NOMINATION AND MATCHING PROCESS
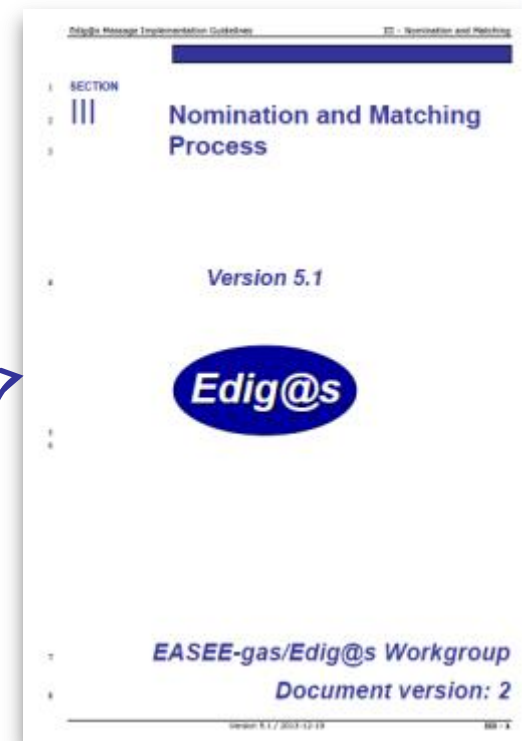
Stanisław BRZĘCZKOWSKI
Message and Workflow Design Working Group (Edig@s-WG)

From BRS to MIG

ENTSOG

- network code
- business process and rules/constraints
- sequence & workflow diagrams
- business data requirements

Edig@s WG

Definitions

- Nomination

Information provided by shippers to the transmission system operators with regard to connection points contains at least the following information:
- connection point identification;
- direction of gas flow;
- shipper or balancing portfolio identification;
- shipper's counterparty or its balancing portfolio identification;
- gas day D, start and end time of gas flow;
- the gas quantity requested to be transported with units

- Types
- Double sided (traditional)
- Single sided nomination
  A nomination that is submitted by a Shipper on behalf of both Shippers to only one Transmission System Operator.

„Notification" according to BAL NC means „Nomination" used for virtual trading point

NOMINT and NOMRES messages are used for Nomination and Notification processes
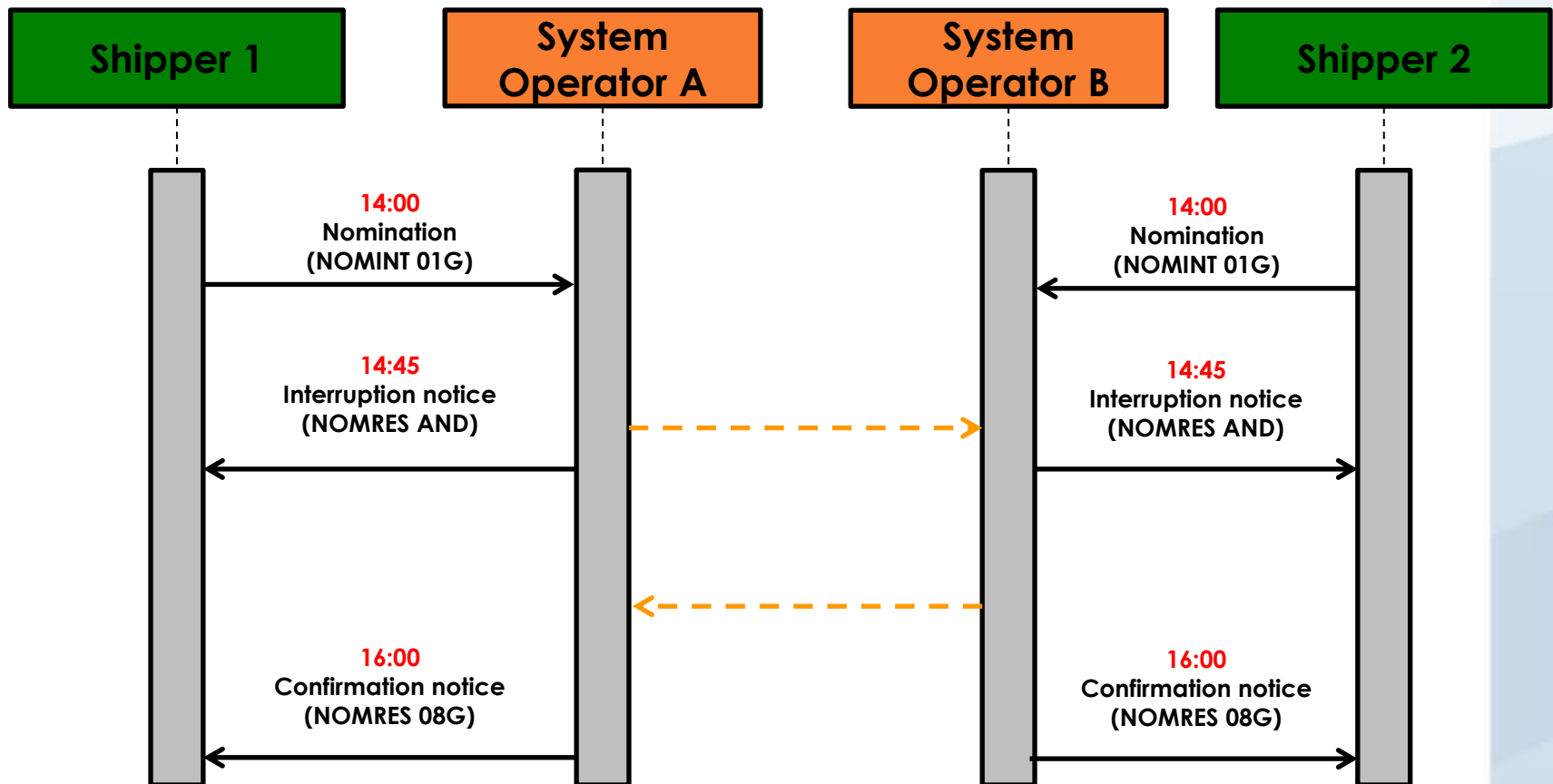
Definitions

