

ISO/IEC JTC 1
Information technology
Secretariat: ANSI (United States)

Document type: Business Plan

Title: SC 6 Business plan for June 2013 – February 2014

Status: This document is circulated for review and consideration at the November 2013 JTC 1 Plenary meeting in France.

Date of document: 2013-09-26

Source: SC 6 Secretariat

Expected action: ACT

Action due date: 2013-11-04

Email of secretary: lrajchel@ansi.org

Committee URL: <http://isotc.iso.org/livelink/livelink/open/jtc1>

Telecommunications and Information Exchange Between Systems

ISO/IEC JTC 1/SC 6

Document Number:	6N15669
Date:	2013-06-25
Replaces:	6N15667
Document Type:	Business plan
Document Title:	SC 6 Business plan for June 2013 – February 2014
Document Source:	SC 6 Chair
Project Number:	
Document Status:	As per the SC 6 Seoul Resolution 6.0.4, SC 6 NBs and LO are requested to submit any comments, if any, on the BP to SC 6 Secretariat by 2013.-08-10.
Action ID:	COM
Due Date:	2013-08-10
No. of Pages:	12

ISO/IEC JTC1/SC6 Secretariat Ms. Jooran Lee, KSA (on behalf of KATS)

Korea Technology Center #701-7 Yeoksam-dong, Gangnam-gu, Seoul, 135-513, Republic of Korea ;

Telephone: +82 2 6009 4808 ; Facsimile: +82 2 6009 4819 ; Email : jooran@kisi.or.kr

BUSINESS PLAN FOR ISO/IEC JTC 1/SC 6

Telecommunications and Information Exchange Between Systems

Period covered: June 2013 – February 2014

Submitted by: Dae Young KIM for approval at the SC 6 Plenary

1. MANAGEMENT SUMMARY

1.1 STATEMENT OF SCOPE

Standardization in the field of telecommunications dealing with the exchange of information between open systems including system functions, procedures, parameters as well as the conditions for their use. The standardization encompasses protocols and services of lower layers including physical, data link, network, and transport as well as those of upper layers including but not limited to Directory and ASN.1. Future Network has recently been added as an important work scope. A considerable part of the work is done in effective cooperation with ITU-T and other standardization bodies including IEEE 802 and Ecma International.

1.2 ORGANIZATION

WG 1 – Services and Protocols in the Physical and Data Link Layers

WG 7 – Network, Transport, and Future Network

WG 10 – Directory, ASN.1 and Registration

1.3 PROJECT REPORT

JTC 1/SC 6 is responsible for 342 published International Standards and 46 open project items. See JTC 1/SC 6 Programme of Work contained in 6N14162 for a complete set of projects along with active project information and status.

1.4 COOPERATIONS WITH OTHER ORGANIZATIONS

[Internal liaison within ISO/IEC JTC 1]

ISO/IEC JTC 1/SC 17

ISO/IEC JTC 1/SC 25

ISO/IEC JTC 1/SC 27

ISO/IEC JTC 1/SC 29

ISO/IEC JTC 1/SC 31

ISO/IEC JTC 1/SC 38

ISO/IEC JTC 1/WG 7

[Internal liaison within ISO/TCs and IEC/TCs]

Liaison Committee to ISO/IEC JTC 1/SC 6

The below committees may see the documents of ISO/IEC JTC 1/SC 6 :

ISO committees in liaison:

ISO/TC 68, ISO/TC 184/SC 5, ISO/TC 215, ISO/TC 122/WG 12(Category C with SC 6/WG 7)

IEC committees in liaison:

IEC/SC 46A, IEC/SC 46C, IEC/TC 48, IEC/SC 48B, IEC/TC 65, IEC/SC 65C, IEC/TC 86, IEC/SC 86C, IEC/TC 93

Liaison Committee from ISO/IEC JTC 1/SC 6

ISO/IEC JTC 1/SC 6 can access the documents of the below committees :

ISO committees in liaison:

ISO/TC 215

[External - Category A and B liaisons]

CEPT (European Conference of Postal and Telecommunications Administrations) : Category A

