial information systems.

- **Scope :** aimed at delivering a standard trade flagging solution.

- **Neutral Industry Group :** Leading stakeholders in the market data value chain are active contributors to FIX MMT work (trading venues, reporting venues, data vendors, investment firms, standards organisation).

Mission Statement of FIX MMT

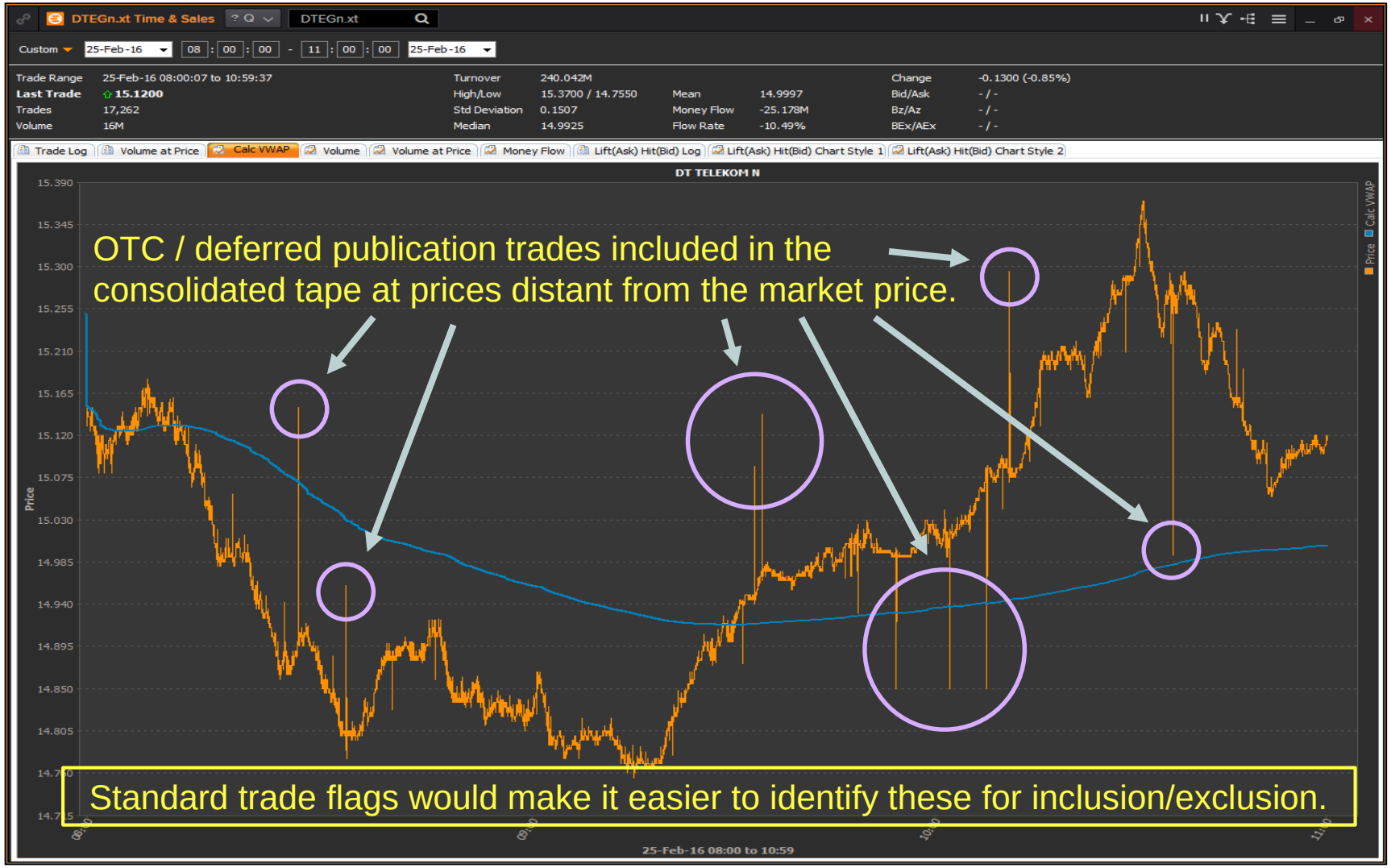
- **FIX MMT has produced a MiFID II** conformant trade flagging model.

- **MMT already has broad acceptance** among trading venues and data vendors (15 trading venues have already implemented MMT).

- **FIX MMT engages in a constructive dialogue with regulator(s)** and has obtained clarifications in order to make sure that the FIX MMT data model fulfills all trade flagging requirements for post-trade transparency purposes (RTS 1 and RTS 2).

- **Cooperation with other FIX workstreams** active in MiFID/MiFIR issues (the FIX Transparency Subgroup in particular).

FIX MMT rationale – improve post trade transparency



Source: Thomson Reuters

MMT documentation available on the FIX website:

Market Model Typology v3.04 (incorporating MiFID II RTS 1 and RTS 2 mandatory trade flags)

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Note that the following MMT v2.2 trade flags have been REMOVED from this version:
"G" - Give-Up/Give-In Trade
"F" - Trade with Conditions

Assuming that RMs, MTFs, OTFs and APAs are required to natively publish the codes in the format prescribed by RTS 1 & RTS 2 (versus a display-only requirement).

