



IoTセキュリティ標準化の動向を知る

2024.11.15

一般社団法人 情報処理学会
情報規格調査会 委員長
河合 和哉

ISO/IEC JTC 1 とは

- ISOとIECの範囲重複のため、情報技術分野の標準化を **JTC 1**として1987年に独立.

International Organization
for Standardization



(172ヶ国)

International Electrotechnical
Commission



(89ヶ国)

International
Telecommunication Union



(194ヶ国)

その他

電気・電子

電気通信

Joint Technical Committee 1



INFORMATION TECHNOLOGY STANDARDS

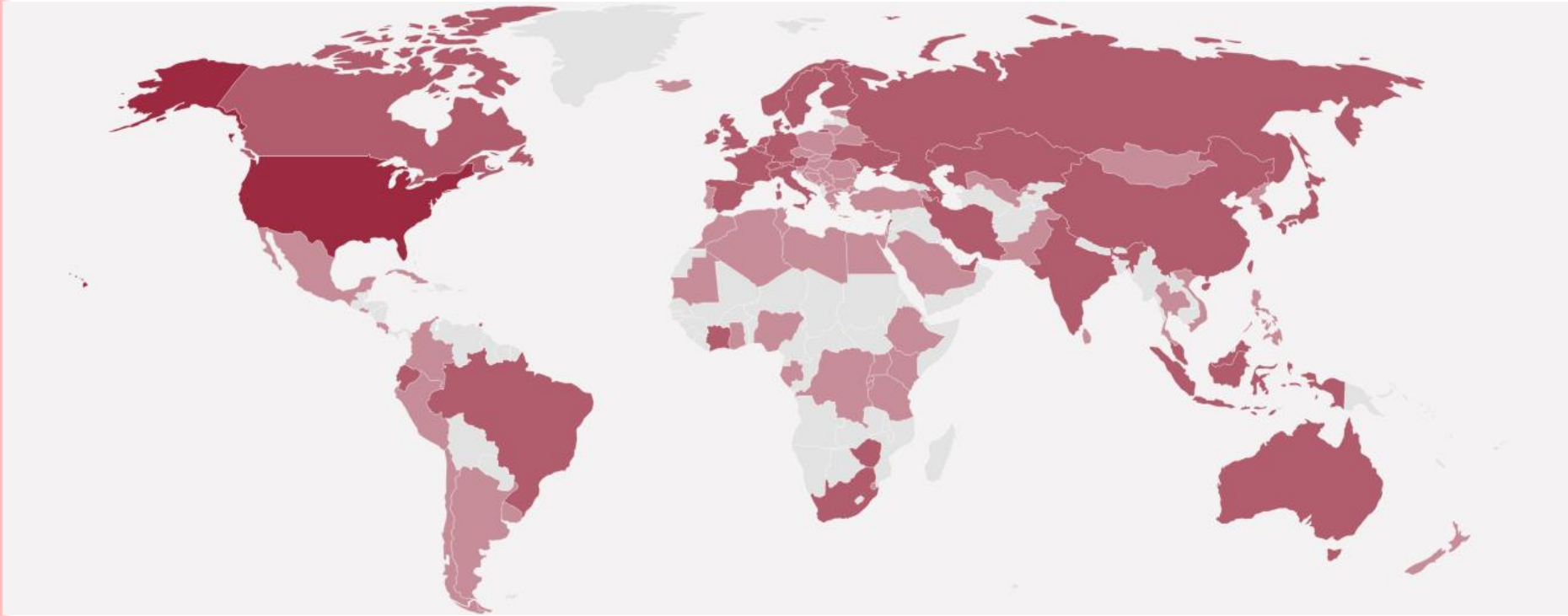
情報技術

- 議長 : 米国
- 幹事国 : 米国 (ANSI)
- **Participating Countries (P-Member) : 41ヶ国**
- **Observing Countries (O-Member) : 62ヶ国**

(2024.11.11 現在)

ISO/IEC JTC 1

情報技術

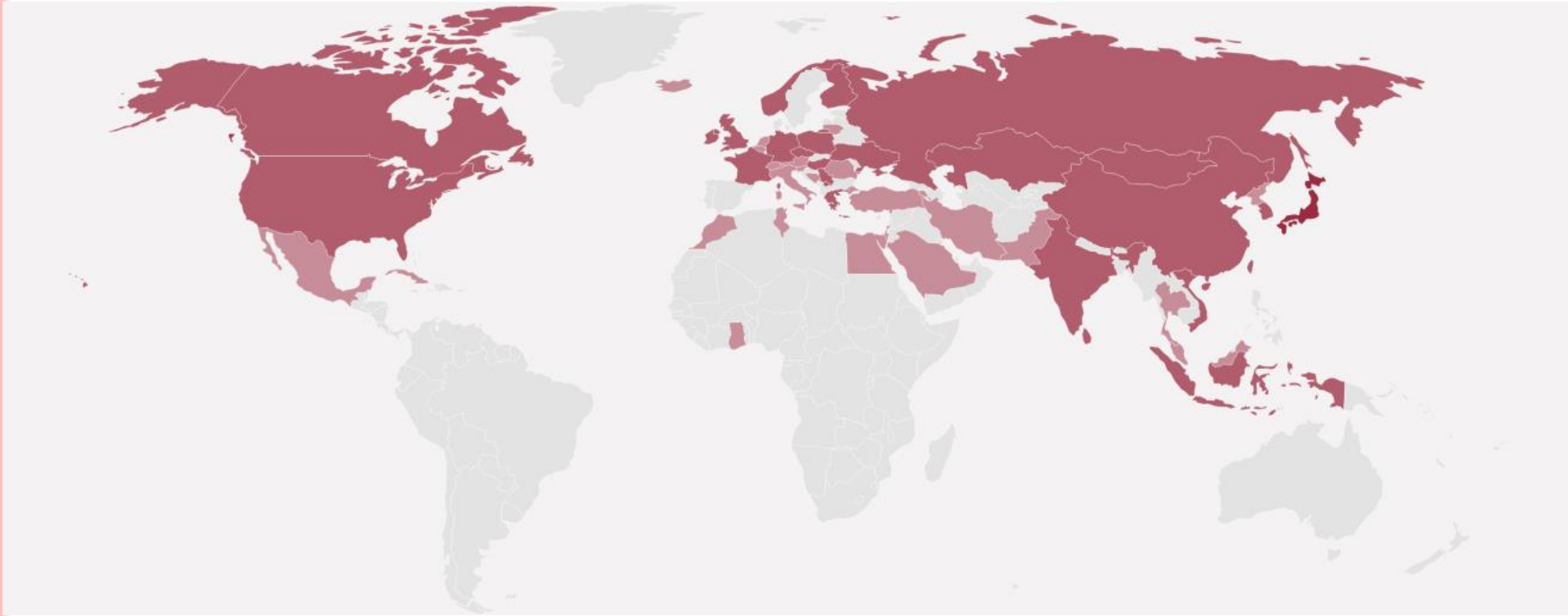


Creation : 1987

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 41
- Observing Countries (O-Member) : 62

