



Changes in the trading systems (Xetra and MMTS II) caused by UTC clock synchronization after MIFID2 comes into force

According to Article 50 and RTS 25 of MIFID2 (2014/65/EU), the Exchange needs to provide in its trading systems the following:

- business clocks used to fix the date and time of reportable events of BSE (hereinafter referred to as: Business Clocks), **have to be synchronized with the Coordinated Universal Time (hereinafter referred to as: UTC) issued and maintained by timing centers** listed in the latest Annual Report on Time Activities of the Bureau International des Poids et Mesures. The synchronization of the Business Clocks used to fix the date and time of reportable events can also be adjusted to the UTC disseminated by a satellite system, provided that any offset from UTC is accounted for and removed from the time-stamp
- the maximum deviation of Business Clocks used by BSE from UTC can be 1 millisecond and the time-stamps used in **the systems will have a 1 millisecond accuracy.**

According to the interpretation of BSE, the Directive only describes the accuracy and makes the synchronization mandatory, while in regard of the applied time zone (hour value) **it does not require a unified solution on an EU level.**

Taking into consideration the previously described criteria, the table below shows the change in time-stamps (according to which time zone the given time-stamp will be shown) in the trading systems (Xetra and MMTS II.) and in the interfaces or software components connected to them (including market data) after MIFID2 comes into force.



Xetra-BSE Spot Market (based on the information provided by Wiener Boerse)

Trading system component	Time zones for time-stamps	Comment
Central Xetra trading system (trading engine) and gateways	UTC	Every transaction will be shown according to UTC
Enhanced Transaction Solution (ETS)	UTC	Every transaction will be shown according to UTC
Xetra (DBAG) FIX Gateway	UTC	No change, already working with UTC
Xetra MISS server	CET	The MISS Server gets the time-stamp of the local time zone. (can be configured by Xetra members)
VALUES API	UTC	Every transaction will be shown according to UTC
J-Trader GUI (and WebTrader)	CET	J-Trader visualization continues to work according to CET
WBAG Alliance Data Highway (ADH) market data	UTC	Every transaction will be shown according to UTC
EnBS/MDI market data	UTC	Every transaction will be shown according to UTC
CEESEG FIX	UTC	No change, already working with UTC
CEE TRADER	CET	CEE-Trader continues to work according to CET
Exchange member reports (market making statistics, OTR, etc..)	CET	Every report sent to members will be made according to CET
BSE-KELER interface (list of trades)	CET	Every transaction will be shown according to CET, no change needed (the accuracy stays second based, but only here)



MMTS II. and Derivatives Market (derivative and commodity section)

Trading system component	Time zones for time-stamps	Comments
Central OLTS trading system (trading engine)	CET	Every transaction will be shown according to CET, no change
Trader Workplace (frontend)	CET	Every transaction will be shown according to CET, no change
K2	CET	Every transaction will be shown according to CET, no change
WBAG Alliance Data Highway (ADH) market data	UTC	Every transaction will be shown according to UTC
fVIS (BSE Vendor Information System (derivative), FIX)	UTC	Every transaction will be shown according to UTC
Member reports (market making statistics, OTR, etc..)	CET	Every report sent to members will be made according to CET
BSE-KELER interface (list of trades)	CET	Every transaction will be shown according to CET, no change needed (the accuracy stays second based, but only here)