Level	Full Name	Encoding Options: Efficient	Encoding Options: ...with ESMA Stipulations	Display Code	MiFID II Equiv: Trade Flag
1	MARKET MECHANISM				
	Central Limit Order Book	"1"	"1"	"LB"	n/a
	Quote Driven Market	"2"	"2"	"QB"	n/a
	Dark Order Book	"3"	"3"	"DB"	n/a
	Off Book (including Voice or Messaging Trading)	"4"	"4"	"OB"	n/a
	Periodic Auction	"5"	"5"	"PA"	n/a
	Request for Quotes	"6"	"6"	"RQ"	n/a
	Any Other, Including Hybrid	"7"	"7"	"AH"	n/a

Level	Full Name	Encoding Options: Efficient	Encoding Options: ...with ESMA Stipulations	Display Code	MiFID II Equiv: Trade Flag
2	TRADING MODE				
	Undefined Auction	"1"	"1"	"AU"	n/a
	Scheduled Opening Auction	"O"	"O"	"OA"	n/a
	Scheduled Closing Auction	"K"	"K"	"CA"	n/a
	Scheduled Intraday Auction	"I"	"I"	"IA"	n/a
	Unscheduled Auction	"U"	"U"	"UA"	n/a
	Continuous Trading	"2"	"2"	"CT"	n/a
	At Market Close Trading	"3"	"3"	"AC"	n/a
	Out of Main Session Trading	"4"	"4"	"OT"	n/a
	Trade Reporting (On Exchange)	"5"	"5"	"ON"	n/a
	Trade Reporting (Off Exchange)	"6"	"6"	"OF"	n/a
	Trade Reporting (Systematic Internaliser)	"7"	"7"	"SI"	n/a

Level	Full Name	Encoding Options: Efficient	Encoding Options: ...with ESMA Stipulations	Display Code	MiFID II Equivalencies or Utilisation: Trade Flag	RTS 1 (equity)	RTS 2 (non-equity)	RTS 1 SI Use Only
3.1	TRANSACTION TYPE : TRANSACTION CATEGORY							
	Dark Trade	"D"	"D"	"D"	n/a	x	x	x
	Trade that has Received Price Improvement	"R"	"RPRI"	"RPRI"	"RPRI"	✓	x	✓
			"TPAC"	"TPAC"	"TPAC"	x	✓	x
			"XFPH"	"XFPH"	"XFPH"	x	✓	x
			"."	nothing	n/a	x	x	x

EP163 Market Model Topology (MMT) Extensions — Please login to download
This Extension Pack provides enhancements to FIX to support the MMT requirements established by the FESE for data consolidation. [UPDATED 2013-12-09] Updated FIXML Schema and FIX Repository due to updates to resolve issues found in the base FIX 5.0
Create date: June 20, 2017

EP186 – MMT Flagging of OTC Trades — Please login to download
This Extension Pack introduces a new field to facilitate an explicit distinction between automated and manual trades in support of sell-side's requirements found in the Market Model Typology (MMT) version 2.2.
Create date: June 20, 2017

EP216 MMTv3 Support — Please login to download
This Extension Pack supports MMT version 3.01 and the MiFID II post-trade flagging obligations.
Create date: September 30, 2016

MMT Initiative Presentation v2.2 — DOWNLOAD
An introductory presentation to the Market Model Typology initiative.
Create date: February 16, 2017

MMT Model Version 3.04

MMT Initiative Mapping Matrix v3.04 — DOWNLOAD
UPDATED: 11/2017
Create date: July 21, 2017

FIX messages

Market Model Typology v3.04 via FIX Protocol, release identifier 5.0 SP3 (EP216)

FIX Protocol Encoding (Trade Capture Report)			FIX Protocol Encoding (Public Market Data)		
FIX Message	FIX Field (Tag)	FIX Value	FIX Message	FIX Field (Tag)	FIX Value
TradeCaptureReport	VenueType (1430)	B = Central limit order book	MarketDataIncrementalRefresh - and - MarketDataSnapshutFullRefresh	MDOriginType (1024)	0 = Book
		Q = Quote driven market			3 = Quote driven market
		D = Dark order book			4 = Dark order book
		O = Off-market			1 = Off-book
		A = Auction driven market			5 = Auction driven market
		N = Quote negotiation			6 = Quote negotation
		H = Hybrid Market			8 = Hybrid market
FIX Protocol Encoding (Trade Capture Report)			FIX Protocol Encoding (Public Market Data)		
FIX Message	FIX Field (Tag)	FIX Value	FIX Message	FIX Field (Tag)	FIX Value
TradeCaptureReport	TradingSessionSubID (625)	8 = Any auction	MarketDataIncrementalRefresh - and - MarketDataSnapshutFullRefresh	TradingSessionSubID (625)	8 = Any auction
		2 = Opening or opening auction			2 = Opening or opening auction
		4 = Closing or closing auction			4 = Closing or closing auction
		6 = Intraday auction			6 = Intraday auction
		9 = Unscheduled intraday auction			9 = Unscheduled intraday auction
		3 = (Continuous) trading			3 = (Continuous) trading
		5 = Post-trading			5 = Post-trading
		10 = Out of main session trading			10 = Out of main session trading
	MatchType (574)	3 = Confirmed trade report (reporting from recognized markets)		MatchType (574)	3 = Confirmed trade report (reporting from recognized markets)
		1 = One Party Trade Report (privately negotiated trade)			1 = One Party Trade Report (privately negotiated trade)
		9 = Systematic Internalizer			9 = Systematic Internalizer
FIX Protocol Encoding (Trade Capture Report)			FIX Protocol Encoding (Public Market Data)		
FIX Message	FIX Field (Tag)	FIX Value	FIX Message	FIX Field (Tag)	FIX Value
TradeCaptureReport	TrdType (828)	62 = Dark trade	MarketDataIncrementalRefresh - and - MarketDataSnapshutFullRefresh	TrdType (828)	62 = Dark trade
	TradePriceCondition (1839)	14 = Price improvement		TradePriceCondition (1839)	14 = Price improvement
	TrdType (828)	65 = Package trade		TrdType (828)	65 = Package trade
		2 = Exchange for physical			2 = Exchange for physical
		any other value, or field not present, means neither Dark Trade, Package Trade nor Exchange for Physicals Trade			*any other value, or field not present, means neither Dark Trade, Package Trade nor Exchange for Physicals Trade*
FIX Protocol Encoding (Trade Capture Report)			FIX Protocol Encoding (Public Market Data)		
FIX Message	FIX Field (Tag)	FIX Value	FIX Message	FIX Field (Tag)	FIX Value