◉   Matching

*The process of comparing and aligning processed quantities of gas for Shippers at both sides of a specific connection point,
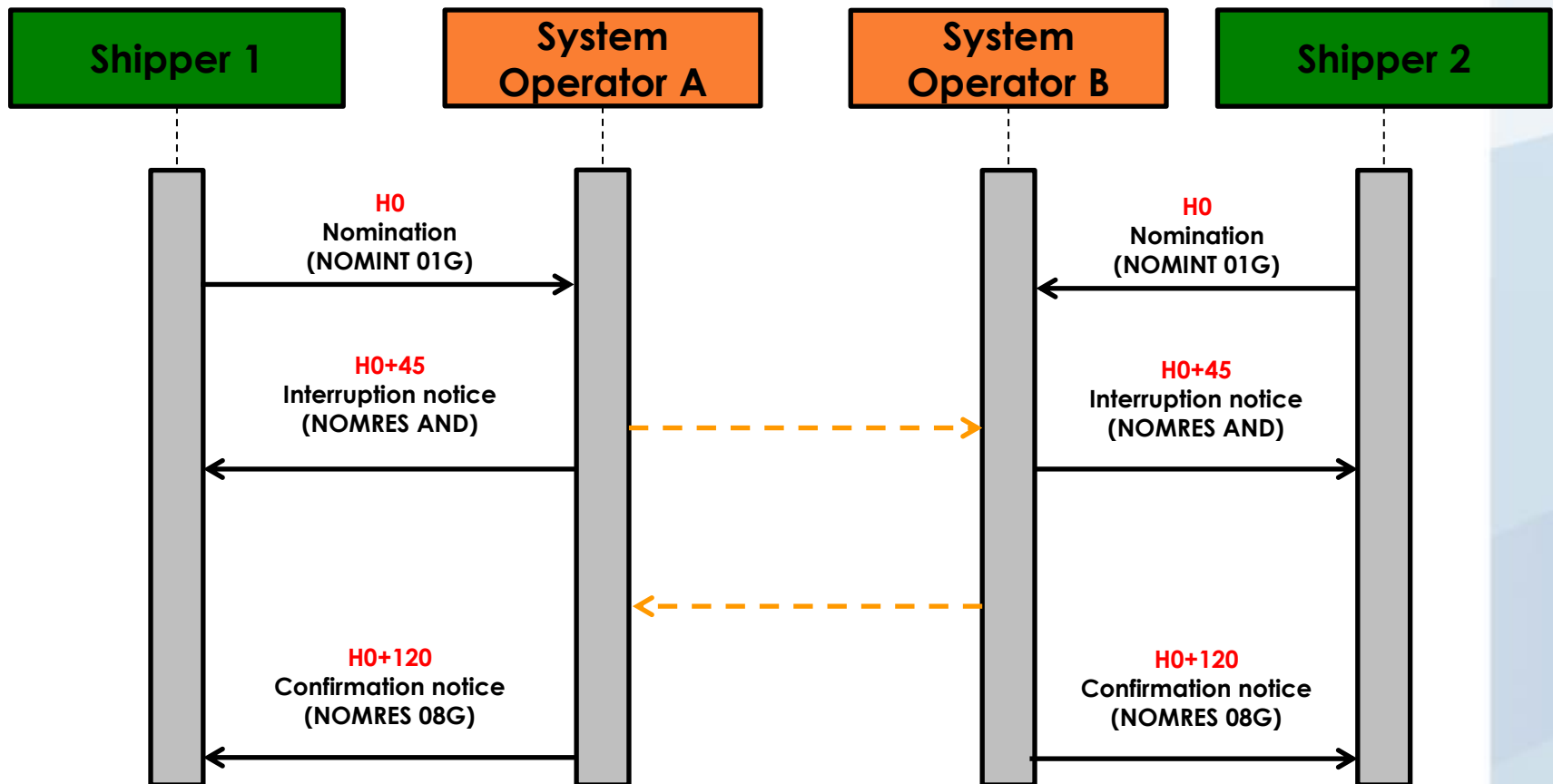which will result in confirmed quantities for the Shippers;*

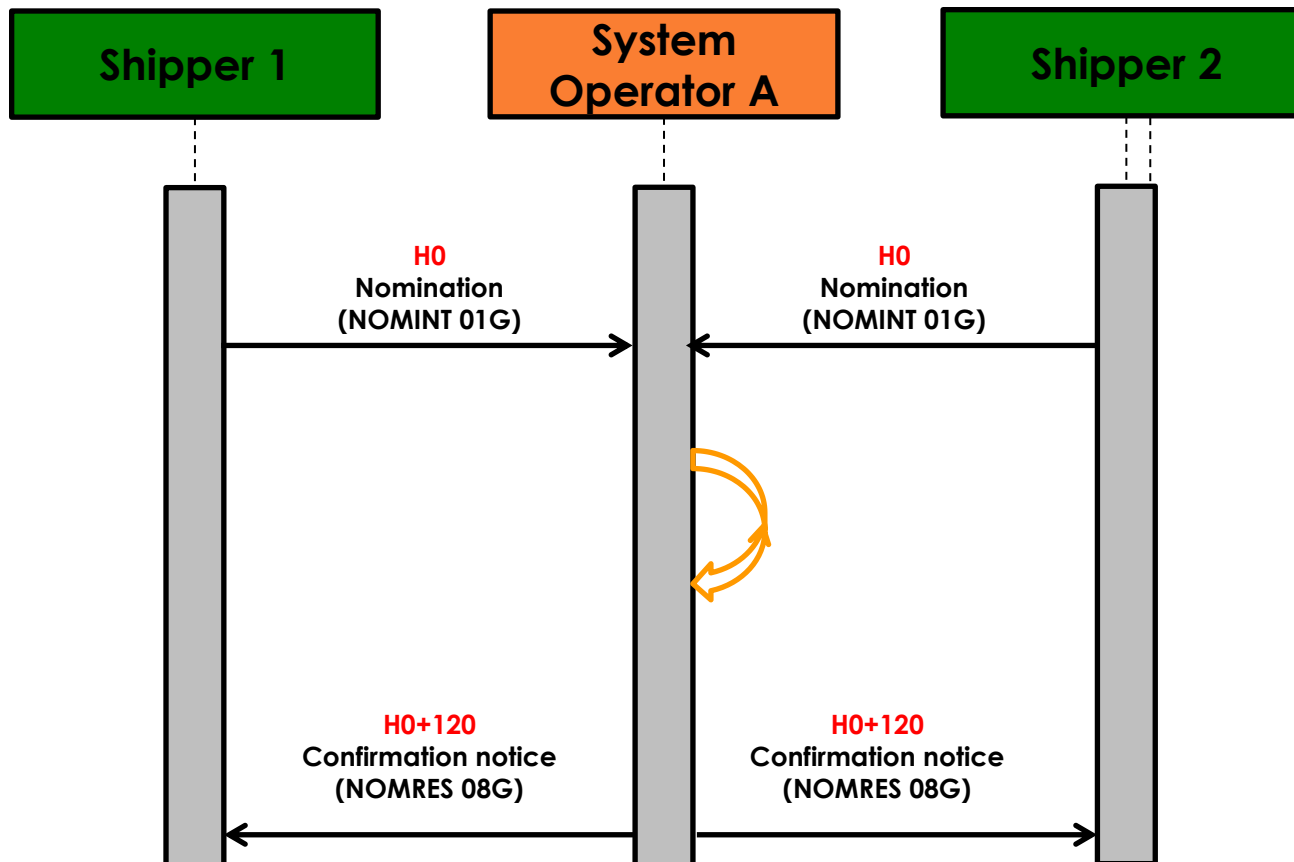# Renomination sequence diagram

Double sided Renominations concerning IP between two System Operators

Notification sequence diagram

Nominations concerning Virtual Trading Point of System Operator

| Shipper 1 | System Operator A | Shipper 2 |

H0
Nomination
(NOMINT 01G)