ISO/IEC JTC 1/SC 2

符号化文字集合

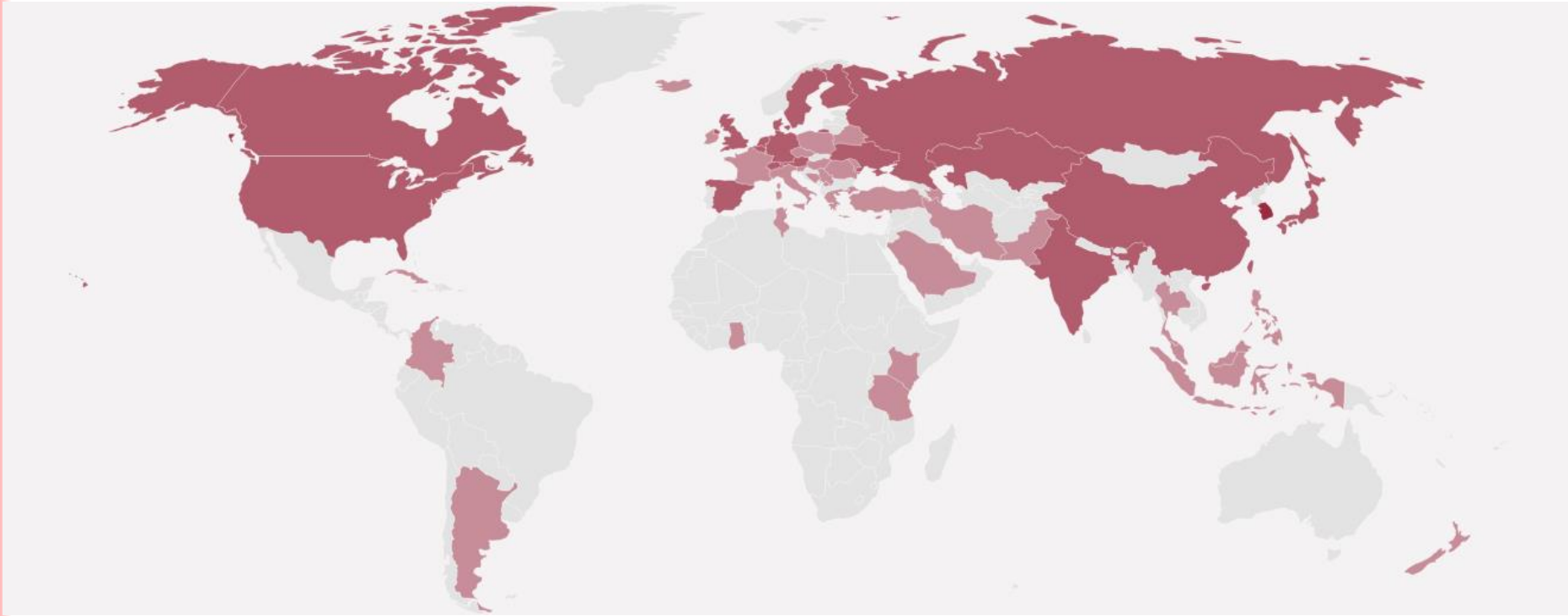


Creation : 1987

- **Secretariat : JISC (JPN)**
- **Participating Countries (P-Member) : 24**
- **Observing Countries (O-Member) : 26**

ISO/IEC JTC 1/SC 6

通信とシステム間の情報交換

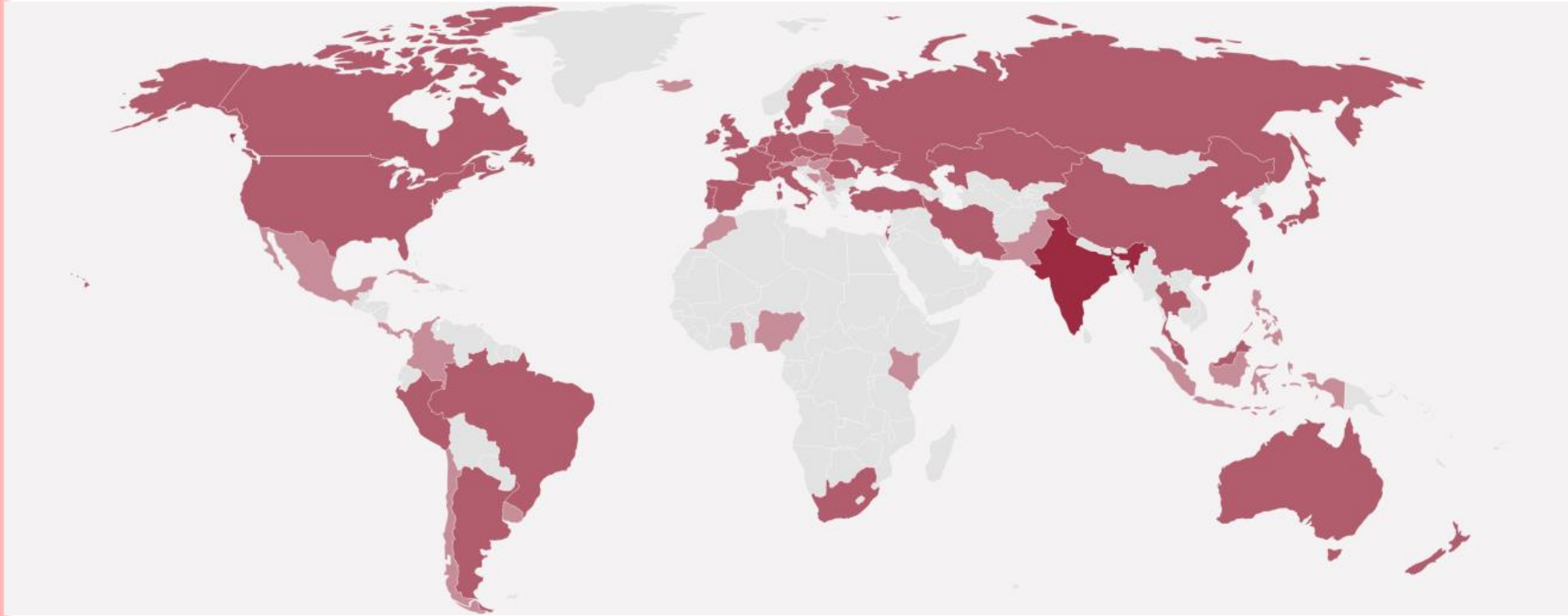


Creation : 1988

- Secretariat : KATS (KOR)
- Participating Countries (P-Member) : 19
- Observing Countries (O-Member) : 36

