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New Approach vs Standards and Regulation: how it all works between the EU and an EU Member State (UK example)

Robert Jeanjean
Former Chairman of CENELEC
TC 99 and TC 17A/C
Brussels, 30th of January 2013

www.inogate.org



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- Harmonisation and reference to standards
- Main CENELEC Guides
- Exemples:
 - TC11 , TC 99
 - TC110X
- List of directives
- Agency for cooperation of energy regulators
- Interconnection rules between HV network
ENTSO and UCTE





Harmonization and reference to standards

1. Introduction

1.1 As a mean **to eliminate existing trade barriers** between the member countries, insofar as they emanate **from discrepancies** in national regulations and standards, communities of states can refer **to standards in their common directives**, preferably to such standards which are harmonized between the member states.

Note: In case of the European Community, EC, the laying down of an aim by directives is assured according to Article 189, Paragraph 3 of the Treaty of Rome 1.





Harmonization and reference to standards

2. Total harmonization

2.1 Total harmonization means that an existing national regulation has **the same content** as a directive agreed upon within a community of states.

2.2 If and when total harmonization is reached, earlier existing technical trade barriers are removed, and the conditions of competition are the same for all member states. In individual cases, disadvantages at an initial stage may occur to those manufacturing, service etc, in the form of expenses for changes of production or service facilities.





Harmonization and reference to standards

3. Optional harmonisation

3.1 Optional harmonisation means that in the countries there may exist - in parallel to a national regulation in concordance with a directive within a community of states - a **national regulation having a technical content less rigorous than the directive.**

In case of optional harmonisation two different systems of technical specifications for a product may coexist in one or more member states.





Harmonization and reference to standards

3. Optional harmonisation

3.2 Optional harmonisation gives a certain **freedom of choice**, but does not lead to one single market.

In a country having national technical specifications differing from those harmonised there may exist **two categories of products**, the harmonised and the national.





Harmonization and reference to standards

4. Choice between total and optional harmonisation

For selecting the possibilities for harmonisation, i.e. the total and the optional harmonisation, the following should be considered:

- 4.1 The total harmonisation should be aimed at in as many cases as possible in order to reach the same conditions in all member countries, so that practically one common market is achieved.





Harmonization and reference to standards



4.2

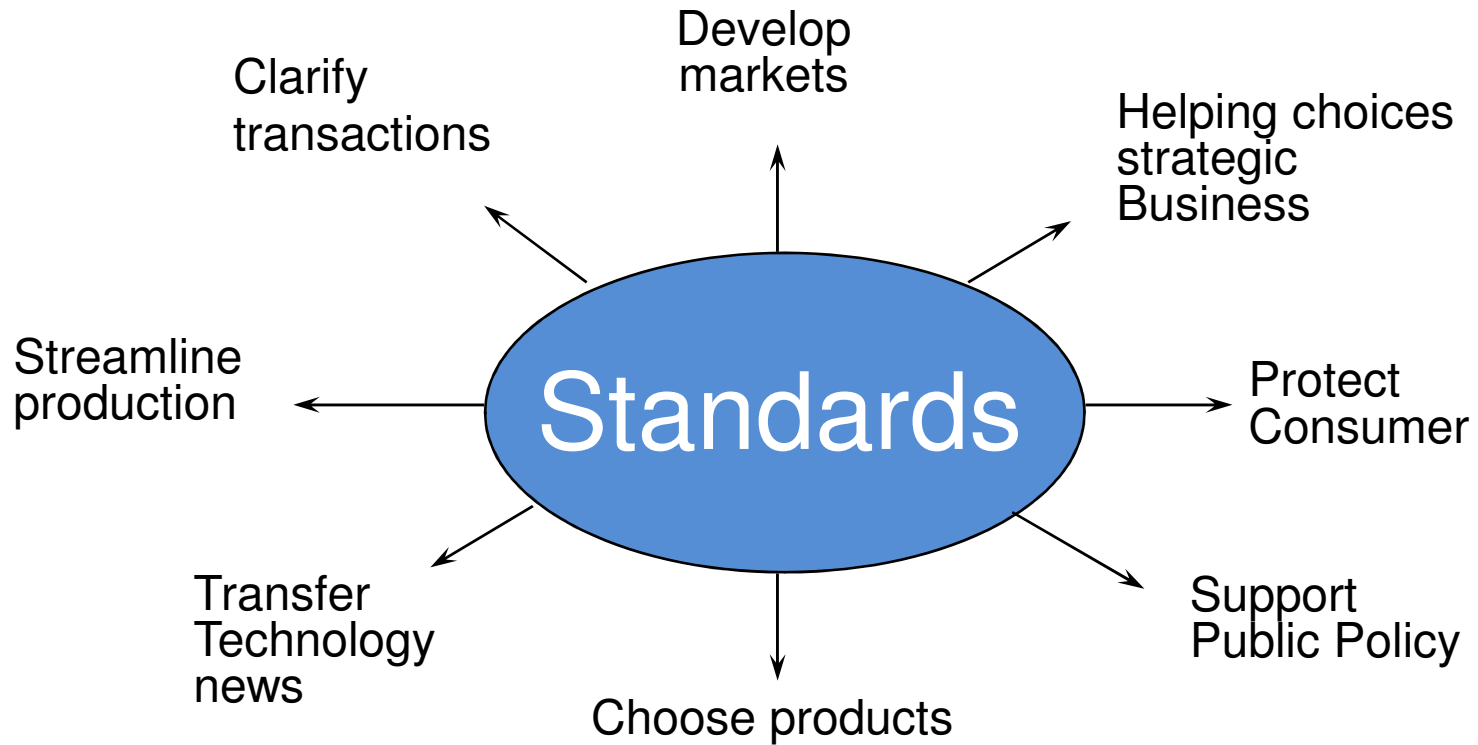
The optional harmonisation is recommended in cases where a quick amelioration of the exchange of goods between the member countries has to be achieved

Total harmonisation would require a very long transitional period. At least in those cases where the exchange of goods between some of the member countries is essential a later total harmonisation should be aimed at.