H0
Nomination
(NOMINT 01G)

H0+120
Confirmation notice
(NOMRES 08G)

H0+120
Confirmation notice
(NOMRES 08G)
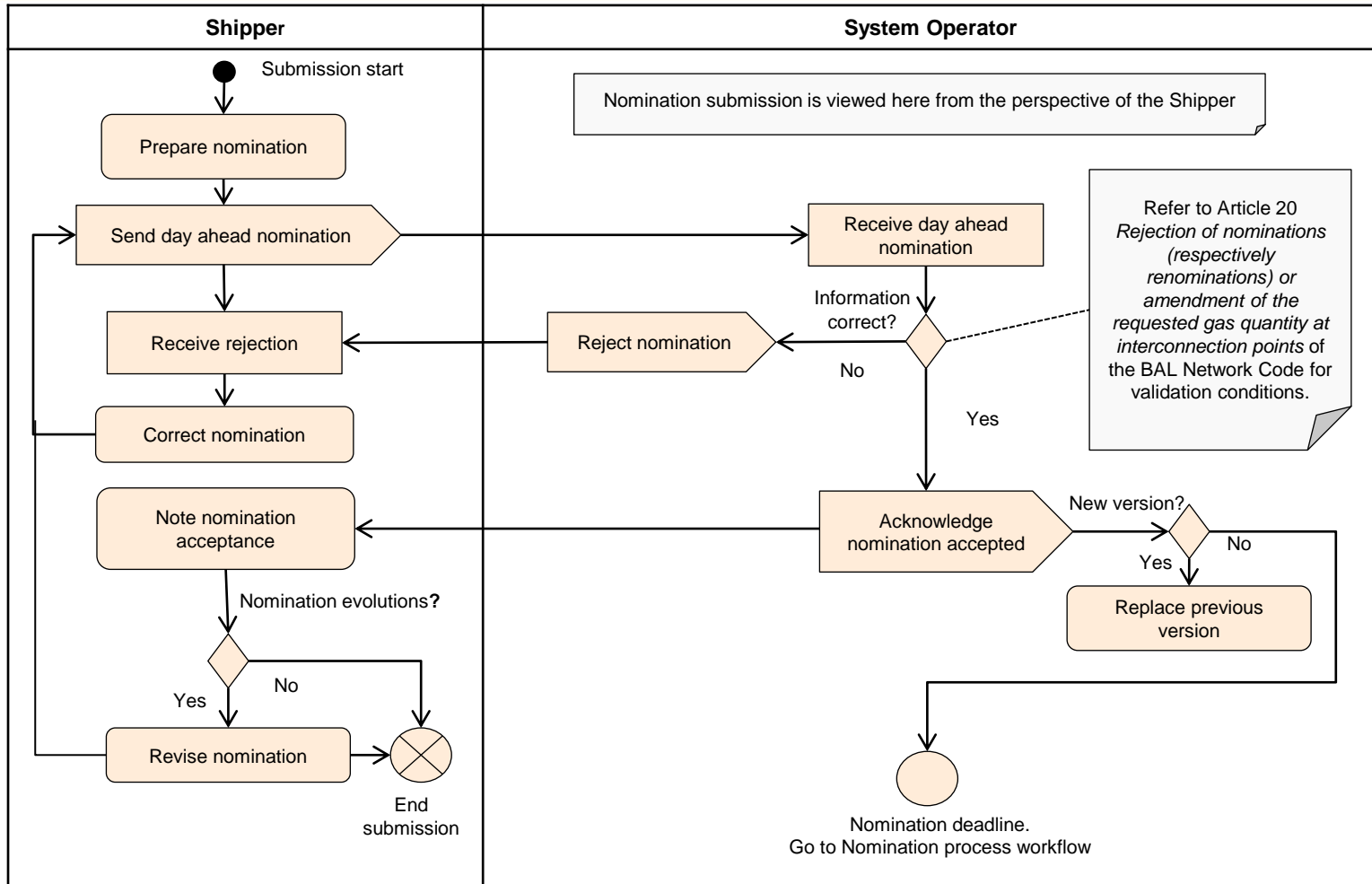
Nomination sequence diagram