ISO/IEC JTC 1/SC 7

ソフトウェア及びシステム技術

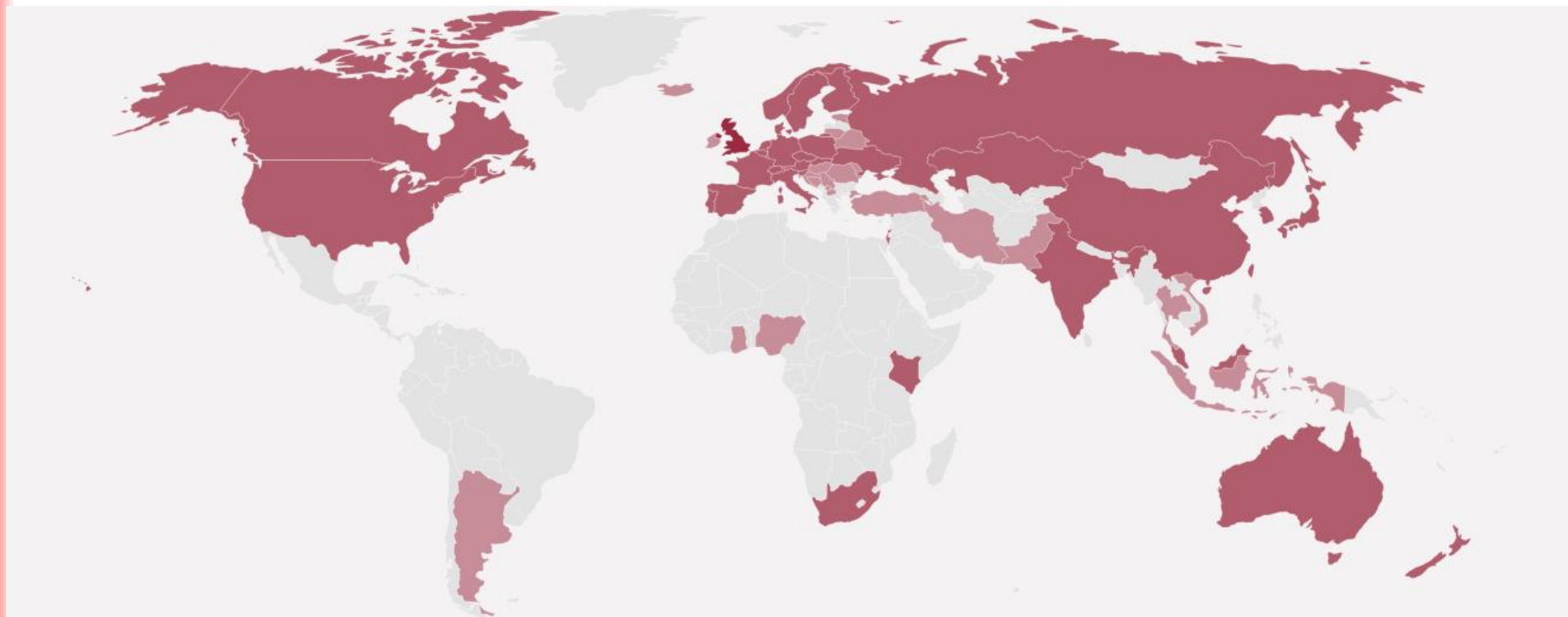


Creation : 1987

- Secretariat : BIS (IND)
- Participating Countries (P-Member) : **38**
- Observing Countries (O-Member) : 23

ISO/IEC JTC 1/SC 17

カード及び個人識別のためのセキュリティデバイス

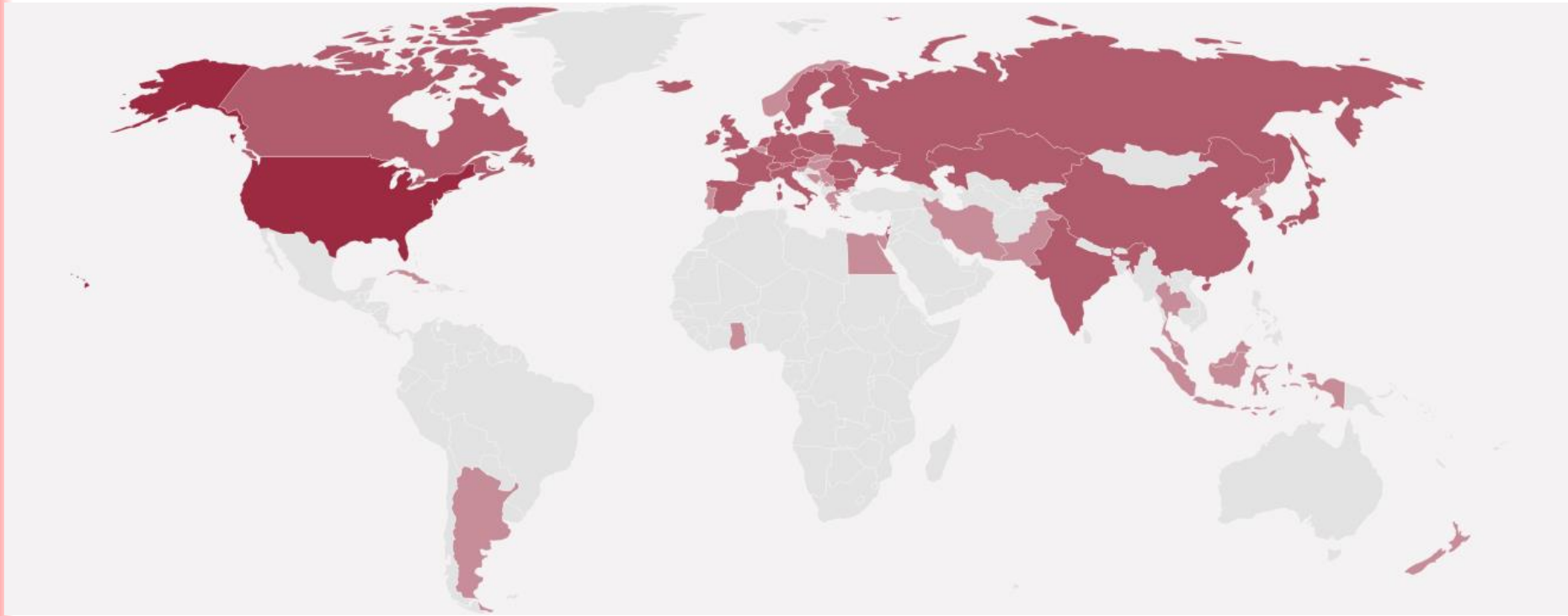


Creation : 1987

- Secretariat : BSI (GBR)
- Participating Countries (P-Member) : 35
- Observing Countries (O-Member) : 23