The Role of Standards





Standards a "concept" among others

Regulation
(mandatory)

standardisation
(consensus)

Certification
(proof)



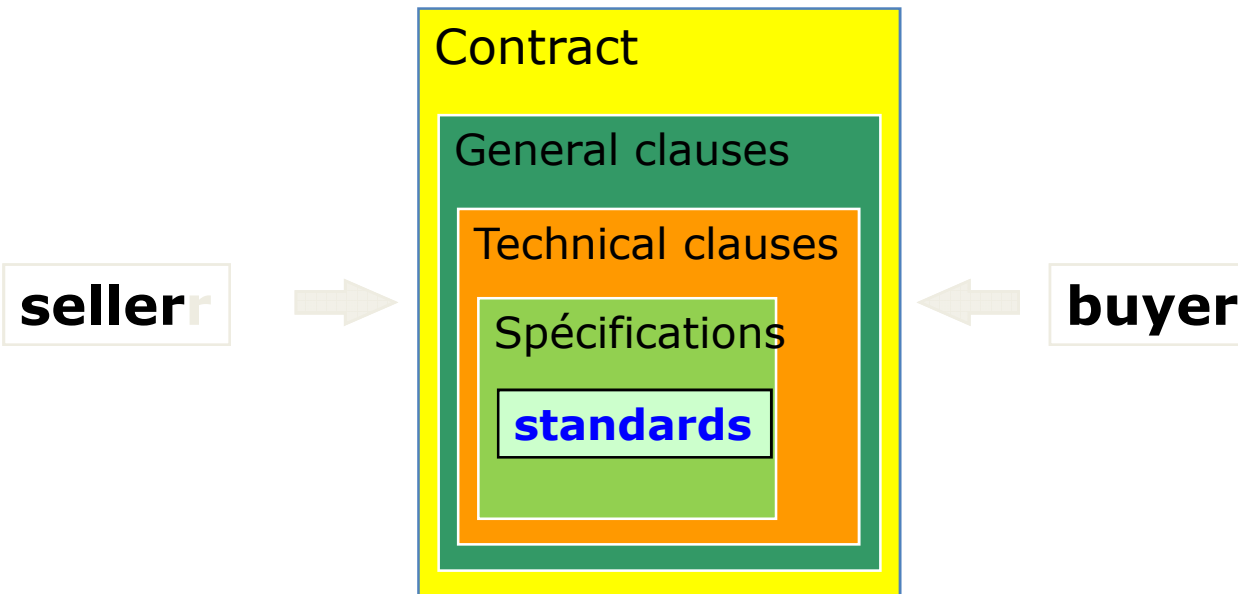
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The standard is an element of contract ...

i.e, between a buyer and a seller ...

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Main CENELEC Guides

- Guide 00: Documentation
- Guide 01: Consumer interest
- Guide 02: Safety Standards
- Guide 03: Interaction regulation-standards
- Guide 05: Trade union and standard
- Guide 06: Marking of rated voltage





Main CENELEC Guides

- Guide 08: Villamoura
- Guide 09: A deviation
- Guide 12: Affiliation
- Guide 13: Partner standard body
- Guide 15: New approach
- Guide 31: Technical liaison



Guide 00: Documentation

Internal Regulations

Part 1:

- Organisation and Administration

Part 2:

- Common Rules for Standardization Work - 2008

ANNEX:

- Amendment to Internal Regulations Part 2

Part 3:

- Rules for the Structure and Drafting of European Standards

Part 4:

- Certification - 2006





Guide 02:Safety standard

2.1 The object of this document is to give **guidance for the preparation of safety standards** for electrical products. Its content is in accordance with the relevant provisions of the "Directive on the harmonization of the laws of member states relating to electrical equipment designed for use within certain voltage limits", of 19th February 1973.





Guide 02: Safety standard

- 2.3 It is for **the individual standards to specify the safety requirements** for the different kinds of electrical products in accordance with the guidance and to indicate the pertinent tests.
- 2.4 This guidance is intended to be **used by all technical bodies** of CENELEC concerned with the preparation of standards for safety in the design and construction of electrical equipment.





Guide 03: Interaction regulation - standards

This CENELEC Guide is intended **to clarify the relations between authority regulations and standards**, a subject which gains increasing importance not only at the national level but also at regional level. At both levels governmental and standards organizations work together closely on harmonization matters.





Guide 08: Villamoura

1 General

- 1.1 The Villamoura procedure intends to **promote collaboration between National Committees at European level** by decentralizing the earliest stages of work. It is to be seen in the context of Directive 98/34/EC “Provision of information in the field of technical standards and regulations”. Under the Villamoura procedure the National Committees of CENELEC are requested to notify their intentions





Guide 08: Villamoura

- a) **to start national work** on a new subject

- b) **to revise one of their national standards** not already covered by standstill in a detailed manner so that all members can understand the nature of the proposed work and, where relevant, communicate their interest in active participation.





Guide 31: Technical liaison

- A **Technical Liaison Partner** is either a European organization or an international organization with a European branch that, through its recognized expertise and the development of standards or similar technical documents, **can provide inputs to the work of a technical body.**
- These contributions can take the form of technical documents or contributions to the work programme of this technical body.



Overhead electrical lines exceeding AC 45 kV

Structure

- EN 50341-1 Part 1: General requirement:
- EN 50341-2 Part 2: Index of National Normative Aspects
- EN 50341-3-** Part 3: NNA

This standard specifies the general requirements that shall be met for the design and construction of new overhead lines to ensure that the line is suitable for its purpose with regard to safety of persons, maintenance, operation and environmental considerations.



Part 1: General requirements - Common specifications

This part, also referred to as the Main Body, includes clauses common to all countries. These clauses have been prepared by Working Groups and approved by CLC/TC 11.

Part 2: Index of National Normative Aspects

This index gives the list of all the National Normative Aspects (NNAs) - see signification and contents of NNAs hereafter under .Part 3: National Normative Aspects..

Part 3: National Normative Aspects

The National Normative Aspects (NNAs) reflect national practices. They generally include A-deviations, special national conditions and national complements.

A-deviations:

A-deviations are required by existing national laws or regulations, which cannot be altered at the time of preparation of the standard.

Reference is made to CENELEC Internal Regulations Part 2, definition 3.1.9.