RTS 1 (equities) ➔ MMT v3.04

ESMA RTS 1 Trade Flags

Code	Meaning	Efficient Code	Code	Accommodation in the MMT Hierarchy
BENC	Benchmark transactions flag	B	BENC	3.5 Transaction Type: Benchmark or Reference Price Indicator
ACTX	Agency cross transactions flag	X	ACTX	3.3 Transaction Type: Agency Cross Trade Indicator
NPFT	Non-price forming transactions flag	T	NPFT	3.8 Transaction Type: Ordinary/ Standard Trades or Trades Outside Price Formation/Discovery Process
TNCP	Transactions not contributing to the price discovery process for the purposes of Article 23 of Regulation (EU) No 600/2014 flag	J	TNCP	3.8 Transaction Type: Ordinary/ Standard Trades or Trades Outside Price Formation/Discovery Process
SDIV	Special dividend transaction flag	E	SDIV	3.6 Transaction Type: Special Dividend Indicator
LRGS	Post-trade large in scale transaction flag	2	LRGS	4.1 Publication Mode / Post-Trade Deferral: Reason
RFPT	Reference price transaction flag	S	RFPT	3.5 Transaction Type: Benchmark or Reference Price Indicator
NLIQ	Negotiated transaction in liquid financial instruments flag	1	NLIQ	3.2 Transaction Type: Negotiation Indicator or Pre-Trade Transparency Waiver
OILQ	Negotiated transaction in illiquid financial instruments flag	2	OILQ	3.2 Transaction Type: Negotiation Indicator or Pre-Trade Transparency Waiver
PRIC	Negotiated transaction subject to conditions other than the current market price flag	3	PRIC	3.2 Transaction Type: Negotiation Indicator or Pre-Trade Transparency Waiver
ALGO	Algorithmic transaction flag	H	ALGO	3.9 Transaction Type: Algorithmic Indicator
SIZE	Transaction above the standard market size flag	4	SIZE	4.1 Publication Mode / Post-Trade Deferral: Reason
ILQD	Illiquid instrument transaction flag	3	ILQD	4.1 Publication Mode / Post-Trade Deferral: Reason
RPRI	Transactions which have received price improvement flag	R	RPRI	3.1 Transaction Type: Transaction Category
CANC	Cancellation flag	C	CANC	3.4 Transaction Type: Modification Indicator
AMND	Amendment flag	A	AMND	3.4 Transaction Type: Modification Indicator
DUPL	Duplicative trade reports flag	1	DUPL	5 Duplicative Indicator

MMT Transaction Type Codes
(other codes also exist)

MMT v3.04 hierarchical model *(relative to MMT v2.2)*

1. Market Mechanism *(extended or amended)*
2. Trading Mode
3. Transaction Type: *(extended or amended)*
    1. Transaction Category *(extended or amended)*
    2. Negotiation Indicator *(extended or amended)*
    3. Agency Cross Indicator
    4. Modification Indicator
    5. Benchmark or Reference Price Indicator *(extended or amended)*
    6. Special Dividend Indicator
    7. Off Book Automated Indicator
    8. Contribution to Price Formation or the Price Discovery Process *(new)*
    9. Algorithmic Indicator *(new)*
4. Publication Mode / Post-Trade Deferral *(extended or amended)*
    1. Publication Mode / Post-Trade Deferral : Reason *(extended or amended)*
    2. Post-Trade Deferral or Enrichment Type *(new)*
5. Duplicative Indicator *(new)*

