Implementation Guide for the ESS (ETSO Scheduling System) in the UCTE processes

Version : 1

Release : 0

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REVISION HISTORY

Version	Release	Date	Paragraphs	Comments
1	0	2007-09-04		initial release

This document represents the adaptation of the "ETSO Scheduling System Implementation Guide" to enable its use for UCTE purposes.

29 **CONTENTS**

REFERENCE DOCUMENTS.

1. The ETSO Role Model
2. The Energy Identification Coding Scheme – EIC
3. The ETSO Scheduling System

This document was elaborated in close cooperation with ETSO since the System Operator – System Operator (SO-SO) exchange also may concern the TSOs adjacent to the UCTE network.

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1. OBJECTIVE

The objective of this implementation guide is a detailed description of the UCTE business processes related to scheduling operation and settlement[1]. It is an operational application of the ESS Implementation guide to carry out the validation process for area cross border exchanges. This important process ensures that with in a time interval all confirmed exchanges within the UCTE are balanced.

Its aim is to standardise the automation of the process throughout the UCTE.

Such standardisation is important since local market systems within the UCTE use specific communication rules towards their market participants which dictate the communication methods and the information structures that have to be used. To a certain extent these communication rules can be compared to a "national language".

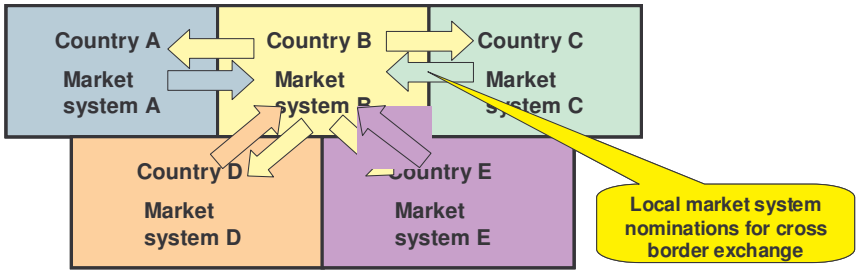

Figure 1: market areas without a common language

Making use of such local national languages as a means of UCTE information exchange for cross border matching can be a cause of a major problem since each local market has to implement the "language" of its neighbouring markets. This introduces incompatibilities and produces a less efficient matching process. It also is subject to the changes of the "language" within a local market which affects the corresponding System Operators.

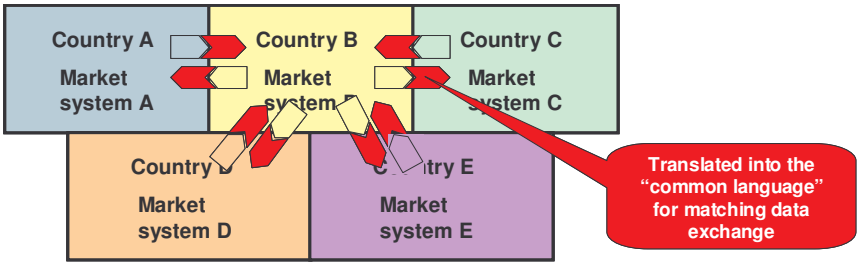

Figure 2: Market areas using a common language

It is important to underline that the exchanges that are carried out within the scope of the UCTE do not have to respect local market rules and more significantly the local information exchange language.

Consequently the UCTE has addressed the issue of disjoint and disparate "languages" by defining the System Operator – System Operator (SO-SO) information "language" as the "common language" for exchanging cross border information between System Operators.

Each local System Operator will be required to transform the local language into a SO-SO equivalent document. This avoids the need to support multiple local languages. The investment for each System Operator is a one time investment.

[1] The settlement process is not currently defined.

Such a common language and its supporting process enables a more efficient matching system and makes the System Operator to System Operator exchanges independent from local market information exchange evolutions.

2. THE UCTE SCHEDULING OF POWER EXCHANGE PROCESS OVERVIEW

The success of the Internal Electricity Market (IEM) requires that the operation of the interconnection between national grids is optimal. There are two kinds of interconnection to be considered:

1. DC links, where optimal operation is ensured through the independent management and control of each link (asynchronous network operation).
2. AC links, where optimal operation requires a higher level of coordination between all the System Operators connected to the same synchronous grid (synchronous network operation).

UCTE has put into place an operational handbook detailing the procedures and organisation enabling AC links to operate optimally. This is the subject area of this guide. This procedure can be broken down into:

1. An operational planning phase, this phase aims to guarantee agreed, unique border - crossing Exchange Schedules and Compensation (UCTE policy 2) Programs among all Control Areas, Control Blocks and Coordination Zones of UCTE. The scheduling of Exchange Programs is an important phase enabling the validation of the UCTE-wide consistency of the input variables used by the single parties involved in order to prevent systematic faults in the context of Load-Frequency Control and to prepare Day Ahead Congestion Forecasts (DACF). The operational planning phase starts with the day-ahead schedule nomination of market participants and ends with the last intra-day schedule adaptations before system operation.
2. A System operation phase, where in order to prevent systematic faults in the context of Load Frequency Control it is essential to check the UCTE-wide consistency of the input variables for online operation used by the single parties involved. This comprises the control deviation used as an input value for Load Frequency Control as well as the real-time observation of border-crossing exchange power flows and exchange programs among all Control Areas, Control Blocks and Coordination Zones of UCTE.
3. An accounting phase, where the task of accounting of unintentional deviations is performed "after the fact", i.e. at the next working day following the system operation. It comprises the settlement of the account of unintentional deviations of each Control Area, Control Block and Coordination Zone with reference to a recording period. The compensation of unintentional deviations is performed by using a program of compensation "in kind" within the compensation period - as an import / export of the corresponding amount of energy per tariff period, that was accumulated in the recording period. Accounting is an important issue to check the UCTE-wide consistency of the input variable "compensation program" used by the single parties involved in order to prevent systematic faults in the context of Load Frequency Control. The compensation programs of all Control Blocks within UCTE must sum up to zero.

The electronic documents defined in this guide cover the first phase of the UCTE process, the operational planning phase[2].

It provides a standard enabling a uniform layout for the transmission of scheduling data between the European electricity System Operators responsible for ensuring the security of the UCTE grid.

[2] This document currently only handles the System Operator to System Operator exchanges.

2.1 Subject

The electronic documents defined in this guide enable System Operators within the UCTE and all levels to exchange the cross border schedules for validation and matching for the day ahead activities. The electronic documents may also be used for the transmission of intra day schedules within the same day ahead schedule period.

2.2 Operational scenario

2.2.1 The overall context

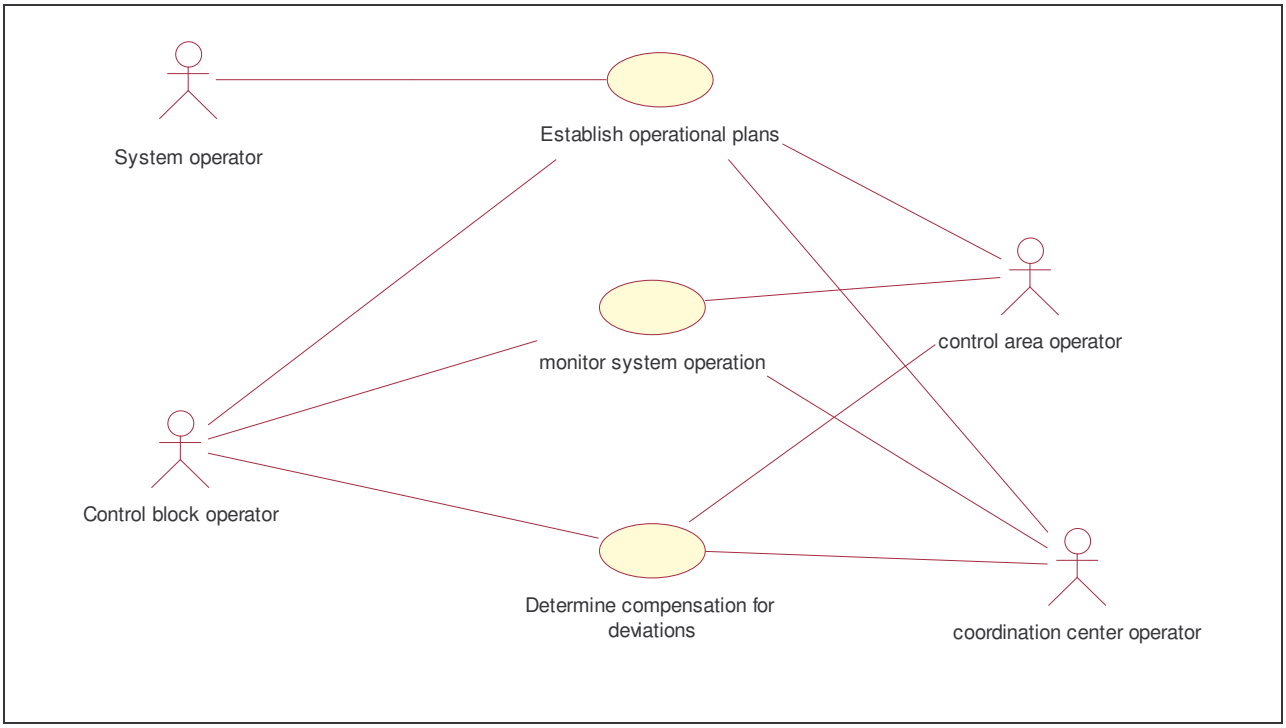

Figure 3: The UCTE process perspective

Within this perspective there are three principal activities which can be identified. These, as shown in figure 3 are:

1. **The operational planning activity that is the subject matter of this implementation guide and will be further detailed below**. The principal deliverable of this phase is a set of time series schedules that have gone through their validation process (matching and acceptance).
2. The operational monitoring activity that ensures that the different schedules in addition to the compensation program and the UCTE reserves are correctly implemented (i.e. that the control program is correctly implemented in the Load Frequency Control (LFC) and Automatic Generation Control (AGC) controllers. It also has to ensure that any deviations from the control program is catered for.
3. The accounting activity that takes place when the day of execution has terminated. It may be spread over a defined lapse of time. It is composed of three basic activities. The first activity receives all the schedules that have been sent. The second activity recuperates the validated values of the accounting points. The final activity reconciles these values and establishes the compensation program.

2.2.2 Breakdown of the operational planning phase

The operational planning activity concerns principally the System Operator schedules, constituted from those received from the Balance Responsible Parties (BRPs), exchanged between System Operators.

The System Operators inform the Balance Responsible Parties (BRPs) of the results of this process. This is a local market question and is not covered within the scope of this guide. The resulting exchange programs of all these nominated and matched export/import schedules and compensation program schedules are transmitted to the next higher level within the UCTE process after validation at the System Operator level.

3. SCHEDULE SYSTEM INFORMATION REQUIREMENTS

3.1 Overview

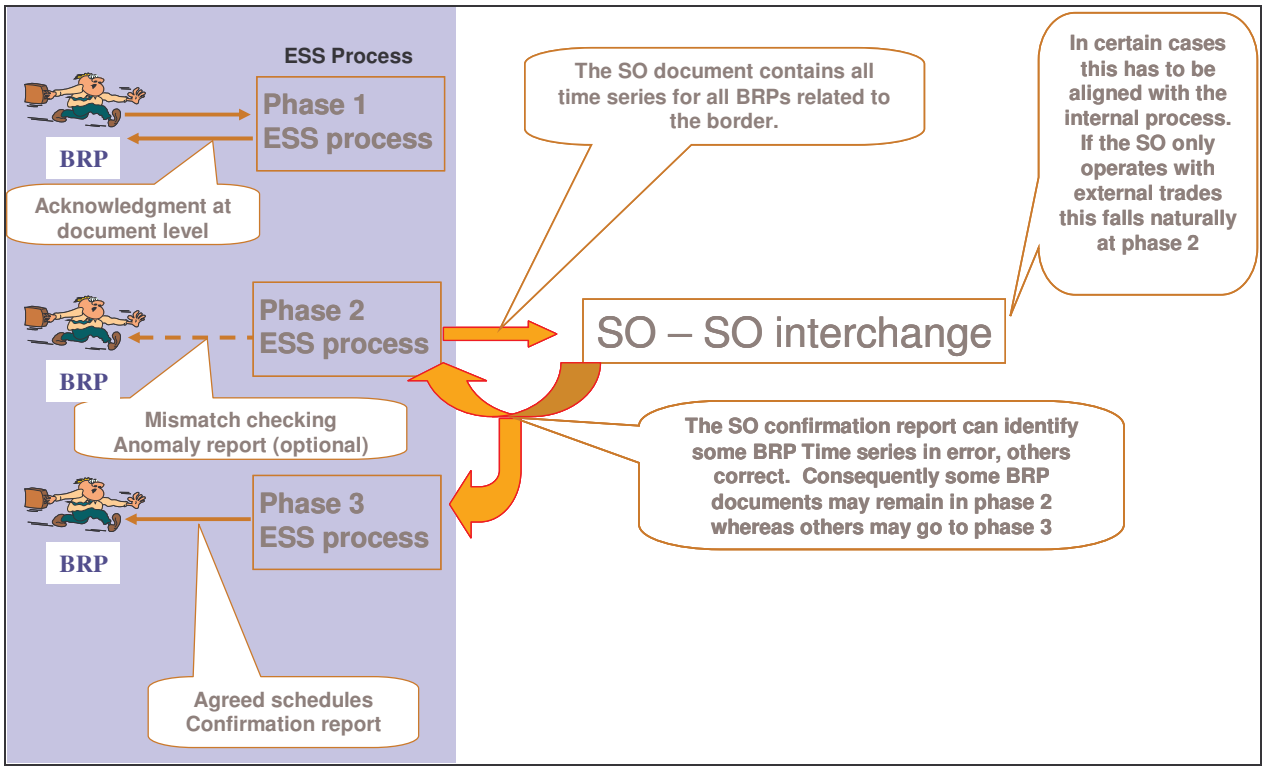

Figure 4: Overview of the ESS process.

The ETSO Scheduling System (ESS) process is broken into three phases;

1. The submission phase, which essentially establishes that all electronic documents received independently are complient with local market rules.
2. The verification and correction phase where the schedules are matched to ensure that both market participants are coherent.
3. The confirmation phase where all market participants have their schedules confirmed. The confirmation may modify or reject time series depending on market conditions.

It is somewhere during phase 2 that the System Operator to System Operator exchanges take place for all import/export schedules. It is this phase that is the current interest area of this document.

3.2 Process flow

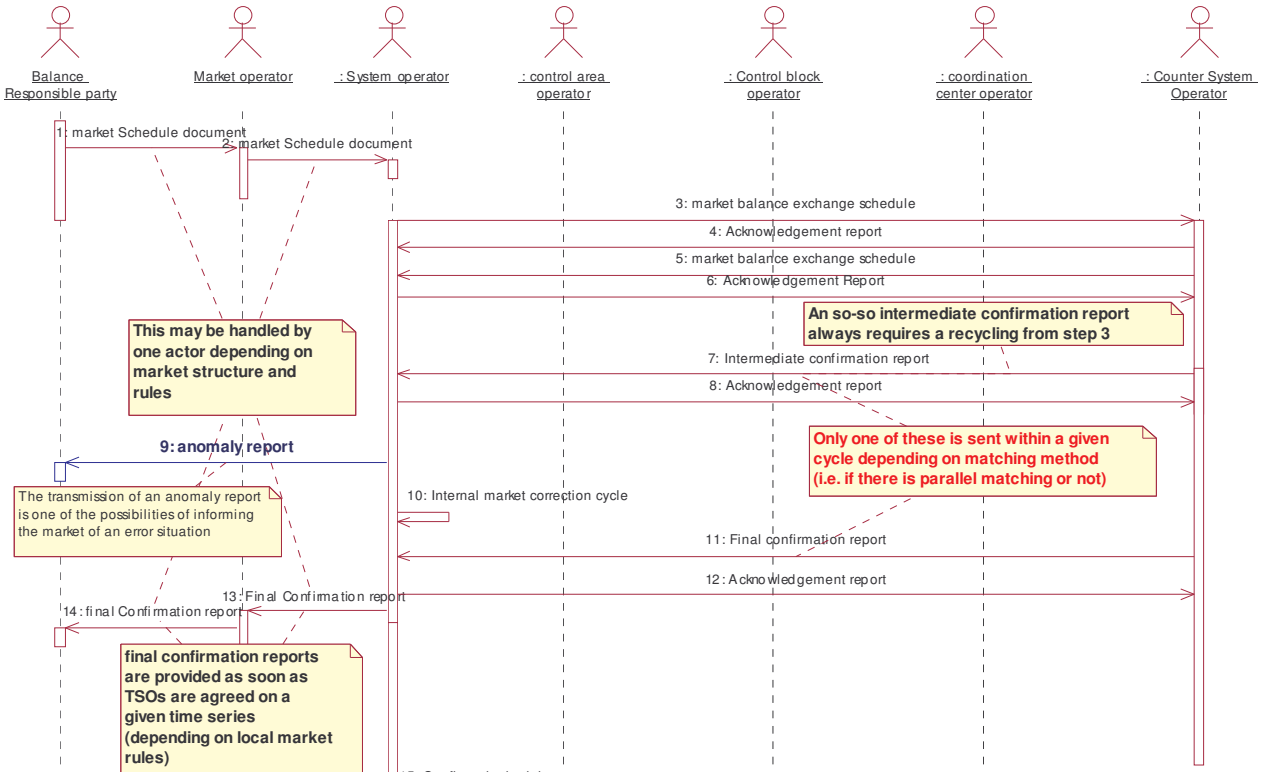

Figure 5: Typical sequence diagram of the information flow from the Initiating/Participating System Operator perspective

The exchanges between the System Operator and the Balance Responsible Party (BRP) is only shown as an example for the completeness of the generic process. This may vary depending on local market rules.

This guide defines a single process with two different modes of operation:

a. A single sided mode of operation where one System Operator manages the matching process on behalf of both System Operators for a border.

b. A parallel mode of operation where both System Operators carry out the matching process for a border.

For the single sided mode of operation two distinct terms are used to designate the actions and reactions that are expected from a System Operator:

1. Participating System Operator: this is a passive role designating a System Operator who has subcontracted the matching process to another System Operator.

2. Matching System Operator: this is an active role designating a System Operator who is responsible for the matching on a border of all schedules and who has the eventual possibility of applying agreed rules to resolve mismatches.

For the parallel mode of operation two distinct terms are used to designate the actions and reactions that are expected from a System Operator:

1. Initiating System Operator: this is an active role designating a System Operator who will initiate a matching by initially sending the schedules to his counter part and on receiving the counter parts schedules will match them and compare them with the results received from the Receiving System Operator.

2. Receiving System Operator: this is an active role designating a System Operator who on reception of a schedule from an Initiating System Operator will match them and provide the results of the match through a detailed confirmation report.

Functionally the Participating System Operator may be paired with the Initiating System Operator and the Matching System Operator may be paired with the Receiving System Operator since they have essentially the same roles in the UCTE process flow.

The UCTE operational planning process makes use of four document types defined within the ESS process:

1. The "Schedule Document" to transmit the market participant schedules between the System Operators.
2. The "Acknowledgement Document" to acknowledge all transmissions between System Operators.
3. The "Intermediate Confirmation Report" for the transmission by the Receiving/Matching System Operator of the situation of the matching process is sent:
   - In the case of a single sided mode of operation where there are anomalies that cannot be resolved and imposed automatically. This provides the complete situation for the border and includes all proposed and agreed changes as well as all correctly matched time series.
   - In the case of a parallel mode of operation where there are mismatches. This provides the complete situation as well as proposals from the Receiving System Operator in cases where there are time series mismatches. Each System Operator informs the market of the situation respecting the local market processes.
4. The "Final Confirmation Report" for the transmission by the Receiving/Matching System Operator of the final matched and agreed schedule information. This includes any agreed modifications where the Matching System Operator has applied agreed rules.

It is to be noted that the only ESS document type not used within the UCTE process is the optional "Anomaly Report" which generally uniquely contains the time series that are mismatched without any added value. The "Intermediate Confirmation Report" enables the Receiving/Matching System Operator to provide the same information for mismatched time series in addition to any recommendations for correction. It also provides all the time series that have been correctly matched thus enabling the Initiating/Participating System Operator to inform those market participants whose time series are correctly matched.

The sequence diagram in Figure 5 outlines the information that is exchanged between the different actors in the planning phase of UCTE operational planning process. The information flows concern the scheduling process as seen from a balance area administered by an Initiating/Participating System Operator and connected to another balance area administered by a Receiving/Matching System Operator.

The concepts of Initiating, Participating, Receiving and Matching System Operator are used to underline the different contexts where the process may be applied. In the case of Initiating/Receiving System Operators both System Operators carry out matching whereas in the case of Participating/Matching System Operators only one System Operator operates the matching process at a given time. The responsibilities of both System Operators are established by bilateral agreements and can differ from border to border. The Initiating/Participating System Operator is identified in the figure merely as "System Operator". The Receiving/Matching System Operator is identified in the figure merely as "Counter System Operator". The dialogue between the Receiving/Matching System Operator and the market is symmetrical with that of the

Initiating/Participating System Operator. In all cases both System Operators must be capable of operating the matching process on behalf of the other in the case of problems.

Before transmitting a Final Confirmation Report to the market the System Operators exchange cross border schedules to ensure that the information supplied by the market participants on both sides of the market balance area border is coherent or is made coherent through the application of bilateral rules.

By mutual agreement the involved System Operators designate one to assume the role of Receiving/Matching System Operator and consequently the one who will be the System Operator who always sends the Confirmation Reports of the schedules.

Where a Matching System Operator is designated (i.e. single sided mode of operation), the matching process can include agreed rules that can be immediately applied depending on specific mismatch conditions.

In the case where mismatches cannot be resolved or rules cannot be applied by a System Operator, the Matching System Operator sends an Intermediate Confirmation Report to the Participating System Operator. These mismatches have to be resolved locally and the process recycled. This can be assimilated to a reiteration of phase 2 of the ESS process.

In the case where all mismatches are resolved or where there are no mismatches the Matching System Operator sends a Final Confirmation Report to the Participating System Operator. Both System Operators then move to confirm the schedules to the participants within their respective markets.