Special national conditions (snc):

Special national conditions are national characteristics or practices that cannot be changed even over a long period, e.g. those due to climatic conditions, earth resistivity, etc.



EN 50341 - 2



- Country Origin and Code
- AT Austrian National Committee EN 50341-3-1
- BE Belgian National Committee EN 50341-3-2
- CH Swiss National Committee EN 50341-3-3
- DE German National Committee EN 50341-3-4
- DK Danish National Committee EN 50341-3-5



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Power installations exceeding 1 kV a.c

IEC 61936-1 Ed. 2.0. Part 1: Common rules

By

Dr. Robert Jeanjean





IEC 61936-1 Ed. 2.0. part 1



- **1 Scope**
- **2 Normative references.**
- **3 Definitions**
- **4 Fundamental requirements**
- **5 Insulation**
- **6 Equipment**
- **7 Installations**
- **8 Safety measures**
- **9 Protection, control and auxiliary systems**





A - Deviation for GREECE

In case of public MV/LV distribution substations, where a protective multiple earthing system is applied, **the MV and LV neutral earthing systems can be connected when the combined earthing resistance does not exceed 1 ohm.** Combined earthing resistance up to 2 ohms can be accepted in case of transformers mounted on wooden poles, when a short-circuit of MV to LV before the MV protective fuses is impossible to happen.





CENELEC Technical Committee 111X

Environment



CLC TC 111X Scope

- 1- **To deal with environmental aspects** for electrical and electronic products and systems.
- 2- To promote activities in CENELEC relevant **to reducing detrimental impacts of electrotechnical activities/products/systems on the natural environment.** (In this context “reducing” means a process of continual environmental improvement aimed towards an optimum balance with social, economic, safety and performance requirements.)
- 3- To enhance CENELEC.s environmental links with the European legal framework (notably the European Commission).



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CLC TC 111X Scope

- 4- **To prepare the necessary standards framework** and in co-operation with other CENELEC Technical Bodies co-ordinate the development of, or when necessary produce, the needed standardization deliverables. Product TCs remain autonomous in dealing with environmental aspects relevant to the products included in their scope.
- 5- **To assist product committees** in the elaboration of environmental requirements of product standards in order to foster common technical approaches and solutions for similar problems and thus promote consistency in CENELEC standards.



CLC TC 111X Scope

6- To cooperate with recognized standardization bodies and other relevant organizations for matters of common environmental interest.

7- To communicate with and to give advice to CENELEC BT and technical committees on questions related to work on environmental issues.

EMC and EMF aspects are excluded, but relevant developments will be noted.





List of directives

Directive 2008/1/EC of the European Parliament and of the Council of January 15, 2008 concerning integrated pollution prevention and control

Council Directive 92/43/EEC of May 21, 1992 on the conservation of natural habitats and of wild fauna and flora

Urban Waste Water Directive (Council Directive 91/271/EEC of May 21, 1991 concerning urban waste water collection and treatment)

Electronic communication-related:

- Access and interconnection Directive 2002/19/EC
- "Authorisation" Directive 2002/20/EC
- "Framework" Directive 2002/21/EC
- **Universal service and user's rights Directive 2002/22/EC**





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List of directives

A **directive** is a [legislative act](#) of the [European Union](#),^[1] which requires [member states](#) to achieve a particular result without dictating the means of achieving that result. It can be distinguished from [regulations](#) which are self-executing and do not require any implementing measures.

Directives normally leave member states with a certain amount of leeway as to the exact rules to be adopted. Directives can be adopted by means of a variety of [legislative procedures](#) depending on their subject matter



List of directives

- Directive on Privacy and Electronic Communications
- **Construction products Directive**
- Dangerous Preparations Directive (1999/45/EC in force from July 30, 2002)
- Electromagnetic compatibility Directive ("EMC directive")
- General product safety Directive
- **Low voltage Directive**
- Machinery Directive
- Noise emission in the environment by equipment for use outdoors Directive
- Pressure Equipment Directive
- Product liability Directive
- **Simple pressure vessel Directive**
- **Waste Electrical and Electronic Equipment Directive ("WEEE directive")**



Sectors Harmonized in Line with the New Approach

- **Pressure equipment**
 - Pressure equipment
 - Road safety: transportable pressure equipment
 - Simple pressure vessels
- **Electrical and electronic equipment and gas appliances**
 - Household appliances: energy consumption labelling
 - Domestic refrigeration appliances: energy efficiency
 - Hot-water boilers
 - Energy efficiency: energy efficiency requirements for ballasts for fluorescent lighting
 - Electromagnetic compatibility of electrical and electronic apparatus





Sectors Harmonized in Line with the New Approach

- **Information and telecommunication**
 - Standardization: information technology and telecommunications
 - Radio and telecommunications terminal equipment
 - Non-automatic weighing instruments
 - Measuring instruments
- **Materials used outdoors**
 - Noise emission by equipment used outdoors



Agency for the Cooperation of Energy Regulators



The Agency for the Cooperation of Energy Regulators was created with the aim of **assisting the authorities regulating energy markets** to exercise at Community level the regulatory tasks performed in the Member States and, where necessary, to coordinate their actions.





Agency for the Cooperation of Energy Regulators



SUMMARY

- This Regulation establishes the Agency for the Cooperation of Energy Regulators with the aim of exercising at Community level the tasks performed by the Member States' regulatory authorities.
- **The Agency** for the Cooperation of Energy Regulators **can make decisions regarding cross-border** infrastructure, including derogations from certain provisions in the applicable regulations, community body with legal personality.
- It shall issue opinions on all questions related to the field of energy regulators. It shall participate in the **creation of network codes** in the fields of electricity.





Agency for the Cooperation of Energy Regulators



Tasks concerning the cooperation of transmission system operators

The Agency is responsible for issuing an opinion on the draft statutes, the list of members and **the draft rules of procedure of the ENTSO** (European Network of Transmission System Operators) for electricity and gas, and for monitoring the execution of the tasks. The Agency shall play an important role in drafting the framework guidelines which the network codes must comply with. In addition, the Agency shall **monitor regional cooperation between transmission system operators** in the electricity and gas sectors, and the execution of tasks by the ENTSO for electricity and gas.