Trading venues that have adopted MMT*

- BME / BME Data Feed 3.0 /MMT v3 ESMA stipulation (Efficient encoding pending to be populated) 18.12.2017
- Boerse Berlin / MMT v3 4.12.2017
- Boerse München / MMT v3
- Deutsche Börse incl. EUREX/ CEF Core 13.0 / MMT v3 / Efficient encoding 4.12.2017
- EURONEXT / Optiq MDG / MMT v3 Efficient Encoding with ESMA stipulation 25.11.2017
- Irish Stock Exchange / MMT v3 4.12.2017
- NASDAQ/NLS / MMT v3 / Efficient encoding 23.10.2017
- SIX Swiss Exchange /MDDX / MMT v3 Efficient encoding 23.10.2017
- Vienna SE/ADH Feed 4.0/MMT v3, (Efficient encoding pending to be populated) 4.12.2017
- AQUIS/Binary MMT Feed/ Efficient encoding 25.11.2017
- CBOE Equity Europe /PITCH / MMT v3 / Efficient encoding 27.10.2017

*This list is not comprehensive

Example from SIX Swiss Exchange MDDX data feed message

On-book opening trade:

```
0: 54 52 00 64 00 00 03 0a 00 00 00 05 00 00 01 02 TR.d............
10: 00 05 5c 6d ba c2 37 c6 43 48 30 30 30 35 37 39 ..\m..7.CH000579
20: 35 36 36 38 43 48 46 58 53 57 58 00 05 5c 6d ba 5668CHFXSWX..\m.
30: c1 b1 8f 30 30 30 33 31 44 36 55 48 31 50 30 30 ...00031D6UH1P00
40: 30 31 54 00 05 5c 6d ba c1 b1 8f 58 53 57 58 00 01T..\m....XSWX.
50: 00 00 00 00 0e 09 c0 4d 00 00 02 66 00 00 00 00 .......M...f....
60: 00 00 00 00 00 20 00 31 4f 2d 2d 2d 2d 2d 2d 2d ..... .1O-------
70: 50 48 2d 2d 2d                                  PH---
```

```
MessageName = Trade Type = TR
Version = 100
Subtopic = PostTrade,Auction Topic=768
Package = 5
Flags = Delta,Single
SendTime = 20171026-07:00:38.034374
Isin = CH0005795668
Currency = CHF
Exchange = XSWX
ExecutionTime = 20171026-
07:00:38.000015
TradeId = 00031D6UH1P0001T
PublishTime = 20171026-07:00:38.000015
PublicationVenue = XSWX
Price = 0.920000
PriceNotation = M
Size = 614
NotionalAmount = 0.000000
NostroCross = 0
TradeToBeCleared =
SpecialPrice = 0
MMT flags = 1O-------PH---
MarketMechanism = 1 LB
TradingMode = O OA
TransactionCategory = -
NegotiationIndicatorOrWaiver = -
AgencyCrossTradeIndicator = -
ModificationIndicator = -
BenchmarkOrReferencePriceIndicator = -
SpecialDividendIndicator = -
OffBookAutomatedIndicator = -
OrdinaryOrOutsidePriceFormation = P P
AlgorithmicIndicator = H ALGO
PublicationMode = -
PostTradeDeferralType = -
DuplicativeIndicator = -
```

Source: SIX Swiss Exchange

Bloomberg Terminal

NOKIAH EB € ↓4.817 +0.145 B4.815/4.819B 2700x349
At 8:11 Vol 379,594 O 4.735B H 4.884B L 4.735B Val 1.837M
NOKIAH EB Equity 1) Actions 97) Settings Page 7 Trade/Quote Recap
02/26/18 17:00:00
2) Trade Recap 3) Quote Recap
Show Ticks All Cond Code Definitions
High 4.884 Low 4.735

Time	Size	Price	E	MIC	Cond (MMT)	Trd Date	Trd Time
	<min size>						
08:04:09	1.2k	↑4.845	EB		LB,CT,P,ALGO	2/26/18	08:04:09
08:04:09	200	↑4.844	EB		LB,CT,P,ALGO	2/26/18	08:04:09
08:04:06	3.5k	4.836	EB		LB,CT,P,ALGO	2/26/18	08:04:06
08:04:06	1.5k	↓4.836	EB		LB,CT,P,ALGO	2/26/18	08:04:06
08:04:01	633	4.837	EB		LB,CT,P,ALGO	2/26/18	08:04:01
08:03:56	400	↓4.837	EB		LB,CT,P,ALGO	2/26/18	08:03:56
08:03:54	1.5k	↑4.838	EB		LB,CT,P,ALGO		08:03:54
08:03:54	1.5k	↓4.836	EB		LB,CT,P,ALGO		08:03:54
08:03:42	1.47k	↓4.838	EB		LB,CT,P,ALGO		08:03:42
08:03:42	544	↑4.842	EB		LB,CT,P,ALGO		08:03:42
08:03:37	1.49k	4.839	EB		LB,CT,P,ALGO		08:03:37
08:03:34	1.5k	↑4.839	EB		LB,CT,P,ALGO		08:03:34
08:03:34	1k	↑4.836	EB		LB,CT,P,ALGO	2/26/18	08:03:34
08:03:31	1.5k	↓4.833	EB		LB,CT,P,ALGO	2/26/18	08:03:31
08:03:31	150	4.835	EB		LB,CT,P,ALGO	2/26/18	08:03:31
08:03:27	750	4.835	EB		LB,CT,P,ALGO	2/26/18	08:03:27
08:03:26	600	↑4.835	EB		LB,CT,P,ALGO	2/26/18	08:03:26
08:03:18	500	↑4.829	EB		LB,CT,P,ALGO	2/26/18	08:03:18
08:03:18	1.2k	4.828	EB		LB,CT,P,ALGO	2/26/18	08:03:18

Condition Code: Central Limit Order Book (LB)
Condition Code: Continuous Trading (CT)
Condition Code: Plain-Vanilla Trade (P)
Condition Code: Algorithmic Trade (ALGO)

Click to display condition code definitions.
Right-click for more options.