Where a Receiving System Operator is designated (i.e. parallel mode of operation) the matching process will cycle until the schedules on both sides of the border agree. Until this occurs the Receiving System Operator transmits Intermediate Confirmation Reports to the Initiating System Operator. When the Receiving System Operator matches successfully a Final Confirmation Report is sent to the Initiating System Operator.

To terminate the System Operator to System Operator process[3] each System Operator sends an aggregation of all the confirmed schedules along with the eventual compensation program to the next level of the UCTE hierarchy, the Control Areas.

3.3 Escalation

It may happen that an incident occurs that oblige a System Operator to abandon the cross border matching process and to require that this be escalated to bring into play agreed emergency procedures.

This may occur at any time during the general procedure and consequently it has not been specifically identified in the process flow.

An escalation procedure is triggered by a System Operator sending an ETSO Problem Statement Document (an ETSO stand alone document for identifying problems) to the other System Operator. The escalation process shall be immediately brought into action upon reception of such a document. The specific procedure to be executed is specified in the Problem Statement Document.

[3] This is only a part of the operational planning phase. Other phases may be added later.

3.4 The UCTE Role model

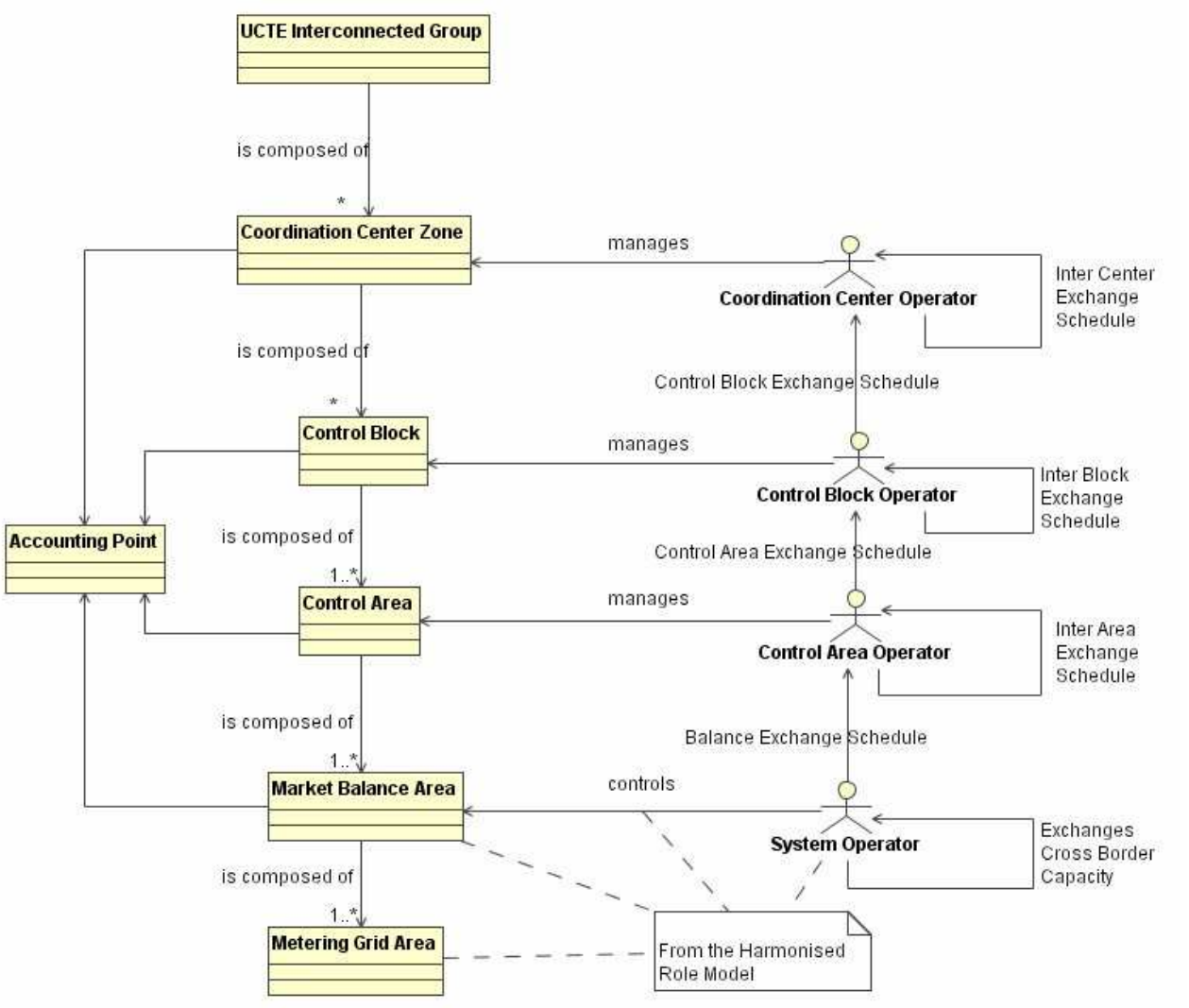

Figure 6: The UCTE Role Model

Figure 6 outlines the UCTE role model and the hierarchy for managing the grid security. Each role and domain in the hierarchy is defined as follows:

Role	Description
Control Area Operator	Responsible for: 1. The coordination of exchange programs between its related market balance areas and for the exchanges between its associated control areas. 2. The Load Frequency Control for its own area. 3. The coordination of the correction of time deviations.
Control Block Operator	Responsible for: 1. The coordination of exchanges between its associated control blocks and the organisation of the coordination of exchange programs between its related control areas. 2. The Load Frequency Control within its own block and ensuring that its control areas respect their obligations in respect to Load Frequency Control and time deviation. 3. The organisation of the settlement and/or compensation between its control areas.
Coordination Center Operator	Responsible for: 1. The coordination of exchange programs between its related control blocks and for the exchanges between its associated coordination center zones. 2. Ensuring that its control blocks respect their obligations in respect to Load Frequency Control. 3. Calculating the time deviation in cooperation with the associated coordination centers. 4. Carrying out the settlement and/or compensation between its control blocks and against the other coordination center zones.
System Operator	A party that is responsible for a stable power system (including the organisation of physical balance) through a transmission grid in a geographical area. The SO will also determine and be responsible for cross border capacity and exchanges. Transmission as mentioned above means "the transport of electricity on the extra high or high voltage network with a view to its delivery to final customers or to distributors. Operation of transmission includes as well the tasks of system operation concerning its management of energy flows, reliability of the system and availability of all necessary system services." (Definition taken from the UCTE Operation handbook Glossary). Note: additional rules may be imposed through local market rules.

Domain	Description
Control Area	The composition of one or more market balance areas under the same technical Load Frequency Control responsibility. Note: in some cases there may be some metering points that belong to a market balance area that is not a part of the control area. However, these do not impact the general definition. For example, a village in one country connected to the grid of another.
Control Block	The composition of one or more control areas, working together to ensure the Load Frequency Control on behalf of UCTE.
Coordination Center Zone	The composition of one or more control blocks under the responsibility of the same coordination center operator.
Market Balance Area	A geographic area consisting of one or more metering grid areas with common market rules for which the settlement responsible party carries out a balance settlement and which has the same price for imbalance. A market balance area may also be defined due to bottlenecks.
Accounting Point	A point where the calculation of the energy produced or consumed is carried out. It may be a physical point situated at an extremity of a line; a virtual point that is an agreed position between two connections or an aggregation of physical or virtual points (for example a virtual tie-line).

3.5 System Operator to System Operator information flows

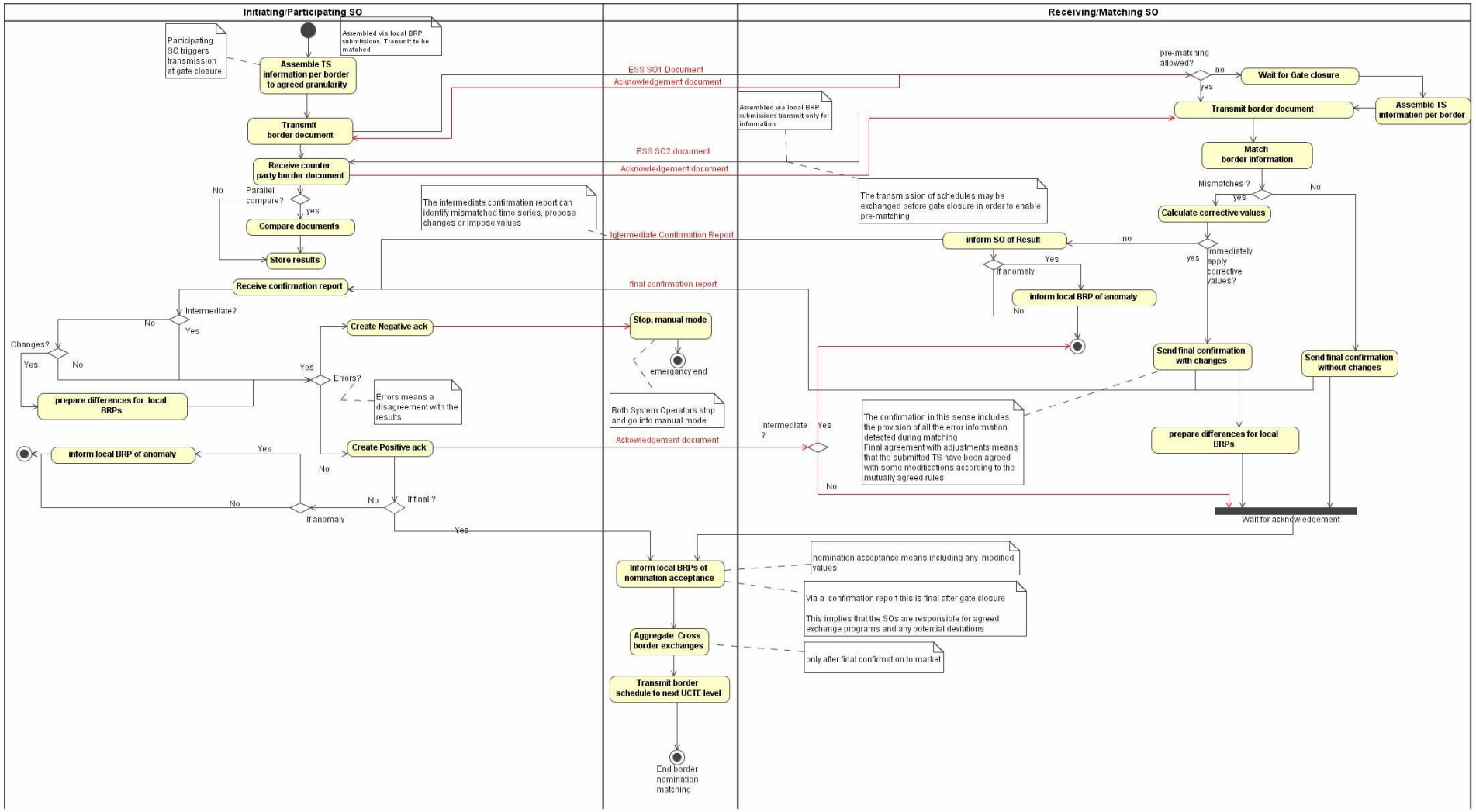

Figure 7: The import/export validation process

Figure 7 outlines the transmission and validation of the cross border exchanges between the different System Operators.

The key to the UCTE validation process is that irrespective of the matching mode employed only one System Operator transmits confirmation information to the counter System Operator. The UCTE process caters for both the case of matching by only one System Operator as well as the case of both System Operators carrying out the matching process. It is even possible in the case of single sided matching for the Participating System Operator to mirror the matching process. As mentioned previously the System Operators mutually agree to who plays the role of the Receiving/Matching System Operator and who plays the role of the Initiating/Participating System Operator. The operators will also decide in what circumstances each role is played. For example one operator could play the role of Matching System Operator for the day ahead schedules whereas the other may play the role for the intra day process.

The process starts by the transmission of the cross border schedule information to the Receiving/Matching System Operator. The Receiving/Matching System Operator's exchange information is sent to the Initiating/Participating System Operator either for information or for mirror matching in the case of single sided matching or for dual matching in the case of parallel matching. This may eventually be used in the case of a system failure on the matching side.

All exchanges are then matched. In the case of a single sided matching process rules can be immediately applied depending on specific mismatch conditions. In the case of a parallel matching process the cycle will reiterate with the interaction or not of the market participants until both schedules agree. The Receiving System Operator may provide rectifications that are proposed in the case no further information is provided by the market participant.

Where mismatches occur that either cannot be resolved and imposed automatically, or no specific rules are provided the Receiving/Matching System Operator sends an Intermediate Confirmation Report to the Initiating/Participating System Operator. These mismatches have to be resolved locally and the process recycled.

In the case where all mismatches are resolved or where there are no mismatches the Receiving/Matching System Operator sends a Final Confirmation Report to the Initiating/Participating System Operator.

In all circumstances the Receiving/Matching System Operator shall wait for a positive acknowledgement before informing the market participants of a successful match. Both System Operators then inform their respective markets of the results with confirmation reports sent to the market participants.

Where an abnormal situation occurs, the Initiating/Participating System Operator may send a negative acknowledgement which puts the process into a manual mode of operation.

The Schedule Document, the Acknowledgement Document and the confirmation report document are defined within this guide.

3.6 Switching from Participating to Matching role

Both operators shall be capable of acting as a Matching System Operator in order to ensure that the border nomination matching can be carried out.

In case it is necessary to change the roles,

- if the exchange of the Schedule Documents have occurred the process can start over on the new Matching System Operators system with the matching activity (refer to figure 7)

- if the Schedule Documents have not been successfully exchanged between both System Operators, the whole process has to restart on the new Matching System Operators system with the exchange of Schedule Documents.

Based on this philosophy it is not necessary to maintain and exchange status information within both systems.

3.7 Matching principles

The UCTE matching process is based on the basic requirement that all System Operator to System Operator schedules have to be matched or in the case of mismatches resolved with the agreement of System Operators in question respecting all predefined rules on the subject.

A match between two time series is considered successful if they both have the same Time Series header information (excluding the Time Series Identification and Version) and the same sets of time interval values.

A match is considered unsuccessful if both time series have the same Time Series header information (excluding the Time Series Identification and Version) and one or more of their time interval values differ.

A time series is considered to have no counterpart if there is no equivalent time series with the same Time Series header information (excluding the Time Series Identification and Version).

Current market practices use schedules which contain time series that have several levels of granularity. The level of granularity of the time series can be categorised from the most detailed to the least in the following manner:

A. Time series that provide information at the level of the agreement identification that was assigned to the allocation of the capacity transmission rights.

B. Time series that are aggregated to the level of the In/Out Area/Party or eventually Capacity Contract Type on a per direction basis.

C. Time series that are aggregated to the level of the In/Out Area/Party and then netted with the equivalent opposing direction time interval by time interval thus ensuring that one of the time intervals for a direction is always equal to zero.

As long as the time series provided by each System Operator is of the same level of granularity (i.e. the market provides the same detail) matching and any eventual automatic modifications can be carried out without any particular difficulty. However if the levels of granularity differ the matching process becomes more hazardous. This is essentially due to the necessity to aggregate the time series of the System Operator that are the most detailed (i.e. type A time series need to be aggregated in order to match them with type B or C time series and type B time series need to be aggregated in order to be matched with type C time series). This aggregation process loses information that make any automatic error modification more or less unlikely (refer to annex for examples).

The System Operators must agree upon the level of detail for matching. Both System Operators transmit the schedules for matching with the agreed level of detail.

It is recommended that these are the most detailed possible in order to enable an optimal automatic correction process.

In the case where this is not possible the System Operator who has a low level of granularity, should not attempt to deduce by any means more detailled information. Consequently this implies that the System Operator with the higher level of detail should aggregate and/or net to the agreed level of the counter System Operator.

However, System Operators should constantly aim at acquiring the optimal level of detail. Such a level of detail should consist of the aggregation to the "agreement identification" level for a time series for a given area and parties. It is recommended that this level of detail should not be netted (i.e., the sum of the "ins" subtracted from the sum of the "outs"). This is generally not possible since an agreement identification normally is only assigned to a flow in one direction. Once System Operators have the same level of detail matching becomes a relatively simple process and can be operated in an automated fashion.

Each System Operator must ensure that the party identification related to the area under its responsibility has a valid authorisation to operate across the border.

It is *not* the responsibility of the System Operator to ensure that the party identification related to the area *which is not under its responsibility* has a valid authorisation to operate across the border.

Matching not only requires a good level of detail but also knowledge of who the market participants are on each side of the border. Currently several techniques are used to facilitate this identification over and above other requirements:

1. Single party: This technique requires that only one market participant (i.e. the same legal entity) acts on the border and in effect buys energy from or sells energy to himself and afterwards through internal market transactions distributes the energy in question to the local market participants. The task of the System Operator is facilitated insofar as there is only one market participant acting on the border. However, it generally implies that the market participant in question has to have interconnection access and BRP contracts with the System Operators on either side of the border. This is known in the DE, CH and AT marketplaces as the "one to one nomination" where the "In Party" and "Out Party" must be the same.

2. Coupled: This technique requires that two market participants declare prior to operation that they are going to exchange energy between themselves. Once defined they cannot exchange energy with any other party. In a similar fashion the task of the System Operator is facilitated insofar as the market participants are identified ahead of market operations. However this implies that they cannot exchange energy with a third party at short notice. The market participants are not required in this case to have a contract on both sides of the border and they can trade with whatever market participant they wish on the other side of the border.

3. Cross nomination: This technique requires no predefined knowledge of which market participant is going to trade with which market participant. This is extremely flexible from a market perspective as it requires no prior identification of both parties. However, in order to permit the operation in a flexible manner the principle laid down in this document for market participant validation should be followed. At the local level each System Operator ensures that the party trading in its area has the legitimate characteristics to carry out cross border trading and that the party trading in the other area has a legitimate code. During the System Operator to System Operator exchange when the schedules match, then de facto the two market participants are considered legitimate. The market participants are not required in this case to have a contract on both sides of the border and they can trade with whatever market participant they wish on the other side of the border.

3.7.1 Time series matching criteria

The following criteria can be used for determining if a time series is in a matched or mismatched state:

- A time series with no counterpart nomination and where all values are zero is considered as matched!

- A time series with no counterpart nomination and where not all values are set to zero is considered as mismatched!
- A time series with counterpart nomination and where all values are equal is considered as matched!
- A time series with counterpart nomination and where not all values are equal is considered as mismatched!

3.7.2 Matching possibilities

The following table provides the essential of the different matching cases that can occur during the matching process.

N°	Matching possibility	Values	Matching state	Additional. state	mismatch Reason
1	TS found in both schedules	All values are equal	Matched		
2		Not all values are equal	Mismatched		Counterpart time series quantity differences
3	System Operator TS missing	all values in Counter System Operator TS are zero	Matched		
4		Not all values in Counter System Operator TS are zero	Mismatched		Counterpart nomination missing
5	Counter System Operator TS missing	all values in System Operator TS are zero	Matched		
6		not all values in System Operator TS are zero	Mismatched		Counterpart nomination missing
7	Counter System Operator TS In/Out Party invalid	All values are zero	Matched	TS Ignored	Party invalid
8		Not all values are zero	Mismatched		Party invalid
9	Counter System Operator TS Contract Type is invalid	All values are zero	Matched	TS Ignored	Unexpected/invalid Cap. Contract Type
10		Not all values are zero	Mismatched		Unexpected/invalid Cap. Contract Type
11	Counter System Operator TS Capacity Contract Id is invalid	All values are zero	Matched	TS Ignored	Invalid Cap. Contract Id
12		Not all values are zero	Mismatched		Invalid Cap Contract Id

3.8 Process Type use

There are four process types permitted within the SO-SO process; Long Term, Day Ahead, Intraday and Schedule Day. These processes are used with the context of two methods:

1. Incremental matching: The Long term process type is used within a document to provide the long term (yearly, monthly, weekly, etc) schedules for matching in the case where there is a specific long term gate closure. Once this has been agreed the day ahead process initiates a new document with new identification. The Day Ahead process type is used within a document to provide the schedule for day ahead matching. Once this has been agreed the intraday process initiates a new document with new identification and the Intraday process type for each intraday gate. The Schedule Time Interval identifies the period covered within the document which is reduced as the day progresses. The Matching Period is always equal to the Schedule Time Interval. In essence there is no historical information (already matched) within the document.

2. Global matching: A Schedule Day process type is used to provide the schedule for the whole day (long term, day ahead and intraday), each change in the document after gate closure or in case of modifications causes an evolution of its version. Its identification remains the same. The Schedule Time Interval shall always cover the complete period, however the Matching Period is reduced as the day progresses.

   When a Schedule Day process type is used then the time intervals within the Matching Period are the only periods to be matched. All time intervals outside the matching period should be verified to ensure that they have not changed.

Consequently the fundemental difference between the two methods is whether or not historical information is exchanged between the System Operators.

If both System Operators have a high level of granularity then the first method is recommended.

For a given border only one of the above methods may be used.

The diagram in figure 8 outlines the differences between these two methods.