Agency for the Cooperation of Energy Regulators



Tasks concerning national regulatory authorities

The Agency is **responsible for adopting**, under certain conditions, **individual decisions on technical issues**. It may make recommendations with the aim of promoting the exchange of good practice between regulatory authorities and market players. It shall also **provide a framework for cooperation** between the national regulatory authorities.



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Agency for the Cooperation of Energy Regulators



Tasks concerning national regulatory authorities:

- The Agency may issue an opinion on whether a decision taken by a regulatory authority complies with the applicable Community rules. If its opinion is not followed, the Agency shall inform the European Commission and the Member State concerned.
- The Agency is **also responsible** for determining, under certain conditions, **the terms and conditions for access to and operational security** of electricity and gas infrastructure, which connects at least two Member States.





Agency for the Cooperation of Energy Regulators



Tasks concerning cross-border infrastructure:

- The **terms and conditions for access** applicable to cross-border infrastructure include:
 - a procedure for capacity allocation;
 - a time-frame for allocation;
 - shared congestion revenues;
 - the levying of charges on the users of the infrastructure.





Interconnection rules between HV networks

ENTSO...ETSI...EDI...UCTE



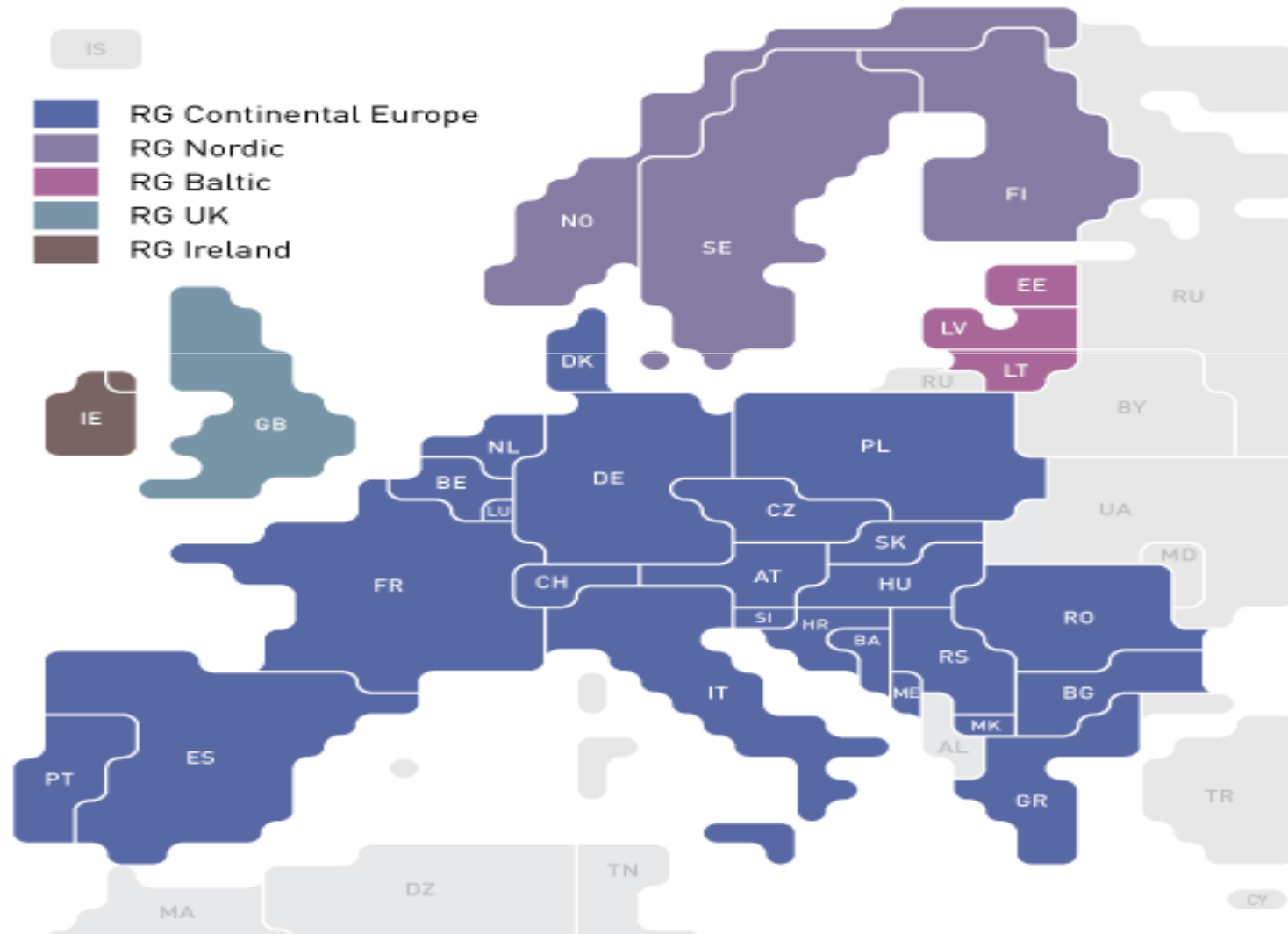
ETSI

ETSI produce globally applicable **standards for Information & Communications Technologies** including fixed, mobile, radio, broadcast, internet, aeronautical and other areas.

ETSI is recognised as an official European Standards Organisation by the European Union, enabling valuable access to European markets.



ENTSO





ENTSO

The Regional Groups will continue the system operations activities of former TSO associations in Europe, addressing technical and operational aspects specific to the synchronously interconnected system operation.

Continental Europe	former UCTE
Nordic	former NORDEL
Baltic	former BALTSO
UK	former UKTSOA
Ireland	former ATSOI



ENTSO

The networks represented by ENTSO supply more than 490 million people with electric energy. The consumption of electric energy amounts to approx. 3200 TWh per year. The length of HV (400 and 220 kV) lines covered by ENTSO is of more than 290 000 km.



ENTSO

ENTSO is the **association of Transmission System Operators (TSOs)** in Europe providing grid access to the electricity market players according to non-discriminatory and transparent rules



ENTSO

The main objective of the activities of the Committee is **to contribute to the transmission system adequacy and security** planning by preparing the ENTSO-E 10 Year Network Development Statement including generation adequacy outlook.