CERN (European Organization for Nuclear Research): Category A

EC (European Commission): Category A

ETSI (European Telecommunications Standards Institute) : Category A

Ecma International: Category A

ICAO (International Civil Aviation Organization: Category A

ISOC (Internet Society): Category A

ITSO (International Telecommunications Satellite Organization): Category A

UNCTAD (United Nations Conference on Trade and Development) : Category B

UNECE (United Nations Economic Commission for Europe): Category B

UPU(Universal Postal Union): Category B

WMO(World Meteorological Organization) : Category A

[External - Category C liaison]

IEEE 802 LMSC (LAN/MAN Standard Committee) (with SC 6/WG 1)

NFC Forum (with SC 6/WG 1)

CEN/TC 247/WG 4 (with SC 6/WG 7) : To be approved by JTC 1

2. PERIOD REVIEW

2.1 MARKET INITIATIVES

NFC standards (ISO/IEC 18092 NFCIP-1, ISO/IEC 21481 NFCIP-2) are becoming a significant success in the market. Many vendors including Google, Nokia, and Samsung are incorporating NFC technology in their smart phones. NXP, Sony, NFC Forum, and Ecma International have contributed significantly to the development of the NFC standards. SC 17 has been a close partner in developing the standards in SC 6.

ISO/IEC TR 29181-series documents have been developing to specify problem statement and requirements for the various issues of Future Network such as overall aspects, naming and addressing, switching and routing, mobility, security, media transport, and service composition. Several approved TR 29181-series documents are referenced and used by relevant SDOs such as TTA to develop further detail standards for Future Network. SC 6 is leading the standardization activities of Future Network in collaboration with ITU-T SG13.

X.500 standard has been designed to permit deployment of large directory databases distributed in many systems with a very efficient, flexible and reliable replication mechanism. It constitutes a very good solution for enterprise directory particularly if it is completed with LDAP protocol (Directory servers can be accessed with DAP or LDAP protocols) and requests can be chained between X.500 Directory servers and LDAP servers. Directory standard is continuously improved to be usable by emerging applications like tag-based or cloud computing. Public-key and attribute certificates which are also part of X.500 standard are now widely used for security in transactions and should be adapted for different environments with many interconnected devices (for example Smart Grid).

2.2 ACHIEVEMENTS

WG 1:

Publication:

- ISO/IEC 18092, NFCIP-1 Interface and protocol
- ISO/IEC 22536, NFCIP-1 RF interface test methods

Progression of revision DIS ballot:

- ISO/IEC DIS 24771, MAC/PHY standard for ad hoc wireless network to support QoS

Progression of CD ballot:

- ISO/IEC CD 15149-2, In-band Control Protocol for Wireless Power Transfer

Progression of revision CD ballot:

- ISO/IEC CD 29157, PHY/MAC specifications for short-range wireless low-rate applications

Progression of NP Ballot:

- ISO/IEC 18840, PHY and MAC protocol for ALAN (Acoustic Local Area Network) and Extended ALAN

WG 7:

Publication of Technical Report:

- ISO/IEC TR 29181-1, Future Networks: Problem Statement and Requirements - Part 1: Overall aspects
- ISO/IEC TR 20002, Managed peer-to-peer (P2P) framework

Progression of DTR Ballot:

- ⑩ ISO/IEC DTR 29181-3, Part 3: Switching and routing
- ⑩ ISO/IEC DTR 29181-4, Part 4: Mobility
- ⑩ ISO/IEC DTR 29181-6, Part 6: Media Transport
- ⑩ ISO/IEC DTR 29181-7, Part 7: Service Composition

Progression of PDTR Ballot:

- ⑩ ISO/IEC WD 29181-2, Part 2: Naming and Addressing
- ⑩ ISO/IEC WD 29181-5, Part 5: Security

Progression of CD Ballot:

- CD 17811-1, Device Control and Management – Architecture

Progression of Working Draft on Future Network Problem Statement and Requirements:

- ⑩ WD 17811-2, Protocol Specification for Device Control and Management
- ⑩ WD 17811-3, Protocol Specification for Reliable Message Delivery
- ⑩ WD 17821, Low Power Wireless Mesh Network over Channel-hopped TDMA Links (LPWMN-TDMA)

Progression of Preliminary Work Items:

- PWI - Functional Architecture and Protocols for Managed P2P communications
- PWI - Network Proxy Protocol for Sleep Mode Management of Nodes
- PWI - Distributed Mapping System (DMS)
- PWI - Knowledge Distribution Model and Protocols (KDMP)

Collaboration with Liaison Organizations:

- ⑩ ITU-T SG11 on Multicast and Managed P2P communications
- ⑩ ITU-T SG13 on Future Network
- ⑩ ITU-T SG17 on Security
- ⑩ ISO/IEC JTC1/SC29/WG11 on MMT
- ⑩ IEEE-SA on IEEE 1888

WG 10

Directory:

Achievement of Edition 7 of ISO/IEC 9594. This edition incorporates the technical corrigenda on Edition 6 and the three amendments:

- Amendment 1: Password Policy support
- Amendment 2: Communication enhancements
- Amendment 3: Directory IDM support

Edition 7 includes Password Policy, can use encoding rules other than Basic Encoding Rules (BER). The interworking with LDAP have been improved and the part 8 of the standard (Public-key and attribute certificates) have been adapted for Identity Management.

ASN.1:

- Preparation of new work items related to Octet Encoding Rules and new usages of object identifiers.

Registration:

- Development and publication of a number of Corrigenda. New Edition of ISO/IEC 9834-8 (Generation of Universally Unique Identifiers (UUIDs) and their use in object identifiers).

3. FOCUS DURING NEXT WORK PERIOD

3.1 DELIVERABLES

WG 1:

Progression of two revision

- FDIS ballot: ISO/IEC 24771, MAC/PHY standard for ad hoc wireless network to support QoS
- DIS ballot: ISO/IEC CD 29157, PHY/MAC specifications for short-range wireless low-rate applications

Progression of CD Ballot on Magnetic Field Area Network

- ISO/IEC CD 15149-1: Information technology -- Telecommunications and information exchange between systems -- Magnetic field area network (MFAN) -- Part 1: Air interface
- ISO/IEC CD 15149-2: Information technology -- Telecommunications and information exchange between systems -- Magnetic field area network (MFAN) -- Part 2: In-band Control Protocol for Wireless Power Transfer
- ISO/IEC CD 15149-3: Information technology -- Telecommunications and information exchange between systems -- Magnetic field area network (MFAN) -- Part 3: Relay Protocol for Extended Range
- ISO/IEC CD 15149-4: Information technology -- Telecommunications and information exchange between systems -- Magnetic field area network (MFAN) -- Part 4: Security Protocol for Authorization

WG 7:

Publication of relevant documents:

- ⑩ ISO/IEC DTR 29181-3, Part 3: Switching and routing
- ⑩ ISO/IEC DTR 29181-4, Part 4: Mobility
- ⑩ ISO/IEC DTR 29181-6, Part 6: Media Transport
- ⑩ ISO/IEC DTR 29181-7, Part 7: Service Composition

Progression of DTR Ballot:

- ⑩ ISO/IEC WD 29181-5, Part 5: Security

Progression of CD Ballot:

- WD 17811-2, Protocol Specification for Device Control and Management
- WD 17811-3, Protocol Specification for Reliable Message Delivery
- WD 17821, Low Power Wireless Mesh Network over Channel-hopped TDMA Links (LPWMN-TDMA)

Progression of Preliminary Work Items:

- PWI - Functional Architecture and Protocols for Managed P2P communications
- PWI - Network Proxy Protocol for Sleep Mode Management of Nodes
- PWI - Distributed Mapping System (DMS)

- PWI - Knowledge Distribution Model and Protocols (KDMP)
- WG 10:
-
- **Directory:**
- Maintenance of Edition 7 (2012): progression of technical corrigenda.
- Progression of two amendments:
 - • Amendment 1: Communications Support Enhancements: improvement of interworking between X.500 directory and LDAP servers.
 - • Amendment 2: IDM support: improvement of part 8 of the standard related to public-key and attribute certificates.
 - • Restructuration of several parts for the future Edition 8 to have part 8 only related to public key infrastructure (PKI) and privilege management infrastructure (PMI).
- **ASN.1:**
- Continue to assist other groups with use of ASN.1-related texts and use of object identifiers and respond to their needs.
- Resolution of current defects.
- Submission of new work items:
 - • Addition of a new part to ISO/IEC 8825 for Octet Encoding Rules (OER) which are used in Intelligent transportation protocols.
- **Registration:**
 - • Extension of the scope of ISO/IEC 9834-9 to include network sensors.
 - • New usage of object identifiers for resolution of heterogeneous identifiers and locators in network.