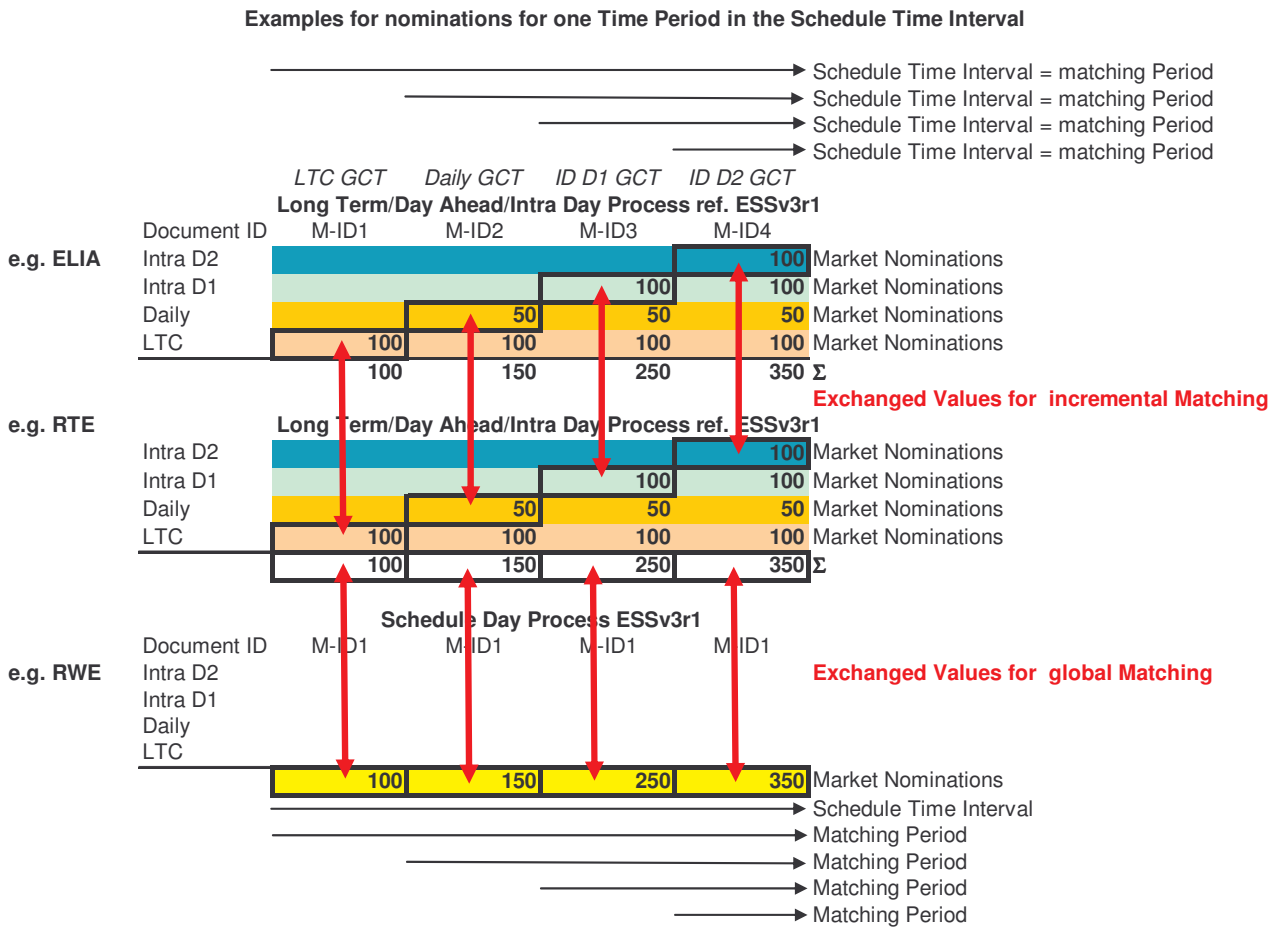

Figure 8: Different method use

3.9 General ground rules

The process flow assumes that a certain number of basic rules are respected. This does not include the specific rules that have been defined in an interchange agreement. These basic rules are:

1. Each Schedule Document shall have a unique identification (i.e. for the same Message Type, Process Type, Classification Type Schedule Time Interval and Domain). Successive transmissions of the same document may be identified through the use of the version number which shall be incremented with each transmission. The initial version of a document shall be 1.
2. A time series shall be provided for each unique combination of the product, business type, object aggregation, in area, out area, metering point identification, in party, out party, capacity contract type and capacity agreement identification.
3. Each time series shall have a unique identification within the Schedule Document.
4. Every time a new version of a Schedule Document is provided all the time series accepted in the previous transmission must appear in the new version. In the case where a time series is missing, or an existing time series is rejected, the complete document will be rejected.

5. All version numbers shall be positive integer values and leading zeros shall be suppressed.
6. All documents received shall have an acknowledgement (acceptance, rejection or errors).
7. All the times identified in the documents are expressed in Coordinated Universal Time (the acronym of which is UTC) in compliance with ISO 8601. This is restricted to YYYY-MM-DDTHH:MMZ in order to remain in conformity with XML schema requirements.
8. All the time intervals in the documents are expressed in compliance with ISO 8601 This is restricted to YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ. The time interval has an inclusive start time and an exclusive end time and is expressed in minutes (i.e. 00:00Z to 00:00Z is exactly a 24 hour period).
9. The resolution of a time series period shall always be expressed in one of the following resolutions:
   PT15M which expresses a 15 minute resolution
   PT30M which expresses a 30 minute resolution
   PT60M which expresses a 60 minute resolution
   System Operators have to agree on the resolution to be used. All matching shall use exclusively the agreed resolution.
10. The time interval of a period shall always be a multiple of its resolution.
11. For a Schedule Document the time interval of a period shall always be equal to the Schedule Time Interval.
12. Negative quantities for a time series are not permitted.
13. A time series shall be suppressed by zeroing out all the time interval periods in the time series.
14. All quantities shall be expressed as power units' i.e. MW (code MAW) (UCTE Policy 2 A-R4.2).
15. A quantity shall be expressed in compliance with the UCTE policy which states that "if the resolution is 1 hour then megawatt values are sent with or without decimal digits. Whenever the resolution is 15 or 30 minutes then 3 decimal digits are mandatory".
16. Whenever a coded value within a message is associated with a coding scheme, the coding scheme must always be supplied. The coding scheme shall always correspond to A01 "EIC" or A10 "GS1".

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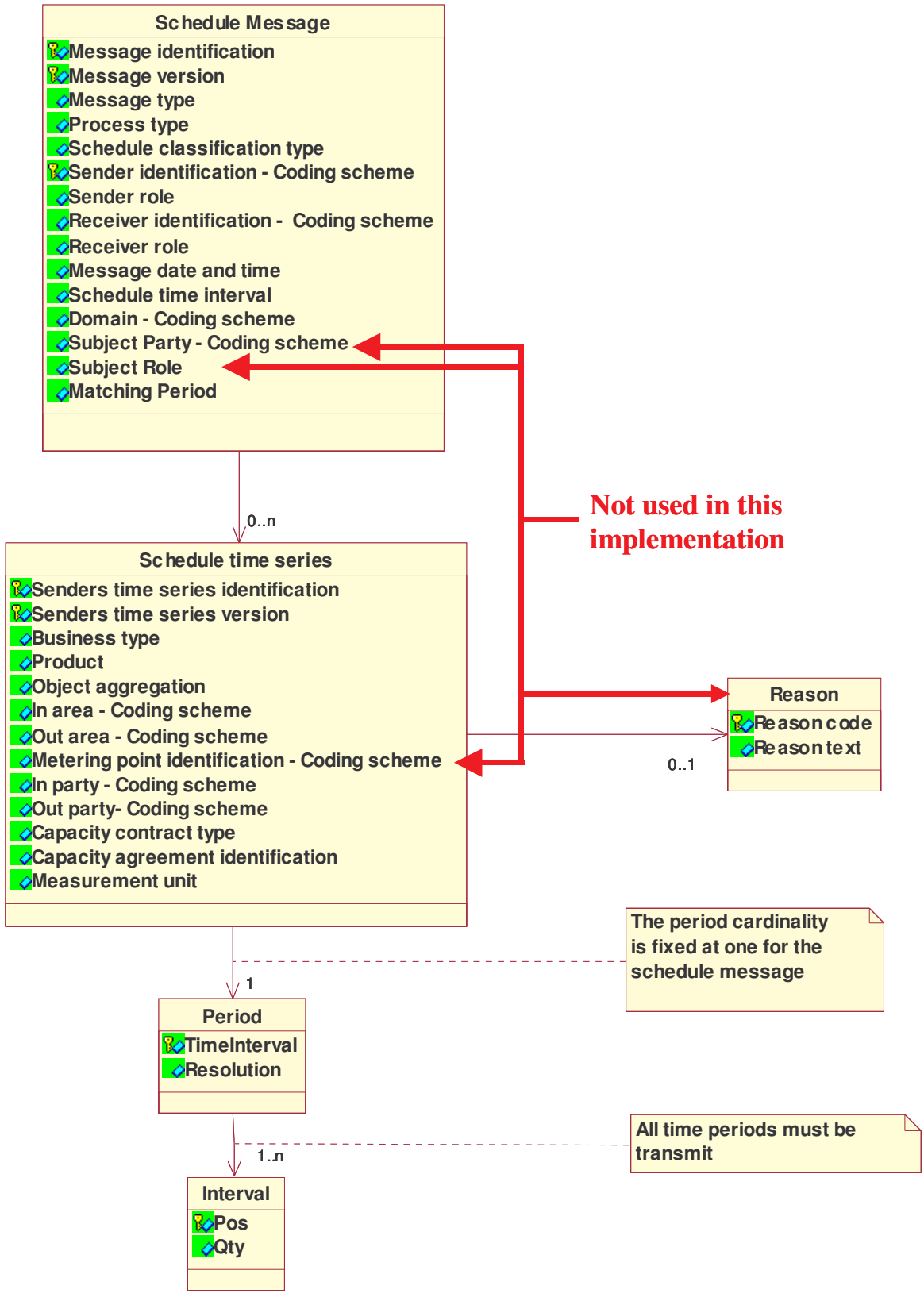
4. SCHEDULE DOCUMENT IMPLEMENTATION

4.1 Information model



4.2 Rules governing the Schedule Document Implementation

4.2.1 Dependency matrix

The matrix, outlined below, shows the mandatory requirement for dependant key attributes that appear in the schedule time series element. For example in the case where the business type is "A03" then the in area and in party are required.

				If Object Aggregation = A03 (Party)[4]			
		Area		**Party**			
Business type	**Name**	**IN**	**OUT**	**IN**	**OUT**	**Capacity Agreement identification**	**Capacity contract type**
A03	External trade explicit capacity	M	M	M	M	M[5]	M
A06	External trade non-explicit capacity	M	M	M	M		
A10	Tertiary control	M	M	M	M		
A15	Losses	M	M	M	M		
A28[6]	Control Area Program	M	M				
A44	Compensation program	M	M	M	M		
A45	UCTE Reserves	M	M	M	M		
A46	SO redispatching	M	M	M	M		

M signifies mandatory; Blank signifies not allowed to be used.

[4] If the Object Aggregation = A01 (Area) the Party information is not permitted.

[5] In cases where there is no agreement identification a standard fixed value may be agreed between the System Operators (recommended "0")

[6] In the case of A28 only Object Aggregation A01 (Area) is permitted

4.2.2 General rules governing document content

4.2.2.1 Document and time series version numbers.

A Schedule Document is sent for the schedule identified by its identification given by the "Message identification", its version given by the "Version" and the sender given by the "Sender Identification" for a set of time series schedules, given by the "Schedule Time Interval". The Schedule Document shall provide all the cross border schedule information for a given border. Each Schedule Document has a unique identification. If there are additions, modifications or suppressions to the set of time series within the Schedule Document, the identification is complemented by a version number.

The initial transmission of a Schedule Document should generally have a version number of "1". However, in specific circumstances this may be different, but the initial transmission of a document should always have the lowest version number for that document. For each transmission of the Schedule Document the version number is incremented. The receiver shall ensure that a retransmitted Schedule Document has a version number strictly superior to the previous version number. The document version number does not have to be in strict sequential order (for example a document version "5" may be sent after a version number "3". A version number "4" is not required).

Each retransmission of the Schedule Document shall include all the time series associated with the document in question. Each time series has a version number that corresponds strictly to the document version number in which it is contained

4.2.3 Document acceptance and rejection criteria.

The Schedule Document is composed of four levels:

1. The document header providing the basic document identification, the identification of involved parties, and the Schedule Time Interval.
2. The time series identification level providing all the information that is necessary to uniquely identify a time series. It also provides some information relative to the time interval such as the measurement unit.
3. The period level that defines the time interval period and resolution that covers the quantities being reported. In the case of the schedule message only one period is permitted.
4. The interval level that provides the time interval position (time interval period / resolution) and the quantity for the position in question.

In each of these cases an error condition may occur which can either cause the rejection of the document or the time series or the time interval quantities. The following conditions describe these possibilities:

ERROR LEVEL	SECONDARY CONDITION	ACTION
1. Document header		The complete document is rejected.
2. Time series identification header.	A: If it is the initial transmission of a document, or if it concerns the addition of a new time series.	The complete time series in question is rejected. Note: If a Matching System Operator identifies a case where Time series header information contains an error (party, contract,..) then the Time series is accepted and all quantities are put to zero and reported as invalid in the confirmation.
	B. If it is the retransmission of a document with a new version number then if it concerns an error at the time series level	The complete time series in question is rejected. Note: If a Matching System Operator identifies a case where Time series header information contains an error (party, contract,..) then the Time series is accepted and all quantities are put to zero and reported as invalid in the confirmation.
3. Time series missing.	.	The complete document is rejected.
4. Period level	An error concerning the time interval or the resolution	The complete time series is rejected
5. Interval level.	If it is an error with the quantity.	The Time Series is rejected completely
	If the position doesn't exist for example if there are more positions (i.e. if number of positions is superior to the number obtained from the time interval divided by the resolution)	The Time Series is rejected completely
	If the position is missing; for example if there are not sufficient positions or there is a missing one (i.e. 1, 2, 4, 3 is missing).	The Time Series is rejected completely

4.2.4 A document without any time series instances

A document that contains no time series instances shall be considered to be a valid transmission from a Participating System Operator indicating that there is no time series information forthcoming.

The System Operator may at a later time transmit a new version of the document in question with time series information.

4.2.5 Document identification (synonyme message identification)

An electronic document is identified by its originator (sender) with a string of alpha-numeric and special characters (A-Z, a-z or 0-9, "-", "_") that make it unique amongst all other electronic documents that the originator generates for the same document model (i.e. ScheduleMessage, EAR, etc..)

For electronic documents with version numbers, there may be several versions that identify different states of the document. This state is identified by the version number where the highest version number corresponds to the latest state of the document.

Consequently an electronic document may be uniquely identified within an information system through the concatenation of the originator (sender) identification, the document identification and, where applicable, the version number.

4.3 Schedule Document class specifications

4.3.1 Message Identification (synonyme document identification)

ACTION	DESCRIPTION
Definition of element	Unique identification of the document for which the time series data is being supplied.
Description	A Schedule Document for a given set of time series and a given Schedule Time Interval must have a unique identification assigned by the sender for the same Message Type, Process Type, Classification Type Schedule Time Interval and Domain, of the message for all transmissions to the receiver. All additions, modifications, or suppressions for the time series and Schedule Time Interval must use the same identification. An intra day document shall have an identification code, which is not the same as the day ahead document.
Size	The identification of a Schedule Document may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

693 **4.3.2 Message Version**

ACTION	DESCRIPTION
Definition of element	Version of the document being sent. A document may be sent several times, each transmission being identified by a different version number that starts at 1 and increases sequentially.
Description	The Schedule Document version is used to identify a given version of a time series set for a given Schedule Time Interval. The first version number for a given Schedule Document identification shall normally be 1. The document version number must be incremented for each retransmission of a Schedule Document that contains changes to the previous version. The receiving system should ensure that the version number for a Schedule Document is superior to the previous version number received.
Size	A version number may not exceed 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

694 **4.3.3 Message Type**

ACTION	DESCRIPTION
Definition of element	The coded type of the document being sent.
Description	The Schedule Document type identifies the information flow characteristics. ***The code shall always be "A04", System Operator area schedule***
Size	The Schedule Document type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

695 **4.3.4 Process Type**

ACTION	DESCRIPTION
Definition of element	The nature of the process that the document is directed at.
Description	The process type identifies the process to which the information flow is directed. ***The permissible process types are:*** ***A01: Day ahead*** ***A02: Intra day*** ***A12: Long term*** ***A17: Schedule day***
Size	The process type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

696 **4.3.5 Schedule Classification Type**

ACTION	DESCRIPTION
Definition of element	A type that is used to classify the schedule by aggregation or classification.
Description	The schedule classification type identifies the aggregation or classification type of the schedule . **Refer to ETSO Code list document for the valid list of codes.**
Size	The schedule classification type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

697 **4.3.6 Sender Identification – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	Identification of the party who is sending the document.
Description	The sender of the document is identified by the unique coded identification assigned to the System Operator in the EIC codification scheme. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. ***The only codification scheme permitted in this context is : A01: EIC***
Size	The maximum length of a sender's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

698 **4.3.7 Sender Role**

ACTION	DESCRIPTION
Definition of element	Identification of the role that is played by the sender.
Description	The sender role, which identifies the role of the sender within the message. ***The only role permitted in this context is: A04: System Operator.***
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

699 **4.3.8 Receiver Identification – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the schedules.
Description	The receiver of the document is identified by a unique coded identification assigned to the System Operator in the EIC codification scheme. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. ***The only codification scheme permitted in this context is : A01: EIC***
Size	The maximum length of a receiver's identification is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	Both the identification and the coding scheme are mandatory.
Dependence requirements	None.

700 **4.3.9 Receiver Role**

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	The receiver role, which identifies the role of the receiver within the document. ***The only role permitted in this context is: A04: System Operator.***
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

701 **4.3.10 Message Date and Time**

ACTION	DESCRIPTION
Definition of element	Date and time of creation of the scheduling data. The time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Description	The date and time that the document was created for transmission by the application of the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

702 **4.3.11 Schedule Time Interval**

ACTION	DESCRIPTION
Definition of element	The beginning and ending date and time of the period covered by the document containing the schedule. The schedule start and stop time interval must be expressed with a UTC time as follows: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	This information provides the start and end date and time of the Schedule Time Interval. All time intervals for the time series in the document must be within the total time interval for the schedule. The Schedule Time Interval shall always be in the case of countries within the CET time zone from 22:00 to 22:00 UTC in summer time and 23:00 to 23:00 UTC in wintertime. On the day of change over from summertime to wintertime the time interval shall be 22:00 to 23:00 and the change from wintertime to summertime it shall be 23:00 to 22:00. Due to different time zones in the UCTE this may follow specific rules which have to be agreed. The receiver will discard any time intervals outside the schedule period.
Size	The start and end date and time must be expressed as YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

703 **4.3.12 Domain -codingScheme**

ACTION	DESCRIPTION
Definition of element	The domain represents a delimited area that is uniquely identified for a specific purpose and where energy consumption, production or trade may be determined.
Description	The identification of the domain that is covered in the Schedule Document. This attribute shall identify the UTCE border concerned by the document. The code to be used shall be an EIC "Y" code. The codification scheme used for the coded identification shall correspond to "A01" Energy Identification code. It is a 3 character alphanumeric code.
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

704 **4.3.13 Subject Party – codingScheme**

ACTION	DESCRIPTION
Definition of element	The Party that is the subject of the Schedule Document
Description	The identification of the party that is the subject of the schedule message. ***In the case of UCTE transmissions this is not used***
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This attribute is not used for UCTE transmissions

705 **4.3.14 Subject Role**

ACTION	DESCRIPTION
Definition of element	The Role of the Subject Party.
Description	In the context where a domain is further refined into Balance Groups this provides the identification of the Balance Group that is the subject of the Schedule Document. The global position of the Schedule Document is provided at this level of detail. ***In the case of UCTE transmissions this is not used***
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This attribute is not used for UCTE transmissions

706 **4.3.15 Matching Period**

ACTION	DESCRIPTION
Definition of element	The beginning and ending date and time of the period covered by the intraday transmission within the document containing the schedule. The period start and stop time interval must be expressed with a UTC time as follows: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	This information provides the start and end date and time of the period to be matched. The Matching Period start date and time must begin at the start of the Schedule Time Interval or be within the bounds of the Schedule Time Interval. The Matching Period end date and time must be the same as that of the Schedule Time Interval. It is this period that is being presented for matching. The period prior to the Matching Period is generally considered to be historical data and should correspond to the information received in previous transmissions.
Size	The start and end date and time must be expressed as YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is dependent.
Dependence requirements	***Note: to be defined for the intraday process***

4.4 Rules governing the Schedule Time Series class

A document sent without any time series signifies that the sending party has no time series information to transmit for the period in question at the moment of transmission.

The sender assigns a unique identification to each occurrence of the product, business type, object aggregation, in area, out area, metering point identification, in party, out party, capacity contract type and capacity agreement identification.

A time series has a version number that shall always correspond to that of the document.

A time series shall contain a period that will cover the complete Schedule Time Interval. The period shall also indicate the resolution of the periods within the time interval. The time interval must be completely covered by a whole multiple of the resolution.

If a time series is suppressed in a later transmission the time series will be resent with all the periods containing a zero value quantity.

Each System Operator must ensure that the party identification related to the area under its responsibility has a valid authorisation to operate across the border.

It is *not* the responsibility of the System Operator to ensure that the party identification related to the area *which is not under its responsibility* has a valid authorisation to operate across the border.

4.4.1 Senders Time Series Identification

ACTION	DESCRIPTION
Definition of element	Sender's identification of the time series instance. This must be unique for the whole document and guarantee the non-duplication of the product, business type, object aggregation, in area, out area, metering point identification, in party, out party, capacity contract type and capacity agreement identification.
Description	A unique identification within the Schedule Document assigned by the sender. This identification shall guarantee the uniqueness of the product, business type, object aggregation, in area, out area, metering point identification, in party, out party, capacity contract type and capacity agreement identification.
Size	The maximum size of a time series identification is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

725 **4.4.2 Senders Time Series Version**

ACTION	DESCRIPTION
Definition of element	The time series version must always be the same as the current document version number All time series, must be retransmitted when a document is resent. In the case of the deletion of a time series, it is resent with all periods zeroed out.
Description	The version number assigned to the time series in question. The time series version shall be the same as the document version number for all transmissions. .
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the sender's time series identification.