EDI

Electronic data interchange (EDI) is the **structured transmission of data between organizations** by electronic means. It is used to transfer electronic documents from one computer system to another, i.e. from one trading partner to another trading partner. It is more than mere [e-mail](#); for instance, organizations might replace [bills of lading](#) and even [cheques](#) with appropriate EDI messages.



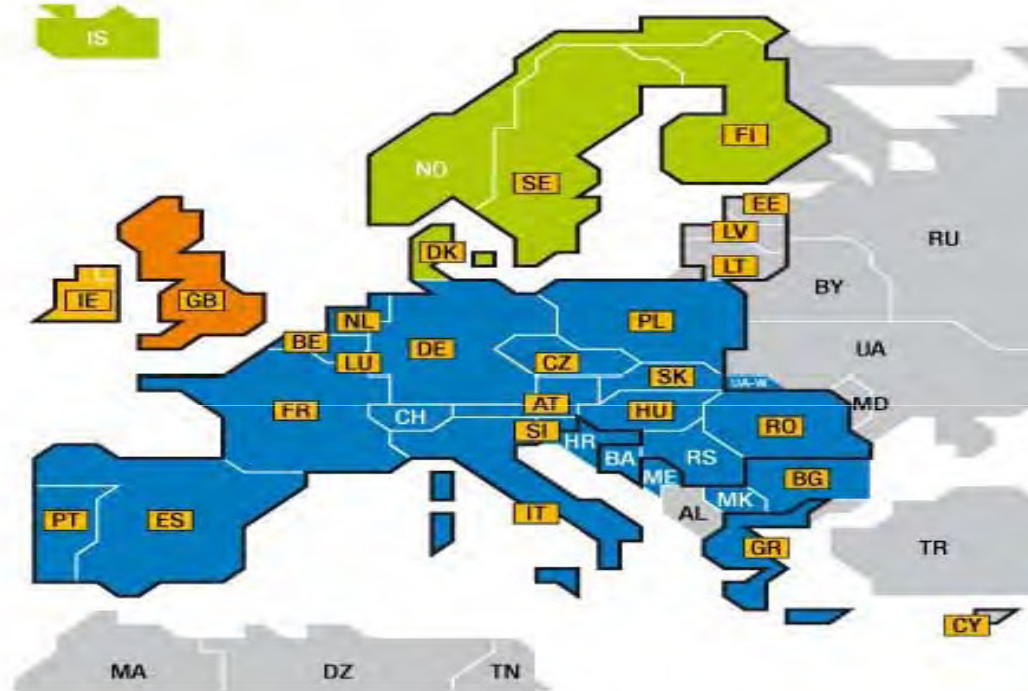
UCTE System Adequacy Methodology



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- UCTE
- NORDEL
- UKTSOA
- ATSOI
- ETSO
- EU members



