Summary Member Impact - OMnet Genium INET 5.0.0210 (November 2017)

Contents

1. Purpose of the Document

This document presents the technical impact of the Genium INET 5.0.0210 release (November 2017) on the OMnet API compared to the version 4.1.0220 (February 2017).

2. Reference Data

2.1 Trade Report Type

2.1.1 Description

Venue of Execution and Transaction Category will be available via trade report type configuration.

This is a mandatory change.

2.1.2 Messages

- DQ45/DA45

2.1.3 Structure

- New fields to be added to structure ANSWER_TRADE_REPORT_TYPES
    - Venue of Execution [UINT8]
        - Values: 0=Not applicable, 1=MIC Code, 2=SINT, 3=XOFF
    - Transaction Category [UINT8]
        - Values: 0=Not applicable, 1=TPAC, 2=XFPH

2.2 Minimum Block Trade Size and Liquidity flag

2.2.1 Description

Minimum Trade Report Size (Pre-Trade LIS) and Liquidity will be available in the reference data for the Instrument Class.

2.2.2 Messages

- DQ122/DA122, BU122
- DQ123/DA123, BU123

2.2.3 Structure

- New named structure NS_INST_CLASS_MIFID will be added with the following fields:
    - Minimum Block Trade Size [INT64]
    - Liquid [UINT8]

2.3 Minimum Deferral Size

2.3.1 Description

Minimum Deferral Size will be available in the reference data for the Instrument Class.
Note that there will be two deferral sizes.

This is a mandatory change

2.3.2 Messages

- DQ122/DA122, BU122
- DQ123/DA123, BU123

2.3.3 Structure

- Named structure NS_INST_CLASS_TRR_DEF_PUBL (37118) will be extended with the following field:
    - INT64_T traded_quantity_q // SSTI Deferral Size =>Existing field with changed description
    - INT64_T traded_quantity_2_q // LIS Deferral Size

2.4 Extra Reference Data for Commodities

2.4.1 Description
New reference data fields will be published for Commodity instruments.

2.4.2 Messages
- DQ122/DA122, BU122
- DQ123/DA123, BU123

2.4.3 Structure
New named structure NS_INST_CLASS_COMMODITY with the following fields:

- Base Product [4 chars]
- Sub Product [4 chars]
- Further Sub Product Code [4 chars]
- Quantity in Measurement unit [25 chars]

Note that emission allowances are identified with Base Product = ENVR and Sub Product = EMIS.

2.5 Default Trader ID

2.5.1 Description
The Default Trader ID configured for the user will be provided.

This is a mandatory change.

2.5.2 Structure and Messages
A Default TraderID [char6] will be added to the answer for DQ30 (struct ANSWER_USER_TYPE_INFO).

2.6 Coupon Interest Rate

2.6.1 Description
The coupon interest rate can now be negative.
The coupon interest rate will be expressed as a **percentage** with 6 implicit decimals; for example the value 110000 should be interpreted as 0,11%.
Note: This means 2 more implicit decimals than the current interpretation.

This is a mandatory change.

2.6.2 Structure and Messages
`coupon_interest_i` is changed from unsigned INT32 to a signed INT32, this affects the structs:

- DA4_DA19 (used in broadcasts BU4 and BU19)
- NS_FIXED_INCOME (used in BU120, BU121, answers to DQ120, DQ121)

3. Order Management

3.1 OM_EXCHANGE_INFO structure

3.1.1 Description

Due to requirements for order record keeping, transaction reporting and Trader ID, new fields will be added to the overlay structure OM_EXCHANGE_INFO, as a consequence the field `exchange_info_s` needs to be extended to 64 bytes.

This is a mandatory change.

3.1.2 Structure

The overlay structure OM_EXCHANGE_INFO will have new fields added:

- Client identification code [32-bit signed integer/Short code]
- Investment decision within firm [32-bit signed integer/Short code]
- Execution within firm [32-bit signed integer/Short code]
- Trader ID [6 chars]
- DEA-flag [1 byte enumerated value] (This shall not be set in the incoming transactions. It will be populated from the reference data configuration on the Trader ID.)
- Risk reducing indicator [1 byte enumerated value] (Commodities risk reducing indicator for MIFID reporting)
- Filler [12 bytes for future use]

3.1.2.1 Order capacity

The existing field Order Capacity will allow two new values, 8-9. It is no longer allowed to set the Order Capacity to zero (0). In the context of Order Record Keeping the following Order Capacity mapping will be done downstream from Genium INET:

Description	OMnet	MiFID II	
	Order capacity	Trading Capacity	Liquidity Provision activity
Not allowed for orders	0	N/A	N/A
Agent	1	AOTC	false
Principal	2	DEAL	false
Acting as Market Maker or Specialist	3	DEAL	true
Issuer holding	4	AOTC	false
Issue Price Stabilization	6	AOTC	false
Riskless principal	7	MTCH	false
Agent + liquidity provision	8 (new)	AOTC	true
Riskless principal + liquidity provision	9 (new)	MTCH	true

3.1.3 Messages

The above structure is used in the following messages:

Queries	External	Proxy	Name
Total orders	MQ8/MA43	MQ392/MA43	Total Order

	MQ9/MA44	MQ393/MA44	Total Inactive Order
	MQ32/MA32	MQ416/MA32	Total Session State Type Order
	MQ48/MA48	MQ432/MA48	Query Own Stop Orders
		MQ434/MA50	MQ50 With Trader ID QUERY
	MQ90/MA100	MQ396/MA100 + MQ474/MA100	Own Linked Order
	MQ100/MA100	MQ397/MA100	Own Inactive Linked Order
Proxy orders	MQ5/MA8		Proxy Order
	MQ34/MA34		Proxy Session State Type Order
	MQ47/MA47		Proxy Query Stop Order
	MQ49/MA49	MQ433/MA49	Query Inactive Stop Orders
BO5 recovery	MQ151/MA151		Order Broadcast
	MQ154/MA154		Order Broadcast Proxy
Trade recovery	CQ10/CA10		Query missing trade
	CQ11/CA11		Query missing trade historical
Trade reports	MQ78/MA78	MQ398/MA334	Trade Reports, Unmatched
	MQ80/MA80		Trade Reports Counterpart, Unmatched
Transactions	**External**	**Proxy**	
Order entry	MO31	MO415	Order Entry
	MO41	MO425	Stop Order
	MO2		Multi Leg Order Entry
	MO90	MO474	Linked Order
	MO37	MO421	Two-Sided Price Quotation
Order update	MO33	MO417	Alteration
	MO43	MO427	Alter Stop Order
	MO100	MO484	Alter Linked Order
Order delete	MO4	MO388	Order Deletion
	MO40	MO424	Inactive Deletion
	MO44	MO428	Delete Stop Order
Trade reports	MO74		Trade Report Deletion, Unmatched
	MO75	MO459	Trade Report
	MO76		Trade Report, Two-Sided
Broadcasts	**Message**	**Name**	
	BO5	Firm Order Book	

	BO55	Trade Report Notification
	BD6	Dedicated Trade Information

3.1.3.1 Remarks

It is not possible to change Client identification code, Investment decision within firm, Execution within firm using "order update" transaction. Those fields are not relevant on "order cancel" transactions.

On Trade Report Notifications (BO55/MQ80) , the Order Record Keeping fields above, trader ID, and capacity will be blank.

3.2 Circuit Breaker Triggering information

3.2.1 Description

The user whose order or quote triggers a circuit breaker will be informed about this through a BO5 [Firm Order Book] broadcast.

3.2.2 Structure and Messages

A new VIM struct will be added to the BO5 broadcast with the following information:

- `struct series`
- `struct trading_code` (owner of the order)
- `bid_or_ask_c [UINT8]`
- `order ID`

This new VIM struct will also be added to the answers to the BO5 related queries MQ151 and MQ154.

3.3 Trade Report Originator

3.3.1 Description

A Trade Report Originator free text field is added to identify the entering part in double sided and proxy trade report transactions.

3.3.2 Structure and Messages

The Trade Report Originator [char 16] is added to the following structures:

- TRADE_REPORT_2_TRANS (MO76, BO5, MA151 – answer to MQ151, MA154 - answer to MQ154)
- TRADE_REPORT_1_TRANS_P (MO459, BO5, MA151, MA154)

The Trade Report Originator will be a free text field with no validation.

3.4 Quotes

3.4.1 Description

New fields are added to MO96 Mass Quote Transaction.

The existing quote transaction MO36 is obsolete and shall no longer be used. This applies to the proxy version of the transaction as well (MO420).
Note that MO37 is only possible to use for Commodities.

This is a mandatory change.

3.4.2 Structure and Messages

The following fields are added to struct MASS_QUOTE_TRANS in MO96:

- Investment decision within firm [32-bit signed integer/Short code]
- Execution within firm [32-bit signed integer/Short code]
- Trader ID [6 chars]
- `ex_client_s` [10 chars]

3.5 Post Trade Transparency flags

3.5.1 Description

Benchmark transaction flag (BENC) and Agency Cross transaction flag (ACTX) can be set in Trade Report transactions and will be available in Firm Order book messages.