726 **4.4.3 Business type**

ACTION	DESCRIPTION
Definition of element	Identifies the trading nature of an energy product.
Description	The nature of the time series for which the product is handled. Current valid codes: A03 External trade explicit capacity A06 External trade unlimited capacity A10 Tertiary control A15 Losses A44 compensation program A45 Schedule activated Reserves A46 SO Redispatching Other codes concerning SO-SO related schedules may be used if defined in the ETSO codelist document.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

727 **4.4.4 Product**

ACTION	DESCRIPTION
Definition of element	Identification of an energy product such as Power, energy, reactive power, transport capacity, etc.
Description	This identifies the product for which the time series is reporting. There is a different time series for each product ***The code shall always be "8716867000016" active power.***
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

728 **4.4.5 Object aggregation**

ACTION	DESCRIPTION
Definition of element	Identifies how the object is aggregated.
Description	This identified to what extent the object is aggregated The code shall be either: A01, area, in cases where the classification type is "summary" A03, party, in cases where the classification type is "exchange". A04, agreement identification, where the classification type is "exchange".
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

729 **4.4.6 In Area – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The area where the product is being delivered
Description	The identification of the in area using the EIC coding scheme. The codification scheme used for the coded identification is A01, Energy coding scheme. It is a 3 character alphanumeric code
Size	The maximum length of the in area code is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

730 **4.4.7 Out Area – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The area where the product is being extracted.
Description	The identification of the out area using the EIC coding scheme. The codification scheme used for the coded identification is A01, Energy coding scheme. It is a 3 character alphanumeric code.
Size	The maximum length of the out area code is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

731 **4.4.8 Metering Point Identification – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The identification of the location where one or more products are metered. This may be one physical location or the combination of several points together. A metering point identification may be divided into a value and an optional sub-value.
Description	The identification of the location where one or more products are metered. A metering point identification code may be divided into 3 parts: - A value. - An optional sub-value in order to satisfy the needs of more precise identification. The use or not of the sub–value is determined by market requirements. - A coding scheme. **Refer to ESS Code list document for valid coding scheme codes.** ***In the case of UCTE transmissions this is not used***
Size	The maximum length of the identification value is 35 alphanumeric characters. If the identification sub value is used its maximum size is 35 characters. The coding scheme is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Not used in SO – SO exchanges

732 **4.4.9 In Party – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The party that is putting the product into the area.
Description	The identification of the party putting the product into the in area using the EIC coding scheme. The codification scheme used for the coded identification is A01, Energy coding scheme or A10 GS1 coding scheme. It is a 3 character alphanumeric code
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

733 **4.4.10 Out Party – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The party taking the product out of the area.
Description	The identification of the party taking the product out of the out area using the EIC coding scheme. The codification scheme used for the coded identification is A01, Energy coding scheme or A10 GS1 coding scheme. It is a 3 character alphanumeric code
Size	The maximum length of this information is 16 alpha-numeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

734 **4.4.11 Capacity Contract Type**

ACTION	DESCRIPTION
Definition of element	The contract type defines the conditions under which the capacity was allocated and handled. e.g.: daily auction, weekly auction, monthly auction, yearly auction, etc. The significance of this type is dependent on the in area and out area specific coded working methods. The transmission capacity Allocator responsible for the area in question auctions defines the contract type to be used.
Description	This information defines the conditions under which the capacity was allocated and handled. **Refer to ESS Code list document for valid codes.**
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

735 **4.4.12 Capacity agreement identification**

ACTION	DESCRIPTION
Definition of element	The identification of an agreement for the allocation of capacity to a party.
Description	This provides the identification of the allocated capacity by a capacity Allocator. The same identification must be always used even when the same capacity is fully or partially resold.
Size	The maximum length of this information is 35 alpha-numeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

4.4.13 Measurement Unit

ACTION	DESCRIPTION
Definition of element	The unit of measure which is applied to the quantities in which the time series is expressed.
Description	The unit if measurement used for the quantities expressed within the time series. ***The UCTE implementation shall use the "power" unit of measure (MAW).***
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

4.5 Rules governing the Reason class

The reason class shall not be used in the UCTE process

4.6 Rules governing the Period class

There is only one period class for a time series schedule.

The time interval covered by the period shall be equal to the complete period of the schedule.

The number of periods within a time series as characterized by the resolution must completely cover the period's time interval.

If a time series is suppressed then the interval quantities are all zeroed out.

4.6.1 Time Interval.

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question. The time of the start and end of the period is expressed in UTC with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	This information provides the start and end date and time of the period being reported.
Size	The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

4.6.2 Resolution

ACTION	DESCRIPTION
Definition of element	The resolution defining the number of periods that the time interval is divided.
Description	This information the resolution of a single period. The time interval must contain a whole number of periods as expressed by the resolution.
Size	The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. Where nY expresses a number of years, nM a number of months, nD a number of days. The letter "T" separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds. ***One of the following values shall be used:*** ***PT15M which expresses a 15 minute resolution*** ***PT30M which expresses a 30 minute resolution*** ***PT60M which expresses a 60 minute resolution***
Applicability	This information is mandatory.
Dependence requirements	None.

4.7 Rules governing the Interval class

The interval class contains the relative position within a time interval period and the quantity associated with that position.

The position must begin with 1 and increment by 1 for each subsequent position forming a series of contiguous numbers covering the complete range of the period.

Any leading zeros in a position shall be suppressed.

Negative values are not allowed in schedule time series quantities

Zero value periods must be sent.

Leading zeros in a quantity shall be suppressed before transmission.

If the direction of the product flow changes during the Schedule Time Interval the two time series with opposite in area, out area or parties are required.

759 **4.7.1 Pos**

ACTION	DESCRIPTION
Definition of element	The relative position of a period within a time interval.
Description	This information provides the relative position of a period within a time interval.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

760 **4.7.2 Qty**

ACTION	DESCRIPTION
Definition of element	The quantity of the product scheduled for the position within the time interval in question.
Description	This information defines the quantity of energy scheduled for the position within the time interval period. A decimal point value shall be used to express values that are inferior to the defined unit of measurement. The decimal mark that separates the digits forming the integral part of a number from those forming the fractional part. (ISO 6093) shall always be a period (“.”). All quantities are non-signed values up to 3 decimal places
Size	The maximum length of this information is 17 numeric characters (decimal mark and sign, if used, included).
Applicability	This information is mandatory.
Dependence requirements	None.

5. ACKNOWLEDGEMENT DOCUMENT IMPLEMENTATION

5.1 Rules governing the Acknowledgement Document implementation

The UCTE process makes use of the ETSO Acknowledgement Document version 4.0 for all electronic document acknowledgements. The Acknowledgement Document is used within the SO-SO process in two contexts:

- To acknowledge the reception of a schedule message document and that the contents are acceptable (A01) or not (A02 and more explicit codes with further explanation possible in the Reason Text) for further processing (in particular matching).
- To acknowledge a confirmation report and that the contents are totally accepted (A01) or not (A02 and more explicit codes with further explanation possible in the Reason Text).

The following restrictions apply to its use:

5.1.1 Permissible codes

The following Reason codes are permitted in the UCTE Acknowledgement Document:

At the document level :

A01: Message fully accepted
A02: Message fully rejected
A03: Message contains errors at the time series level
A04: Schedule Time Interval incorrect
A51: Message identification or version conflict
A52: Time series missing from new version of message
A53: Receiving party incorrect
A57: Deadline limit exceeded
A78: Sender identification and/or role invalid
A79: Process type invalid
A80: Domain invalid
A81: Matching period invalid
A83: Disagree with matching results
A84: Confirmation ignored due to higher version already received
999: Errors not specifically identified

At the time series level

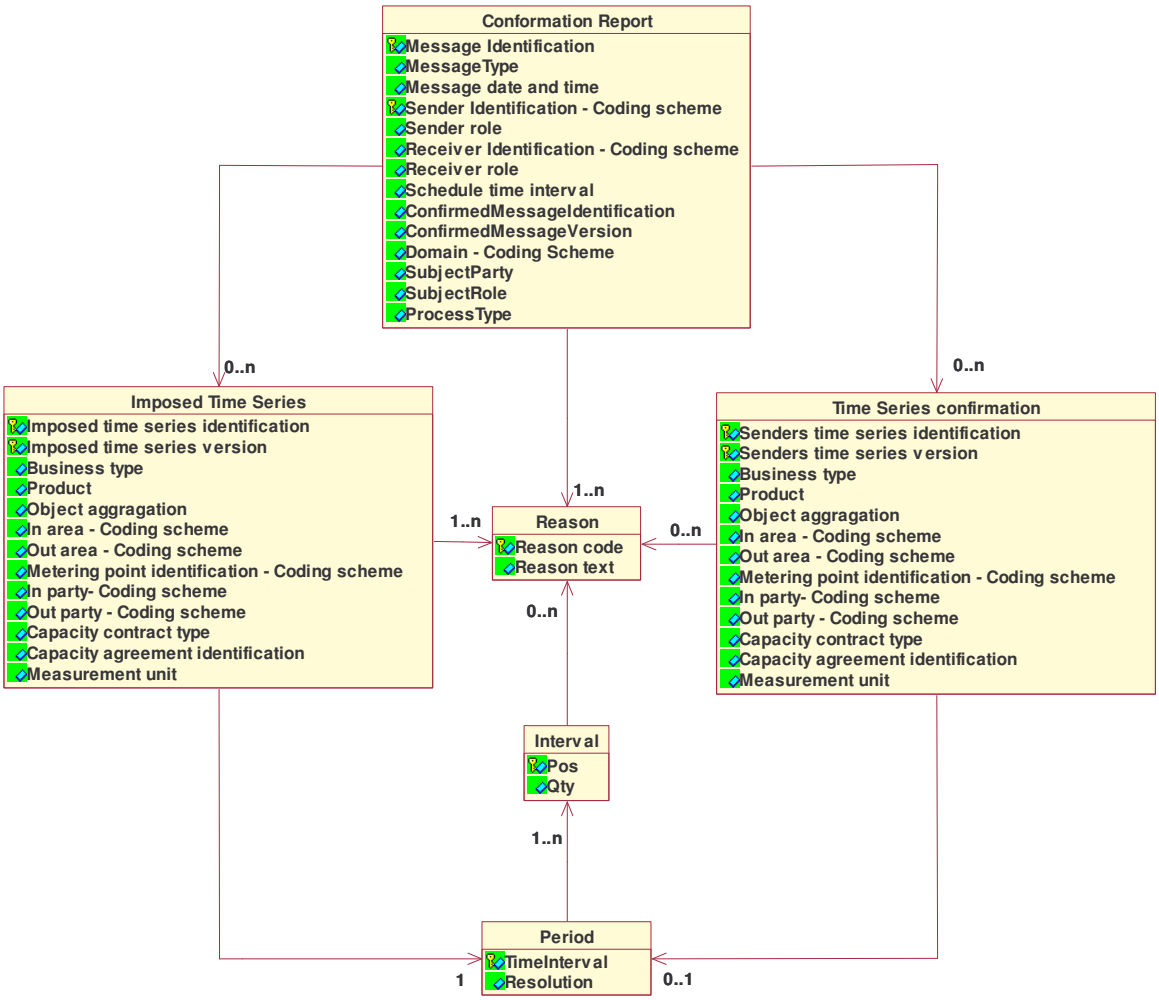
A20: Time series fully rejected
A22: In party/out party invalid
A23: Area invalid
A41: Resolution inconsistency
A42: Quantity inconsistency
A46: Quantities must not be signed values
A49: Position inconsistency
A50: Senders time series version conflict
A55: Time series identification conflict
A56: Corresponding Time series not netted
A57: Deadline limit exceeded
A77: Dependency matrix not respected
A82: In/Out area inconsistant with domain
999: Errors not specifically identified

5.1.2 Use of the Time Series Error Class

This class is not used in System Operator to System Operator exchanges.

6. TIME SERIES CONFIRMATION REPORT IMPLEMENTATION

6.1 Information model



6.2 Rules governing the confirmation report class

A confirmation report is generated after gate closure time has been reached and matching has been performed for the Schedule Time Interval in question. At that point in time the total schedule is matched and all outstanding discrepancies are noted.

The Matching System Operator will produce a Final Confirmation Report whenever all the time series provided are matched with the local set or whenever it has been possible to apply a mutually agreed set of rules to rectify any erroneous time series.

In cases where there are outstanding differences, an Intermediate Confirmation Report shall be generated to inform the Participating System Operator of unresolved problems.

It is also possible for the Matching System Operator to send Intermediate Confirmation Reports to the Participating System Operator prior to gate closure if this has been mutually agreed beforehand (in the case of pre-matching).

In the case of parallel matching a Final Confirmation Report cannot be generated by the Receiving System Operator until there are no mismatches. If the mismatches are not solved by the market participants by an agreed point in time an internal looping process has to occur between the System Operators to ensure a successful closure. The Initiating System Operator may make use of the information provided by the Receiving System Operator in

the Intermediate Confirmation Report concerning a proposed solution to resolve any outstanding issues.

Each System Operator then informs all interested parties of the situation in respect to their schedule.

The confirmation report provides the complete set of time series that has been accepted for the cross border exchange along with any eventual rectifications. It may also include one or several time series that the Matching System Operator has imposed in compliance with the agreed matching rules. This information will then be sent to the market participants on each side of the border by the System Operators in question.

This document terminates the cross border schedule planning process.

6.2.1 Document acceptance and rejection criteria.

A Confirmation Report may be fully accepted or rejected. In the specific case of rejection the Reason Codes in the Acknowledgement Document shall provide as much information as possible concerning the motivation for the rejection.

Wherever a Confirmation report is rejected manual intervention will be necessary in order to resolve the problem except in the case where a document is rejected because it was already received (duplicate message) or is rejected because a higher version of the referenced Schedule Document was already sent (ignored confirmation). These two cases can happen under normal conditions and therefore must be indicated with dedicated reason codes to support proper handling by the schedule management system of the Receiving/Matching System Operator.

6.2.2 Message **Identification**

ACTION	DESCRIPTION
Definition of element	Unique identification of the confirmation report that is sent to the Participating System Operator.
Description	A confirmation report is identified by a unique number generated by the sender to serve as the identification of the report in any further communication on the subject.
Size	A confirmation report identification code may not exceed 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

851 **6.2.3 Message Type**

ACTION	DESCRIPTION
Definition of element	The coded type of the message being sent.
Description	The confirmation report message type identifies the information flow characteristics. ***The following codes are permitted:*** ***A07: Intermediate Confirmation Report*** ***A08: Final Confirmation Report***
Size	The confirmation report message type value may not exceed 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

852 **6.2.4 Message Date And Time**

ACTION	DESCRIPTION
Definition of element	Date and time of the preparation for transmission of the confirmation report.
Description	The date and time that the message was prepared for transmission by the sender.
Size	The date and time must be expressed in UTC as YYYY-MM-DDTHH:MM:SSZ.
Applicability	This information is mandatory.
Dependence requirements	None.

853 **6.2.5 Sender Identification – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	Identification of the party who is sending the confirmation report.
Description	The sender of the message is identified by a unique coded identification. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. ***The only codification scheme permitted in this context is : A01: EIC***
Size	The maximum length of a sender's identification code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

854 **6.2.6 Sender Role**

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the sender.
Description	The sender role, which identifies the role of the sender within the message**.** ***The only role permitted in this context is : A04: System Operator*****.**
Size	The maximum length of a sender role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

855 **6.2.7 Receiver Identification – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	Identification of the party who is receiving the confirmation report.
Description	The receiver of the message is identified by a unique coded identification. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. ***The only codification scheme permitted in this context is : A01: EIC***
Size	The maximum length of a receiver's identification code is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

856 **6.2.8 Receiver Role**

ACTION	DESCRIPTION
Definition of element	Identification of the role played by the receiver.
Description	The receiver role, which identifies the role of the receiver within the message. ***The only role permitted in this context is : A04: System Operator.***
Size	The maximum length of a receiver role is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

857 **6.2.9 Schedule Time Interval**

ACTION	DESCRIPTION
Definition of element	The beginning date and time and the ending date and time of the schedule period covered by the confirmation report.
Description	This information provides the beginning date and time and the ending date and time of the schedule period for which the confirmation report is being generated.
Size	The start and end date and time must respect the format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ. The time must be expressed in UTC.
Applicability	This information is mandatory.
Dependence requirements	None.

858 **6.2.10 Confirmed Message Identification**

ACTION	DESCRIPTION
Definition of element	The identification of the Participating System Operators document containing his cross border situation that is being confirmed.
Description	The identification of the document that was sent by the Participating System Operator containing the cross border schedule as seen from his perspective.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

859 **6.2.11 Confirmed Message Version**

ACTION	DESCRIPTION
Definition of element	The document version that was taken into consideration.
Description	The version of the document being confirmed.
Size	The maximum size of a time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None

860 **6.2.12 Domain -codingScheme**

ACTION	DESCRIPTION
Definition of element	The domain covered within the document being confirmed.
Description	The identification of the domain that is covered in the document being confirmed. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code. **Refer to ETSO Code list document for the valid list of codes.**
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Usage is defined by local market rules.

861 **6.2.13 Subject Party – codingScheme**

ACTION	DESCRIPTION
Definition of element	The Party covered within the document being confirmed.
Description	The party that is the subject of the being confirmed. ***In the case of UCTE transmissions this is not used***
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Usage is defined by local market rules

862 **6.2.14 Subject Role**

ACTION	DESCRIPTION
Definition of element	The Role of the Subject Party covered within the document being confirmed.
Description	Where the subject party is described then the subjectrole must be used to describe the role of the party ***In the case of UCTE transmissions this is not used***
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Usage is defined by local market rules. To be used only in cases where the Subject Party is a Balance Responsible Party.

863 **6.2.15 Process Type**

ACTION	DESCRIPTION
Definition of element	The nature of the process defined in the document being confirmed.
Description	The process type of the document being confirmed **Refer to ETSO Code list document for the valid list of codes.**
Size	The process type value may not exceed 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Usage is defined by local market rules.

6.3 Rules governing the Reason class

In a confirmation report reason codes can be detailed at three levels (the period class is assimilated with the time series level):

1. At the header level to identify that all the schedules have been accepted, accepted with modification or requires action.

2. At the time series level to identify where differences have occurred or to identify that a specific time series has been changed.

3. At the interval level to indicate where quantities have been increased, or decreased

Reason code	Message level elements	Time series level elements		Time interval level elements
A85	M	M	A88	
A86	M	M	A88	
		M	A09	A43/A44
		M	A89	A44
		M	A28	
		M	A63	A43/A44
A87	M	M	A09	A43/A44
		M	A63	A43/A44
		M	A28	
		M	A88	
		M	A89	A44
		M	A90	A43/A44

Note: There are only two cases where a Time series can be rejected (i.e. values set to zero) by a Matching/Receiving System Operator:

1. When the Capacity Agreement Identification is not known to the Matching/Receiving System Operator (no Time Series submitted on its side with the same identification).

2. When the Party in the Matching/Receiving System Operator's area is not known.

In both of these cases the Participating/Initiating System Operator will have already acknowledged the Time series in question as being accepted. Consequently where such a rejection occurs, the market participant will have to be informed of the rejection with the indication: Counterpart Time series missing. In all future transmissions to the Matching/Receiving System Operator the Time Series will have to have all its quantities set to zero. These Time series shall by convention be ignored in future transmissions by the Matching/Receiving System Operator (i.e. the Matching/Receiving System Operator shall no longer identify them as being in error).

887 **6.3.1 Reason code**

ACTION	DESCRIPTION
Definition of element	A code providing the status of the information. Currently the following status's have been identified : **<u>At the message level :</u>** A85: Confirmation without adjustment (time series have been matched without changed) A86: Confirmation with adjustment (time series have been modified) A87: For action (only in intermediate confirmation – time series need mutual agreement and action) **<u>At the timeseries level :</u>** **<u>(note: there must be either a code A88 or A09.There may be other reason codes defining the context specific of the time series).</u>** A88 Time series matched A09: Time series not matching A28: counterpart time series missing A89 Time series ignored (note: this can only apply to time series that are set to zero – see matching principles) A90: Modification proposal (intermediate confirmation) A63 time series modified **<u>At the time interval level :</u>** A43: Quantity increased A44: Quantity decreased Other ETSO code list Reason codes may be used as required.
Description	The reason code provides the status of the differences and confirmation. For errors as many reason elements as necessary may be used.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	This information is used either at the header level to give a global description of the error, at the time series or time interval quantities levels to provide more detailed information.

888 **6.3.2 Reason Text**

ACTION	DESCRIPTION
Definition of element	Textual explanation of an eventual difference .
Description	If the code does not provide all the information to clearly identify a difference the reason text may be used.
Size	The maximum length of this information is 512 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Used only if the reason code is insufficient to identify a difference.

6.4 Rules governing the Time Series confirmation class

All the time series that have been sent by the Participating System Operator are identified in the confirmation report. If there are discrepancies these are identified with a reason code and eventual text. A time series, if being rejected in the confirmation report, shall have all its period information quantities set to zero.

The attributes Senders Time Series Identification, Senders Time Series Version, Business Type, Product, Object Aggregation, In Area and coding Scheme, Out Area and coding Scheme, Metering Point Identification and coding Scheme, In Party and coding Scheme, Out Party and coding Scheme, Capacity Contract Type, Capacity Agreement Identification, and Measurement Unit must all have exactly the same values as those found in the time series of the document being confirmed.

6.5 Rules governing the imposed time series class

A time series may be imposed by the Matching System Operator providing that the agreed matching rectification rules permit it. For example, if market rules indicated that in case of mismatch one of the parties time series would automatically be taken and imposed on the other party.

6.5.1 Imposed Time Series Identification

ACTION	DESCRIPTION
Definition of element	The identification of the imposed time series assigned by the System Operator.
Description	The identification of the time series imposed by the System Operator on the market participant.
Size	The maximum size of this information is 35 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.5.2 Imposed Time Series Version

ACTION	DESCRIPTION
Definition of element	The imposed time series version assigned by the Matching System Operator.
Description	The version of the imposed time series. This value s in general should be equal to 1.
Size	The maximum size of an imposed time series version is 3 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	This data element is always associated with the imposed time series identification.