ISO/IEC JTC 1/SC 22

プログラム言語,その環境及びシステムソフトウェア インターフェース

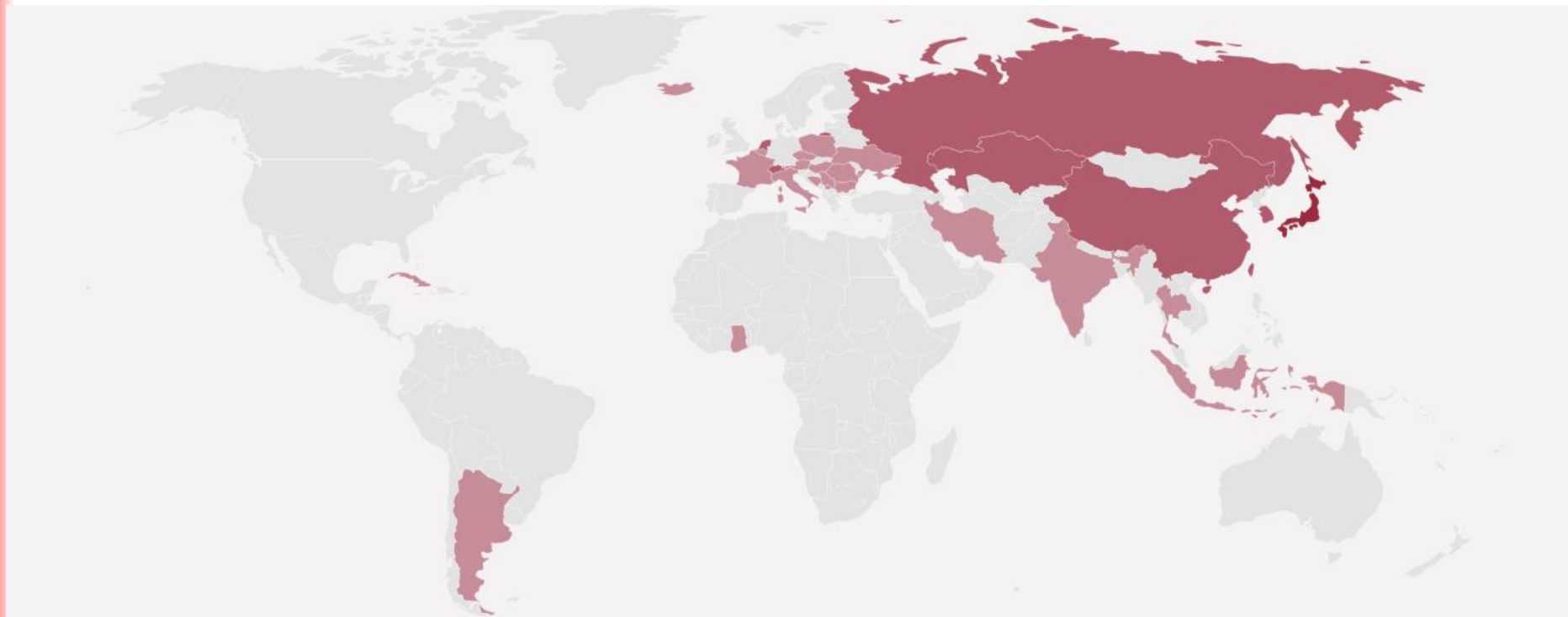


Creation : 1987

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 27
- Observing Countries (O-Member) : 20

ISO/IEC JTC 1/SC 23

情報交換及び保存用デジタル記録再生媒体

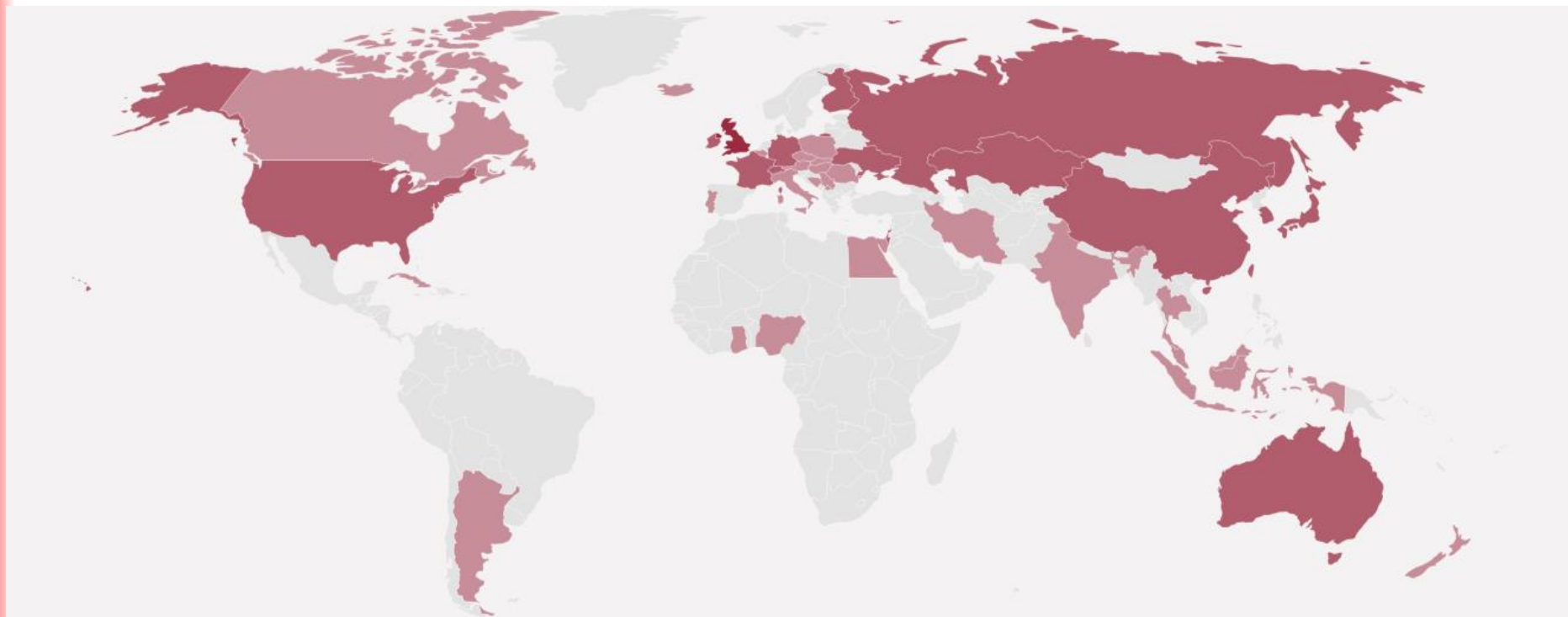


Creation : 1987

- **Secretariat : JISC (JPN)**
- **Participating Countries (P-Member) : 7**
- **Observing Countries (O-Member) : 20**

