

Vision and conceptual approaches to elaboration in specialized UN agencies and in relevant international organizations a family of recommendations on establishing and functioning of a trans-boundary trust space

Introduction

“Trans-boundary trust space” (hereinafter – TTS) is proposed to mean a combination of legal, organizational and technical conditions recommended by relevant specialized UN agencies (departments) and international organizations with the aim of ensuring trust (confidence in authenticity) in international exchange of electronic documents and data between electronically interacting parties (subjects).

“Electronically interacting parties (subjects)” is proposed to mean the entirety of public authorities, physical and legal persons interacting within relations arising from forming, sending, transmitting, receiving, storage and using electronic documents and data.

These proposals purpose to identify approaches and issues to be discussed in the context of development of a set of Recommendations on forming and functioning trans-boundary trust space (TTS Recommendations) in related UN organisations. It intends facilitating the building of technical, institutional and legal infrastructure for practical use of the TTS Recommendations.

Interested delegates and experts from state agencies and business are welcome to participate in this discussion.

Possible WTO role and contribution to TTS. The establishing of TTS will contribute to the facilitation and development of international trade and WTO attention to TTS issues will help to mobilize the support from governments and business to its practical implementation. Another area of concern is the lack of a coordination of work (and often of interoperability of final outputs) between numerous international and regional organizations (for example, ISO, ITU, UNECE/CEFACT, UNCITRAL, APEC, etc.) which are working on e-standards and related issues. The assigning to WTO a coordinating role in this process will make the international standardization in this area more efficient and effective.

Conceptual approaches

1. TTS Recommendations are proposed to be aimed to guarantee ensuring rights and legal interests of citizens and organizations under the jurisdiction of United Nations Member States while performing legally significant information transactions in electronic form using the Internet and other open ICT systems of mass usage.

2. The mentioned institutional guarantees are proposed to be ensured within business activity of specialized operators which:

- provide users with a set of trusted ICT services;
- operate within established legal regimes, which include but are not limited to restrictions imposed by processing of personal data.

3. It is proposed to give a description of different possible legal regimes:

- based on international agreements (conventions) and/or on directly applicable international regulation;
- based on commercial agreements and/or common trade practice;
- without special international regulation.

Legal regimes can be additionally supported by traditional institutes (governmental authorities, judicial settlement, risk insurances, notary ship and others) through mutual recognition of electronic documents secured by trusted ICT services.

Established legal regimes can also provide for imposing special requirements on the material and financial support of the business activity of specialized operators in case of damage to their users, including cases of compromising personal data.

Issues of institutional guarantees and legal regimes for forming and functioning regional and global TTS-clusters as well as for functional services provided in the frames of these clusters are proposed to be considered in a separate UNCITRAL Recommendation.

4. It is proposed to give a description of the possible sets of trusted infrastructural ICT services in conjunction with the criticality of functional applications. The services and their available levels of trust can be determined by the operators of functional information systems dependent on threats, risks, agreed legal regimes and users' demands. In order to ensure required levels of trust the operators of functional information systems can operate in a neutral international environment defined by given legal regimes. It is proposed to describe organizational infrastructures necessary for establishing and maintaining the neutral international environment.

Common provisions on forming and functioning of regional and global TTS clusters, functional services provided in the frames of these clusters as well as sets of trusted infrastructural ICT services can be considered in the UNECE-UN/CEFACT «Recommendation for ensuring legally significant trusted trans-boundary electronic interaction».

Description of single trusted ICT-services can be a subject of technical standards and recommendations ITU, JTC-1, ETSI and others.

5. Sets of identification attributes can be defined by the legal regimes for the business activity of operators specialized in performing identification and functional operators and can be maintained by the related trusted ICT services. Operators' activity can be regulated by special organizational and technical requirements directed, besides others, on personal data protection.

Sets of identification attributes and identification procedures themselves can serve as the basis for the definition of the trust levels of identification schemes. The levels of trust of identification schemes can be of essence for regulation of interaction between different clusters of trust (see item 9).

6. It is proposed to describe the mechanisms of interaction of particular states and their international unions with other international formats in the frames of forming of a common TTS:

6.1. On the basis of accession to an existing legal regime, which ensures institutional guarantees to the subjects of electronic interaction:

- a complete accession of a state to an existing legal regime on the basis of international treaties and/or directly applicable international regulation, in which frames a task on forming a regional TTS has already been set or solved, including functional services provided in the frames of this TTS;
- a partial accession of a state to an existing legal regime on the basis of international treaties and/or directly applicable international regulation, in part of provisions on forming of regional and/or functional TTS;

6.2. On the basis of interaction between different international unions:

- in the first stage, a group of states creates an isolated regional TTS cluster, including functional TTS services provided in the frames of this TTS, ensuring institutional guarantees for the subjects of electronic interaction within the legal regime specified by these states;
- in the second stage, the protocols of trusted interaction with other international unions are specified as related to mutual recognition of different legal regimes. This mutual recognition shall regard to institutional guarantees and information security requirements appertaining to each of the international formats, possibly on the basis of a neutral inter-cluster gateway (nICG) being operated in the frames of a special legal regime.