907 **6.5.3 Business type**

ACTION	DESCRIPTION
Definition of element	The trading nature of the time series imposed.
Description	The nature of the time series that the Matching System Operator is imposing.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

908 **6.5.4 Product**

ACTION	DESCRIPTION
Definition of element	The product of the imposed time series .
Description	This identifies the product for which the Matching System Operator is imposing the time series
Size	The maximum length of this information is 13 numeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

909 **6.5.5 Object aggregation**

ACTION	DESCRIPTION
Definition of element	The aggregation of the imposed time series.
Description	The aggregation of the time series imposed by the Matching System Operator.
Size	The maximum length of the time series type is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

910 **6.5.6 In Area – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The in area of the imposed time series.
Description	The identification of the in area of the time series that has been imposed by the Matching System Operator with the coding scheme used in the original transmission.
Size	The maximum length of this information is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

911 **6.5.7 Out Area – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The out area of the imposed time series.
Description	The identification of the out area of the time series that has been imposed by the Matching System Operator with the coding scheme used in the original transmission.
Size	The maximum length of this information is 18 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

912 **6.5.8 Metering Point Identification – Coding Scheme**

913 Not transmitted in this context.

914 **6.5.9 In party – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The identification of the in party of the imposed time series.
Description	The identification of the party, which is putting the product into the area, of the time series that has been imposed by the Matching System Operator with the coding scheme used in the original transmission.
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

915 **6.5.10 Out party – Coding Scheme**

ACTION	DESCRIPTION
Definition of element	The identification of the out party of the imposed time series.
Description	The identification of the party, which is taking the product out of the area, of the time series that has been imposed by the Matching System Operator with the coding scheme used if it was in the original transmission.
Size	The maximum length of this information is 16 alphanumeric characters. The maximum length of the coding scheme code is 3 alphanumeric characters. The codification scheme used for the coded identification is indicated by the coding scheme attribute. It is a 3 character alphanumeric code.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

916 **6.5.11 Capacity Contract Type**

ACTION	DESCRIPTION
Definition of element	The capacity contract type of the imposed time series.
Description	This information defines the conditions under which the capacity was allocated and handled. It corresponds to the information that has been imposed by the Matching System Operator.
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

917 **6.5.12 Capacity agreement identification.**

ACTION	DESCRIPTION
Definition of element	The capacity agreement identification of the imposed time series in error.
Description	This information identifies the agreement made between the parties for the sale or purchase of capacity. It corresponds to the information that has been imposed by the Matching System Operator.
Size	The maximum length of this information is 35 alphanumeric characters.
Applicability	This information is dependent.
Dependence requirements	Refer to the matrix in 4.2.1 for dependency requirements.

918 **6.5.13 Measurement Unit**

ACTION	DESCRIPTION
Definition of element	The unit of measure that is applied to the quantities in which the imposed time series is expressed.
Description	The unit if measurement used for the quantities expressed within the time series that has been imposed by the Matching System Operator
Size	The maximum length of this information is 3 alphanumeric characters.
Applicability	This information is mandatory.
Dependence requirements	None.

6.6 Rules governing the Period class

The period and resolution as identified the original document must be sent in the confirmation report for all time series that have been accepted or accepted with modification. In the case of imposed time series the resolution must be the same as that identified for the Schedule Document.

6.6.1 Time Interval.

ACTION	DESCRIPTION
Definition of element	The start and end date and time of the time interval of the period in question. The time of the start and end of the period is expressed in UTC with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Description	The time interval which has been accepted or imposed.
Size	The start and end date and time must be expressed in compliance with the following format: YYYY-MM-DDTHH:MMZ/YYYY-MM-DDTHH:MMZ.
Applicability	This information is mandatory.
Dependence requirements	None.

6.6.2 Resolution

ACTION	DESCRIPTION
Definition of element	The resolution defining the number of periods that the time interval is divided.
Description	The resolution that has been accepted or imposed.
Size	The resolution is expressed in compliance with ISO 8601 in the following format: PnYnMnDTnHnMnS. Where nY expresses a number of years, nM a number of months, nD a number of days. The letter "T" separates the date expression from the time expression and after it nH identifies a number of hours, nM a number of minutes and nS a number of seconds.
Applicability	This information is mandatory.
Dependence requirements	None.

6.7 Rules governing the Interval class

All the interval quantities for the time series that has been accepted or those imposed by the Matching System Operator must be sent in the confirmation report

6.7.1 Pos

ACTION	DESCRIPTION
Definition of element	The relative position of a period within a time interval.
Description	The position that has been accepted or imposed.
Size	The relative position must be expressed as a numeric integer value beginning with 1. All leading zeros must be suppressed. The maximum number of characters is 6.
Applicability	This information is mandatory.
Dependence requirements	None.

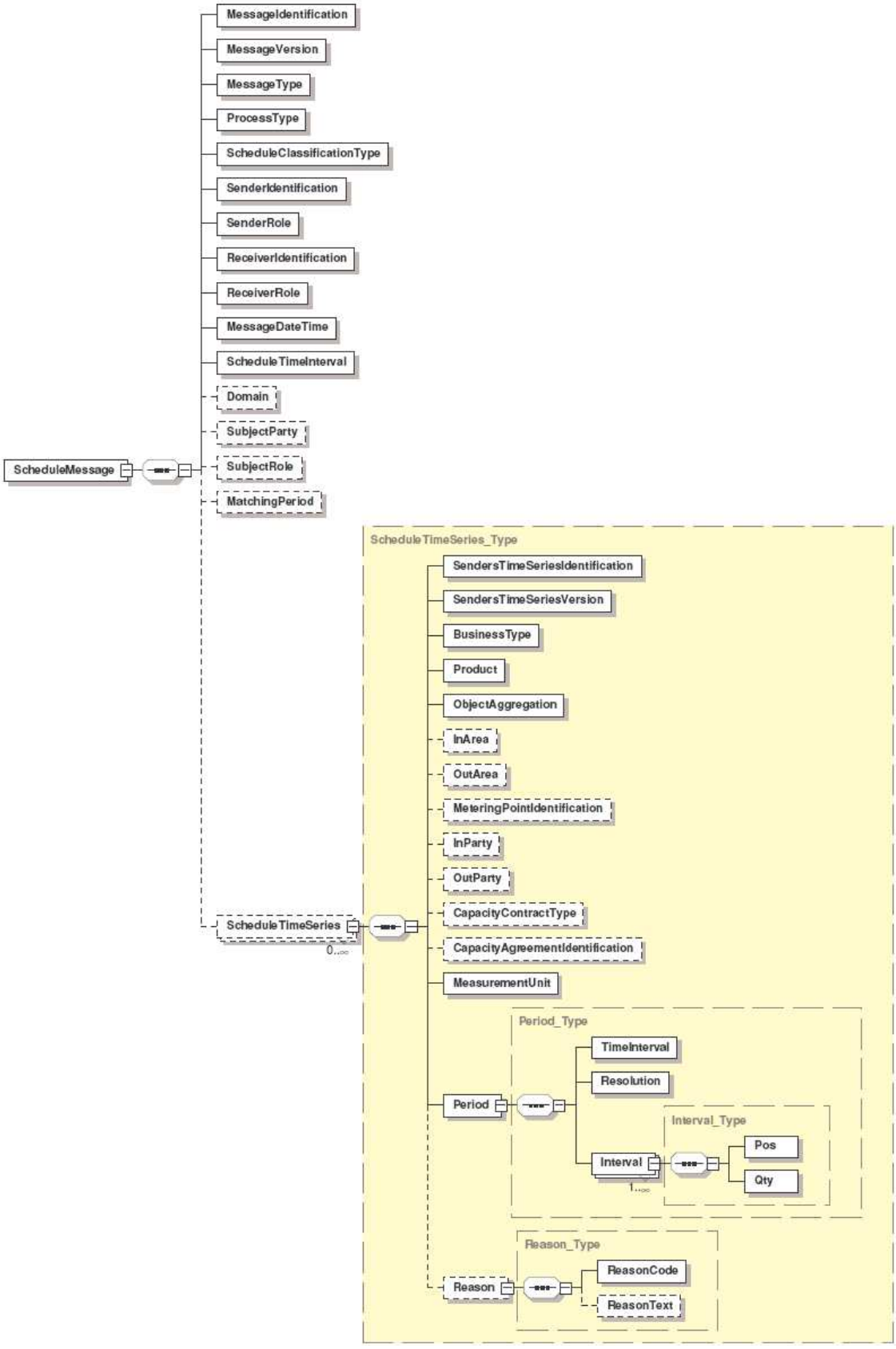
6.7.2 Qty

ACTION	DESCRIPTION
Definition of element	The quantity of the product scheduled for the position within the time interval in question.
Description	The quantity that has been accepted or imposed.
Size	The maximum length of this information is 17 numeric characters (decimal point if used, included). All quantities are non-signed values up to 3 decimal places
Applicability	This information is mandatory.
Dependence requirements	None.

7. XML DEFINITIONS

7.1 Schedule Document

7.1.1 Schedule Document - Schema Structure



7.1.2 Schedule Document – Schema Definition

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:ecc="etso-core-cmpts.xsd"
elementFormDefault="qualified" attributeFormDefault="unqualified" ecc:VersionRelease="4.0">
    <xsd:import namespace="etso-core-cmpts.xsd" schemaLocation="etso-core-cmpts.xsd"/>
    <!--
            ETSO Document Automatically generated from a UML class diagram using XMI.
            Generation tool version 1.7
        -->
    <xsd:element name="ScheduleMessage">
        <xsd:complexType>
            <xsd:annotation>
                <xsd:documentation/>
            </xsd:annotation>
            <xsd:sequence>
                <xsd:element name="MessageIdentification" type="ecc:IdentificationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MessageVersion" type="ecc:VersionType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MessageType" type="ecc:MessageType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ProcessType" type="ecc:ProcessType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ScheduleClassificationType" type="ecc:ClassificationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SenderIdentification" type="ecc:PartyType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SenderRole" type="ecc:RoleType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ReceiverIdentification" type="ecc:PartyType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ReceiverRole" type="ecc:RoleType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MessageDateTime" type="ecc:MessageDateTimeType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ScheduleTimeInterval" type="ecc:TimeIntervalType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="Domain" type="ecc:AreaType" minOccurs="0">
```

```
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SubjectParty" type="ecc:PartyType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SubjectRole" type="ecc:RoleType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MatchingPeriod" type="ecc:TimeIntervalType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ScheduleTimeSeries" type="ScheduleTimeSeries_Type" minOccurs="0"
maxOccurs="unbounded"/>
            </xsd:sequence>
            <xsd:attribute name="DtdVersion" type="xsd:string" use="required"/>
            <xsd:attribute name="DtdRelease" type="xsd:string" use="required"/>
        </xsd:complexType>
    </xsd:element>
    <xsd:complexType name="ScheduleTimeSeries_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="SendersTimeSeriesIdentification" type="ecc:IdentificationType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="SendersTimeSeriesVersion" type="ecc:VersionType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="BusinessType" type="ecc:BusinessType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Product" type="ecc:EnergyProductType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="ObjectAggregation" type="ecc:ObjectAggregationType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="InArea" type="ecc:AreaType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="OutArea" type="ecc:AreaType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="MeteringPointIdentification" type="ecc:MeteringPointType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="InParty" type="ecc:PartyType" minOccurs="0">
                <xsd:annotation>
```

```
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="OutParty" type="ecc:PartyType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="CapacityContractType" type="ecc:ContractType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="CapacityAgreementIdentification" type="ecc:IdentificationType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="MeasurementUnit" type="ecc:UnitOfMeasureType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Period" type="Period_Type"/>
            <xsd:element name="Reason" type="Reason_Type" minOccurs="0"/>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Period_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="TimeInterval" type="ecc:TimeIntervalType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Resolution" type="ecc:ResolutionType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Interval" type="Interval_Type" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Interval_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="Pos" type="ecc:PositionType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Qty" type="ecc:QuantityType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Reason_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="ReasonCode" type="ecc:ReasonCodeType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="ReasonText" type="ecc:ReasonTextType" minOccurs="0">
```

```
            <xsd:annotation>
                <xsd:documentation/>
            </xsd:annotation>
        </xsd:element>
    </xsd:sequence>
  </xsd:complexType>
</xsd:schema>
```

7.1.3 Schedule Document DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- ETSO Task Force 14 - DTD Version : 3 RELEASE : 0 -->
<!ELEMENT ScheduleMessage (MessageIdentification, MessageVersion,
MessageType,
ProcessType, ScheduleClassificationType, SenderIdentification,
SenderRole, ReceiverIdentification, ReceiverRole,
MessageDateTime, ScheduleTimeInterval,Domain? SubjectParty?,
SubjectRole?, MatchingPeriod? ScheduleTimeSeries*)>
     <!ATTLIST ScheduleMessage DtdVersion CDATA #REQUIRED
                               DtdRelease CDATA #REQUIRED>

     <!ELEMENT MessageIdentification EMPTY>
     <!ATTLIST MessageIdentification v CDATA #REQUIRED>

     <!ELEMENT MessageVersion EMPTY>
     <!ATTLIST MessageVersion v CDATA #REQUIRED>

     <!ELEMENT MessageType EMPTY>
     <!ATTLIST MessageType v CDATA #REQUIRED>
     <!--     See Message type valid codes and meanings in
implementation guide     -->

     <!ELEMENT ProcessType EMPTY>
     <!ATTLIST ProcessType v CDATA #REQUIRED>
     <!--     See role meanings in implementation guide     -->

     <!ELEMENT ScheduleClassificationType EMPTY>
     <!ATTLIST ScheduleClassificationType v CDATA #REQUIRED>
     <!--     See role meanings in implementation guide     -->

     <!ELEMENT SenderIdentification EMPTY>
     <!ATTLIST SenderIdentification v CDATA #REQUIRED
                                    codingScheme CDATA #REQUIRED>

     <!ELEMENT SenderRole EMPTY>
     <!ATTLIST SenderRole v CDATA #REQUIRED>
     <!--     See role meanings in implementation guide     -->

     <!ELEMENT ReceiverIdentification EMPTY>
     <!ATTLIST ReceiverIdentification v CDATA #REQUIRED
                                    codingScheme CDATA #REQUIRED>

     <!ELEMENT ReceiverRole EMPTY>
     <!ATTLIST ReceiverRole v CDATA #REQUIRED>
```

```
1205        <!--     See role meanings in implementation guide    -->
1206
1207        <!ELEMENT MessageDateTime EMPTY>
1208        <!ATTLIST MessageDateTime v CDATA #REQUIRED>
1209
1210        <!ELEMENT ScheduleTimeInterval EMPTY>
1211        <!ATTLIST ScheduleTimeInterval v CDATA #REQUIRED>
1212
1213        <!ELEMENT Domain EMPTY>
1214        <!ATTLIST Domain v CDATA #REQUIRED>
1215
1216        <!ELEMENT SubjectParty EMPTY>
1217        <!ATTLIST SubjectParty v CDATA #REQUIRED
1218                                    codingScheme CDATA #REQUIRED>
1219
1220        <!ELEMENT SubjectRole EMPTY>
1221        <!ATTLIST SubjectRole v CDATA #REQUIRED>
1222
1223        <!ELEMENT MatchingPeriod EMPTY>
1224        <!ATTLIST MatchingPeriod v CDATA #REQUIRED>
1225
1226        <!ELEMENT ScheduleTimeSeries
1227   (SendersTimeSeriesIdentification, SendersTimeSeriesVersion,
1228   BusinessType, Product, ObjectAggregation, InArea?, OutArea?,
1229   MeteringPointIdentification?, InParty?, OutParty?,
1230   CapacityContractType?, CapacityAgreementIdentification?,
1231   MeasurementUnit,  Period, Reason?)>
1232
1233        <!ELEMENT SendersTimeSeriesIdentification EMPTY>
1234        <!ATTLIST SendersTimeSeriesIdentification v CDATA #REQUIRED>
1235
1236        <!ELEMENT SendersTimeSeriesVersion EMPTY>
1237        <!ATTLIST SendersTimeSeriesVersion v CDATA #REQUIRED>
1238
1239        <!ELEMENT BusinessType EMPTY>
1240        <!ATTLIST BusinessType v CDATA #REQUIRED>
1241        <!--     See Business type valid codes and meanings in
1242   implementation guide    -->
1243
1244        <!ELEMENT Product EMPTY>
1245        <!ATTLIST Product v CDATA #REQUIRED>
1246        <!--     See product meanings in implementation guide -->
1247
1248        <!ELEMENT ObjectAggregation EMPTY>
1249        <!ATTLIST ObjectAggregation v CDATA #REQUIRED>
1250        <!--     See object aggregation valid codes and meanings in
1251   implementation guide    -->
1252
1253        <!ELEMENT InArea EMPTY>
1254        <!ATTLIST InArea v CDATA #REQUIRED
1255                        codingScheme CDATA #REQUIRED>
1256
```

```
1257        <!ELEMENT OutArea EMPTY>
1258        <!ATTLIST OutArea v CDATA #REQUIRED
1259                      codingScheme CDATA #REQUIRED>
1260
1261        <!ELEMENT MeteringPointIdentification EMPTY>
1262        <!ATTLIST MeteringPointIdentification v CDATA #REQUIRED
1263                                          subValue CDATA #IMPLIED
1264                                          codingScheme CDATA
1265                            #REQUIRED>
1266
1267        <!ELEMENT InParty EMPTY>
1268        <!ATTLIST InParty v CDATA #REQUIRED
1269                            codingScheme CDATA #REQUIRED>
1270
1271        <!ELEMENT OutParty EMPTY>
1272        <!ATTLIST OutParty  v CDATA #REQUIRED
1273                            codingScheme CDATA #REQUIRED>
1274
1275        <!ELEMENT CapacityContractType EMPTY>
1276        <!ATTLIST CapacityContractType v CDATA #REQUIRED>
1277        <!--     See contract type meanings in implementation guide--
1278  >
1279
1280        <!ELEMENT CapacityAgreementIdentification EMPTY>
1281        <!ATTLIST CapacityAgreementIdentification v CDATA #REQUIRED>
1282
1283        <!ELEMENT MeasurementUnit EMPTY>
1284        <!ATTLIST MeasurementUnit v CDATA #REQUIRED>
1285        <!--     See measurement unit meanings in implementation
1286  guide     -->
1287
1288        <!ELEMENT Period (TimeInterval, Resolution, Interval+)>
1289
1290        <!ELEMENT TimeInterval EMPTY>
1291        <!ATTLIST TimeInterval v CDATA #REQUIRED>
1292
1293        <!ELEMENT Resolution EMPTY>
1294        <!ATTLIST Resolution v CDATA #REQUIRED>
1295
1296        <!ELEMENT Reason (ReasonCode, ReasonText*)>
1297
1298        <!ELEMENT ReasonCode EMPTY>
1299        <!ATTLIST ReasonCode v CDATA #REQUIRED>
1300        <!--  See reason code meanings in implementation guide-->
1301
1302        <!ELEMENT ReasonText EMPTY>
1303        <!ATTLIST ReasonText v CDATA #REQUIRED>
1304
1305        <!ELEMENT Interval (Pos, Qty)>
1306
1307        <!ELEMENT Pos EMPTY>
1308        <!ATTLIST Pos v CDATA #REQUIRED>
```

```
     <!ELEMENT Qty EMPTY>
     <!ATTLIST Qty v CDATA #REQUIRED>
```

7.1.4 Schedule Document - Data instance

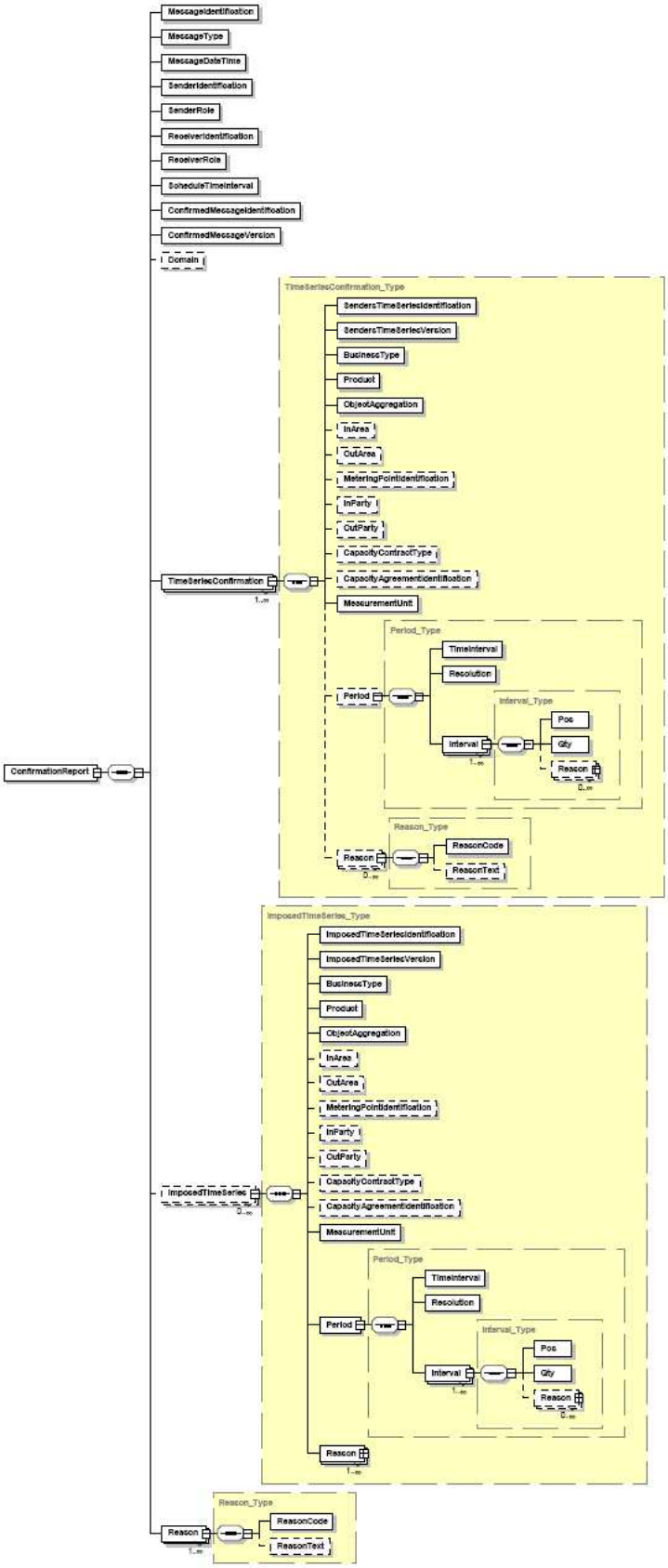
```
<?xml version="1.0" encoding="UTF-8"?>
<ScheduleMessage DtdVersion="2" DtdRelease="3">
     <MessageIdentification v="1234"/>
     <MessageVersion v="1"/>
     <MessageType v="A01"/>
     <ProcessType v="A01"/>
     <ScheduleClassificationType v="A01"/>
     <SenderIdentification v="5790000432752" codingScheme="A10"/>
     <SenderRole v="A01"/>
     <ReceiverIdentification v="10X000000000RTEM"
codingScheme="A01"/>
     <ReceiverRole v="A04"/>
     <MessageDateTime v="2001-06-02T09:00:00Z"/>
     <ScheduleTimeInterval v="2001-06-02T22:00Z/2001-06-
02T23:00Z"/>
     <ScheduleTimeSeries>
          <SendersTimeSeriesIdentification v="TS0001"/>
          <SendersTimeSeriesVersion v="1"/>
          <BusinessType v="A03"/>
          <Product v="8716867000016"/>
          <ObjectAggregation v="A01"/>
          <InArea v="12Y000002347651H" codingScheme="A01"/>
          <OutArea v="12YRWENET------Q" codingScheme="A01"/>
          <InParty v="11X000000100741R" codingScheme="A01"/>
          <OutParty v="11X000000340533X" codingScheme="A01"/>
          <CapacityContractType v="A01"/>
          <CapacityAgreementIdentification v=”R567”>
          <MeasurementUnit v="MAW"/>
          <Period>
               <TimeInterval v="2001-06-02T22:00Z/2001-06-
02T23:00Z"/>
               <Resolution v="PT15M"/>
               <Interval>
                    <Pos v="1"/>
                    <Qty v="45"/>
               </Interval>
               <Interval>
                    <Pos v="2"/>
                    <Qty v="40"/>
               </Interval>
               <Interval>
                    <Pos v="3"/>
                    <Qty v="45"/>
               </Interval>
               <Interval>
                    <Pos v="4"/>
                    <Qty v="45"/>
```

```
            </Interval>
        </Period>
    </ScheduleTimeSeries>
</ScheduleMessage>
```

Note: This example, for the sake of space, is only for the duration of one hour.