Currency EUR

Fidessa

Time and Sales [\\Fidessa\Private\MyPortfolio.fwp]

Inst	Rec...	TrdTm	Size	Price	Tt	VWAP	Flg	VWVol	Bid	Ask	MMT Codes
VOD	16:21	15 Feb 16:21	2,800	199.9	AT	202.88		12.614m	199.9	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	3,547	199.9	AT	202.89		12.611m	199.9	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	121	199.94	AT	202.89		12.607m	199.94	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	200	200	AT	202.89		12.607m	199.94	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	100	200.6	AT	202.89		12.607m	200	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	32	200.8	AT	202.89		12.607m	200	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	2	200.8	AT	202.89		12.607m	200.8	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	65	200.8	AT	202.89		12.607m	200.8	210	LB,CT,P,ALGO
VOD	16:21	15 Feb 16:21	1	200.8	AT	202.89		12.607m	200.8	210	LB,CT,P,ALGO
VOD	16:20	15 Feb 16:20	151	202.15	UT	202.89		12.607m	200.8	202.15	LB,UA,P
VOD	16:20	15 Feb 16:20	55	199.6					210	199.6	OB,ON,NLIQ,P
BARC	16:18	15 Feb 16:18	9	195	AT	201.76		31.287m	175	198.02	LB,CT,P
MKS	16:18	15 Feb 16:18	100	289	AT	289		1.4732m	288.1	289	LB,CT,P,ALGO
VOD	16:15	15 Feb 16:15	1	200	AT	202.89		12.606m	199.94	210	LB,CT,P,ALGO
VOD	16:14	15 Feb 16:14	2	199.94	AT	202.89		12.606m	199.94	210	LB,CT,P,ALGO
VOD	16:14	15 Feb 16:14	10	199.98	AT	202.89		12.606m	199.98	210	LB,CT,P,ALGO

Instrument Portfolio Custom

MyPortfolio Instrument Only

Price Min: Max:

Volume Min: Max:

More

Filter: Start: Today End: Today+1

Reset

SIX Financial Information – Market Data Feed (MDF)

