
ISO/IEC JTC 1 "Information technology"

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SC 32 Business Plan 2020

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Description

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BUSINESS PLAN FOR JTC 1/SC 32: 2019-2020

PERIOD COVERED:

July 2019 through August 2020 with Chairman's remarks and Achievements to August 2020

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EXECUTIVE SUMMARY

Each WG establishes work program priorities in its project plan, which is approved in the SC 32 Plenary. These can be seen in the material below. For example, high priority is given to the standardization of an integrated/interoperable information processing environment.

The SC has established a priority of educating each working group about the work and ideas of the other working groups. Previous SC 32 meetings have shown that there is considerable interest in the synergy that can be developed within the subcommittee. The next in person SC 32 plenary meeting will again include tutorials from each work group to facilitate and encourage awareness, communication, and collaboration among the four working groups.

Working Group 6 was formed to address JTC 1 request to take on the work for JTC 1 AG9 data usage work. There first meeting will be held on 24 September, 2020.

1. CHAIRMAN'S REMARKS

SC 32 participants continue to progress a wide range of projects, as shown below. These projects range from revisions of standards for relatively mature technologies to new standards for emerging technologies. Participants include major vendors, academics, and users, including government agencies. Contributions are received from North America, Asia, Australia, and Europe—a resource that is beneficial to the quantity and quality of the standards. These strengths stand against substantial risks of shifting priorities and support within participating organizations, as well as competition from other standards development organizations.

SC 32/WG 1 continues to advance its e-Business standards development work, and its focus remains the Business Operational View (BOV) aspects of ISO/IEC 14662, Open-edition Reference Model. The BOV standards development work of SC 32/WG 1 (specified in the multiple parts of ISO/IEC 15944) addresses operational aspects of Open-edition for implementation, registration of scenarios and scenario components as business objects, accounting and economic ontology, identification of external constraints of jurisdictional domains on business transactions (including privacy protection requirements), coded domains, and traceability framework. The BOV standards not only address the legal requirements for e-Business, but also facilitate the IT-enablement of business standards.

These BOV standards also serve as the basis for the high-level Memorandum of Understanding (MOU) concerning standardization in the field of electronic business signed between ISO, IEC, ITU, and UN/ECE, with full participation of international user groups.

The WG is still preparing an introduction to its standards and projects for consumption by other standardizers.

SC 32/WG 2 Substantial efforts were made to align these standards within SC 32 and between WG 2 and OMG, W3C, and OASIS through a series of liaison and informal meetings.

WG 2 plans for 2020–2021 include further development and publication of new parts of ISO/IEC TR 19583, Concepts and usage of metadata, to provide an SQL implementation of ISO/IEC 11179-3, and to provide a sort of tutorial Technical Report explaining the various processes defined by ISO/IEC 19763. WG 2 has begun work on a newly-approved work item to develop a new standard for ontologies, ISO/IEC 21838 series. The Working Group is working on standards for data provenance metadata, which have been identified as key standards in support of Big Data. WG 2 will also continue to watch developments in the areas of data security and data privacy to determine if metadata describing security and privacy settings for Big Data are needed.

SC 32/WG 3 continues to work on the anticipated next generation of the SQL standard using the pseudonym “SQL:2020”. It continues to monitor the ever-changing state of the database industry to identify additional capabilities suitable for standardization.

WG 3 is considering work in new areas such as approximate queries, BASE transactions, SQL for streaming data, and property graph data. WG 3 is working towards progressing its project for a standalone Graph Query Language (GQL) (multi-part) standard ISO/IEC 39075.

SC 32/WG 6, Working Group 6 was formed to address JTC 1’s request to take on the work for JTC 1 AG 9 data usage work. Their first kick-off meeting will be held in September, 2020. WG 6 will start the work of the 2 projects assigned to them on data usage terminology and use cases and guidance for data usage.

JTC 1/SC 32 STATEMENT OF SCOPE

Title: Data Management and Interchange

Area of Work: Standards for data management within and among local and distributed information systems environments. SC 32 provides enabling technologies to promote harmonization of data management facilities across sector-specific areas. Specifically, SC 32 standards include:

- a. reference models and frameworks for the coordination of existing and emerging standards;
- b. definition of data domains, data types, and data structures, and their associated semantics;
- c. languages, services, and protocols for persistent storage, concurrent access, concurrent update, and interchange of data;
- d. methods, languages, services, and protocols to structure, organize, and register metadata and other information resources associated with sharing and interoperability, including electronic commerce.

2. EXISTING WORK AND ACHIEVEMENTS

Achievements (since the last report)

The following projects have completed and been published or are in Stage 60 – Publication Stage:

ISO/IEC TR 19075-8:2019	Information technology database languages — SQL technical reports — Part 8: Multi-dimensional arrays (SQL/MDA)
ISO/IEC 11179-7:2019	Information technology — Metadata registries (MDR) — Part 7: Metamodel for data set registration
ISO/IEC TR 19583-1:2019	Information technology — Concepts and usage of metadata — Part 1: Metadata concepts
ISO/IEC TR 19583-23:2020	Information technology — Concepts and usage of metadata — Part 23: Data element exchange (DEX) for a subset of ISO/IEC 11179-3
ISO/IEC 15944-12:2020	Information technology — Business operational view — Part 12: Privacy protection requirements (PPR) on information life cycle management (ILCM) and EDI of personal

	information (PI)
ISO/IEC TS 11179-30:2019	Information technology — Metadata registries (MDR) — Part 30: Basic attributes of metadata
ISO/IEC 9075-2:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 2: Foundation (SQL/Foundation) — Technical Corrigendum 1
ISO/IEC 9075-4:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 4: Persistent stored modules (SQL/PSM) — Technical Corrigendum 1
ISO/IEC 9075-9:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 9: Management of External Data (SQL/MED) — Technical Corrigendum 1
ISO/IEC 9075-11:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 11: Information and definition schemas (SQL/Schemata) — Technical Corrigendum 1
ISO/IEC 9075-13:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 13: SQL Routines and types using the Java TM programming language (SQL/JRT) — Technical Corrigendum 1
ISO/IEC 9075-14:2016/Cor 1:2019	Information technology — Database languages — SQL — Part 14: XML-Related Specifications (SQL/XML) — Technical Corrigendum 1