UCTE System Adequacy Methodology

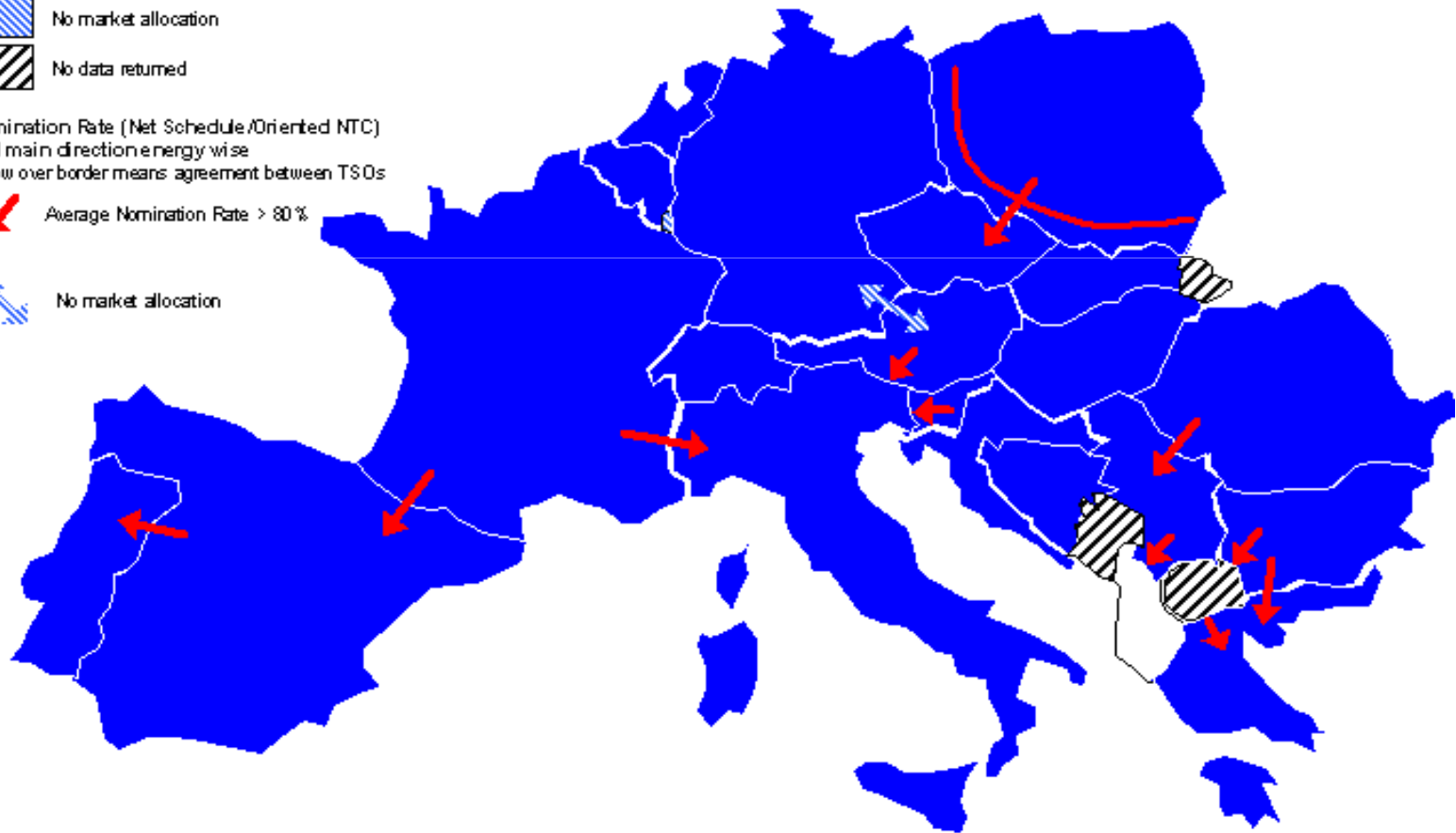
Most Wanted Interconnections

-  No market allocation
-  No data returned

Nomination Rate (Net Schedule/Oriented NTC)
and main direction energy wise
Arrow over border means agreement between TSOs

 Average Nomination Rate > 80 %

 No market allocation





UCTE

System adequacy analysis

Retrospect reports and System Adequacy Forecast reports.



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UCTE

Simultaneous Interconnection Transmission Capacities

Simultaneous Interconnection Transmission Capacity (SITC) of a power system is **the overall transmission capacity through its peripheral interconnection lines within UCTE**. SITC are calculated according to the UCTE Regional Transmission Plans.



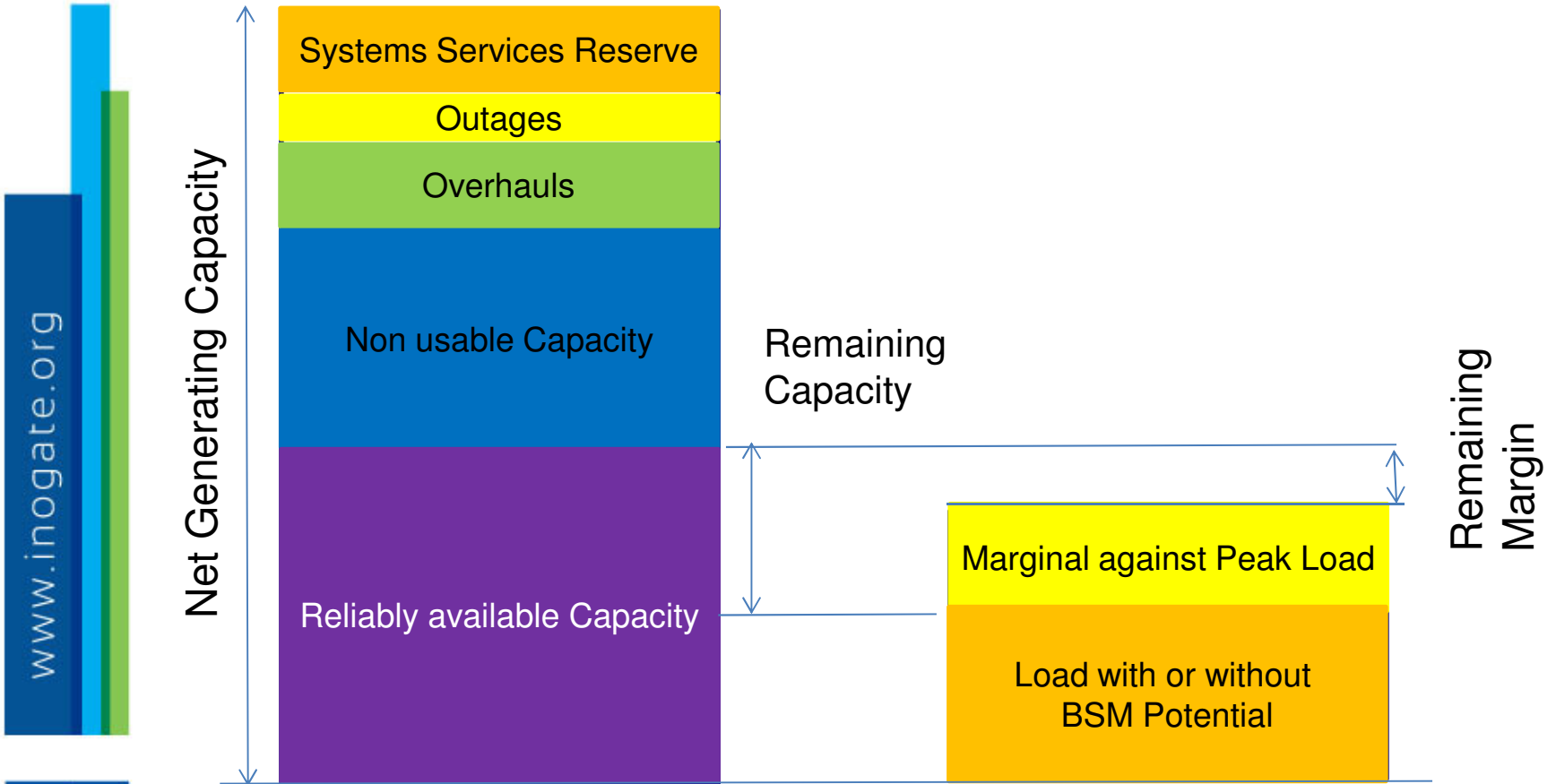
UCTE

Generation Adequacy

Generation adequacy is assessed for each individual countries, for each regional blocks identified within the UCTE system