7.2 Confirmation report

7.2.1 Confirmation report - Schema Structure



7.2.2 Confirmation report - Schema Definition

```
<?xml version="1.0" encoding="UTF-8"?>
<xsd:schema xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:ecc="etso-core-cmpts.xsd"
elementFormDefault="qualified" attributeFormDefault="unqualified" ecc:VersionRelease="3.5">
    <xsd:import namespace="etso-core-cmpts.xsd" schemaLocation="etso-core-cmpts.xsd"/>
    <!--
            ETSO Document Automatically generated from a UML class diagram using XMI.
            Generation tool version 1.7
        -->
    <xsd:element name="ConfirmationReport">
        <xsd:complexType>
            <xsd:annotation>
                <xsd:documentation/>
            </xsd:annotation>
            <xsd:sequence>
                <xsd:element name="MessageIdentification" type="ecc:IdentificationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MessageType" type="ecc:MessageType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MessageDateTime" type="ecc:MessageDateTimeType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SenderIdentification" type="ecc:PartyType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SenderRole" type="ecc:RoleType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ReceiverIdentification" type="ecc:PartyType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ReceiverRole" type="ecc:RoleType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ScheduleTimeInterval" type="ecc:TimeIntervalType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ConfirmedMessageIdentification" type="ecc:IdentificationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ConfirmedMessageVersion" type="ecc:VersionType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="Domain" type="ecc:AreaType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="TimeSeriesConfirmation" type="TimeSeriesConfirmation_Type"
maxOccurs="unbounded"/>
```

```
                    <xsd:element name="ImposedTimeSeries" type="ImposedTimeSeries_Type" minOccurs="0"
maxOccurs="unbounded"/>
                    <xsd:element name="Reason" type="Reason_Type" maxOccurs="unbounded"/>
                </xsd:sequence>
                <xsd:attribute name="DtdVersion" type="xsd:string" use="required"/>
                <xsd:attribute name="DtdRelease" type="xsd:string" use="required"/>
            </xsd:complexType>
        </xsd:element>
        <xsd:complexType name="TimeSeriesConfirmation_Type">
            <xsd:annotation>
                <xsd:documentation/>
            </xsd:annotation>
            <xsd:sequence>
                <xsd:element name="SendersTimeSeriesIdentification" type="ecc:IdentificationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="SendersTimeSeriesVersion" type="ecc:VersionType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="BusinessType" type="ecc:BusinessType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="Product" type="ecc:EnergyProductType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ObjectAggregation" type="ecc:ObjectAggregationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="InArea" type="ecc:AreaType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="OutArea" type="ecc:AreaType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MeteringPointIdentification" type="ecc:MeteringPointType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="InParty" type="ecc:PartyType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="OutParty" type="ecc:PartyType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="CapacityContractType" type="ecc:ContractType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="CapacityAgreementIdentification" type="ecc:IdentificationType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
```

```
            <xsd:element name="MeasurementUnit" type="ecc:UnitOfMeasureType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Period" type="Period_Type" minOccurs="0"/>
            <xsd:element name="Reason" type="Reason_Type" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Period_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="TimeInterval" type="ecc:TimeIntervalType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Resolution" type="ecc:ResolutionType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Interval" type="Interval_Type" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Interval_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="Pos" type="ecc:PositionType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Qty" type="ecc:QuantityType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="Reason" type="Reason_Type" minOccurs="0" maxOccurs="unbounded"/>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="Reason_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="ReasonCode" type="ecc:ReasonCodeType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="ReasonText" type="ecc:ReasonTextType" minOccurs="0">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
        </xsd:sequence>
    </xsd:complexType>
    <xsd:complexType name="ImposedTimeSeries_Type">
        <xsd:annotation>
            <xsd:documentation/>
        </xsd:annotation>
        <xsd:sequence>
            <xsd:element name="ImposedTimeSeriesIdentification" type="ecc:IdentificationType">
                <xsd:annotation>
                    <xsd:documentation/>
                </xsd:annotation>
            </xsd:element>
            <xsd:element name="ImposedTimeSeriesVersion" type="ecc:VersionType">
```

```
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="BusinessType" type="ecc:BusinessType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="Product" type="ecc:EnergyProductType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="ObjectAggregation" type="ecc:ObjectAggregationType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="InArea" type="ecc:AreaType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="OutArea" type="ecc:AreaType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MeteringPointIdentification" type="ecc:MeteringPointType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="InParty" type="ecc:PartyType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="OutParty" type="ecc:PartyType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="CapacityContractType" type="ecc:ContractType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="CapacityAgreementIdentification" type="ecc:IdentificationType" minOccurs="0">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="MeasurementUnit" type="ecc:UnitOfMeasureType">
                    <xsd:annotation>
                        <xsd:documentation/>
                    </xsd:annotation>
                </xsd:element>
                <xsd:element name="Period" type="Period_Type"/>
                <xsd:element name="Reason" type="Reason_Type" maxOccurs="unbounded"/>
            </xsd:sequence>
        </xsd:complexType>
    </xsd:schema>
```

7.2.3 Confirmation report - DTD

```
<?xml version="1.0" encoding="UTF-8"?>
<!-- ETSO Task Force 14 - DTD Version : 3 RELEASE : 0 -->
<!ELEMENT ConfirmationReport (MessageIdentification, MessageType, MessageDateTime, SenderIdentification,
SenderRole, ReceiverIdentification, ReceiverRole, ScheduleTimeInterval, ConfirmedMessageIdentification?,
ConfirmedMessageVersion?, Domain?, Reason+, ImposedTimeSeries*, TimeSeriesConfirmation*)>
    <!ATTLIST ConfirmationReport
    DtdVersion CDATA #REQUIRED
        DtdRelease CDATA #REQUIRED>
    <!ELEMENT MessageType EMPTY>
    <!ATTLIST MessageType v CDATA #REQUIRED>
    <!ELEMENT MessageDateTime EMPTY>
    <!ATTLIST MessageDateTime v CDATA #REQUIRED>
    <!ELEMENT MessageDateTime EMPTY>
    <!ATTLIST MessageDateTime v CDATA #REQUIRED>
    <!ELEMENT SenderIdentification EMPTY>
    <!ATTLIST SenderIdentification v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT SenderRole EMPTY>
    <!ATTLIST SenderRole v CDATA #REQUIRED>
    <!--    See role meanings in implementation guide   -->
    <!ELEMENT ReceiverIdentification EMPTY>
    <!ATTLIST ReceiverIdentification v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT ReceiverRole EMPTY>
    <!ATTLIST ReceiverRole v CDATA #REQUIRED>
    <!--    See role meanings in implementation guide   -->
    <!ELEMENT ScheduleTimeInterval EMPTY>
    <!ATTLIST ScheduleTimeInterval v CDATA #REQUIRED>
    <!ELEMENT ConfirmedMessageIdentification EMPTY>
    <!ATTLIST ConfirmedMessageIdentification v CDATA #REQUIRED>
    <!ELEMENT ConfirmedMessageVersion EMPTY>
    <!ATTLIST ConfirmedMessageVersion v CDATA #REQUIRED>
    <!ELEMENT Reason (ReasonCode, ReasonText*)>
    <!ELEMENT ReasonCode EMPTY>
    <!ATTLIST ReasonCode v CDATA #REQUIRED>
    <!--    See reason code meanings in implementation guide  -->
    <!ELEMENT ReasonText EMPTY>
    <!ATTLIST ReasonText v CDATA #REQUIRED>
    <!ELEMENT ImposedTimeSeries (ImposedTimeSeriesIdentification, ImposedTimeSeriesVersion, BusinessType, Product,
ObjectAggregation, InArea?, OutArea?, MeteringPointIdentification?, InParty?, OutParty?, CapacityContractType?,
CapacityAgreementIdentification?, MeasurementUnit, Period, Reason*)>
    <!ELEMENT ImposedTimeSeriesIdentification EMPTY>
    <!ATTLIST ImposedTimeSeriesIdentification v CDATA #REQUIRED>
    <!ELEMENT ImposedTimeSeriesVersion EMPTY>
    <!ATTLIST ImposedTimeSeriesVersion v CDATA #REQUIRED>
    <!ELEMENT BusinessType EMPTY>
    <!ATTLIST BusinessType v CDATA #REQUIRED>
    <!ELEMENT Product EMPTY>
    <!ATTLIST Product v CDATA #REQUIRED>
    <!--    See product code meanings in implementation guide -->
    <!ELEMENT ObjectAggregation EMPTY>
    <!ATTLIST ObjectAggregation v CDATA #REQUIRED>
    <!ELEMENT InArea EMPTY>
    <!ATTLIST InArea v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT OutArea EMPTY>
    <!ATTLIST OutArea v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT MeteringPointIdentification EMPTY>
    <!ATTLIST MeteringPointIdentification v CDATA #REQUIRED
        subValue CDATA #IMPLIED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT InParty EMPTY>
    <!ATTLIST InParty v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT OutParty EMPTY>
    <!ATTLIST OutParty v CDATA #REQUIRED
        codingScheme CDATA #REQUIRED>
    <!ELEMENT CapacityContractType EMPTY>
    <!ATTLIST CapacityContractType v CDATA #REQUIRED>
```

```
    <!--    See contract type meanings in implementation guide -->
    <!ELEMENT CapacityAgreementIdentification EMPTY>
    <!ATTLIST CapacityAgreementIdentification v CDATA #REQUIRED>
    <!ELEMENT MeasurementUnit EMPTY>
    <!ATTLIST MeasurementUnit v CDATA #REQUIRED>
    <!--    See measurement unit meanings in implementation guide     -->
    <!ELEMENT TimeSeriesConfirmation (SendersTimeSeriesIdentification, SendersTimeSeriesVersion, BusinessType,
Product, ObjectAggregation, InArea?, OutArea?, MeteringPointIdentification?, InParty?, OutParty?, CapacityContractType?,
CapacityAgreementIdentification?, MeasurementUnit, Period?, Reason*)>
    <!ELEMENT SendersTimeSeriesIdentification EMPTY>
    <!ATTLIST SendersTimeSeriesIdentification v CDATA #REQUIRED>
    <!ELEMENT SendersTimeSeriesVersion EMPTY>
    <!ATTLIST SendersTimeSeriesVersion v CDATA #REQUIRED>
    <!ELEMENT Period (TimeInterval, Resolution, Interval+)>
    <!ELEMENT TimeInterval EMPTY>
    <!ATTLIST TimeInterval v CDATA #REQUIRED>
    <!ELEMENT Resolution EMPTY>
    <!ATTLIST Resolution v CDATA #REQUIRED>
    <!ELEMENT Interval (Pos, Qty)>
    <!ELEMENT Pos EMPTY>
    <!ATTLIST Pos v CDATA #REQUIRED>
    <!ELEMENT Qty EMPTY>
    <!ATTLIST Qty v CDATA #REQUIRED>
```

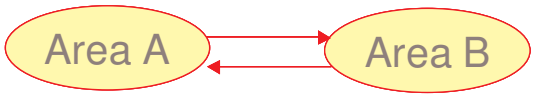
7.2.4 Confirmation report - Data instance

```
<?xml version="1.0" encoding="UTF-8"?>
<ConfirmationReport DtdVersion="2" DtdRelease="3">
        <MessageIdentification v="zerotro"/>
        <MessageType v="A08"/>
        <MessageDateTime v="2001-06-02T09:00:00Z"/>
        <SenderIdentification v="5790000432752" codingScheme="A10"/>
        <SenderRole v="A01"/>
        <ReceiverIdentification v="10X000000000RTEM" codingScheme="A01"/>
        <ReceiverRole v="A01"/>
        <ScheduleTimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
        <ConfirmedMessageIdentification v="1234"/>
        <ConfirmedMessageVersion v="1"/>
        <Domain v="12Y000002347651H "/>
        <Reason>
                <ReasonCode v="A07"/>
        </Reason>
        <TimeSeriesConfirmation>
                <SendersMessageIdentification v="1234"/>
                <SendersMessageVersion v="1"/>
                <SendersTimeSeriesIdentification v="TS0001"/>
                <SendersTimeSeriesVersion v="1"/>
                <BusinessType v="A03"/>
                <Product v="8716867000016"/>
                <ObjectAggregation v="A01"/>
                <InArea v="12Y000002347651H" codingScheme="A01"/>
                <OutArea v="12YRWENET------Q" codingScheme="A01"/>
                <InParty v="11X000000100741R" codingScheme="A01"/>
                <OutParty v="11X000000340533X" codingScheme="A01"/>
                <CapacityContractType v="A01"/>
                <CapacityAgreementIdentification v=”R567”>
                <MeasurementUnit v="MAW"/>
                <Period>
                        <TimeInterval v="2001-06-02T22:00Z/2001-06-02T23:00Z"/>
                        <Resolution v="PT15M"/>
                        <Interval>
                                <Pos v="1"/>
                                <Qty v="40"/>
                        </Interval>
                        <Interval>
                                <Pos v="2"/>
                                <Qty v="45"/>
                        </Interval>
                        <Interval>
                                <Pos v="3"/>
                                <Qty v="45"/>
                        </Interval>
                        <Interval>
```

```
                                        <Pos v="4"/>
                                        <Qty v="45"/>
                                </Interval>
                        <Reason>
                                <ReasonCode v="A26"/>
                        </Reason>
                </TimeSeriesConfirmation>
</ConfirmationReport>
```

8. ANNEX 1: EXAMPLE OF DIFFERENT TIME SERIES GRANULARITY.

Assume that two areas A and B have the available capacity rights as indicated below and that these rights have been allocated as indicated in the table. *Note: this is a simplified example and there are other attributes that participate in the identification of a time series.*



Total capacity rights:

Area A to Area B	600
Area B to Area A	400

Capacity agreement identification	In area	Out area	capacity trader	interconnection trade responsible	Transmission Capacity Rights
ID-LTC-01	Area-A	Area-B	CT-01	ITR-01	100
ID-LTC-02	Area-B	Area-A	CT-01	ITR-02	100
ID-LTC-03	Area-A	Area-B	CT-02	ITR-03	100
ID-LTC-04	Area-A	Area-B	CT-03	ITR-02	100
ID-LTC-05	Area-B	Area-A	CT-03	ITR-05	100
ID-LTC-06	Area-A	Area-B	CT-03	ITR-01	100
ID-LTC-07	Area-B	Area-A	CT-04	ITR-04	100
ID-LTC-08	Area-A	Area-B	CT-05	ITR-03	100
ID-LTC-09	Area-A	Area-B	CT-06	ITR-04	100
ID-LTC-10	Area-B	Area-A	CT-06	ITR-05	100

Note: the terms Capacity Trader and Interconnection Trade Responsible are roles that have been defined within the ETSO Capacity Allocation and Nomination process (ECAN). However as far as the System Operator to System Operator exchanges are concerned the Interconnection Trade Responsible (ITR) is the only party of interest since it is the party that nominates the capacity.

	A to B	B to A
ITR-01	200	
ITR-02	100	100
ITR-03	200	
ITR-04	100	100
ITR-05		200
Total	600	400

From a global point of view each of the Interconnection Trade Responsibles has the possibility of nominating the capacity as indicated in the table above.

There are three possibilities of nominating the capacity in question as indicated in the explanation provided in section 3.7. These forms of nomination are dependent on local market rules.

The tables below show how the same information is nominated depending on each of the cases in question.

CASE A: Nomination by capacity agreement identification

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-01	100	
2	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-06	100	
3	Area-B	Area-A	ITR-02	ITR-02	ID-LTC-02		100
4	Area-B	Area-A	ITR-05	ITR-05	ID-LTC-05		100
5	Area-A	Area-B	ITR-03	ITR-03	ID-LTC-03	100	
6	Area-A	Area-B	ITR-03	ITR-03	ID-LTC-08	100	
7	Area-A	Area-B	ITR-02	ITR-02	ID-LTC-04	100	
8	Area-A	Area-B	ITR-04	ITR-04	ID-LTC-09	100	
9	Area-B	Area-A	ITR-04	ITR-04	ID-LTC-07		100
10	Area-B	Area-A	ITR-05	ITR-05	ID-LTC-10		100
						600	400

CASE B: Nomination aggregated by party

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01		200	
2	Area-B	Area-A	ITR-02	ITR-02			100
3	Area-A	Area-B	ITR-02	ITR-02		100	
4	Area-A	Area-B	ITR-03	ITR-03		200	
5	Area-A	Area-B	ITR-04	ITR-04		100	
6	Area-B	Area-A	ITR-04	ITR-04			100
7	Area-B	Area-A	ITR-05	ITR-05			200
						600	**400**

CASE C: Aggregated and netted by party

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01		200	
2	Area-A	Area-B	ITR-02	ITR-02		0	
3	Area-A	Area-B	ITR-03	ITR-03		200	
4	Area-A	Area-B	ITR-04	ITR-04		0	
5	Area-B	Area-A	ITR-05	ITR-05			200
						400	200

When one examines what happens when matching occurs depending on each of the cases it can be seen that when matching takes place between markets which use the same nomination rule (i.e. Case A, B, or C) then matching is a relatively simple process and may be automated relatively easily.

The following examples show different case studies for the nominations of party "ITR-01" to demonstrate the complexities that are involved in nominations where each side uses a different nomination approach. (*note: the following examples use the same In and Out Parties in order to more explicitly demonstrate the matching problematic).*

8.1 Situation 1: Case A versus Case A matching

The first case demonstrates matching solving where both sides use the case A situation:

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-01	100	
2	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-06	100	
3	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-02		100
4	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-05		100
5	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-03	100	
6	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-08	100	
7	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-04	100	
8	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-09	100	
9	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-07		100
10	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-10		100
						600	400

Missing –the missing transaction is known

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-01	100	
2	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-06	100	
5	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-03	100	
6	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-08	100	
7	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-04	100	
8	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-09	100	
3	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-02		100
4	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-05		100
9	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-07		100
						600	300

8.2 Situation 2: Case A versus Case B matching

However, if matching has to take place between a case A situation and case B situation, after the case A situation has been aggregated, then some problems occur which are a handicap to matching. In general this will necessitate the involvement of the Participating System Operator if it is the party using the most detailed information. This is outlined in the example below.

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-01	100	
2	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-06	100	
3	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-02		100
4	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-05		100
5	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-03	100	
6	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-08	100	
7	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-04	100	
8	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-09	100	
9	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-07		100
10	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-10		100
						600	400

One of these missing
All others are correct

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01		600	
2	Area-B	Area-A	ITR-01	ITR-01			300
						600	300

8.3 Situation 3: Case A versus Case C matching

In the case where matching has to take place between a case A situation and a case C situation, after the case A situation has been aggregated, the problems become more severe and increase the matching problems. In general this will necessitate the involvement of the Participating System Operator if it is the party using the most detailed information. This is outlined in the example below.

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-01	100	
2	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-06	100	
3	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-02		100
4	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-05		100
5	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-03	100	
6	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-08	100	
7	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-04	100	
8	Area-A	Area-B	ITR-01	ITR-01	ID-LTC-09	100	
9	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-07		100
10	Area-B	Area-A	ITR-01	ITR-01	ID-LTC-10		100
						600	400

Find the error: 5 possibilities of error,
No transactions can be accepted

TS ID	In area	Out area	In party	Out party	Agreement id	Quantity	
1	Area-A	Area-B	ITR-01	ITR-01		100	
						100	0

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9. ANNEX 2: AGGREGATION RULES

9.1 Case A aggregation for case B

1. Agree on the attributes that are to be found in the Case B Time Series header information.
2. Sum all Time series which have the same values for each of the agreed attributes, ignoring all undefined attributes

9.2 Case A aggregation for case C and Case B aggregation for case C

1. Agree on the attributes that are to be found in the Case C Time Series header information.
2. Sum all Time series which have the same values for each of the agreed attributes, ignoring all undefined attributes
3. Where there are Time Series with the same attributes but in different directions subtract one from the other ensuring that one side has a zero value.

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10. ANNEX 3: MATCHING RULE CHECKLIST

The matching rule checklist is provided to give an indication of what may be done to automatically correct a matching error.

In general there are only two cases where a mismatch can occur:

a. The schedules have different values

b. A schedule is missing

The table below provides an indication of what rule can be applied in the case of a mismatch:

	Rule	Examples
1	Lower value principle	In the case of mismatch the lower value is taken into account.
2	Reducing values to Zeros	In case of mismatch the values on both sides of the border are set to zeros
3	Values from only one SO are valid	An agreement is made that the values of coming from one of the System Operators is considered valid. e.g. VE-T/PSE-O border, (long term schedule matching)
4	Import (in) values are valid	An agreement is made that the values for the In Area are considered valid. e.g. German market
5	Export (out) values are valid	An agreement is made that the values for the Out Area are considered valid.

As a general principle the following basic rules may be applied:

1. No Time series should be imposed. The values of a time series with no counterparty nomination should be set to zero.

2. In case of a mismatch:

2.1 Change only the values of those intervals whose values do not match and

2.1.1 Reduce the higher value to the lower value.

2.1.2 If the compared value is created through netting a set of time series that were not netted, propagate the changed value to the non aggregated time series by reducing values of time series with the same direction.