ISO/IEC JTC 1/SC 24

コンピュータ グラフィックス，画像処理及び環境データ表現

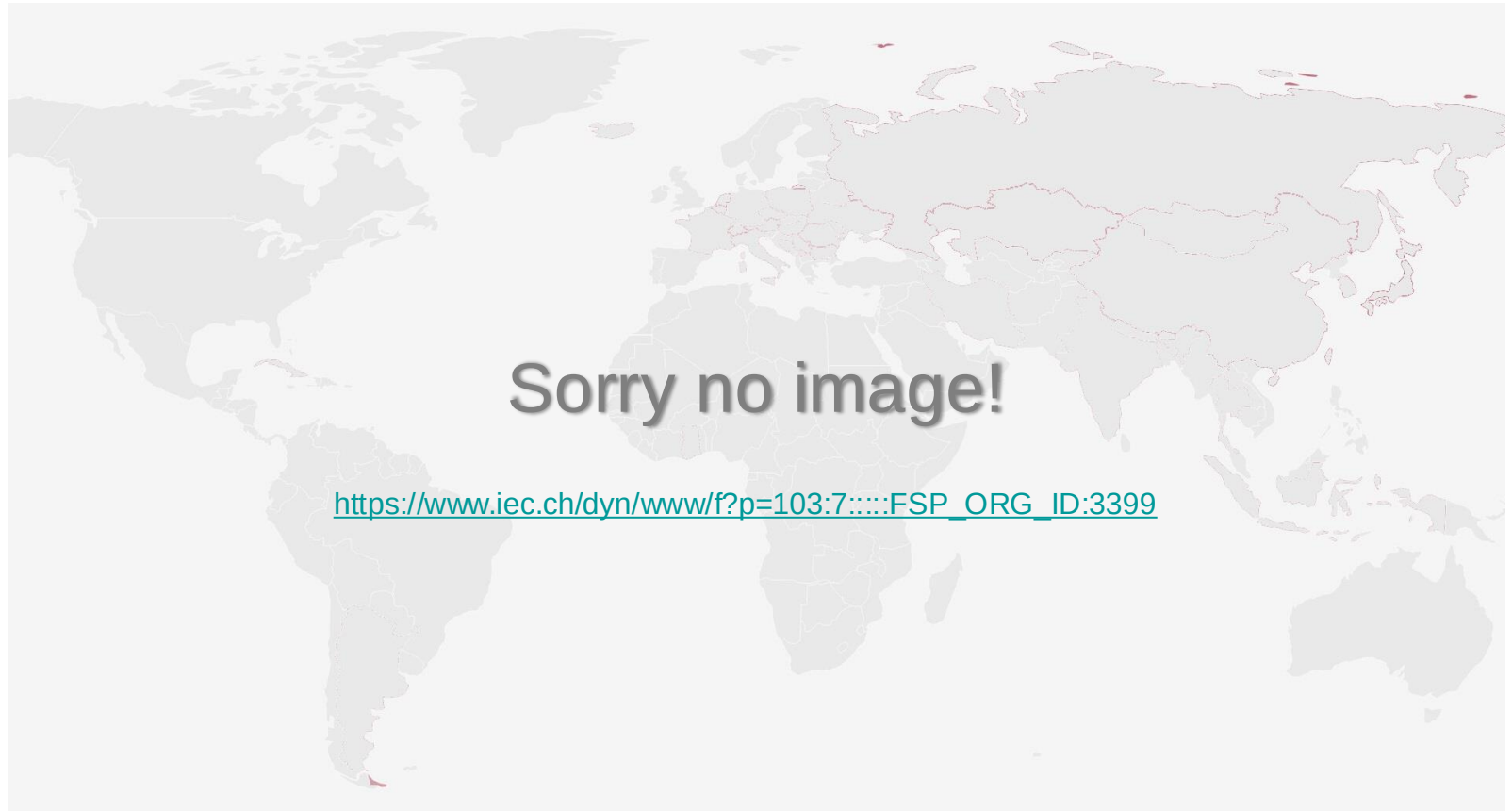


Creation : 1987

- Secretariat : BSI (GBR)
- Participating Countries (P-Member) : 15
- Observing Countries (O-Member) : 24

ISO/IEC JTC 1/SC 25

情報機器間の相互接続

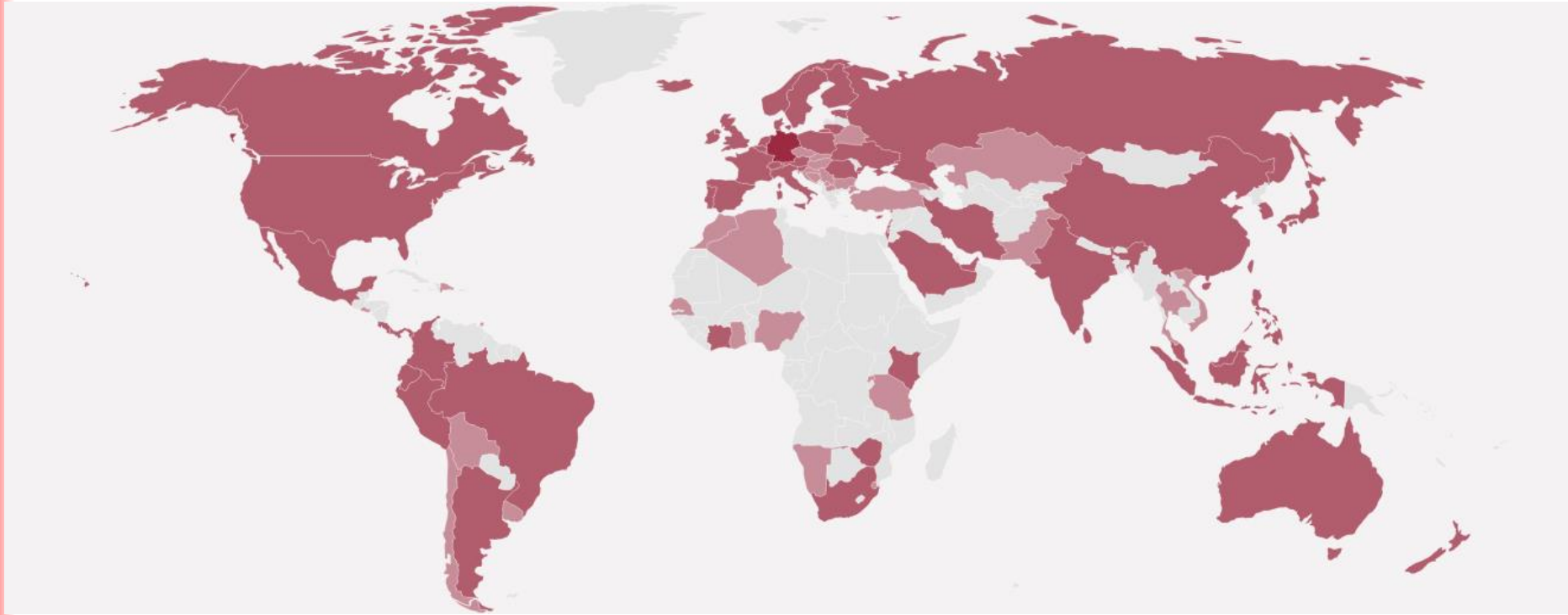


Creation : 1990

- • Secretariat : DIN (DEU)
- • Participating Countries (P-Member) : 29
- • Observing Countries (O-Member) : 18

