

Approved at the 17th meeting of the CIS Member States Coordination Council  
on Information under Regional Communication Commonwealth (RCC)  
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## **Operating model of formation and functioning of a transboundary trust space of the CIS Member States in the Internet**

The urgency of a problem to develop a transboundary trust space ( hereinafter - TTS) for the CIS member states in the Internet , the main approaches to determination of its components, interaction with the global practice, and the functional purpose are described in the relevant explanatory note. Solution of this problem implies consecutive execution of 4 stages of works.

1.1. The Model of formation and functioning of transboundary trust space for the CIS member states in the Internet (hereinafter - TTS Model), described in this text, is a result of execution of the first stage of works to form the transboundary trust space for the CIS member states in the Internet.

TTS Model is aimed at formulation of conceptual framework, structuring of main blocks and components for the TTS, as a system, as well as determination of correlations between the blocks and components.

If TTS Model has been approved by Coordination Council of the CIS member states on information under RCC, it will be a basis for carrying out, at the subsequent stages, further operations to form transboundary trust space of the CIS member states in the Internet within a framework of the system project TTS development and preparation of a set of the normative and technical documents drafts necessary for its practical implementation.

1.2. TTS system engineering is the second stage and is aimed at detailed substantiation of the TTS main components and blocks indicated at the first stage, as well as structured description of correlations between them. The result could be conceptual formulation of the documents content in a framework of TTS system under the list developed at the first stage. Besides that, available experience on implementation of TTS individual fragments in Russia, Moldova, Poland and other countries for more detailed analysis in the CIS member states could be generalized within the limits of system engineering.

1.3. Development of a set of TTS normative, legal and the technical documents drafts necessary for TTS creation and functioning in the systemic aspect is the third stage. The materials obtained as a result of the work may be reference points for the subsequent harmonization for national legal acts, as well as for technical standards and regulations of the CIS member states on the above results basis. It is possible at this stage to get developments which could later be contributed to the international organizations on standardization.

The developed set of normative-technical documentation should provide transfer to practical implementation of TTS system in the CIS territory.

1.4. At the final fourth stage the Commonwealth states, which have decided to join TTS, are making appropriate efforts on harmonization of national legislations, adaptation of existing hardware-software complexes to the requirements developed at the 1-3 stages, creation of necessary new objects and organization of information systems operators' activity in their territory, as well as other practical actions to provide TTS functioning, as an integrated international system.

2. As a conceptual framework for TTS purposes, we may offer the following terms which represent in content main components of the simulated system:

2.1. Registration system (Registry System, literally – «Registration System» in compliance with UNCITRAL) - a registration information system containing the information from constitutive documents of electronic interaction. The information is a basis to compile or issue electronic transferable records (ETR), having legal force.

2.2. The common infrastructure of information documenting in the electronic form (Identity Management System, literally – «Management Identification System» in compliance with UNCITRAL) – a set of information-technological and organizational-legal measures, rules and decisions being implemented with a view of giving legal force to ETR, contained in registration systems based on this general infrastructure.

2.3. Electronic transmittable records (Electronic Transferable Records, literally – «Electronic Records Capable to be Transmitted» in compliance with UNCITRAL) - a kind of e-documents fixed in registration systems, based on the general infrastructure of information documenting in the electronic form.

2.4. The operator of registration system (Registry Operator, literally – «Operator of Registration System » in compliance with UNCITRAL) - a organization entitled, under the national legislation, national legislation of each party under an international contract (an authorized operator) or according to trading customs (an entrusted operator) to carry out operations to maintain electronic registers containing a set of constitutive documents for information interaction subjects.

2.5. The operator of the general infrastructure for the information documenting in the electronic form (IMS operator, literally – « Operator of Identification Management System » or Trusted Third Party in compliance with UNCITRAL) – an organization entitled, under the national legislation, national legislation of each party under an international contract (an authorized operator) or according to trading customs (an entrusted operator) to carry out operations to realize functions of the legal content on the basis of the general infrastructure or individual components (services) of this infrastructure.

2.6. Rules of documenting information in the electronic form are the established regulations for actions - based on the general infrastructure - by the registration systems participants who are subjects of information interaction, including users and authorized persons of operators of registration systems and components (services) of the general infrastructure.

2.7. Requirements to information documenting in the electronic form – the established set of information-technological and organizational-legal actions, rules and decisions regarding creation of the registration systems based on the general infrastructure, including those on usage of objective identifiers.