Single sided Nominations concerning IP between two System Operators
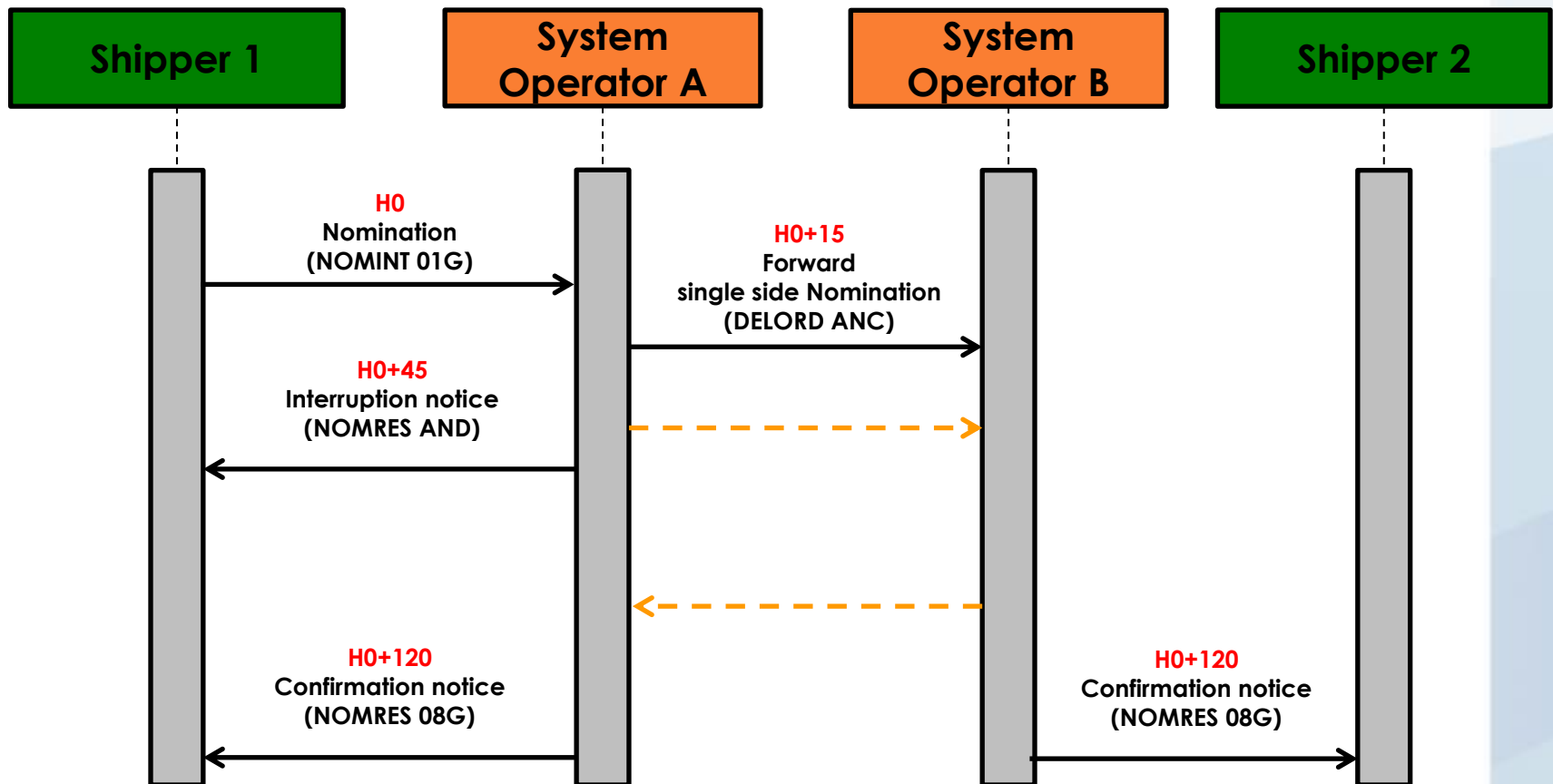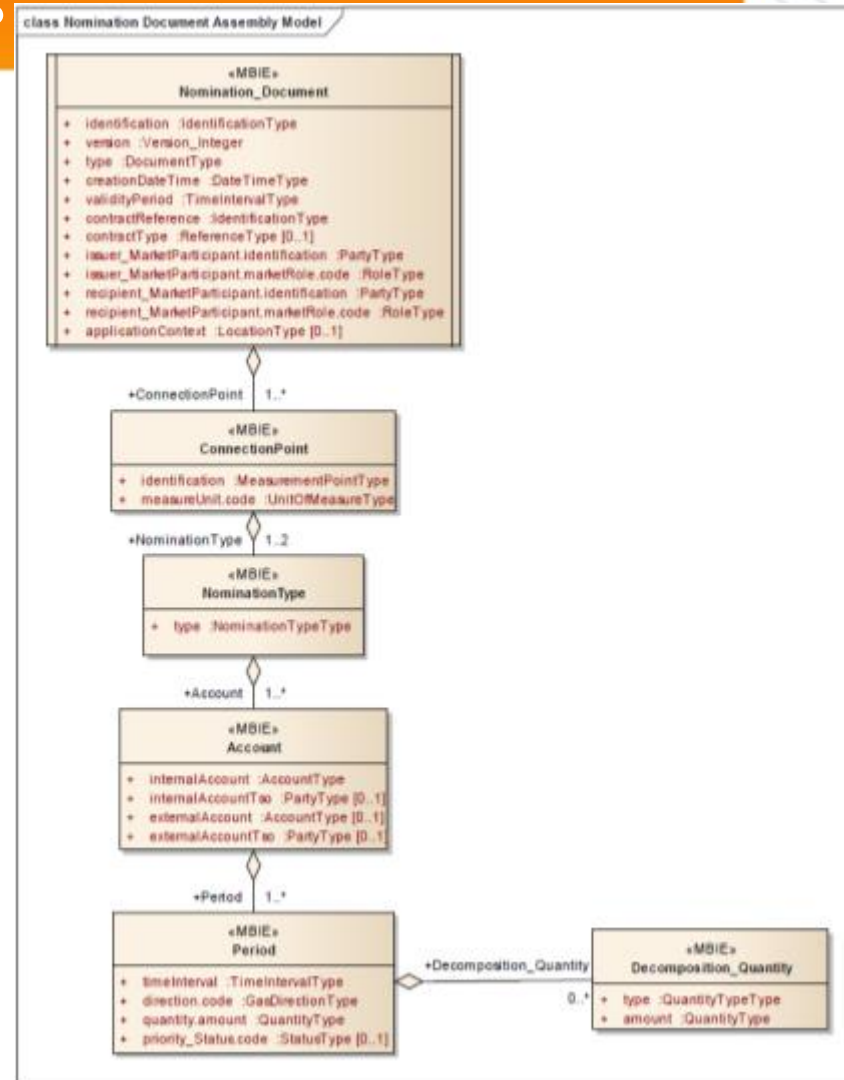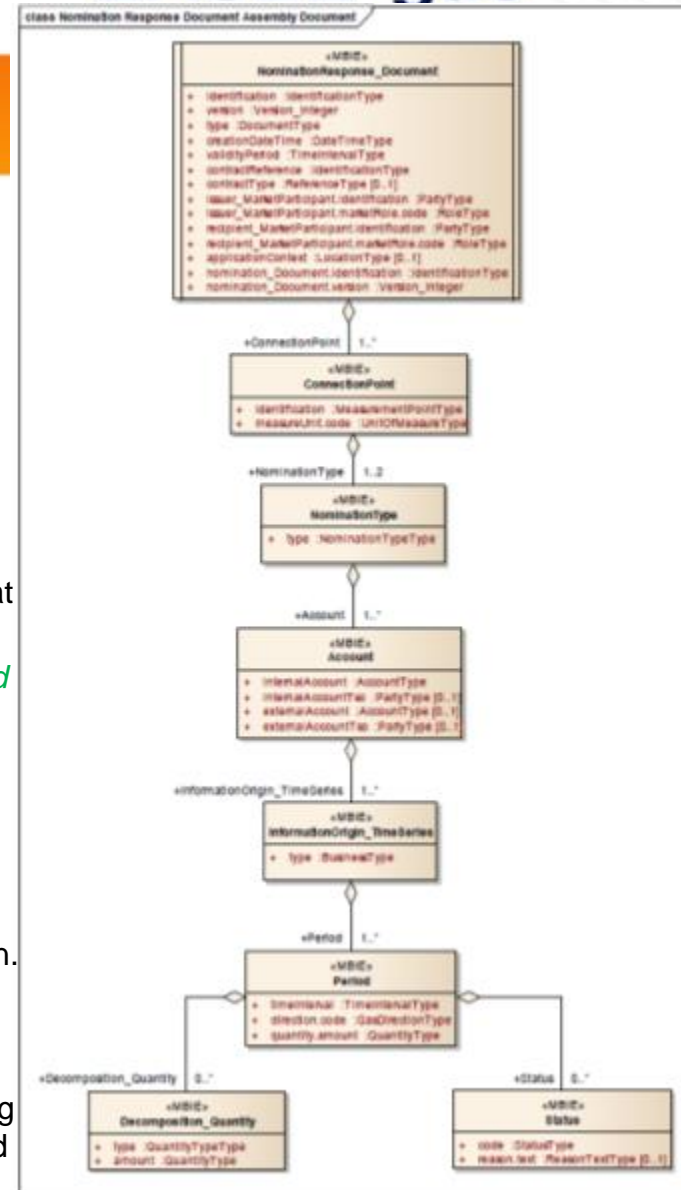
NOMINT – information classes