ISO/IEC JTC 1/SC 27

情報セキュリティ，サイバーセキュリティとプライバシー保護

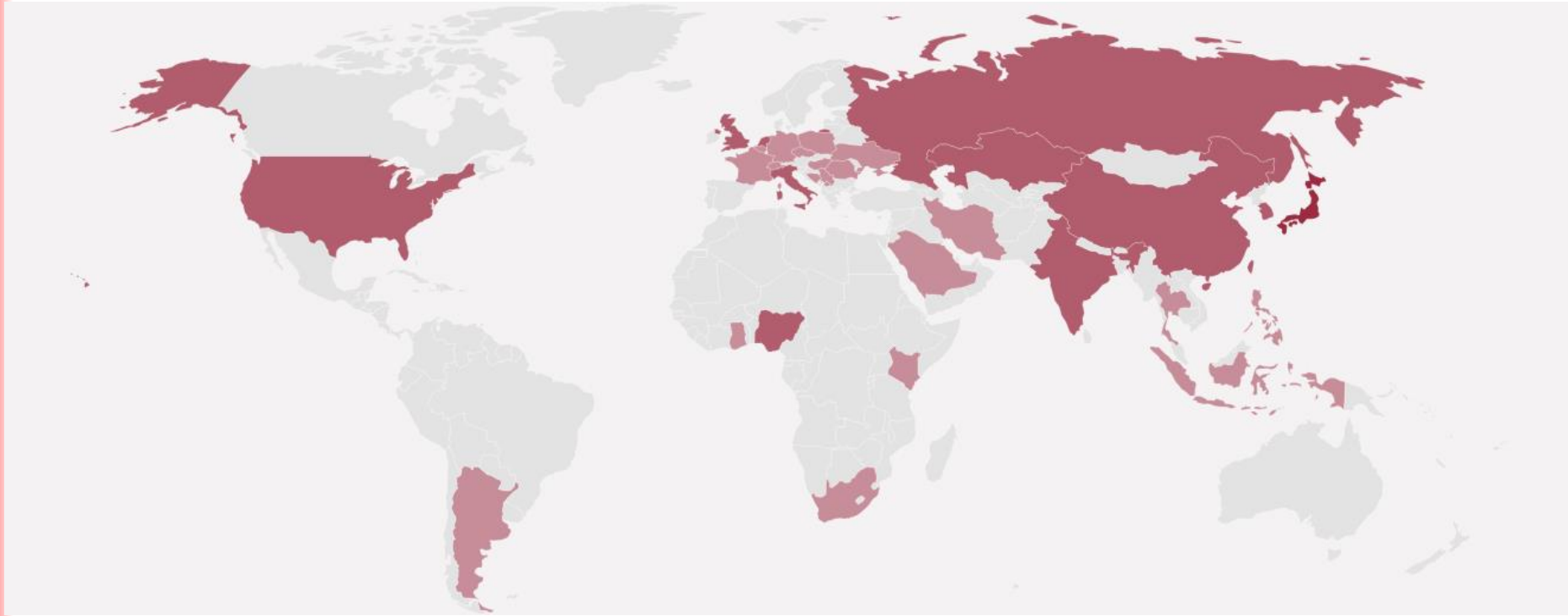


Creation : 1989

- Secretariat : DIN (DEU)
- Participating Countries (P-Member) : 54
- Observing Countries (O-Member) : 36

ISO/IEC JTC 1/SC 28

オフィス機器

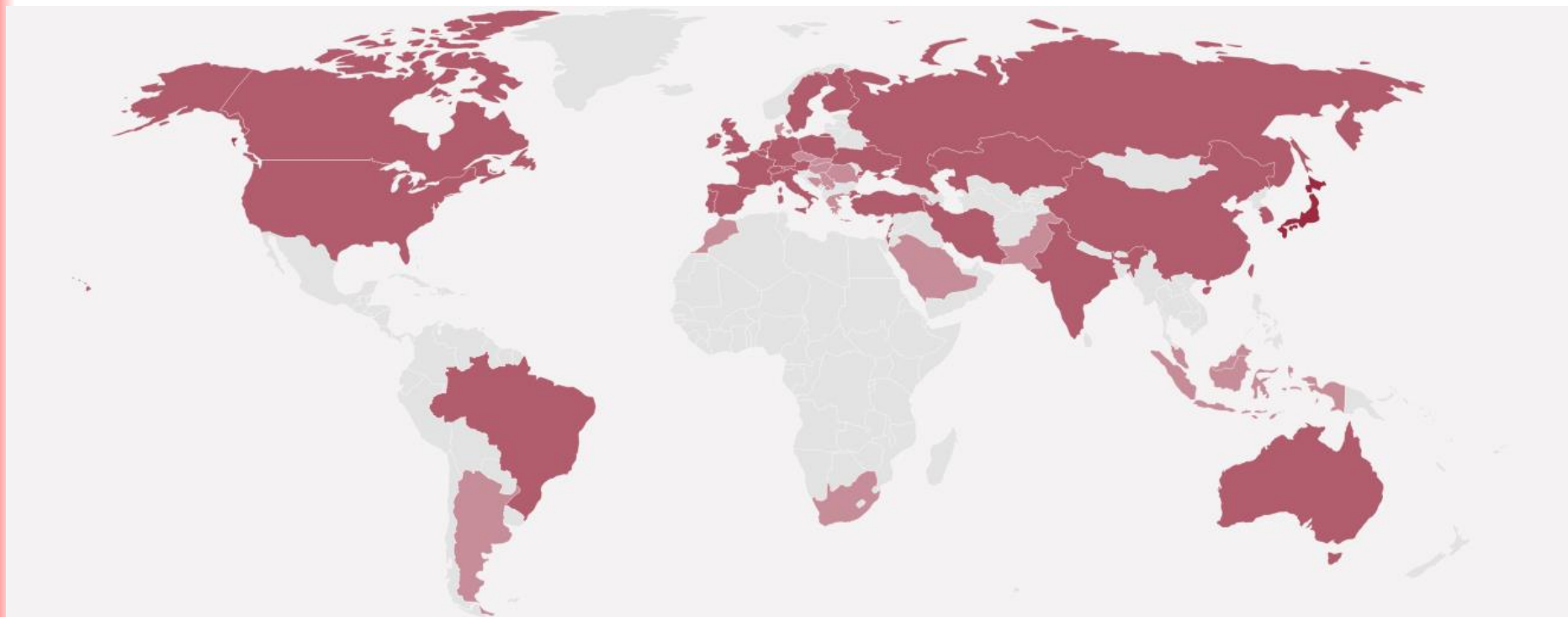


Creation : 1990

- • **Secretariat : JISC (JPN)**
- • **Participating Countries (P-Member) : 11**
- • **Observing Countries (O-Member) : 20**