2.8. Audit of activity of registration systems, general infrastructure, its individual components (services) operators is an international monitoring system of fulfillment by the above operators of the established requirements of information documenting in the electronic form, created according to the international contract or trading customs

3. Between the offered terms as components of the information system to be created, the following correlations (should be specified at the second and third stages) exist:

3.1. Registration systems should be distinguished from electronic systems of office-work or interdepartmental document circulation where electronic messages (another variety of e-documents) preceding as a rule, formation of new constitutive documents, are circulating. The qualitative ratio between ETR and electronic messages could be reflected as 1-10 % to 99-90 %. Requirements on information security , tougher than those to systems of office-work or interdepartmental document circulation due to higher criticality of registration systems, may be presented to registration systems.

Registration systems imply standardization in three directions:

3.1.1. Description (content) and information presentation (a file, record in a database or others) formats;

3.1.2. Rules of information documenting;

3.1.3. The regulations of information flows organization and/or access to the information. (An example of the last direction in standardization is a transboundary mechanism of a single window, cross-border single window facility in compliance with UNCITRAL).

3.2. The general infrastructure for information documenting in the electronic form (hereinafter – the general infrastructure) could consist of a row of components providing - on the basis of information technologies - formalization of legal procedures and conditions, for example:

- The public keys infrastructure is intended to certify a declaration of intent by natural persons – participants of information interaction, and functions on the basis of certifying centers system;

- The infrastructure of entrusted time is intended to certify the time of electronic document issuing and functions on the basis of time stamps usage;

- The infrastructure of a trusted third party is intended to certify a place of an electronic document issuing, the fact of payment execution connected with fulfillment of a legally significant action, and is also an analog of notary and apostil certification of paper documents; it functions on the basis of issuance of a DVCS format receipt and other standardized services;

- The infrastructure to monitor legal statuses of information interaction subjects is intended for registration, maintenance in a current state and termination of legal statuses of information interaction subjects - legal entities, as well as competence, powers and a right to sign by natural persons; it functions on the basis of electronic registers maintenance, assumes both semantic and linguistic compatibility of these registers, and personal data protection.

Each of these infrastructural components, and also appropriate services and protocols of information-safe interaction are realized using a set of information-technological and organizational-legal actions, rules and decisions that is reflected in the above terms.

Division to the above-mentioned components is relative and cited here as an illustration because services realized by these infrastructures, are in process of continuous development, they could be renamed or complemented by the new ones. For the purposes of this Model, analysis of a certain organizational-technological set of components (services) as a separate information system, under control of the appropriate operator seems to be important.

3.3. Formation, storage and termination of legal force of ETR should comply with regulations and meet requirements of information documenting in the electronic form, with the registration systems, as well as general infrastructure or its individual components (services) being controlled by the authorized or entrusted operators whose activity is subject to audit.

Constant differentiated access (in on-line mode) should be provided to ETR. On the basis of ETR extracts in the form of e-documents which could have legal force in an off-line status, can be issued. Thus, when certain time established by regulations has passed, they could be confirmed either by obtaining access to current registration systems, or by obtaining current extracts from these registration systems.

3.4. The general infrastructure can be formed on the one-domain or multi-domain basis depending on using a uniform cryptographic algorithm of the electronic digital signature or a set of national cryptographic algorithms for the electronic digital signature under the national legislation of each party of an international contract or in compliance with trading customs. If a multi-domain circuit is used, all domains should be full-strength. Thus, full-strength is provided applying general rules and requirements of information documenting in the electronic form.

In TTS Model the principle of multi-domain trust where each domain represents a single national trust space (NTS) is used. To support interoperability of national and transboundary circuits for electronic document circulation, NTS should be formed as an interacting TTS subsystem. Description of an integration component of the system, as well as accurate differentiation of interstate and national infrastructures should be conducted at the system engineering stage.

3.5. In the framework of preparing the Regulations for information documenting in the electronic form, developed, first of all, in respect to the client, regulations related to use of appropriate accessors, such as an ID-card which national versions have been already used or planned to be used in the CIS countries and other developed countries, is important. Transboundary electronic document circulation will require a unified usage of accessors for information interaction participants under jurisdiction of various states.