BOURSE_CODE	ISIN	VALOREN	ISSUER	TPCURR	REPTTPRI	REPTRADE	REPTBATE	TRTIME	REPTTIMEMICROSEC	REPTRADEMMT
SWX	US0231351067	645156	AMAZON.COM RG	CHF	1430	1430	TRA	9:04:21	908154	2O-------P----
SWX	FI0009000681	472672	NOKIA RG	CHF	5.562	5.562	TRA	9:02:57	251950	2O-------P----
SWX	LU0838782315	20028815	XTR DAX IN U 1D	CHF	126.08	126.08	TRA	9:55:20	248608	22-------PH---
SWX	CH0200252812	20025281	1.125 AUSNET 19	CHF	101.69	101.69	TRA	9:33:29	877116	22-------PH---
SWX	CH0197841551	19784155	4 EDP FINANCE 18	CHF	103.15	103.15	TRA	10:18:58	392087	22-------PH---
SWX	CH0194958986	19495898	1.375 SVENSKA 22	CHF	106.25	106.25	TRA	10:22:02	463622	22-------PH---
SWX	CH0194836364	19483636	SCOR OPEN	CHF	101.35	101.35	TRA	9:36:20	945431	22-------PH---
SWX	CH0194695190	19469519	SWISS LIFE -S FRN	CHF	102.4	102.4	TRA	10:08:56	771250	22-------PH---
SWX	IE00B88DZ566	19328353	ISHS S&P 500 CHF-AC	CHF	48.62	48.62	TRA	9:37:24	514382	22-------PH---
SWX	IE00B8BVCK12	19328350	ISHS WORLD CHF-ACC	CHF	44.79	44.79	TRA	9:11:13	921785	22-------PH---
SWX	LU0641007421	19204552	XTR2 GI-LBD 4DHD	CHF	107.32	107.32	TRA	10:40:23	55060	22-------PH---
SWX	CH0187695553	18769555	2 LGT BANK 19	CHF	103.39	103.39	TRA	9:52:49	457909	22-------PH---
SWX	IE00B3XXRP09	18575508	VAN S&P 500 ETF USD	CHF	49.355	49.355	TRA	9:48:35	365637	22-------PH---
SWX	CH0184305016	18430501	SBIDSPF1-5-CHF ADIS	CHF	26.73	26.73	TRA	10:00:20	298157	22-------PH---
SWX	IE0086TLBW47	18425202	ISHS JPM EM BD USD	CHF	94.36	94.36	TRA	9:39:21	462216	22-------PH---
SWX	CH0183136057	18313605	ZKBPLATETF -AA CHF-	CHF	281.45	281.45	TRA	10:54:39	743508	22-------PH---
SWX	CH0183136024	18313602	ZKBSILVERETF-AAHCHF	CHF	40.445	40.445	TRA	10:40:29	720312	22-------PH---
SWX	IE00B7452L46	14969108	SPDR UK ALL GBP-ACC	CHF	63.44	63.44	TRA	10:47:33	575424	22-------PH---
SWX	CH0146698425	14669842	1.25 EIB 19	CHF	102.95	102.95	TRA	10:28:41	158033	22-------PH---
SWX	IE0086R52036	13937387	ISHS GLD PRD USD-AC	CHF	8.486	8.486	TRA	10:48:13	323796	22-------PH---
SWX	CH0139101601	13910160	ZKB GOLDETF-AAH CHF	CHF	368.3	368.3	TRA	10:46:50	77625	22-------PH---
SWX	CH0139101593	13910159	ZKB GOLD ETF-AA CHF	CHF	380.2	380.2	TRA	10:25:30	82817	22-------PH---
SWX	IE0084613386	12931546	SSGA SPDR BL BD USD	CHF	72.43	72.43	TRA	10:47:30	464005	22-------PH---
SWX	NL0009739416	12871311	POSTNL BR	CHF	3.767	3.767	TRA	9:02:57	243776	22-------PH---
SWX	CH0122526608	12252660	2.625 ENAG 23	CHF	104	104	TRA	9:44:35	385007	22-------PH---
SWX	CH0120743346	12074334	2 HSBC SFH 19	CHF	102.91	102.91	TRA	9:30:52	92445	22-------PH---
SWX	CH0118923918	11892391	UBSETF SBID715CHFAD	CHF	146.94	146.94	TRA	9:45:22	474127	22-------PH---
SWX	CH0118923876	11892387	UBSETF SBID13CHF AD	CHF	82.9	82.9	TRA	9:58:55	656608	22-------PH---
SWX	DK0060252690	11784376	PANDORA RG	CHF	95.66	95.66	TRA	9:04:28	274810	22-------PH---
SWX	CH0116015352	11601535	CMCIOILSFCHADIS	CHF	27.285	27.285	TRA	10:10:51	951472	22-------PH---
SWX	CH0116014934	11601493	UBSETFPLTN-USD ADIS	CHF	89.23	89.23	TRA	9:45:37	142768	22-------PH---
SWX	FR0010869438	11202645	LY SMI D2I ETF A	CHF	9.428	9.428	TRA	10:29:51	218117	22-------PH---
SWX	FR0010871145	11145933	AM SWITZ UC ETF CHF	CHF	288.85	288.85	TRA	9:12:56	22781	22-------PH---
SWX	LU0488317701	11058258	COMS NY A GOLD ID	CHF	16.25	16.25	TRA	9:56:22	323735	22-------PH---
SWX	LU0480132876	10920548	UBSETF MSCIEM USDAD	CHF	110.6	110.6	TRA	9:31:25	308734	22-------PH---
SWX	LU0411075376	10804968	XTR LEVDAX DS 1CC	CHF	133.2	133.2	TRA	9:36:36	608267	22-------PH---
SWX	IE00B4L5ZG21	10608422	ISH EUR CO EX-F EUR	CHF	134.08	134.08	TRA	9:28:15	554881	22-------PH---
SWX	CH0106027128	10602712	UBSETF GLD HCHF A D	CHF	116.56	116.56	TRA	9:54:10	909437	22-------PH---
SWX	CH0104136285	10413628	ISHSGOCHFHETFCH -A-	CHF	113.5	113.5	TRA	10:54:38	169723	22-------PH---
SWX	LU0392496690	4878674	COMS ATX ID	CHF	47.01	47.01	TRA	10:20:09	651976	22-------PH---
SWX	CH0048265513	4826551	TRANSOCEAN RG	CHF	9.05	9.05	TRA	9:34:39	782141	22-------PH---