† Pending publication by ISO/CS

The following projects are progressing in Stage 40 – Enquiry Stage, and have been approved for registration as FDIS or publication:

The following projects are progressing in Stage 30 – Committee Stage (CD/PDTR/PDTS):

ISO/IEC CD 15944-16	Information technology — Business operational view — Part 16: Consolidated set of the rules and guidelines identified in ISO/IEC 15944 Business Operational View standards and their IT-enablement
ISO/IEC CD 15944-17	Information technology — Business operational view — Part 17: Fundamental principles and rules governing Privacy-by-Design (PbD) requirements in EDI and collaboration space context
ISO/IEC CD 15944-18	Information technology — Business operational view — Part 18: Common principles for identification and rules for use of identifiers in business transaction
ISO/IEC CD 15944-19	Information technology — Business operational view — Part 19: Open-edi, jurisdictional domains, and cross-border data flows (CBDF)
ISO/IEC CD 15944-21	Information technology — Business operational view — Part 21: Application of Open-

	edi business transaction ontology in Distributed Business Transaction Repositories
ISO/IEC CD 19763-16	Information technology — Metamodel framework for interoperability (MFI) — Part 16: Metamodel for document model registration
ISO/IEC CD 11179-1	Information technology — Metadata registries (MDR) — Part 1: Framework
ISO/IEC CD 11179-3	Information technology — Metadata registries (MDR) — Part 3: Metamodel for registry common facilities
ISO/IEC CD 11179-31	Information technology — Metadata registries (MDR) — Part 31: Metamodel for data specification registration
ISO/IEC CD 11179-32	Information technology — Metadata registries (MDR) — Part 32: Metamodel for concept system registration
ISO/IEC CD TR 19583-21.2	Information technology — Concepts and usage of metadata — Part 21: 11179-3 Data model in SQL

3. FUTURE WORK AND DELIVERABLES

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4. RISKS AND ISSUES

Each of the Working Groups within SC 32 sets its own priorities and strategies for achieving objectives. This approach has led to increasing progress in identifying and establishing critical inter-group understanding and liaisons. Considerable effort is being given to reduce the risk of work becoming isolated within a WG. For example, at every SC 32 open plenary meeting, each WG conducts a tutorial presentation on its work to the full subcommittee. However due to the resent challenge of meeting physical the tutorials has not happen as planned. Once physical meetings are allowed, the tutorials will be held again.

There is always some risk that major vendors may wish to re-focus their efforts within national bodies or other standards groups, with the intention to progress the resulting standards through JTC 1 as Fast Track or PAS submissions. Happily, we have not seen any efforts to do so recently. There exists some risk that proponents of particular technologies may prefer that they be developed in an open source community and eschew formal standardization. To minimize this risk, SC 32's WGs have been working more closely with open source communities. There is a possibility that major standards such as SQL could be declared as mature and not require substantial additional effort within SC 32. There is also a possibility that major participant groups within any of the WGs may drop participation for financial, programmatic, product, or other reasons, thus damaging the viability of the WG and/or SC 32.

There is always the risk that new projects are initiated without clear objectives and concrete specifications. If this loss of focus occurs, SC 32 risks dilution of its effectiveness and thus could create incentives to produce important standards outside of SC 32 and JTC 1. Overlapping project scopes is an area that needs to be continually monitored and controlled. Changes in market requirements may cause some perturbation in the work schedules. Therefore, rapid development of new standards, as well as producing new editions of existing standards, is a crucial factor in future success.

If SC 32 does not pursue its work aggressively, risks exist that essential capabilities will not be available in the marketplace to support important functions, or that the marketplace will produce multiple incompatible solutions in areas where common approaches and interoperability are essential to users.

The delegation of authority and responsibility to the WGs stands in contrast to the working of some other JTC 1 Subcommittees. This management style limits discussion time in plenary meetings, so there is a risk of missing some viewpoints that might be expressed in longer plenary meetings. Other standards bodies are very active in areas related to SC 32 standards. SC 32 must be nimble to maintain its relevance and leadership.

5. OPPORTUNITIES

The Internet, cloud computing, semi-structured and unstructured data use, electronic commerce, semantic computing, the semantic web, object technologies, data privacy, XML, JSON, advanced analytics, and Big Data all represent major areas of opportunity where market forces are creating demand for SC 32 standards. SC 32 continues to work with others involved to identify specific standardization needs and respond with current and newly proposed projects. Graph databases and graph query languages are becoming widely used technologies and are ripe for standardization.

The topics of next generation analytics and big data appear frequently both in computing industry and more general news reports. SC 32 initiated a study group in these areas and delivered a preliminary report to JTC 1 that identified existing SC 32 standards that support these technologies and opportunities for enhancing work in these areas. SC 32 remains in close cooperation with SC 42/WG 6.