3.2 STRATEGIES

- ⑩ Develop strategy for efficient coordination with ITU-T and IETF on ASN.1 standards, Directory (LDAP) and publickey certificates to provide and efficient Directory services with interworking of X.500 servers and LDAP servers.
- ⑩ Ensure appropriate publicity for ASN.1 work as a structured data serialization format.
- ⑩ Development of emerging standards for network, transport and Future Network based on close collaboration with Liaison Organizations such as ITU-T SG11, SG13, SG17, ISO/IEC JTC1/SC29/WG11 on relevant standardization issues
- ⑩ Development of emerging standards for wireless power transfer based on close collaboration with Liaison Organizations such as IEC TC100 on relevant standardization issues

3.3 OPPORTUNITIES

- ⑩ Continuing opportunities of deployment of the NFC technologies in the market.
- ⑩ Improve Directory standard by addition of new features if necessary to support new communication protocols and usage by new applications (NGN directory, tag-based applications, cloud computing).
- ⑩ Support of new communications protocols and improvement of security.
- ⑩ Restructure ISO/IEC 9594-8 into a reference document for public key infrastructure and privilege management infrastructure.
- ⑩ Liaise with those involved in new technologies and approaches to ensure that the importance of ASN.1 to their work is fully recognised.
- ⑩ Continuing opportunities of deployment of the emerging networking technologies including Future Network, managed P2P and sensor network for the future enhanced services and applications
- ⑩ Continuing opportunities of deployment of the WPT technologies in the market.

4. WORKING GROUP PROJECTS

Table 1. SC 6/WG 1 Standards Summary

Category	Acr/No	Description	Notes
Winning Standards	ISDN Connector (ISO/IEC 8877)	Pin assignment for ISDN connector	- Developed in collaboration with ITU- T
	CSMA/CD LAN (ISO/IEC 8802-3)	CSMA/CD MAC and PHY Layer Definition	- Widely deployed for LAN protocol over 50 million accesses
	Wireless LAN (ISO/IEC 8802-11)	Wireless MAC control method and physical layer	- Used worldwide for nomadic LAN - Enhancement underway for better performance
	MAC Bridge (ISO/IEC 15802-3)	Medium Access Control sublayer Bridge specification	- It is used extensively to interconnect various LANs - it provides transparent connectivity spanning the network
	NFC (ISO/IEC 18092 & 21481)	Near Field Communication Interface and Protocols	- Contactless near field communication within 20 Centimeters with data rate up to 400 Kbps for mobile phones - Remarkable market success - Developed in collaboration with Ecma International
Niche Standards	Picocast (ISO/IEC 29157)	PHY/MAC specifications for short-range wireless low-rate applications in ISM band	- This standard specifies PHY/MAC protocols for short-range wireless low-rate applications in ISM band - The communication range of Picocast systems covers 10 m for the application areas of Audio broadcasting. - The system does not provide full mesh network capabilities.
	In-band Control for Wireless Power Transfer (ISO/IEC 15149-2)	In-band Control Protocol for Wireless Power Transfer	PHY and MAC Layer Protocol of In-band Control Protocol for Wireless Power Transfer based on Magnetic Field Area Network.

	MFAN (ISO/IEC 15148-1)	PHY/MAC Layer Definition for Magnetic Field Communication	PHY and MAC Layer Protocol for wireless communication in harsh environments using Magnetic Field.
Future Standards	High Rate Ultra Wideband (ISO/IEC 26907)	High Rate Ultra Wideband for Multimedia Services within 10 m range	