6.3. On the basis of interaction of a state with other states or international unions:

- in the first stage, a state creates an isolated national TTS cluster functioning in the frames of national legal regime specified by this state;

- in the second stage, the protocols of trusted interaction with other states and/or international unions are specified as related to mutual recognition of different legal regimes. This mutual recognition shall regard to institutional guarantees and information security requirements appertaining to these states and international formats, possibly on the basis of a neutral inter-cluster gateway (nICG) being operated in the frames of a special legal regime.

7. It is proposed to describe cluster-forming mechanisms, similar to item 6, for legal regimes based on commercial agreements and/or common trade practice.

8. It is proposed to describe the mechanisms of forming of a global TTS based on integration of different clusters into a matrix formed according to the following characteristics:

- functional services and regional scope,
- different legal regimes and their modifications.

9. It is proposed to describe approaches to forming neutral inter-cluster gateways (nICG) as key elements of building a global TTS matrix. Single clusters can also be represented by single states; in such a case, the related neutral inter-cluster gateway will be an interstate one.

The aim of creation of such gateways can be enabling of interaction between different clusters of the global TTS. Gateways forming can consider all the necessary aspects: legal, organizational and technological.

Procedures and processes of interaction between different clusters of the global TTS shall uphold the level of trust between these clusters being sufficient for a mutual recognition (legalisation) of electronic documents and data, which are issued in different jurisdictions (clusters).

Thus, neutral inter-cluster gateways enable establishing and maintaining global legally significant information processes in the frame of the global TTS.

In order to achieve this necessary level of trust, inter-cluster gateways shall be operated in a neutral international environment, i.e. outside (beyond) any single cluster. Neutral inter-cluster gateways should be implemented as a specific type of trust services.

Such a neutral international environment shall be operated in a neutral legal field that is defined, for example, by a UN Convention or by an international treaty between single countries or unions of countries.

Documents establishing the necessary neutral legal field (amongst other, for the operation of the gateways) shall, inter alia, define the role of the neutral international operator of neutral inter-cluster gateway. This international operator shall act in the frame of the mentioned legal field, shall follow requirements set up by this legal field and shall be subjected to an international audit concerning the fulfilment of the requirements.

It appears necessary that documents forming the above mentioned legal filed shall also define the role of the neutral international regulator. This regulator shall, inter alia, coordinate the interaction between the neutral international operators.

Thus, the neutral inter-cluster gateways (nICG) will enable establishing and upholding global legally significant information processes in the frame of the global TTS. These information processes will be performed through a set of NICGs, i.e. through a neutral inter-cluster bus (nICB). nICB will be operated by one or several neutral international operators and regulated by the neutral international regulator, who act on the basis of the related international documents (conventions and/or treaties).

Approaches to forming neutral inter-cluster gateways (nICG) can take into account the existence of different possible levels of interaction between different TTS clusters. In particular, gateways can be established both: at only legal and organizational levels and at a complex level: legal, organizational and technical one.

Approaches to forming neutral inter-cluster gateways can regard usage of transition profiles describing and configuring transitions from one cluster to another. These transition profiles can consider the trust levels of the identification schemes used inside the interacting clusters, see item 5.

Description of neutral inter-cluster gateways can be a subject of technical standards and recommendations ITU and JTC-1.

Summary

The problem of trans-boundary exchange of electronic documents is topical and is noted in global and regional declarations, such as:

- Promote research and cooperation enabling effective use of data and software in particular electronic documents and transactions including electronic means of authentication and improve security methods. (WSIS+10 Vision for WSIS Beyond 2015, C5. Building confidence and security in the use of ICTs, para f.).
- Promote confidence and trust in electronic environments globally by encouraging secure cross border flows of information, including electronic documents and efforts to expand and strengthen the Asia-Pacific Information Infrastructure and to build confidence and security in the use of ICT. (2012 APEC Leaders' Declaration, Vladivostok Declaration - Integrate to Grow, Innovate to Prosper).

There are several good practices of solving such a task in the world now:

- in the European Commission – on the basis of the Regulation of the European Parliament and of the Council on electronic identification and trust services for electronic transactions in the internal market (project - eIDAS¹);
- in the Eurasian Economic Union - on the basis of the Treaty on the Eurasian Economic Union and of the Conception of using services and legally significant electronic documents in interstate informational interaction²;
- in the Asia Pacific Region – on the basis of PAN ASIAN e-COMMERCE ALLIANCE (PAA)³.

The global economy development needs, especially in crisis periods, demand an activation of integration processes in different economic and social areas including through the use of modern ICT-technologies based on innovations. These are the tasks the family of the TTS Recommendations proposed for development is aimed to solve.

¹<http://ec.europa.eu/dgs/connect/en/content/electronic-identification-and-trust-services-eidas-regulatory-environment-and-beyond>

²<http://www.eurasiancommission.org/docs/Download.aspx?IsDlg=0&print=1&ID=5713>

³<http://www.paa.net/>