- **Header** - provides all the information concerning the identification of the nomination including the gas day.
- **Connection Point** - connection point identification and measure unit. Multiple connection points are permitted in NOMINT.
- **Nomination Type** - single sided or double sided.
- **Account** - identifies a Shipper pair.
  Internal Account - the account of the submitting Shipper that is managed by the TSO receiving the NOMINT.
  External Account - the account of the counterpart Shipper that is managed by the adjacent System Operator. In case of End User schedules, the external account attribute is not used.
  Internal and External Account may have the identification of the TSO that provides the code.
- **Period** - shall cover one or multiple intervals of a gas day.
  TimeInterval – start and end time.
  Direction - input or output to/from the area of the TSO.
  Quantity being nominated.
- **Decomposition Quantity (optional)** - only used whenever the quantities nominated have to be distributed by type of contract to which they are being nominated. This is used only in case where local market rules require it and is restricted to LNG Connection Points.

NOMRES – information classes

- **Header** - provides all the information concerning the identification of the nomination confirmation including the gas day, relates it to the NOMINT .
- **Connection Point** - connection point identification and measure unit. Multiple connection points are permitted in NOMRES.
- **Nomination Type** - single sided or double sided.
- **Account** - identifies a Shipper pair.
  Internal Account - the account of the Shipper to whom the NOMRES is being sent that is managed by the TSO transmitting the NOMRES.
  External Account - the account of the counterpart Shipper that is managed by the adjacent TSO.
  Internal and External Account may have the identification of the TSO that provides the code.
- *Information origin - identification of the source of the information provided in the Period class. The following Types are permitted: **16G – Confirmed** , 14 G - Processed by System Operator, 15G - Processed by Adjacent System Operator, 18G – nominated by counterparty (for notification)*
- **Period** - shall cover one or multiple intervals of a gas day.
  TimeInterval – start and end time.
  Direction - input or output to/from the area of the TSO.
  Quantity - confirmed, processes or nominated – depending on the origin.
- *Status (optional) - status of given quantity within a time interval (e.g. mismatch, interrupted,…).*
- **Decomposition Quantity** (optional) - only used whenever the quantities nominated have to be distributed by type of contract to which they are being nominated. This is used only in case where local market rules require it and is restricted to LNG Connection Points.
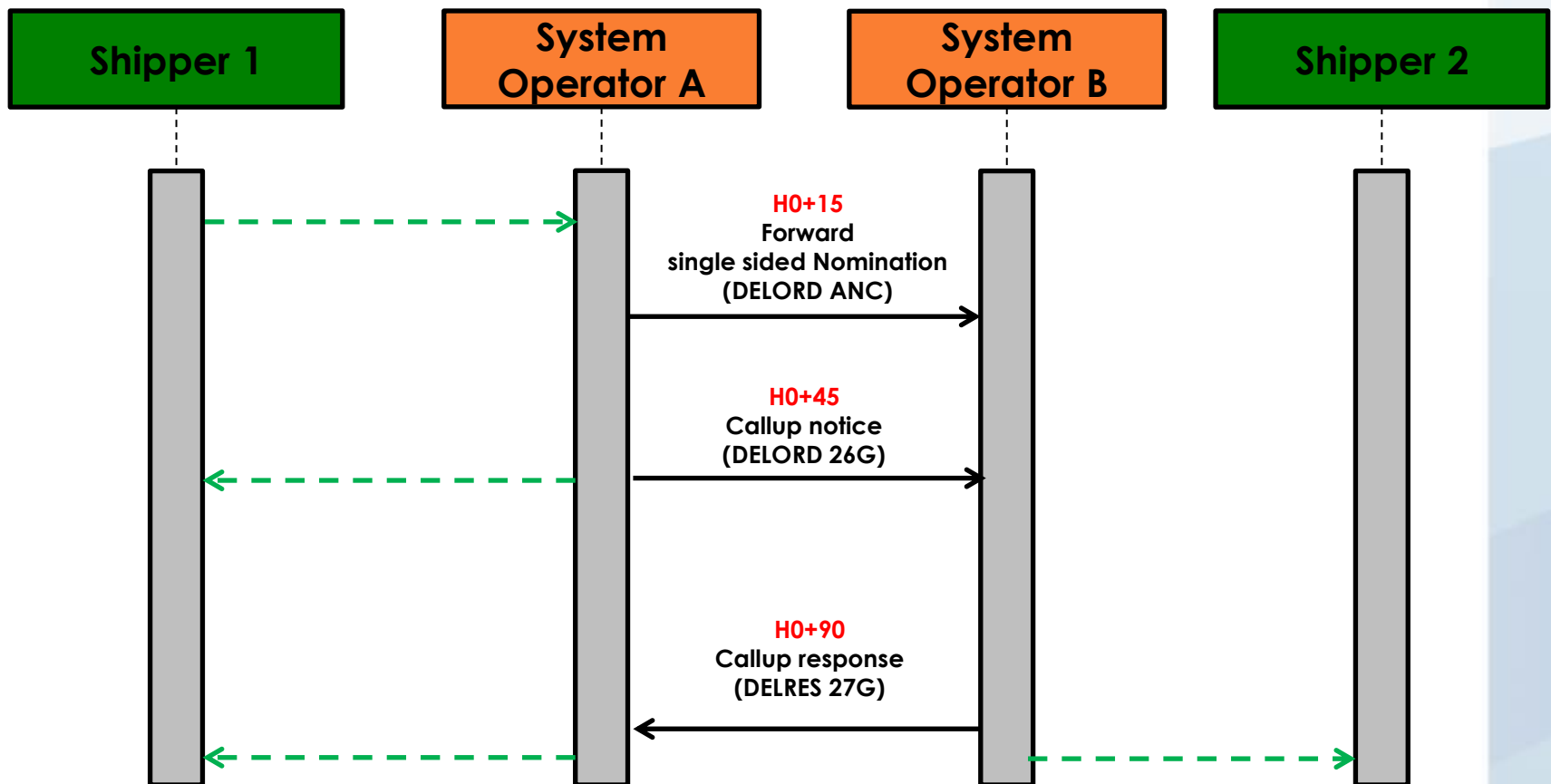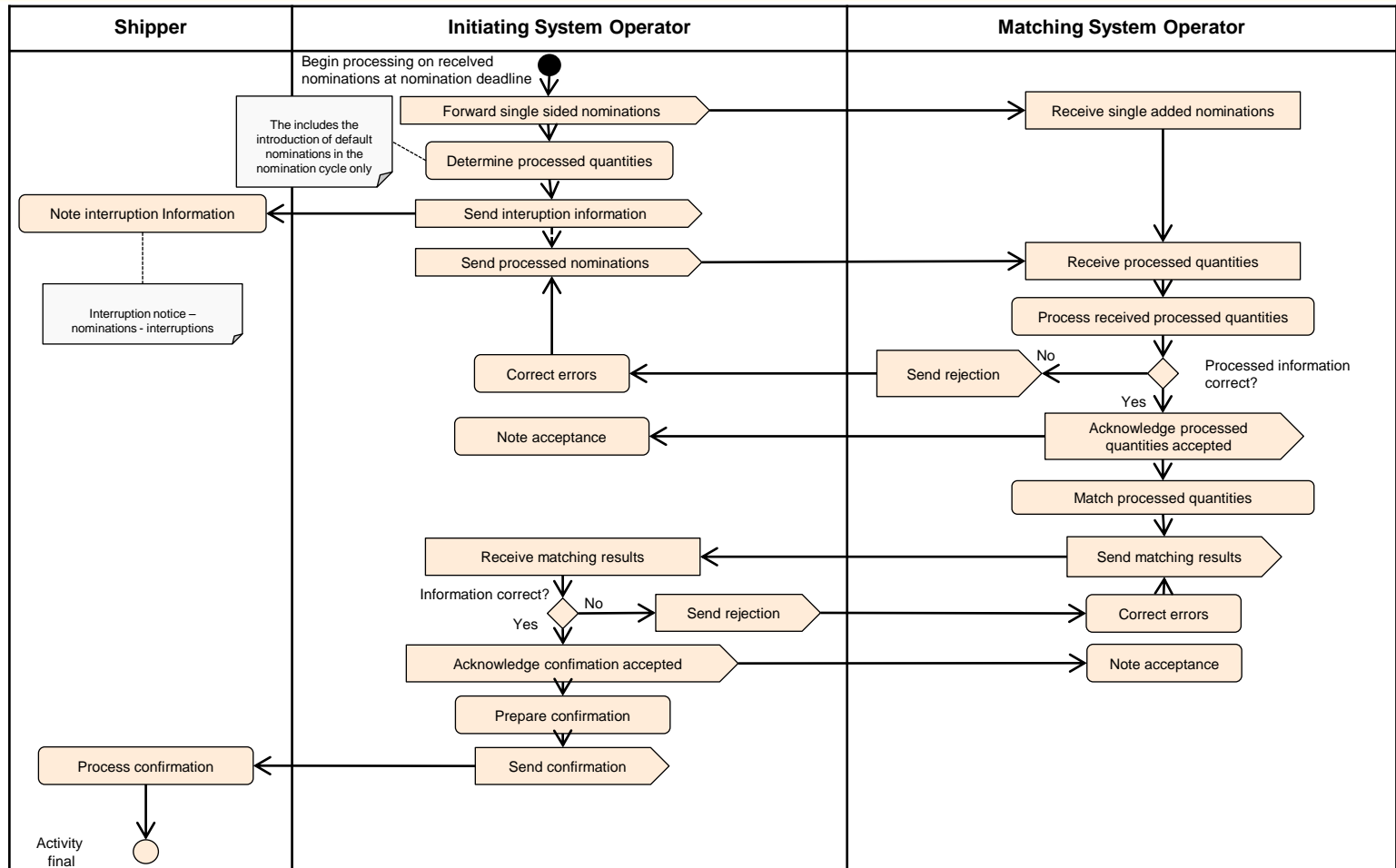
Edig@s messages