3.6. Requirements to information documenting in the electronic form can be formed on a hierarchical basis and include the following levels:

A conceptual level where functional bases of TTS creation are developed;

A general system level where main requirements to the system, as a result of system engineering, are developed;

A component level where requirements to creation of individual registration systems and components (services) of the general infrastructure, first of all, in respect to the object, are specified;

A level of information interaction subjects where rules of information documenting in the electronic form, first of all, in respect to the client, should be prepared;

A level of TTS complex information security where information security of the general infrastructure is complemented with safety of registration systems to a certain completeness determined in advance, taking into account differentiation of access, personal data protection and various types of secrets, for example, banking secrets, as well as other requirements on information security.

3.7. Activity by operators of the general infrastructure registration systems and its components should be formalized within the framework of the approved Statements and Regulations of Internal Activity. Besides that, all types of operators should be under an appropriate international audit, its form and permissions being determined by a relevant agreement of the TTS member states. A would-be version of intersystem correlations is conclusion of contracts between operators fulfilling symmetric functions.

3.8. TTS Model described here, is intended to support a safe functioning of various information interaction systems at levels G-B-2C to G-B-2C in all possible combinations. Variants (classes) of such systems, as well as issues of their complex audit are described in the framework of system engineering.

4. TTS Model isn't just a technological construction, and represents an integrated complex consisting of the following blocks - institutional-legal, organizational-regulation and engineering-technological, including information-telecommunication one.

#### 4.1. The institutional-legal block may include:

4.1.1. International multilateral or bilateral Agreements (Conventions) – for the information systems whose participants are citizens and/or the authorized persons of state (regional, municipal) authorities under jurisdiction of various countries. Subject of these Agreements (Conventions) is a normative formalization of TTS recognition and of an order - for other countries and/or the international formats - to join it. Within the framework of this package, development of a Model Law «On Transboundary Exchange of E-Documents» may be stipulated with the subsequent implementation of its statements into normative legal acts of the CIS member states. At the same time when developing such Model Law it is necessary to take into account, as much as possible, peculiarities of the national legislation of each country, joining TTS.

4.1.2. Trading customs – for information systems whose participants are authorized persons of entrepreneurial structures under jurisdiction of various countries.

4.1.3. A set of amendments to effective normative legal acts in the field of international commercial arbitration.

4.1.4. Proposals to organize international insurance of risks related to application of transboundary legally significant information transactions.

#### 4.2. The organizational-regulation may include:

4.2.1. A set of harmonized Statements and Regulations for activity of operators of registration systems and components of the general infrastructure under jurisdiction of various countries. A would-be option is creation of common international entrusted operators that should be determined by international agreements or by trading customs.

4.2.2. A set of typical contracts between the operators fulfilling symmetric functions under jurisdiction of various countries.

4.2.3. A statement on international audit related to activity of operators (all types ) of the general infrastructure registration systems and its components (services).

4.2.4. A would-be option is development of the Statement on the International Authority on Creation and Development of TTS System Coordination. Creation of such authority, its organizational-legal form, procedure of its financing and operation should be described in a relevant international agreement.

#### 4.3. The engineering-technological block may include:

4.3.1. Requirements to information documenting of the electronic form

4.3.2. Rules of information documenting in the electronic form

4.3.3. Requirements to provide telecommunication support of an information system being created, taking into account on-line and off-line access modes to current registration systems described in Item 4.3.

4.3.4. Requirements to buildings and rooms intended to accommodate TTS system objects in order to ensure their resistance to calamities, reservations of equipment and electrical power supplies, mirroring of these registration systems and other similar requirements.

5. This TTS Model is prepared by RSS Commission on Information and Commission on Information Security of Coordination Council of the CIS member states on Informatization under RCC and is meant, first of all, for usage in the framework of the CIS international format. At the same time, TTS Model could be offered to any of the Commonwealth states for examination and discussion in other international formats and in the framework of bilateral

intergovernmental commissions in order to ensure interoperability of international information systems to be created, as well as reduction of financial expenses.

While each stage is carried out, it is necessary to organize operative informing of the countries considering to join TTS, on decisions, being developed, for discussion and amendments introduction, taking into account national legislations, as well as for unification and harmonization of its normative-legal base, information-telecommunication infrastructure, hardware-software solutions etc.

Detailed description of all TTS components, blocks, services and modules, description of rights and obligations of information interaction participants, as well as other legal issues related to transboundary information interaction could be completed at the second and third stages of TTS system formation, taking into account provisions of the approved TTS model. At the fourth stage of works the interested Commonwealth states carry out work to develop transboundary trust space.

## **Explanatory note to an issue of formation and functioning of transboundary trust space of the CIS member states in the Internet and development of a transboundary trust space operating model**

1. Now in the Internet there are zones of mainly anonymous information interaction, or there are some clearly criminal segments. Formation of the trusted space in a worldwide net as an alternative to the above-mentioned segments is a quite natural and urgent task for the developed states.