This is a mandatory change.

3.5.2 Messages

Messages affected:

- MQ78/MA78, MQ334, MQ398/MA334, Trade Reports, Unmatched
- MQ80/MA80, MQ336 Trade Reports Counterpart, Unmatched
- MO75, MO331 , MO459 Trade Report
- MO76, MO332 Trade Report, Two-Sided
- BO5 Firm Order Book broadcast
- MQ151/MA151 Order Broadcast Query

3.5.3 Structure

Structures to be extended with Benchmark trade flag and Agency Cross transaction flag:

- ANSWER_TRD_REPORT
- ANSWER_TRD_REPORT_PARTY
- TRADE_REPORT_1_TRANS
- TRADE_REPORT_1_TRANS_P
- TRADE_REPORT_2_TRANS

Fields to be added:

- Benchmark Trade flag [UINT8]
- Agency Cross Trade Flag [UINT8]

3.6 Multi Leg Trade Report

3.6.1 Description

New Multi Leg Trade Report transactions will be added as a way to report package transactions (TPAC):

- Double sided Multi trade report transaction
- One-Sided Multi leg trade report transaction
- One-sided Multi leg trade report broadcast
- One-sided Multi leg trade report query, Unmatched
- One-sided Multi leg trade report query, Counterpart Unmatched

The existing Trade Report transaction MO77 Combination Trade Report is obsolete and shall no longer be used.

This is a mandatory change.

3.6.2 Structure and Messages

New two-party multileg trade report transaction (max number of legs: 10) with following fields:

- Series
- Trade report type
- Date of agreement
- Time of Agreement
- Deferred publication
- Benchmark transaction flag
- Agency cross transaction flag
- Trade report originator (optional free text)
- Struct buyer
  - struct party //This is the buyer
  - ex_client_s
  - customer_info_s
  - struct exchange_info_s
  - open_close_req_c
  - give_up_member
- Struct seller
  - struct party //This is the seller
  - ex_client_s
  - customer_info_s
  - struct exchange_info_s
  - give_up_member
  - open_close_req_c
- Items
  - struct series
  - Quantity
  - Premium
  - Leg side (as defined or opposite)

New one-party multileg trade report transaction (max number of legs:10) with following fields:

- Series
- Trade report type
- Date of agreement
- Time of Agreement
- Deferred publication
- Benchmark transaction flag
- Agency cross transaction flag
- Bid or Ask
- Customer_info_s
- ex_client_s
- Struct party //this is the counterpart
- Struct exchange_info_s
- give_up_member
- open_close_req_c
- Items
    - struct series
    - Quantity
    - Premium
    - Leg side (as defined or opposite)

The related multileg trade report counterparty notification broadcast and queries will also be added.

A copy of the information send at entry and leg number will be added in new structure in BO5.

4. Exceptional Market State

4.1.1 Description
New query transaction and corresponding broadcast to return exceptional market state similar to the transactions used for stressed markets (MQ130 and BI620).

4.1.2 Structure and Messages
New Exceptional Circumstances Query and Answer shall be added with the following structure:
- Series
- Items
    - Series
    - Exceptional Circumstances [UINT8]

New Exceptional Circumstances Broadcast shall be added with the following structure:
- Commodity
- Exceptional Circumstances [UINT8]

5. Trading and Market Information

5.1 Public Trade Ticker

5.1.1 Description
The Public Trade Ticker shall be updated to include fields in order to fulfil MiFID II post-trade transparency requirements. The FIX Market Model Typology (MMT) efficient format will be used.

For a reference to FIX MMT, please see:

http://www.fixtradingcommunity.org/pg/file/fplpo/read/3292211/mmt-initiative-mapping-matrix-v301

5.1.2 Messages and Structures
Messages affected:

- BD70, BD71, TR70, TR71

Structure:

- New structure to be added MIFID_TRADE_TICKER
- New fields to be added to structure MIFID_TRADE_TICKER
    - Market Model Typology [char 14]
    - Venue of Execution [char 4].
      Values:
        - [MIC Code] – Market MIC code (segment MIC) for CLOB matched trades or for manually reported trades with trade report types for which the *Venue of Execution* attribute is set to 'MIC Code'.
        - SINT – For manually reported trades with trade report types for which the *Venue of Execution* attribute is set to 'SINT'.
        - XOFF – For manually reported trades with trade report types for which the *Venue of Execution* attribute is set to 'XOFF'.
    - Notional Amount [INT64]

5.2 Order Book Levels
Note that the message BO14 [Order Book Levels] has a struct OB_LEVELS_NO_OF_ORDERS.

This struct will be activated in order to publish the number of Orders per Order Book level.