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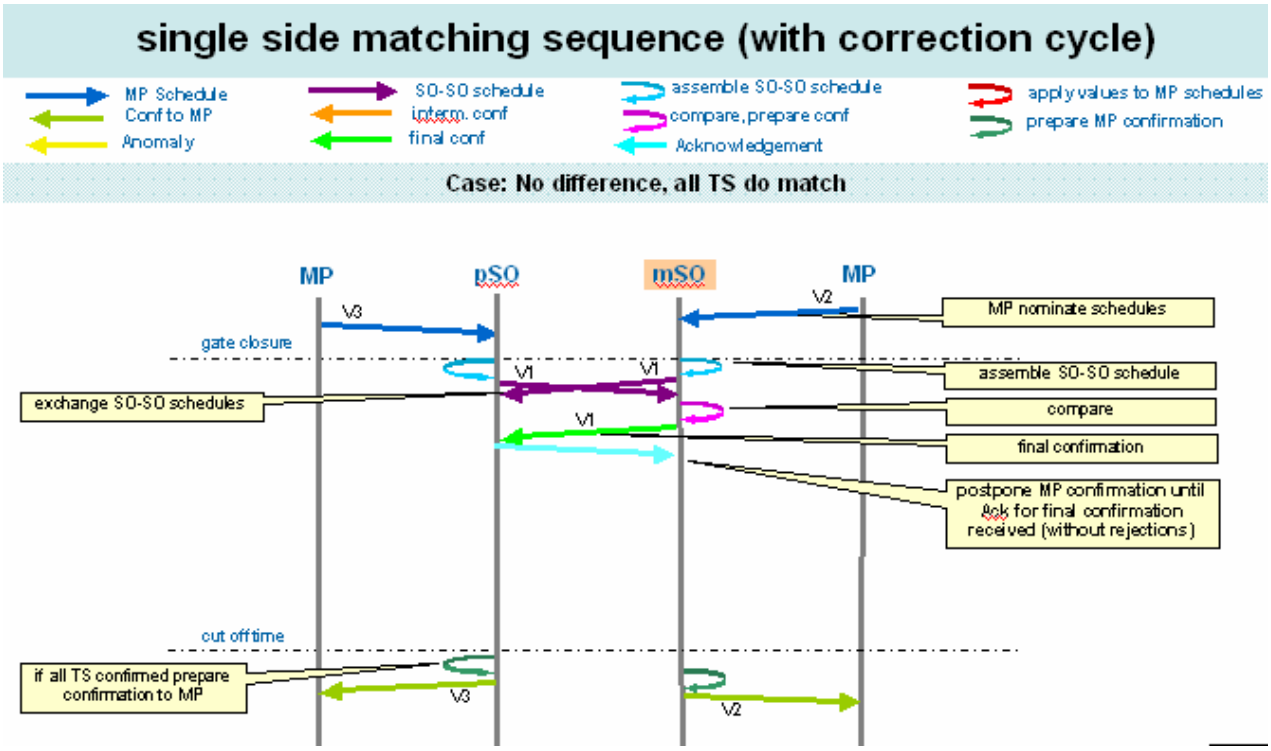
11. ANNEX 5: PROCESS FLOW SCENARIO EXAMPLES



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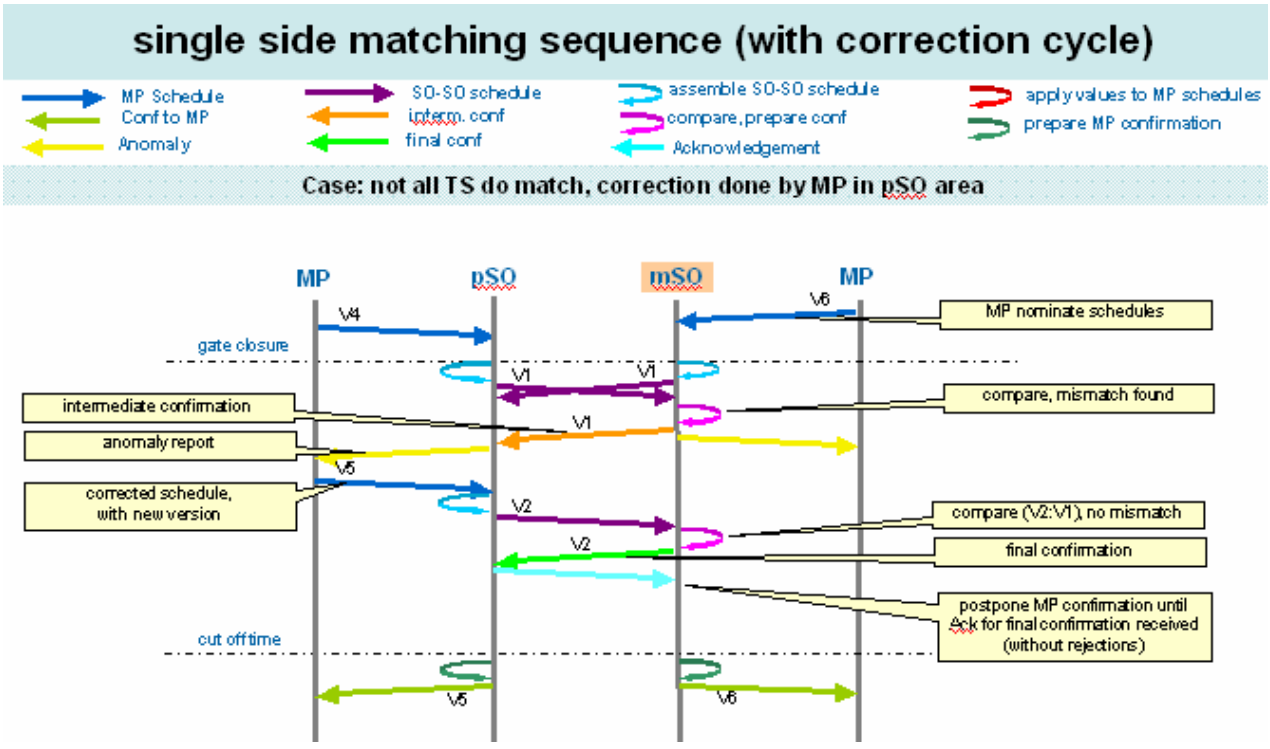

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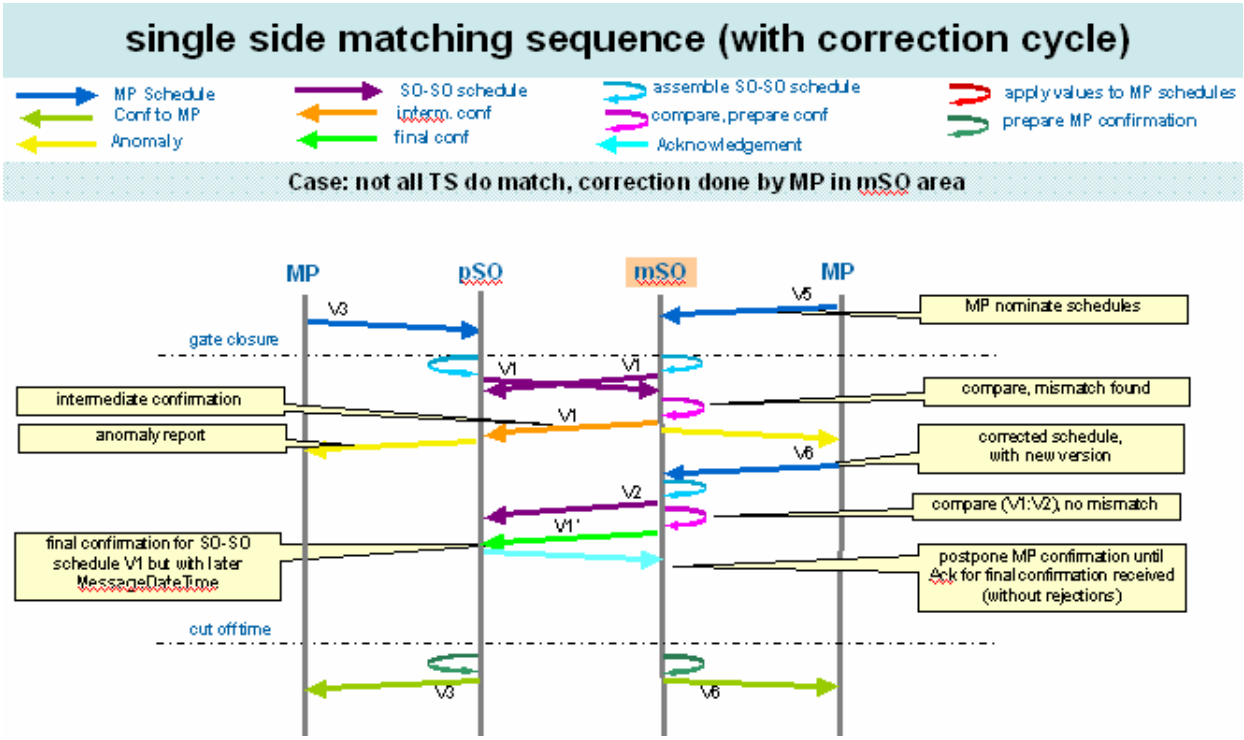
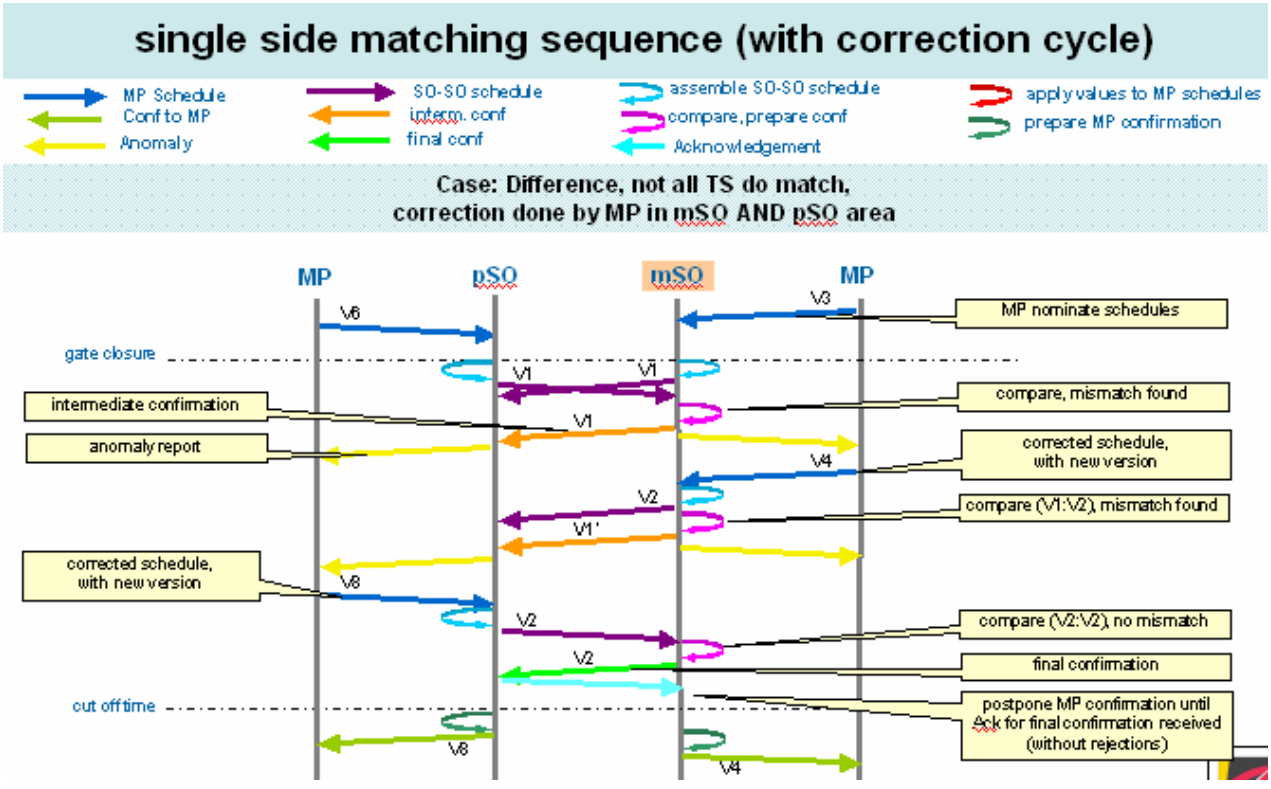
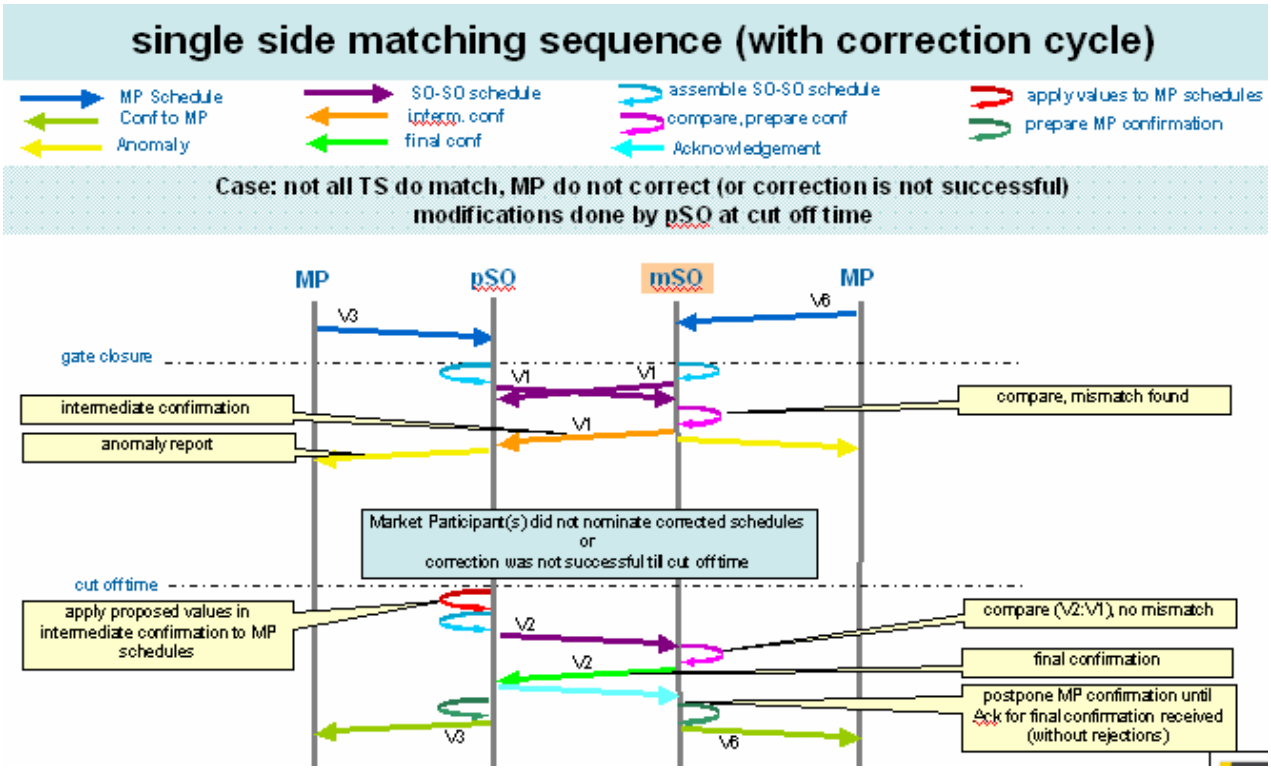

single side matching sequence (with correction cycle)
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, correction done by MP in mSO area
MP
pSO
mSO
MP
V3
V5
MP nominate schedules
gate closure
V1
V1
intermediate confirmation
compare, mismatch found
V1
anomaly report
corrected schedule, with new version
V6
V2
compare (V1:V2), no mismatch
V1'
final confirmation for SO-SO schedule V1 but with later MessageDateTime
postpone MP confirmation until Ack for final confirmation received (without rejections)
cut off time
V3
V6

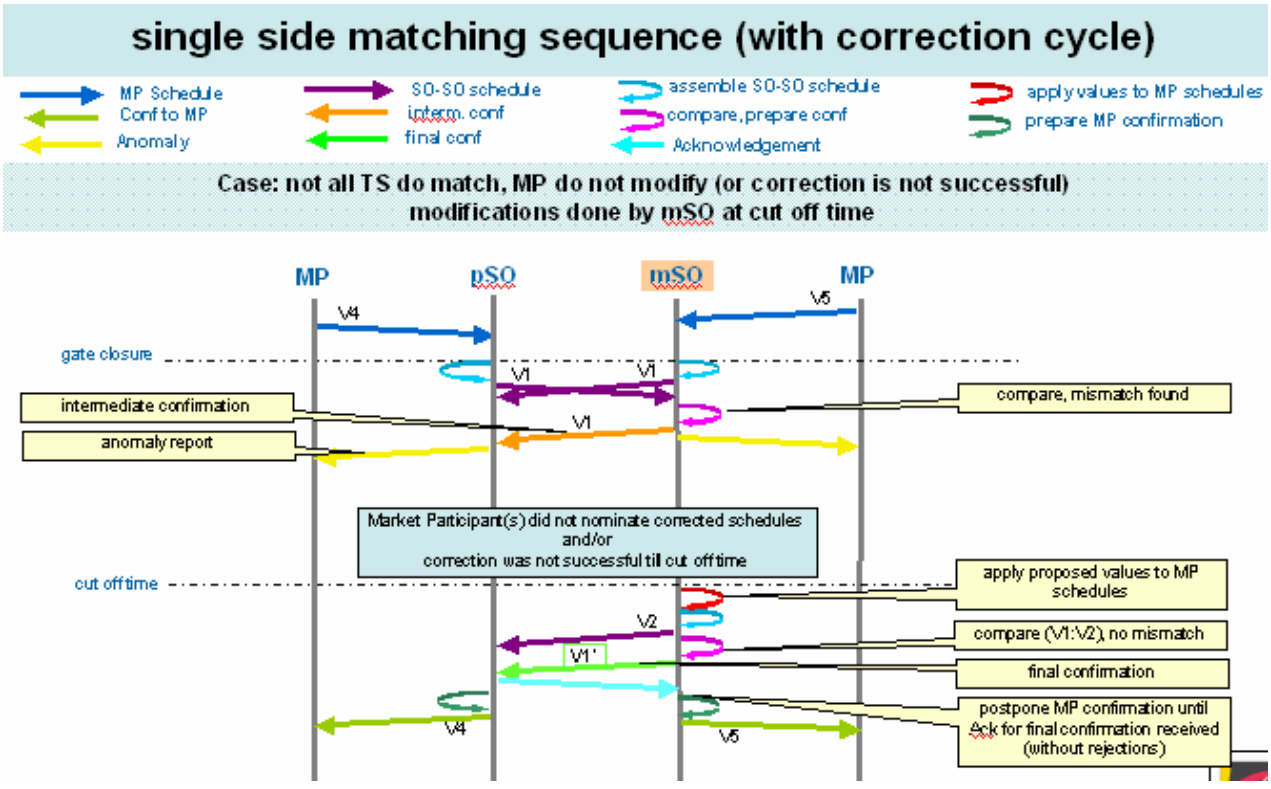
1876


single side matching sequence (with correction cycle)
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: Difference, not all TS do match,
correction done by MP in mSO AND pSO area
MP
pSO
mSO
MP
V6
V3
MP nominate schedules
gate closure
V1
V1
intermediate confirmation
compare, mismatch found
V1
anomaly report
corrected schedule, with new version
V4
V2
compare (V1:V2), mismatch found
V1'
corrected schedule, with new version
V8
V2
compare (V2:V2), no mismatch
V2
final confirmation
cut off time
postpone MP confirmation until Ack for final confirmation received (without rejections)
V8
V4

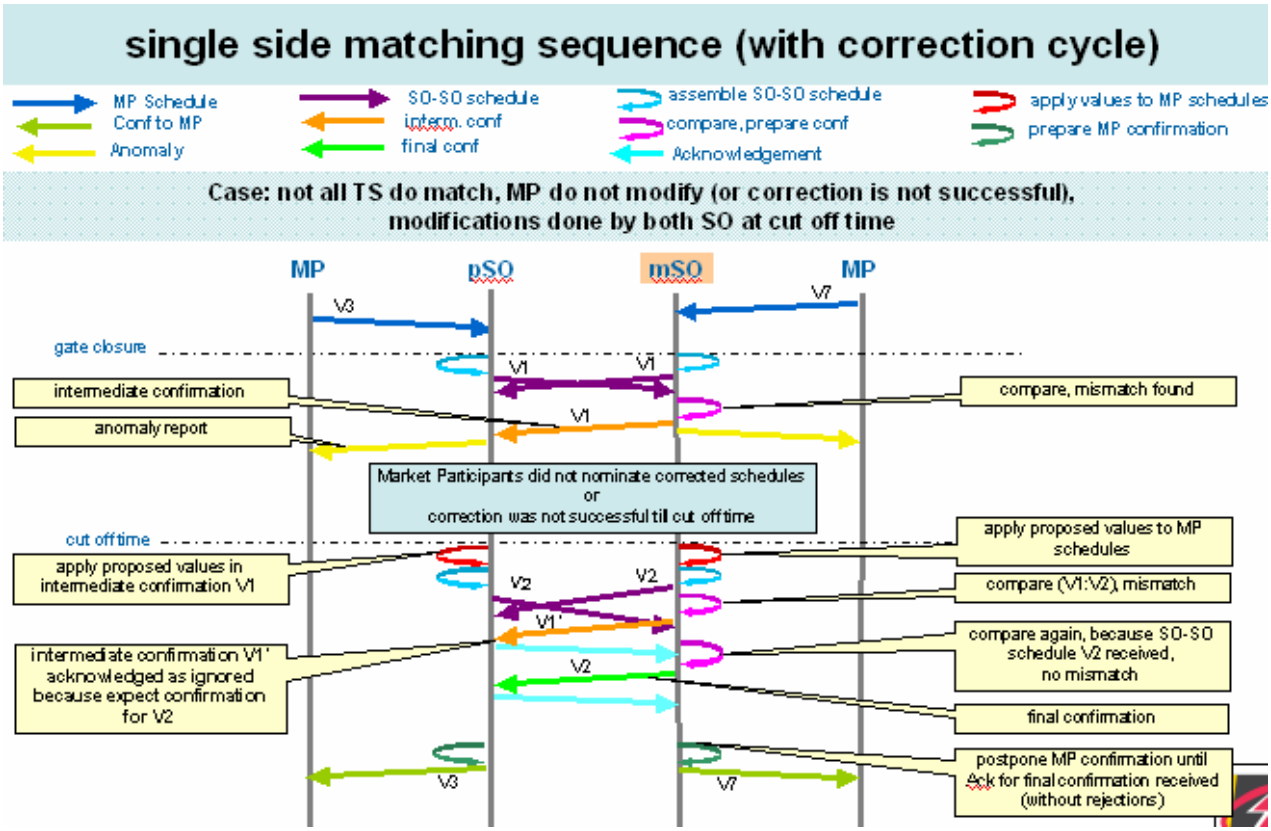
1877


single side matching sequence (with correction cycle)
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, MP do not correct (or correction is not successful)
modifications done by pSO at cut off time
MP
pSO
mSO
MP
V3
V6
gate closure
V1
V1
intermediate confirmation
compare, mismatch found
V1
anomaly report
Market Participant(s) did not nominate corrected schedules
or
correction was not successful till cut off time
cut off time
apply proposed values in intermediate confirmation to MP schedules
compare (V2:V1), no mismatch
V2
final confirmation
V2
postpone MP confirmation until Ack for final confirmation received (without rejections)
V3
V6