UCTE

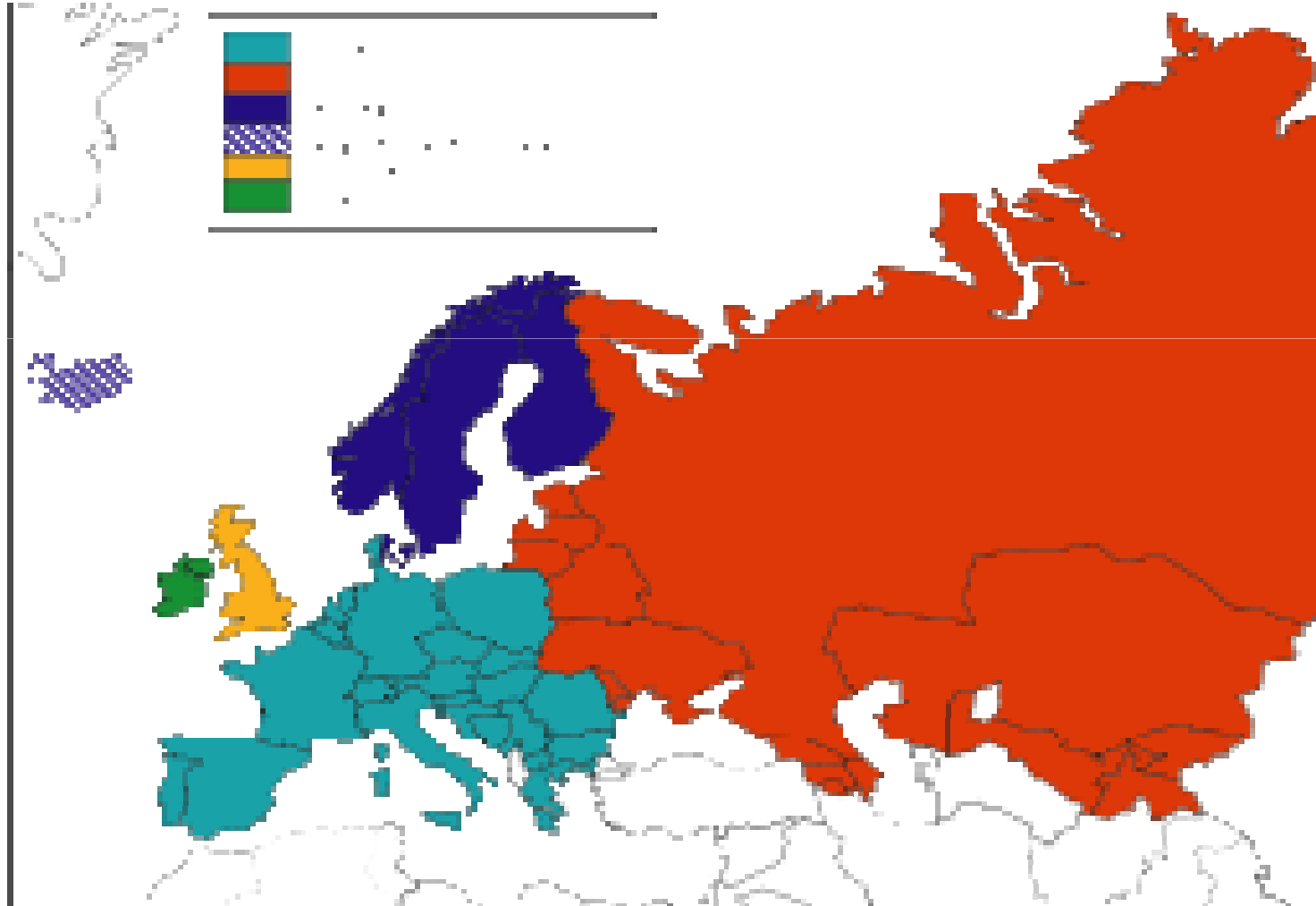


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IPS/UPS





IPS/UPS

The synchronous grids of Europe. IPS/UPS is shown in orange.

The **IPS/UPS** is a wide area synchronous transmission grid of the CIS countries with a common mode of operation and centralized supervisory control. It has an installed generation capacity of 300 gigawatts, and produces 1200 terawatt-hours annually for its 280 million customers. The system spans 8 time zones.