6. Trade and Position Management

6.1 Trade Information

6.1.1 New fields in OM_EXCHANGE_INFO

6.1.1.1 Description
The new fields added to OM_EXCHANGE_INFO (described in the chapter Order Management) impact the size of `exchange_info_s` and `exchange_info_cl_s` (new size is 64 bytes).

This is a mandatory change

6.1.1.2 Messages and Structures
- `exchange_info_s` is used in struct CL_TRADE_BASE_API (messages: BD6, CA10 VIA – answer to CQ10, CA11 VIA – answer to CQ11).
- `exchange_info_s` is used in struct STANDARD_TRADE_REPORT (messages KB1, KC1, KA1 VIA - answer to KQ1, KA2 VIA - answer to KQ2, KA3 VIA - answer to KQ3

- `exchange_info_cl_s` is used in message CA51 – the answer to CQ51.
- `passthrough_s` is removed from struct CL_TRADE_SECUR_PART since this information was similar to `exchange_info_s` sent in CL_TRADE_BASE_API (messages: BD6, CA10 VIA – answer to CQ10, CA11 VIA – answer to CQ11).

6.1.2 New struct with extra MIFID information

6.1.2.1 Description

Due to requirements for transaction reporting, new fields will be added to the Dedicated Trade Information

Stressed Market flag shall indicate if the trade was executed during stressed market condition

6.1.2.2 Messages and Structures

A new struct CL_TRADE_REGDATA will be added to BD6, CA10 - CQ10 answer and CA11 - CQ11 answer with the following fields:

- Market Model Typology [char 14]
- Venue of Execution [char 4] (same values as described under Public Trade Ticker)
- Trade Report Originator [char 16]
- Stressed Market [UINT8]

6.2 Rectify Deals/Trades

6.2.1 Description

In some circumstances it will be possible to amend more values in Rectify Deal or Rectify Trades.

CC19 Cancel Trade will be descoped, CD31 should be used instead.

This is a mandatory change

6.2.1.1 Messages and Structures

CD31 Rectify Deal struct will have new fields for:

- Benchmark flag
- Agency cross flag
- Time of agreement date
- Time of agreement time

CD27/CD28 Rectify Trade ITEM array will have a new field:

- `order_capacity_c [UINT8]`

6.3 Give-ups

6.3.1 Description

The Directed Give-up broadcast will contain the overlay structure OM_EXCHANGE_INFO.
This will allow to get the clean price for Repos.

This is a mandatory change.

6.3.2 Messages and Structures

New struct added to CL_GIVE_UP_API:

- ```
  struct exchange_info_s // Internally overlayed structure:
  OM_EXCHANGE_INFO
  ```

This affects the broadcast BD29 [Directed Give Up] and the answer to the related queries CQ76 [Give Up Query] and CQ77 [Give Up History Query].

6.4 OTC Trade Reports

6.4.1 Time of Agreement for Swaps and TM FRA Trade Reports

6.4.1.1 Description
It should be possible to specify Time of agreement (date and time) when entering a swap or TM FRA trade report.

This is a mandatory change.

6.4.1.2 Structures
The existing OTC_IRS_TRADE_REPORT and OTC_FRA_TRADE_REPORT structs will be extended with two new fields:

- Time of agreement date
- Time of agreement time

6.4.1.3 Messages
The following messages will be affected:

- KB1 Directed OTC Trade Report
- KB14 Directed OTC Give Up
- KC1 Rectify OTC Trade Report
- KO1 Enter OTC Trade Report
- KQ1 OTC Trade Report Query
- KQ2 OTC Trade Report Query
- KQ3 OTC Trade Report Version Query
- KQ14 Query OTC Give Up Request Query
- KQ15 Query Simulate Netting OTC Trade Report

6.4.2 More Details about Pre-novation Results

6.4.2.1 Description
There will more details sent with the pre-novation results in order to help in case of pre-novation reject by giving the trade details together with the deficit amount and Margin account.

6.4.2.2 Messages and Structures
KB10 (OTC Trade Operation on Hold) and KQ10 (Query OTC Trade Operation) will be extended with a new VIM struct that contains the following information:

- Trade report number
- MRA account
- Total surplus/deficit
- Base currency

CB146 (CL OTC Trade Operation Rejected) and CQ146 (Query CL OTC Trade Operation) will be extended with a new VIM struct that contains the following information:

- MRA account
- Base currency

The new VIM structs will only be included if the recipient is the holder of the position account for the trade report.