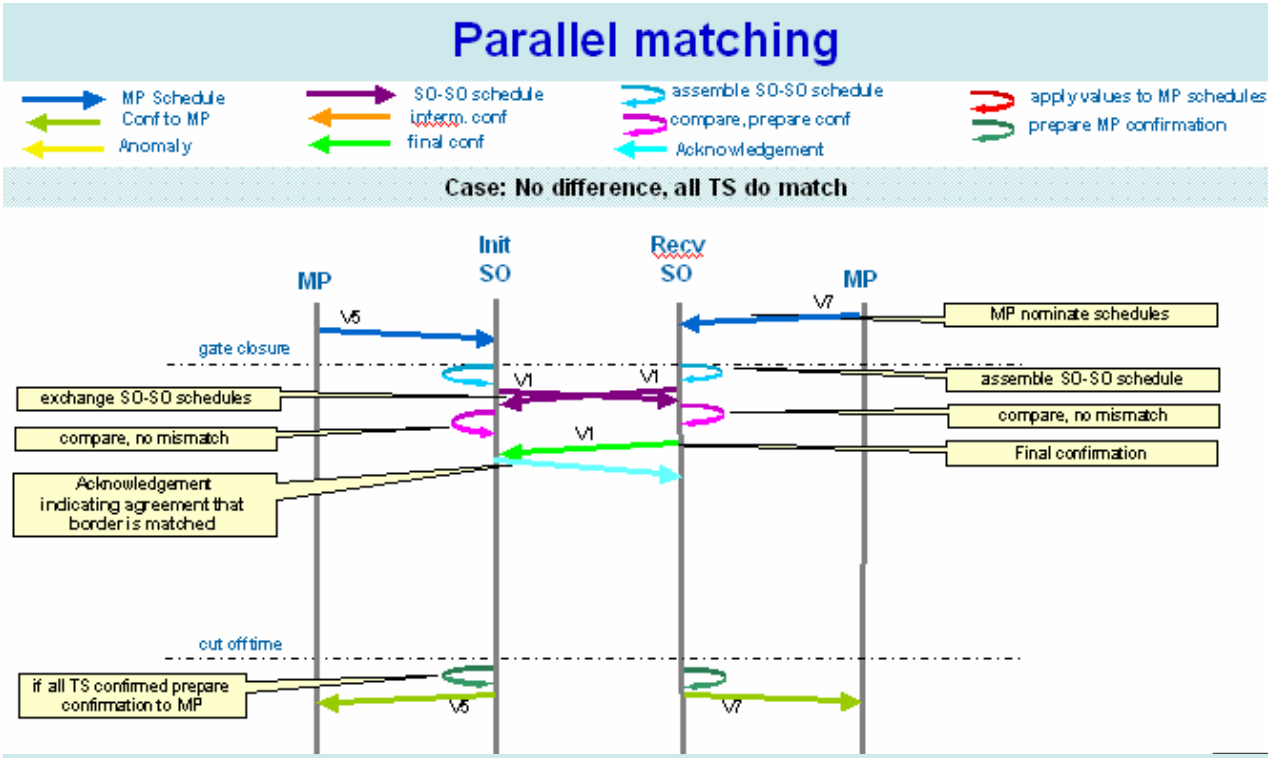
1878


single side matching sequence (with correction cycle)
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, MP do not modify (or correction is not successful)
modifications done by mSO at cut off time
MP
pSO
mSO
MP
V4
V5
gate closure
V1
V1
intermediate confirmation
compare, mismatch found
V1
anomaly report
Market Participant(s) did not nominate corrected schedules
and/or
correction was not successful till cut off time
cut off time
apply proposed values to MP schedules
V2
compare (V1:V2), no mismatch
V1'
final confirmation
postpone MP confirmation until Ack for final confirmation received (without rejections)
V4
V5

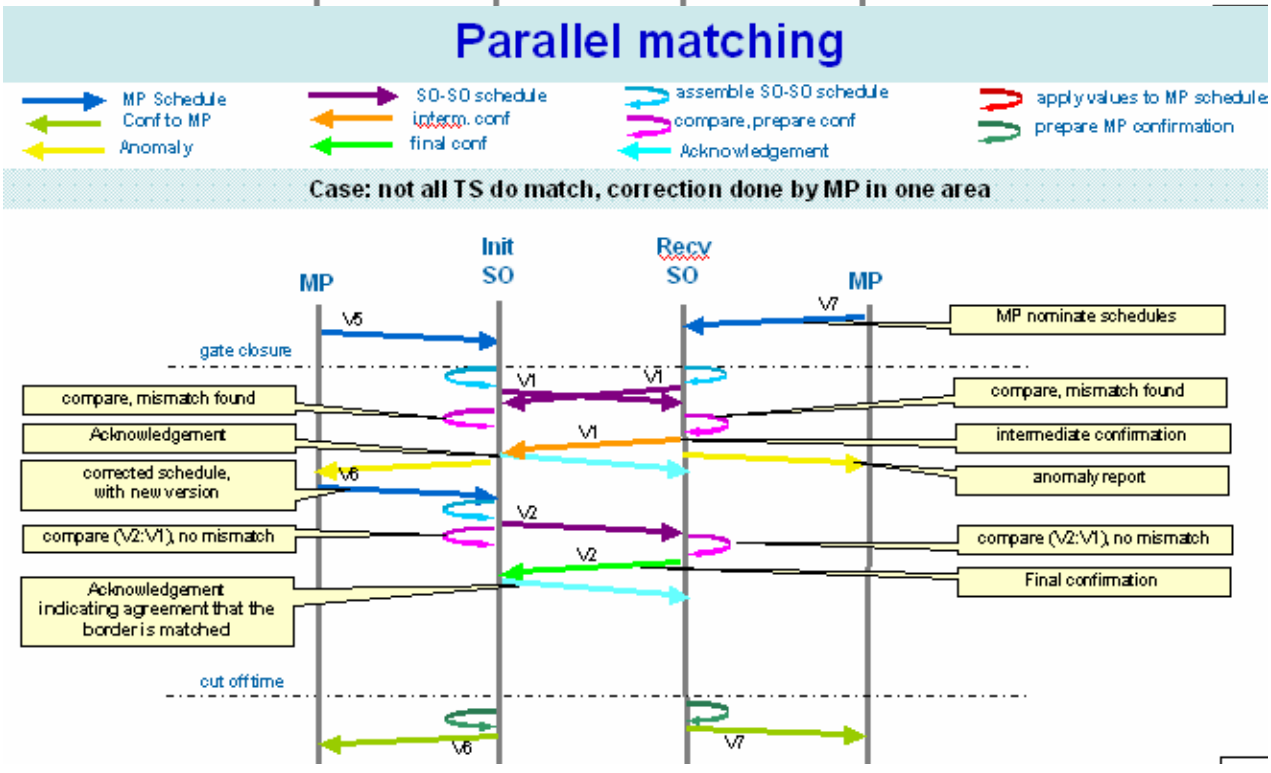
1879


single side matching sequence (with correction cycle)
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, MP do not modify (or correction is not successful), modifications done by both SO at cut off time
MP
pSO
mSO
MP
V3
V7
gate closure
V1
V1'
intermediate confirmation
compare, mismatch found
V1
anomaly report
Market Participants did not nominate corrected schedules or correction was not successful til cut off time
cut off time
apply proposed values to MP schedules
apply proposed values in intermediate confirmation V1
V2
V2
compare (V1:V2), mismatch
V1'
intermediate confirmation V1' acknowledged as ignored because expect confirmation for V2
compare again, because SO-SO schedule V2 received, no mismatch
V2
final confirmation
postpone MP confirmation until Ack for final confirmation received (without rejections)
V3
V7

1880

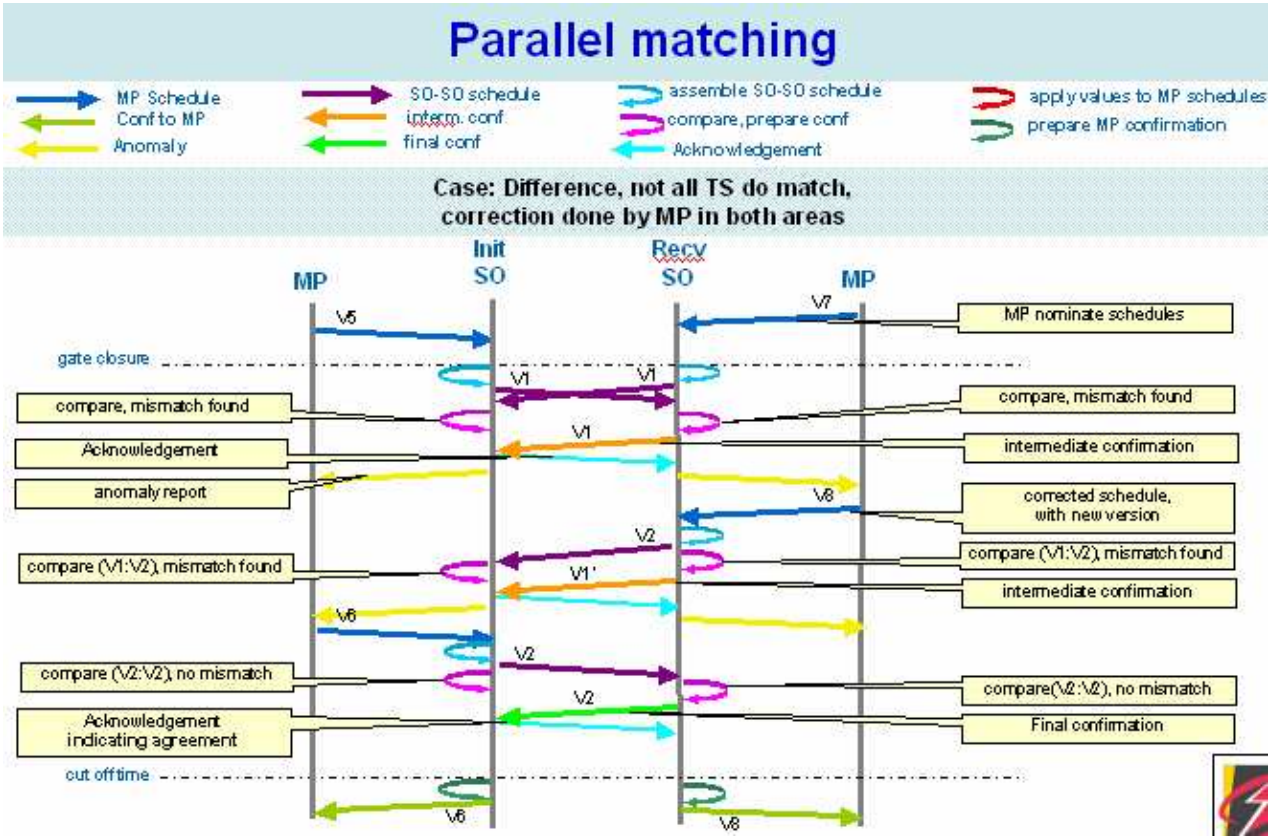

Parallel matching
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: No difference, all TS do match
Init SO
Recv SO
MP
MP
V5
V7
MP nominate schedules
gate closure
V1
V1
assemble SO-SO schedule
exchange SO-SO schedules
compare, no mismatch
compare, no mismatch
V1
Final confirmation
Acknowledgement indicating agreement that border is matched
cut off time
if all TS confirmed prepare confirmation to MP
V6
V7

1881

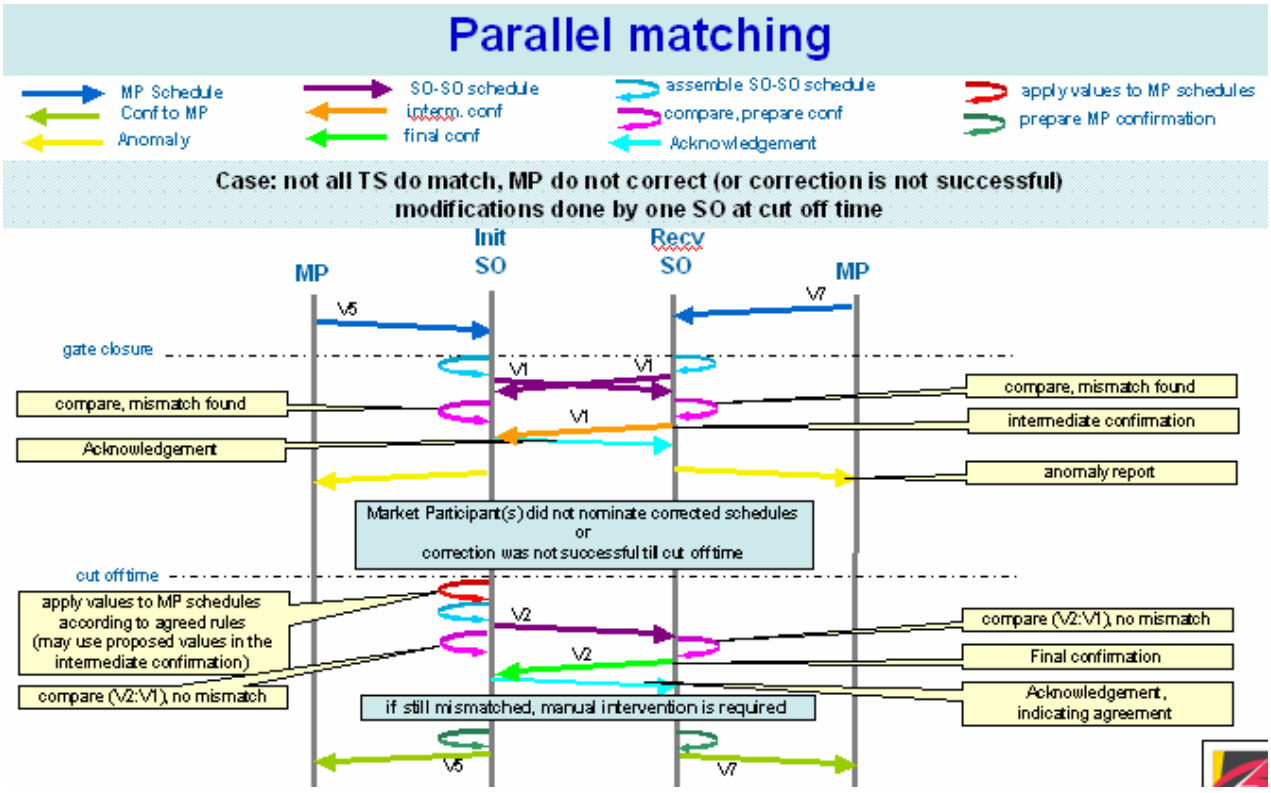

Parallel matching
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, correction done by MP in one area
Init SO
Recv SO
MP
MP
V5
V7
MP nominate schedules
gate closure
V1
V1
compare, mismatch found
compare, mismatch found
Acknowledgement
V1
intermediate confirmation
corrected schedule, with new version
V6
anomaly report
V2
compare (V2:V1), no mismatch
compare (V2:V1), no mismatch
V2
Final confirmation
Acknowledgement indicating agreement that the border is matched
cut off time
V6
V7

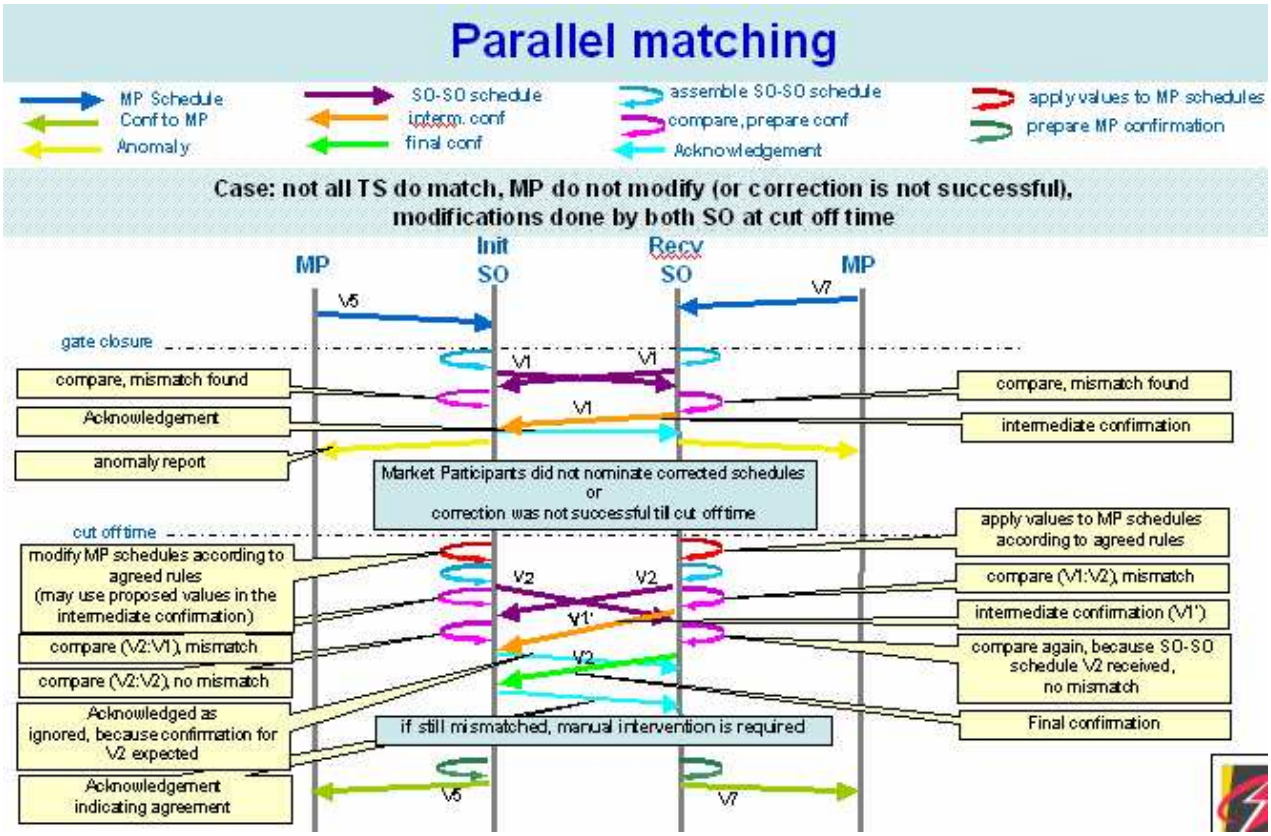
1882

1883


Parallel matching
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: Difference, not all TS do match,
correction done by MP in both areas
Init SO
Recv SO
MP
MP
V5
V7
MP nominate schedules
gate closure
V1
V1
compare, mismatch found
compare, mismatch found
V1
Acknowledgement
intermediate confirmation
anomaly report
V8
corrected schedule,
with new version
V2
compare (V1:V2), mismatch found
compare (V1:V2), mismatch found
V1'
intermediate confirmation
V6
V2
compare (V2:V2), no mismatch
compare(V2:V2), no mismatch
V2
Acknowledgement
indicating agreement
Final confirmation
cut off time
V6
V8

1884


Parallel matching
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, MP do not correct (or correction is not successful)
modifications done by one SO at cut off time
Init SO
Recv SO
MP
MP
V5
V7
gate closure
V1
V1
compare, mismatch found
compare, mismatch found
V1
Acknowledgement
intermediate confirmation
anomaly report
Market Participant(s) did not nominate corrected schedules
or
correction was not successful till cut off time
cut off time
apply values to MP schedules
according to agreed rules
(may use proposed values in the
intermediate confirmation)
V2
compare (V2:V1), no mismatch
V2
Final confirmation
compare (V2:V1), no mismatch
Acknowledgement,
indicating agreement
if still mismatched, manual intervention is required
V5
V7


Parallel matching
MP Schedule
Conf to MP
Anomaly
SO-SO schedule
interm. conf
final conf
assemble SO-SO schedule
compare, prepare conf
Acknowledgement
apply values to MP schedules
prepare MP confirmation
Case: not all TS do match, MP do not modify (or correction is not successful), modifications done by both SO at cut off time
MP
Init SO
Recv SO
MP
V5
V7
gate closure
V1
V1
compare, mismatch found
compare, mismatch found
Acknowledgement
V1
intermediate confirmation
anomaly report
Market Participants did not nominate corrected schedules or correction was not successful till cut offtime
cut offtime
apply values to MP schedules according to agreed rules
modify MP schedules according to agreed rules (may use proposed values in the intermediate confirmation)
V2
V2
compare (V1:V2), mismatch
intermediate confirmation (V1')
V1'
compare (V2:V1), mismatch
V2
compare again, because SO-SO schedule V2 received, no mismatch
compare (V2:V2), no mismatch
Acknowledged as ignored, because confirmation for V2 expected
if still mismatched, manual intervention is required
Final confirmation
Acknowledgement indicating agreement
V5
V7

1885