Visualization of the Market Data Feed

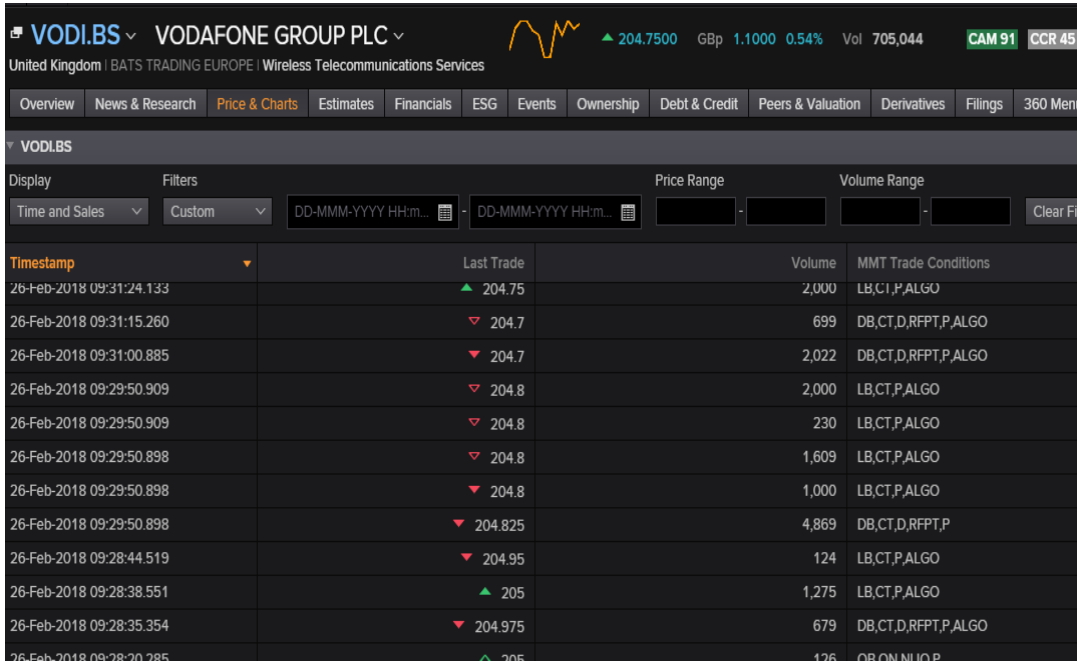
Thomson Reuters – Elektron and Eikon

MMT Flag details
ESMA Flag details

VODI.BS	Market Price	2017-12-19T11:32:33.386500606Z	0	Raw	UPDATE	TRADE	
				FID	11	NETCHNG_1	0.15
				FID	56	PCTCHNG	0.06
				FID	14	PRCTCK_1	2
				FID	32	ACVOL_1	780910
				FID	77	NUM_MOVES	511
				FID	3404	VWAP	231.9605
				FID	3428	ORDER_SIDE	1
				FID	3426	ORDER_ID	4.14085E+17
				FID	100	TURNOVER	181140.2951
				FID	1379	VOL_X_PRC1	320465.2
				FID	975	ACT_FLAG1	
				FID	4465	TRD_IND_1	
				FID	8582	MMT_CLASS	12-------PH---
				FID	1021	SEQNUM	788756
				FID	32741	TRNOVR_UNS	181140295.1
				FID	32743	ACVOL_UNS	
				FID	6	TRDPRC_1	
				FID	3900	TRADE_ID	
				FID	178	TRDVOL_1	
				FID	3854	SALTIM_MS	

Efficient MMT string in Elektron Realtime feed using MMT_CLASS field (available in desktop too). We use "?" in the string where the value is not known from the venue.

MMT display code in Eikon Desktop. You can also view the MMT efficient string within the desktop.



FIX MMT Work program 2018

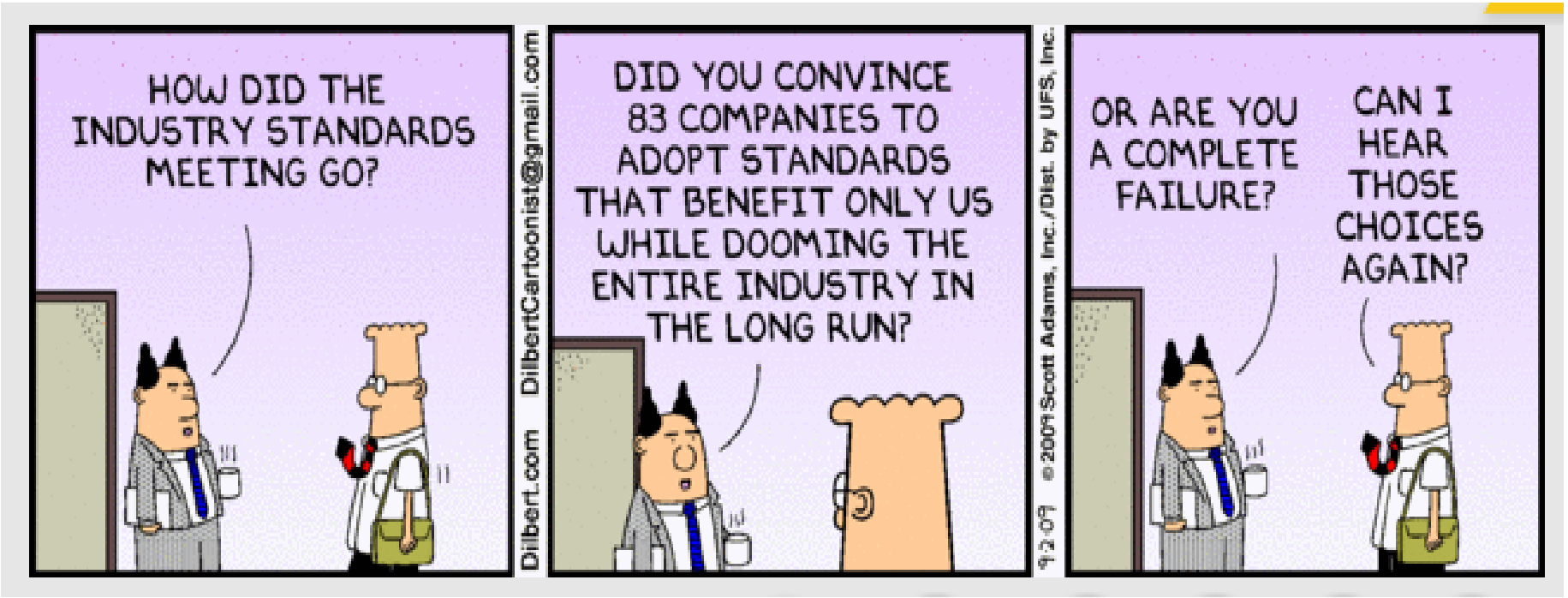
- Enlarge FIX MMT Technical Committee; Engage more representatives from Sell-side, APA and non-equity trading venue operators.
- Support broader roll-out of MMT and monitor MMT adoption
- Support FIX Transparency Group to address trade reporting use cases and deliver trade flagging best practice recommendations
- Improve public FAQ documentation