6.4.3 External Affirmation of Swaps and TM FRA

6.4.3.1 Description
Swaps and TM FRA OTC Trades affirmed by brokers outside Genium INET will be flagged.

6.4.3.2 Structures
`affirmation_state_c` will be extended with a new allowed value called "Externally Affirmed by Party".

`affirmation_state_c` is included in the OTC_TRADE_REPORT_DATA struct.

6.4.3.3 Messages
The following messages will be affected:

- KB1 Directed OTC Trade Report
- KB14 Directed OTC Give Up
- KQ1 OTC Trade Report Query
- KQ2 OTC Trade Report Query
- KQ3 OTC Trade Report Version Query
- KQ5 Trade Report Termination Query
- KQ14 Query OTC Give Up Request Query

7. EMIR reporting

7.1 Unique Trade Identifier (UTI) in API

7.1.1 Trade UTI

7.1.1.1 Description
The new EMIR ITS requires that the UTI is generated by the CCP at the point of clearing of the trade and communicated to the counterparty in a timely manner. The API is therefore updated to include the UTI for trades in trade confirmations.

A new field will be added to the Dedicated Trade Information.

7.1.1.2 Messages and Structures

A new struct TRADE_UTI added to BD6, CA10 - CQ10 answer and CA11 - CQ11 answer, will contain the Trade UTI.

7.1.2 Trade UTI in OTC Trades

7.1.2.1 Description

The new EMIR ITS requires that the UTI is generated by the CCP at the point of clearing of the trade and communicated to the counterparty in a timely manner. The API is therefore updated to include the UTI for trades in trade confirmations.

A new field will be added to the Directed OTC Trade Report.

7.1.2.2 Messages and Structures

A new struct TRADE_UTI added to KB1, KA1 - KQ1 answer, KA2 - KQ2 answer and KA3 - KQ3 answer, will contain the Trade UTI.

7.1.3 Position UTI

7.1.3.1 Description

This change is mandatory, as CQ3 is not implemented with VIQ/VIA concept.

The position query is updated to include the CCP generated position UTI for EMIR transaction reporting. A new field will be added to the Position Query CQ3.

7.1.3.2 Messages and Structures

A new field will be added to the CA3 – CQ3 answer:

- Position UTI

8. Deal Source Changes

The table below lists the deal sources applicable with the new release.

New or changed information is marked in red.

Name in API Guide	deal_source_n	desc_long_s	desc_abbreviated_s	Transaction/Scenario
deal_source_auto	1	Electronically Matched	AUTO	Trades from orders and quotes (MO31, MO37, MO96)
deal_source_manually	2	Manually Matched	MANUAL	Off-book trades from manual exchange system
deal_source_manually_combo	New number 45	Manually Matched, Combination	MANUAL	Off-book strategy trades from manual exchange system

Name in API Guide	deal_source_n	desc_long_s	desc_abbreviated_s	Transaction/Scenario
deal_source_outside	New number 46	Negotiated Outside Exchange	OFF-BOOK	Off-book trades registered by members (MO75, MO76)
deal_source_outside_combo	New number 39	Negotiated Outside Exchange, Combination	OFF-BOOK	Off-book strategy trades registered by members (*New multi-leg transactions*)
deal_source_auto_combo	7	Electronically Matched, Combination	COMBO	Trades from orders and quotes in standardised combinations (MO31)
deal_source_open_allocation	20	Electronically Matched, Auction	AUCTION	Trades from orders and quotes in auction uncross (MO31, MO37, MO96)
deal_source_tm_combo	36	Electronically Matched, Tailor Made Combination	TMC	Trades from orders and quotes in tailor-made combinations (MO31, MO37, MO96)

9. Impact on Reports

9.1 OTC Trades

Time of agreement (date and time) is added to the reports:

- OTC Trade Detail
- Interest Rate Trades

10. Revision History

Date	Revision	Change Description
2017-03-17	1	Published in IT Notice: IT – Genium INET 5.0.0210 MiFID II Project Update (12/17)
2017-03-20	2	Added CD28 to the list of impacted messages.
2017-04-05	3	Descoped CC19 used by Fixed Income cash.
2017-04-28	4	MO37 is only possible to use for Commodities. Added numbers for the new deal sources.
2017-04-28	5	Changed struct names of UTI.