ISO/IEC JTC 1/SC 29

音声，画像，マルチメディア，ハイパーメディア情報符号化

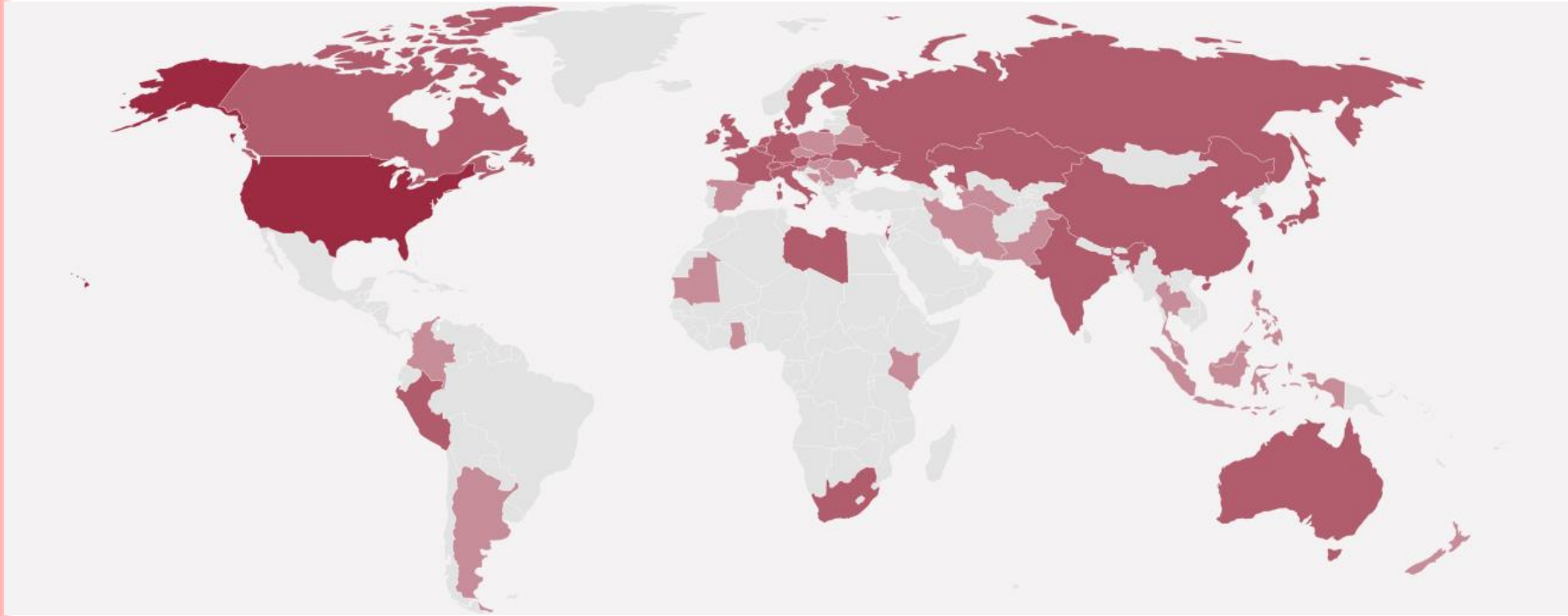


Creation : 1991

- **Secretariat : JISC (JPN)**
- **Participating Countries (P-Member) : 31**
- **Observing Countries (O-Member) : 17**

ISO/IEC JTC 1/SC 31

自動認識及びデータ取得技術

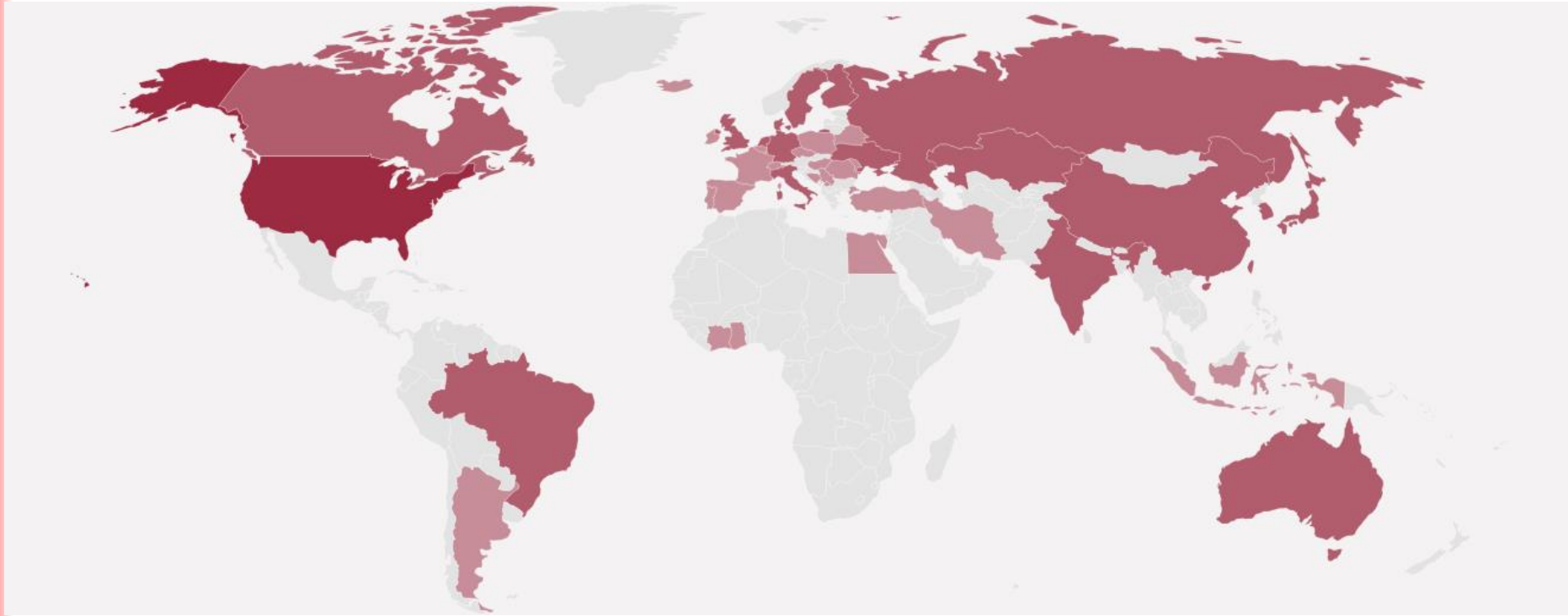


Creation : 1996

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 28
- Observing Countries (O-Member) : 23