➤ MATCHING PROCESS

Matching sequence diagram

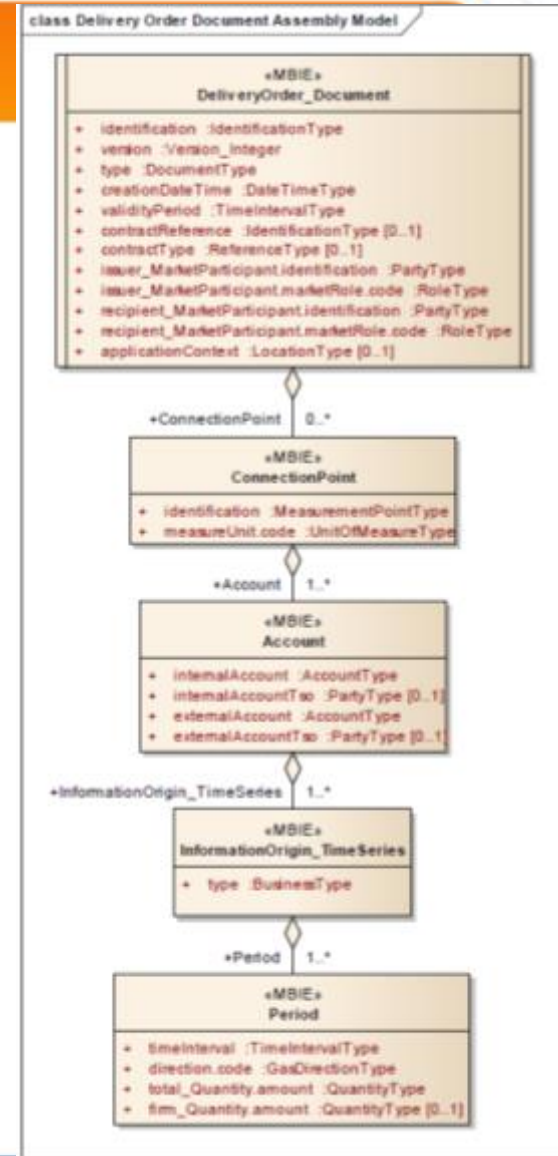◉ Matching that concerns the supply of gas between two System Operators areas

Matching workflow

EASEE-gas

DELORD – information classes

- **Header** - provides all the information concerning the identification of the matching information including the gas day.
- **Connection Point** - connection point identification and measure unit. Multiple connection points are permitted in DELORD.
- **Account** - identifies a Shipper pair.

  Internal Account - the account of the Shipper that is managed by the TSO sending the DELORD (Initiating TSO).

  External Account - the account of the counterpart Shipper that is managed by the adjacent TSO (Matching TSO).

  Internal and External Account may have the identification of the TSO that provides the code.

- **Information origin** - identification of the source of the information provided in the Period class. The following Types are permitted: 12G - Accepted by System Operator 14G - Processed by System Operator.
- **Period** - shall cover one or multiple intervals of a whole gas day.