At the same time, the Internet gives a technological possibility to render quality business, medical and educational services, localized in several centers, usually, in capitals of the leading states with a sufficient number of qualified expert and advanced technologies, to inhabitants of various countries on remote access terms. The active development of transboundary services of electronic auctions, telemedicine and distance learning will improve a standard of living and economic growth in many countries.

A barrier to implement the newest electronic services is an unsolved complex of organizational, technological and legal problems in legalization of foreign electronic documents. They include a problem of a method to build up a transboundary trust space (hereinafter – TTS) which can be formed on the one-domain or multi-domain basis depending upon the usage of the uniform cryptographic algorithm for a digital signature or a set of national cryptographic algorithms for a digital signature according to the national legislation of a TTS member-country.

Some CIS-countries, such as Belarus, Kazakhstan and Russia, have already made a choice in favor of a multi-domain principle of TTS creation. The information system of the Customs Union is built up upon this principle. Such approach complies with a trend to create a multi-polar world and is based on the Trusted Third Party innovative development and legal norms of the Agreement on Application of Information Technologies in Exchange of Electronic Documents in Foreign and Mutual Trade in Single Customs Territory of the Customs Union.

2. This issue may be tackled as well in a broader aspect. Recently in a framework of trends, first of all, of economic regional integration, for example, in the international formats of the CIS, EvrAzES, Customs Union Commission (CUC), Collective Security Treaty Organization (CSTO), and also in connection with increasing interaction with economies of Asian-Pacific region, including China within a framework of Shanghai Cooperation Organization (SCO) and APEC as a whole, on the agenda there arises an issue of common information field formation. This problem is especially urgent in connection with the restricted budgetary financing for information systems creation, as well as a possible incompatibility of hardware-software complexes being created. It may be caused by lack of inter-format coordination based on some general approaches, accepted in various international formats.

3. The problem becomes especially urgent in the CIS format, including the framework of RCC - Regional Communication Commonwealth. Provision of the newest electronic services (medical, educational and business) are at present the specific subjects of the international lawmaking which are at different levels of completion:

- The Agreement of the CIS Member States Cooperation in Creation, Usage and Development of the Interstate Network of Information-Marketing Centers for Promotion of Goods and Services to National Markets, and the Agreement of the CIS Member States Cooperation in Creation of Compatible National Telemedical Systems and their further development and usage have been concluded;

- The Model law «About Telemedical Services» has been passed;

- Model laws «On Electronic Document», «About Electronic Government», «On Transboundary Information Exchange of Electronic Documents», «On Usage Information-Communication Technologies in the Educational System», «On Technoparks», «On Interstate Exchange of Messages of Special Communication» are planned to be approved, and as well as Information and Innovative Codes for the CIS member states.

At the 16-th meeting of Coordination Council of the CIS Member States on Informatization under PCC, that took place on September, 28, 2010, in Kishinev, a task to develop common approaches to create TTS within the CIS framework was set up.

Such approaches can be elaborated on the basis of development, discussion and acceptance of Model of formation and functioning of CIS member states TTS Model in the Internet. In the future the approved statements may be fixed in an appropriate international standard legal act of the CIS in the form of Agreement or Convention and be harmonized with similar acts of other international formats supporting application of the general principles. Symmetrically accepted TTS Model may be developed in a package of the international technical standards and regulations.

Such coordinated actions may be adjusted in a framework of inter-format coordination, probably, possible with a leading role of the CIS as the most representative international format in the EuroAsian region - 11 participating countries, a number of observers and associated members. The organizational driver in this field could be the RCC Executive Committee.

Generally it may be added that similar problems which have not yet been solved positively, exist as well in other international geographic regions, for example, European and Latin American. That was confirmed by participation of CIS member states representatives in December, 2010, in work of the Center on Simplification of Trade Procedures and Electronic Business Operations of the United Nations (CEFACT).