Table 3. SC 6/WG 7 Standards Summary

Category	Acr. / No.	Description	Notes
Winning Standards	8208	X.25 Packet Layer for DTE	Mature standard, very large worldwide installed base. New technologies now have the major share of new communications infrastructure, but X.25 base will remain large for many years and require some maintenance.
	TR9577 8348AnnA	Protocol Identifiers NSAP addressing	Global enablers for the multi-protocol environment. ITU-T, Frame Relay Forum and ATM Forum are among the organisations that look to SC6 documents to assure worldwide interoperation.
	10589 10747	IS-IS routing protocols, intra-domain and inter-domain	Both protocols are widely used in Internet and Intranet environments, in the form of internet IS-IS routing and BGP4 respectively, such use appears likely to increase.
Niche Standards	8073	Connection-mode Transport Protocol	Widely deployed in specific ITU-T applications, including TMN
	CONS	Connection-mode Network Protocols	Deployed in OSI networking systems and in ITU-T applications.
	CLNP	Connectionless-mode Network Protocols	Deployed in OSI networking systems and in ITU-T applications.
Future Trends	13236 13243	QoS Framework QoS Methods and mechanisms	Trial for providing high level descriptions and solutions to consider Quality of service issues in

and Directions			OSI networking services and applications
	13252 14476	Enhanced communications transport Service definition and Protocol specifications for one-to-many, many-to-one and many-to-many data transport	These enhancements are required for new high-speed, multicast and multimedia applications, and particularly enhanced end to end Quality of Service over IP multicast network environments (for example to enable ISPs to offer differentiated service levels to subscribers and thus expand their market offerings and revenue opportunities).
	16513	Group management protocol	Provide group membership management services for multicast communication protocols
	16512	Relayed Multi-Cast Protocol	End-to-end overlay multicast communication protocols that may be used over current IP network where IP multicast is not fully deployed.
	24792	Multicast Session Management Protocol	It is an application-layer control protocol for managing the quality of service for a group communication
	24793	Mobile Multicast Communication	Provide one-to-many multicast services and applications over mobile communications networks
	29180	Security framework for sensor networks	It describes the security threats and security requirements of the ubiquitous sensor network, and categorizes the security technologies according to the security functions that satisfy the requirements and where the security technologies are applied in the security model of the ubiquitous sensor network. Also, The security functional requirements and security technologies for the ubiquitous sensor networks are presented.

	29181	Future Network: Problem statement and requirements	The Future Network (FN), which is anticipated to provide functionalities and services beyond the limitations of current networking technology, has been studied by researchers in the field of communication network and services worldwide. FN technologies have now been widely and deeply studied in many research organizations and standardization bodies. It consists of seven detail documents that cover various aspects of Future Network.
	20002	Managed P2P - Framework	Peer-to-Peer (P2P) is distributed network architecture composed of participants (peer) sharing resources without intervention from the central coordination instances. This technical report does not define new P2P protocol or P2P-based application. This technical report does not define manageability feature for interoperation with conventional P2P-based application. The goal of this technical report is to define a framework to provide manageability to the conventional P2P-based application.

Table 4. SC 6/WG 10 Standards Summary

Category	Acr. / No.	Description	Notes
Winning Standards	9594	Directory (X.500)	<ul style="list-style-type: none"> - Directory standard is used by major suppliers of directory services. It is also used, as foundation for LDAP, by many services in the Internet. X.500 directory servers and LDAP servers can now be parts of a same directory system. - X.509 public key certificates are used extensively to secure transactions in e-commerce and can be adapted for other environments. - X.509 attribute certificates are used in Privilege

			Management Infrastructure (PMI) and in telebiometrics applications.
	8824 8825	ASN.1	Standardized notation and Encoding Rules used for a large number of protocols and file formats.
	9834	Registration of International Object Identifiers	93,000 Object Identifiers registered on the associated Web Site, probably twice that many actually allocated.
	24824	Generic Applications of ASN.1.	Efficient binary encoding of XML documents (Fast Infoset), binary encoding of SOAP wrappers (Fast Web Services), application of integrity and encryption to Fast Infoset (Fast Infoset Security).
Future Trends and Directions	29168	OID Resolution System	Provision for the resolution of any object identifier to information about it, by the use of either the numeric form of arcs or more general Unicode labels, including long arcs. ISO/IEC 10646 character, with associated representation in protocols using object identifiers.

Table 5. SC 6 Standards Summary

Category	Acr. / No.	Description	Notes
Winning Standards	10021	Messaging (X.400)	Deployed in enterprise EMAIL systems