  TimeInterval – start and end time.

  Direction - input or output to/from the area of the TSO sending DELORD.

  Total Quantity - processed or accepted – according to the origin.

  Firm Quantity - may only be used in the case of an information origin "14G" and where specific capacity allocation rules require this information.

class Delivery Order Document Assembly Model

«MBIE»
DeliveryOrder_Document
- identification :IdentificationType
- version :Version_Integer
- type :DocumentType
- creationDateTime :DateTimeType
- validityPeriod :TimeIntervalType
- contractReference :IdentificationType [0..1]
- contractType :ReferenceType [0..1]
- issuer_MarketParticipant.identification :PartyType
- issuer_MarketParticipant.marketRole.code :RoleType
- recipient_MarketParticipant.identification :PartyType
- recipient_MarketParticipant.marketRole.code :RoleType
- applicationContext :LocationType [0..1]

+ConnectionPoint 0..*

«MBIE»
ConnectionPoint
- identification :MeasurementPointType
- measureUnit.code :UnitOfMeasureType

+Account 1..*

«MBIE»
Account
- internalAccount :AccountType
- internalAccountTso :PartyType [0..1]
- externalAccount :AccountType
- externalAccountTso :PartyType [0..1]

+InformationOrigin_TimeSeries 1..*

«MBIE»
InformationOrigin_TimeSeries
- type :BusinessType

+Period 1..*

«MBIE»
Period
- timeInterval :TimeIntervalType
- direction.code :GasDirectionType
- total_Quantity.amount :QuantityType
- firm_Quantity.amount :QuantityType [0..1]

DELRES – information classes

- **Header** - provides all the information concerning the identification of the matching results including the gas day, relates it to the DELORD .
- **Connection Point -** connection point identification and measure unit. Multiple connection points are permitted in DELRES.
- **Account** - identifies a Shipper pair.

  Internal Account - the account of the Shipper that is managed by the TSO sending the DELRES *(Matching TSO)*.

  External Account - the account of the counterpart Shipper that is managed by the adjacent TSO *(Initiating TSO)*.

  Internal and External Account may have the identification of the TSO that provides the code.

- **Information origin** - identification of the source of the information provided in the Period class. The following Types are permitted: 12G - Accepted by System Operator 14G - Processed by System Operator *16G – Confirmed*.
- **Period** - shall cover one or multiple intervals of a whole gas day.

  TimeInterval – start and end time.

  Direction - input or output to/from the area of the TSO *sending DELRES*.

  Total Quantity - confirmed, processesd or accepted – according to the origin.

  Firm Quantity - may only be used in the case of an information origin "14G" and where specific capacity allocation rules require this information.

- *Status (optional) - status of given quantity within a time interval (e.g. mismatch, interrupted,…).*
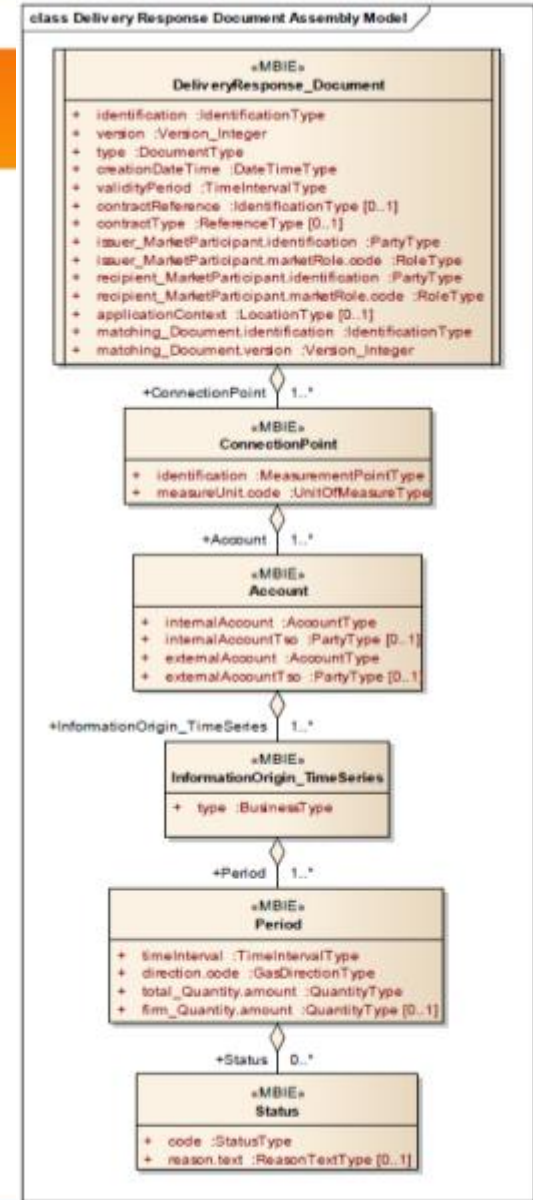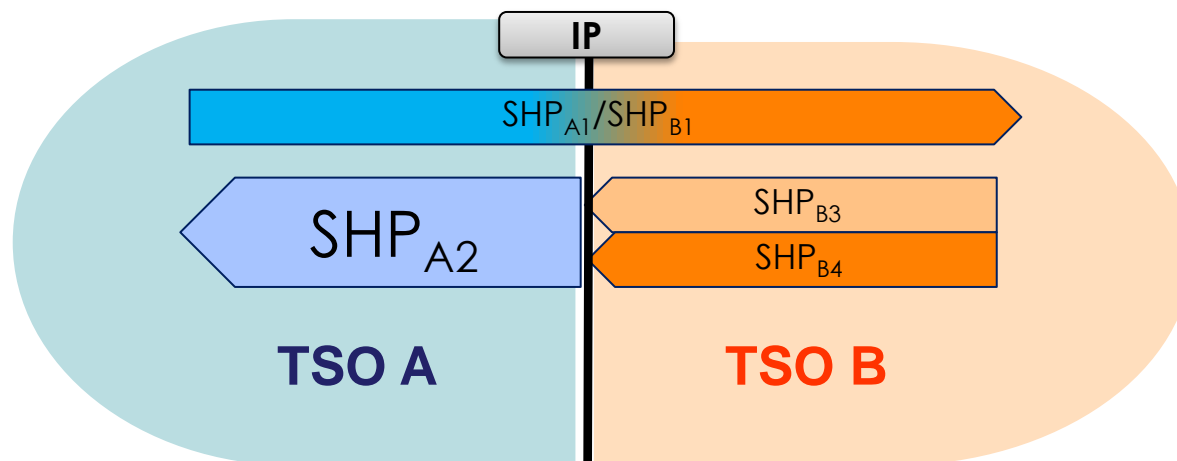
Nomination & Matching Case - Assumptions

◉ Interconnection Point between two TSO

◉ Shippers:

   ◉ One who has bundled capacity

   ◉ Three using unbundled capacity
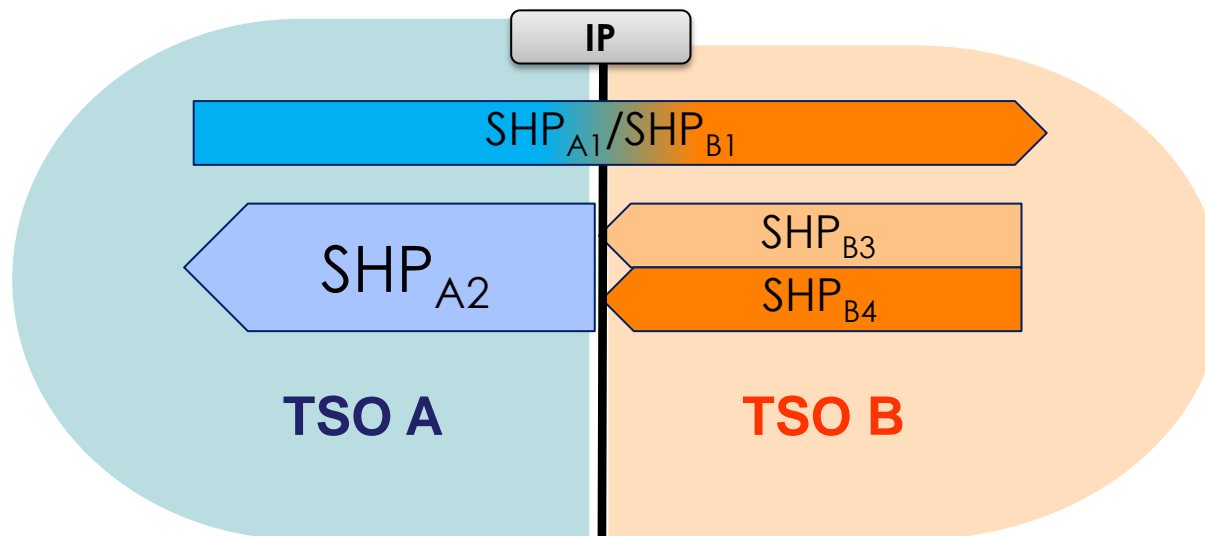
Nomination & Matching Case - Nominatons

NOMINT

- All quantities are equal for each hour during day (6/6) expressed in kWh
- SHP1 – single side nomination submited to TSO A:100 to SHP B1
- SHP 2 - nomination submited to TSO A:
  - 50 from SHP B3 and 50 from SHP B4
- SHP 3 - nomination submited to TSO B: 50 to SHP A2
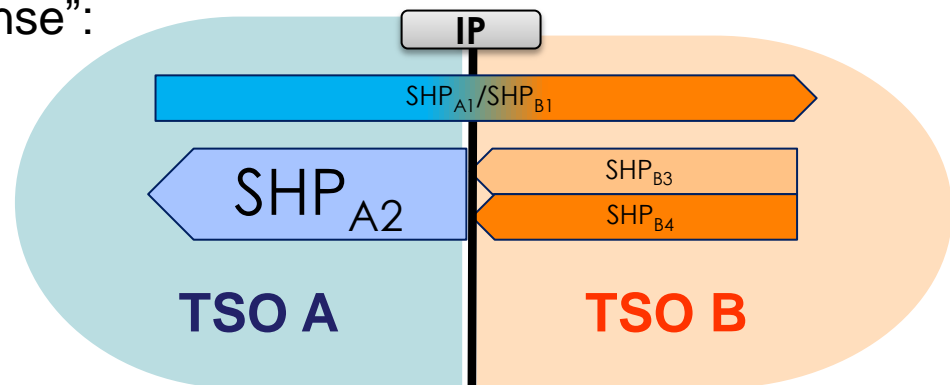- SHP 4 - nomination submited to TSO B: 80 to SHP A2

Nomination & Matching Case - Matching

DELORD (TSO A > TSO B)

- TSO A forwards to TSO B nomination submited by SHP1: 100 to SHPB1
- TSO A sends „callup notice":
  - SHP A2 50 from SHPB3
 - SHP A2 50 from SHPB4

DELRES (TSO B > TSO A)

- TSO B sends „callup response":
  - SHP A1 100 to SHPB1
  - SHP A2 50 from SHPB3
  - SHP A2 50 from SHPB4

IP

SHP_{A1}/SHP_{B1}

SHP_{A2}

SHP_{B3}

SHP_{B4}

TSO A   **TSO B**

Nomination & Matching Case - Confirmation

NOMRES

- Confirmation notice from TSO A to
  - SHP A1: 100 to SHP B1
  - SHP A2:
    - 50 from SHP B3
    - 50 from SHP B4
- Confirmation notice from TSO B to
  - SHP B1 100 from SHP A1
  - SHP B2 50 to SHP A2
  - SHP B4 50 to SHP A2 (reduced 80 to 50)

EASEE-gas
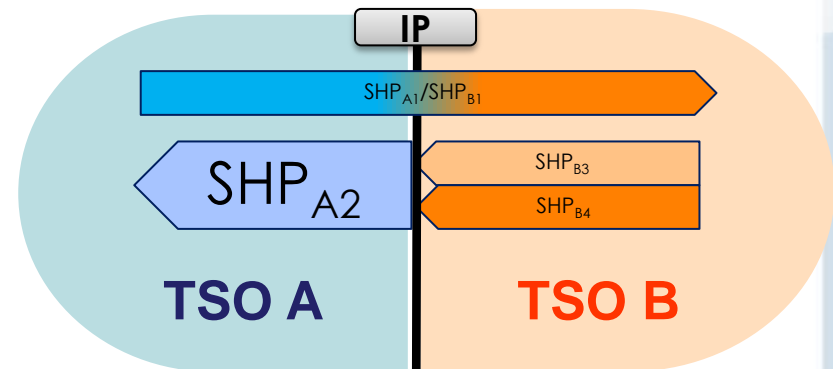
Edig@s v.5 and v.4 – differences in nomination and matching process

- Documents in version 5 introduce ENTSOG requirements - processes according to Network Codes and CNOT/BRS.
- Energy Identification Codes (EIC) used for the identification of parties, connection points and locations.
- Application Context introduced in all messages to facilitate routing of messages.
- Explicit identification of Shipper Accounts through the introduction of the identification of the TSO that assigned the account.
- NOMRES and DELRES contains the Identification of NOMINT and DELORD.
- New message types resulting from the CAM NC:
  - NOMRES: AND – Interruption notice (A notice informing a Shipper of a possible interruption to the quantities nominated).
  - DELORD: ANC – Forwarded single sided nomination (A message to provide single sided nomination information to an adjacent System Operator).
- Nomination Type (single sided or double sided) added in NOMINT and NOMRES