4. For setting and implementation of the task to develop TTS Model at present there are already certain pre-conditions. For example, the Node of International Interaction implementing technology of the trusted third party, has successfully passed for a number of years a test in the following configurations:

- Russia – Poland, in a framework of experiment to hold an electronic auction with participation of a foreign supplier from Poland (private company UNIZETO) in Administration of the Belgorod region, with Russian cryptography means and their analogs accepted in the NATO countries being used;

- Russia – Belarus, in a framework of operating commercial electronic trading platform B2B-energo with usage of Russian and Belarusian cryptography means;

- Belarus – Kazakhstan – Russia, in a framework of preparation to create Integrated Information System for mutual and foreign trade of the Customs Union Commission;

- Moldova – Poland, on the basis of hardware-software complexes of trusted third party;

- Russia – Cyprus – Switzerland, in a framework of operations performed by company «Gazinformservice» on the order of «Gazprombank» to ensure legally significant information interaction of the head office of bank with its branches.

These examples show that search for a decision of the urgent task on organization of transboundary electronic document circulation is undertaken by both government authorities of various countries, and by commercial structures which invest their funds in R-@-D to form trading customs under the aegis of International Chamber of Commerce and Industry.

Within a framework of participation in CEFACT work in December, 2010, by CIS member states representatives, a draft of 37th Recommendation 'Recommendation Concerning Functional Compatibility of Signed Digital Documents' has been considered. An official conclusion by Mincomsvyaz' of Russia with a package of constructive proposals which are actively discussed now in this international format together with remarks and proposals submitted by USA and Canada concerning 37th CEFACT Recommendation. As a part of the Russian proposals a draft of the conceptual framework which can be used in a context of development of TTS Model, was offered.

5. The task on mutual harmonization of national legislations, as well as technical standards and regulations in sphere of transboundary electronic document circulation hasn't been set up earlier, therefore to promote its solution basically two options are possible:

- To take the approaches accepted in one of the CIS countries as a basis for harmonization, and to develop "road maps" for other countries to form TTS on the above basis;

- To take as a basis for harmonization approaches of the higher level, being formed, for example, in United Nations structures, to take this into account and to develop a general TTS Model, as well as unique "road maps" per each country for the coordinated effort to solve common problems.

The last option looks more promising, as it is made up on an assumption to take into account all worldwide community's developments and updated practices. Besides that, successful TTS creation of CIS member states will make it possible to introduce an initiative for other international formats – near and far foreign countries – to join it, or to start negotiations on interaction organization among various regional analogs if those appear.

6. As basic documents of high level can be used materials of the Commission of the United Nations on International Trade Law (UNCITRAL), for example:

Document UNCITRAL № A/CN.9/692 - Current and would-be future work in the field of electronic trade, materials of 43 session of General Assembly of the United Nations, New York, June, 29 - July, 9, 2010;

Materials of UNCITRAL Colloquium on Electronic Trade, that took place in New York, on February, 14-16, 2011, were published at <http://www.uncitral.org/uncitral/en/commission/colloquia/electronic-commerce-2010program.html> .

In these documents the problems of formation of Electronic Transferable Records (ETR), Registration Systems (Registry System), as well as Identification Data Management Systems (Identity Management System) are analyzed in detail. Tasks to search optimal decisions are set up, but ready-made decisions are not offered, as it is obvious that it is a prerogative of individual states and their associations related to documentary support of transboundary electronic services including electronic trade, telemedicine, distance learning and others.

These terms and the basic approaches became a basis of the conceptual framework offered by Russia to be used in the project of 37th CEFACT Recommendation.

7. The analysis conducted allows us to make the following conclusions:

7.1. The task on TTS formation in the Internet to support provision of the newest electronic business (electronic auctions, informatization of check points), social (telemedicine, distance education) and other legally significant services is urgent not only for CIS format but also for other international formats of near and far foreign countries.

7.2. In a number of the CIS countries there are certain technological, legal and organizational pre-conditions which allow to include the task specified in item 7.1. on the actual agenda and to make necessary efforts for its transfer in practice. The first step in this field may be development, discussion and acceptance of TTS Model. In the future harmonization of the national legislation on this basis by the CIS countries, as well as harmonization of technical standards and rules to remove barriers and improve generally a living standard and ensure economic growth on the basis of implementation of the newest electronic services will be possible.

7.3. To create a required TTS Model it is expedient to develop the above- mentioned statements on the basis of the experience utilization, revealed defects and in the context of the problem introduction by international structures of high level, first of all, the United Nations Commissions, such as UNCITRAL and CEFAC. For entrepreneurial structures interaction with the International Chamber of Commerce and Industry within a framework of formation of trading customs for transboundary electronic document circulation is urgent. Thus, for business a right to select – to join an interstate infrastructure of electronic document circulation, or to create its own analog of such infrastructure - should be saved, but anyway it is desirable to do it on the general principles for interoperability.