IPS/UPS



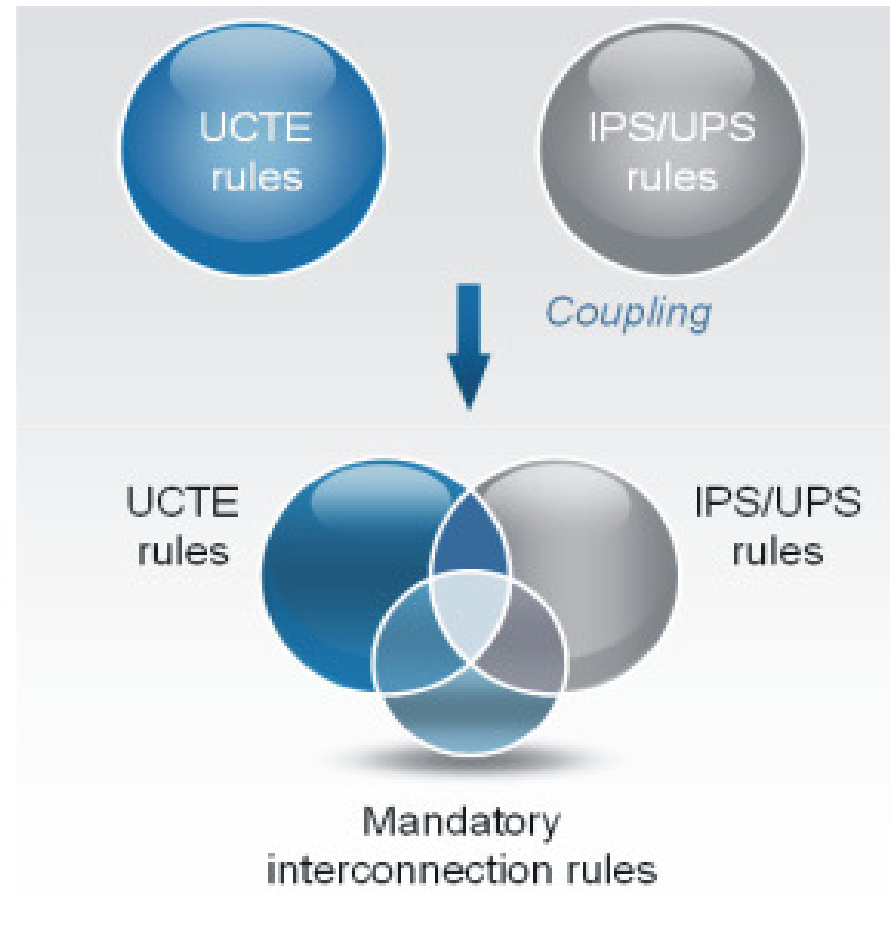
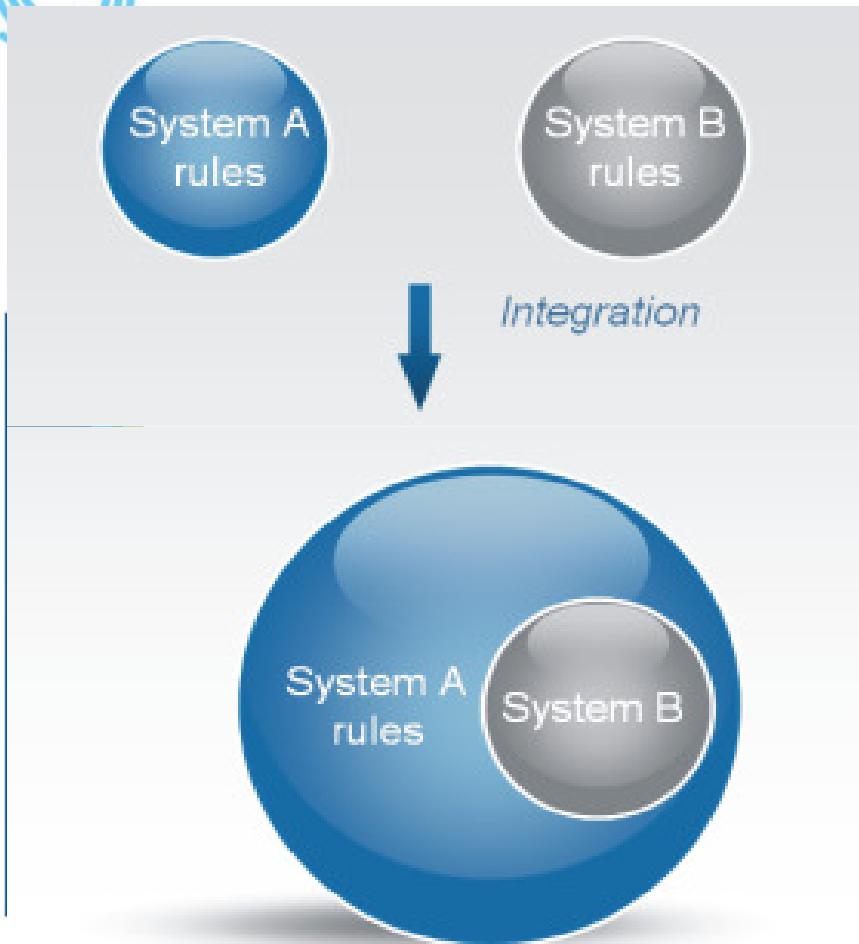
IPS

The Integrated Power System (IPS) portion of the network includes the national networks of Ukraine, Kazakhstan, Kyrgyzstan, Belarus, Azerbaijan, Tajikistan, Uzbekistan, Georgia, Moldova and Mongolia.





UCTE/IPS/UPS





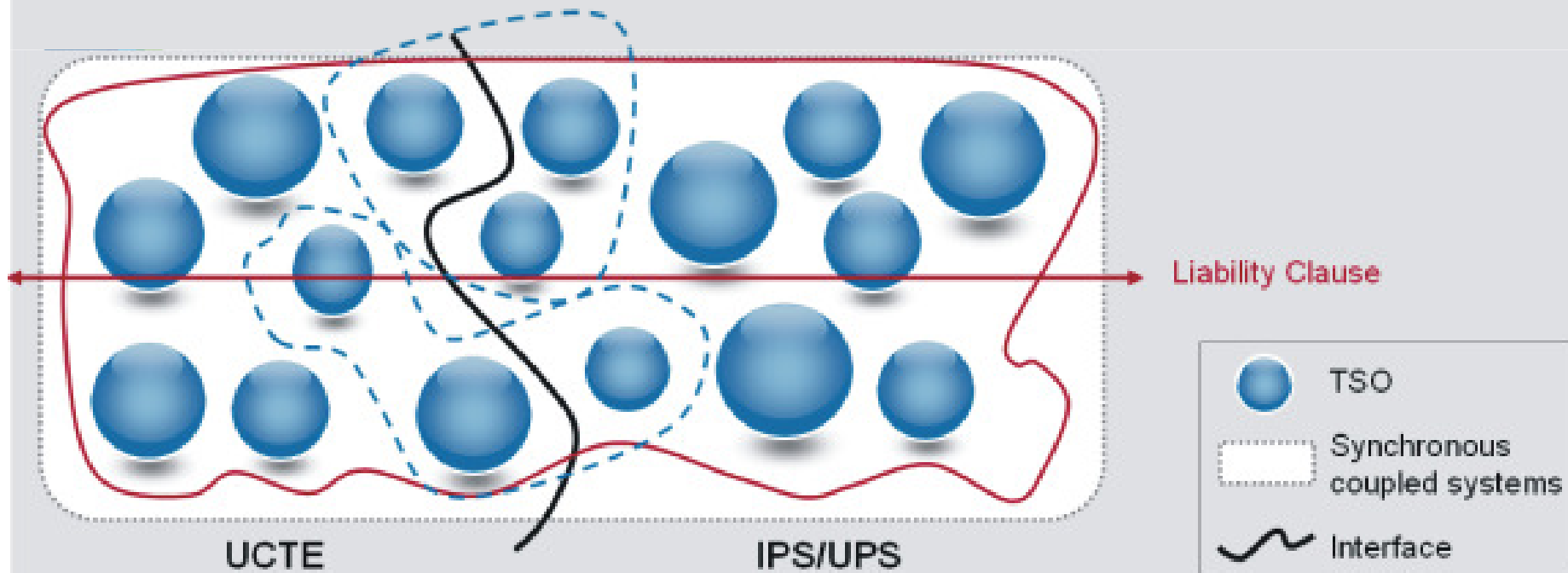
UCTE/IPS/UPS



Legal Checklist

Interzonal
Agreement

Bilateral / multilateral
Agreements





Thank you! Any questions?

Robert Jeanjean