What you should remember about FIX MMT

- FIX MMT delivers an operational solution for fulfilling trade flagging regulatory requirements raised by ESMA
- FIX MMT is an off-the-shelf industry solution and can be freely used without any licensing constraint.
- The FIX MMT Technical Committee is a collaborative initiative; additional expertise is always welcome.
- Please submit your questions/comments to:

mmt@fixtrading.org

Conclusion about data standard…



FIX Application Layer Extensions (https://www.fixtrading.org/extension-packs/)

- A total of 15 Extension Packs (EP226 – EP240) of different sizes and from various areas approved and published for implementation, 9 of them for MiFID II (not repeated here):

  - EP226 – Quote Negotiation (GTC/Bloomberg)
    Addition of PaymentGrp to ExecutionReport, new enumeration values for QuoteQualifier(695).

  - EP227 – Trade Reporting Extensions (GTC/CME)
    Extension of CollateralAmountGrp and availability per trade side. One party auto-match for related counterparties. Distinction between Trade at Market and Basis Trade Index Close.

  - EP230 – Price Qualifiers (Fidelity Capital Markets)
    Addition of PriceQualifierGrp to support fixed income pricing (e.g. taxes, the effect of amortization or a floating rate offset).

  - EP234 – Allocations of Multileg Order or Trade Extension (CME)
    New attribute to the various allocation repeating components allowing for identification of the leg of a multileg order or trade.

  - EP239 – AllocationInstructionAlertRequest Proposal (CME)
    New FIX message to support the ability to request to receive AllocationInstructionAlert messages

  - EP240 – Average Pricing and Markup (CME)
    Extensions of the support for trade submissions and give-ups by clients of a Central Counterparty (CCP) for average pricing.

FIX Technical Standards – https://www.fixtrading.org/standards/

- FIX offers a number of Technical Standards below the application layer for the encoding of messages and session protocols.

- FIX Generation 5 introduced the concept of Transport Independence, supporting a choice for the encoding and session protocol. A FIX Technical Standard has its own name and version number. Release Candidates represent work in progress leading up to an official new version.

- The following progress was made since early 2017:

  - Encoding FIX Using JSON Version 1.0 published end of December 2016 (public review in Q1 2017)
  - Simple Binary Encoding (SBE) Version 1.0 officially published as a FIX Technical Standard in March 2017
  - Release Candidate 2 of FIX Orchestra Version 1.0 published in May 2017
  - Release Candidate 1 of FIX-over-TLS (FIXS) Version 1.0 published in August 2017
  - Draft Standard of FIX-over-TLS (FIXS) Version 1.0 published in January 2018
  - Release Candidate 3 of FIX Orchestra Version 1.0 published in March 2018
  - Work continued on Release Candidate 4 for FIX Performance Session Layer (FIXP) Version 1.0

New FIX Website – https://www.fixtrading.org/

ABOUT COMMUNITY GUIDELINES STANDARDS FIX AND MIFID EVENTS MEMBERSHIP BLOGS NEWS FORUMS

- FIX Global Technical Committee supported the design, launch and operation of the new website
- Main entry points for GTC content:
  - GUIDELINES: Technical guidelines (incl. Beginner‘s guide), FIX processes and templates
  - STANDARDS: FIX Application Layer, FIX Technical Standards, FIX Orchestra, FIX Repository, FIXimate, FIXwiki
  - BLOGS : GTC blog for announcements, commentaries etc.
  - FORUMS: FIX discussion forum, see next slide
- Community ➔ Committees ➔ Global Technical Committee
  - Closed group (new members welcome), GTC page not actively used so far

New FIX Discussion Forum – https://forum.fixtrading.org/

Category	Topics
General Q&A Topics that don't need a category, or don't fit into any other existing category.	10235

- Significant effort made to convert entire FIX forum history from the old website (> 10,000 entries!)
  - Cleaned up content to remove duplicated content (quoting of initial request and previous responses)

- Usage of Discourse
  - Industry standard, open source software (https://www.discourse.org/), hosted and configured by FIX
  - Standard filters (e.g. new, latest, unread) as well as brute force search function
  - Single category (General Q&A) for all issues (“favorite“ category on the old website)
  - Tags defined by GTC for easy filtering, e.g. “mifidii“, “publicreview“
  - Used for public review of Proposals for Extensions and Technical Standards
  - Heavily used for clarifications in the context of MiFID II

Time for Q&A

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