ISO/IEC JTC 1/SC 32

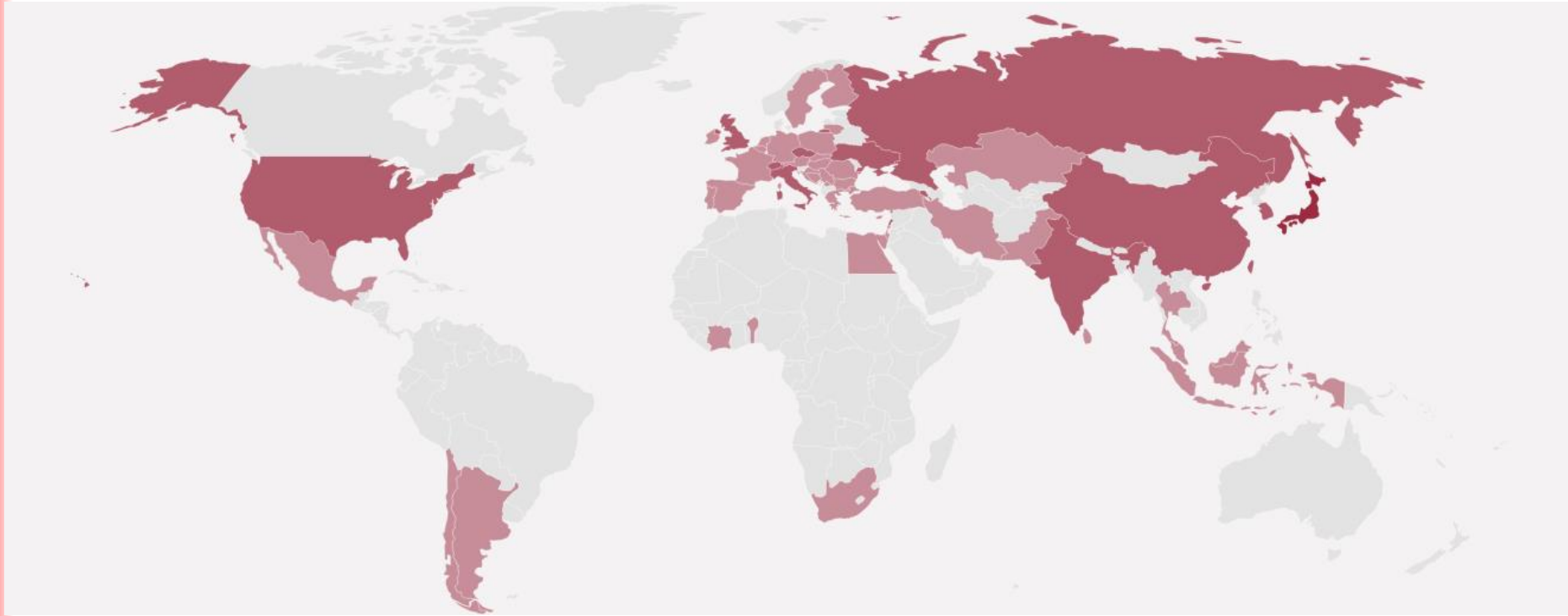
データ管理及び交換



Creation : 1997

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 18
- Observing Countries (O-Member) : 24

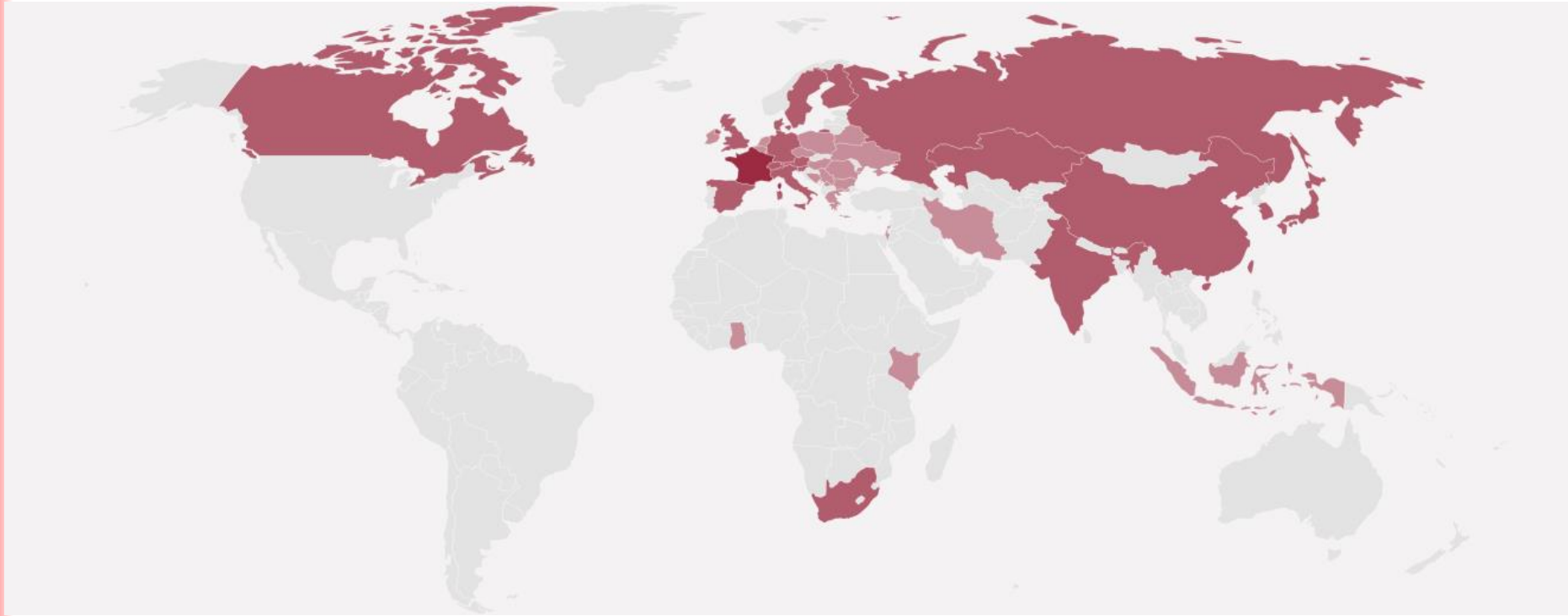
ISO/IEC JTC 1/SC 34



- • **Secretariat : JISC (JPN)**
- • **Participating Countries (P-Member) : 13**
- • **Observing Countries (O-Member) : 39**

ISO/IEC JTC 1/SC 35

ユーザインターフェース

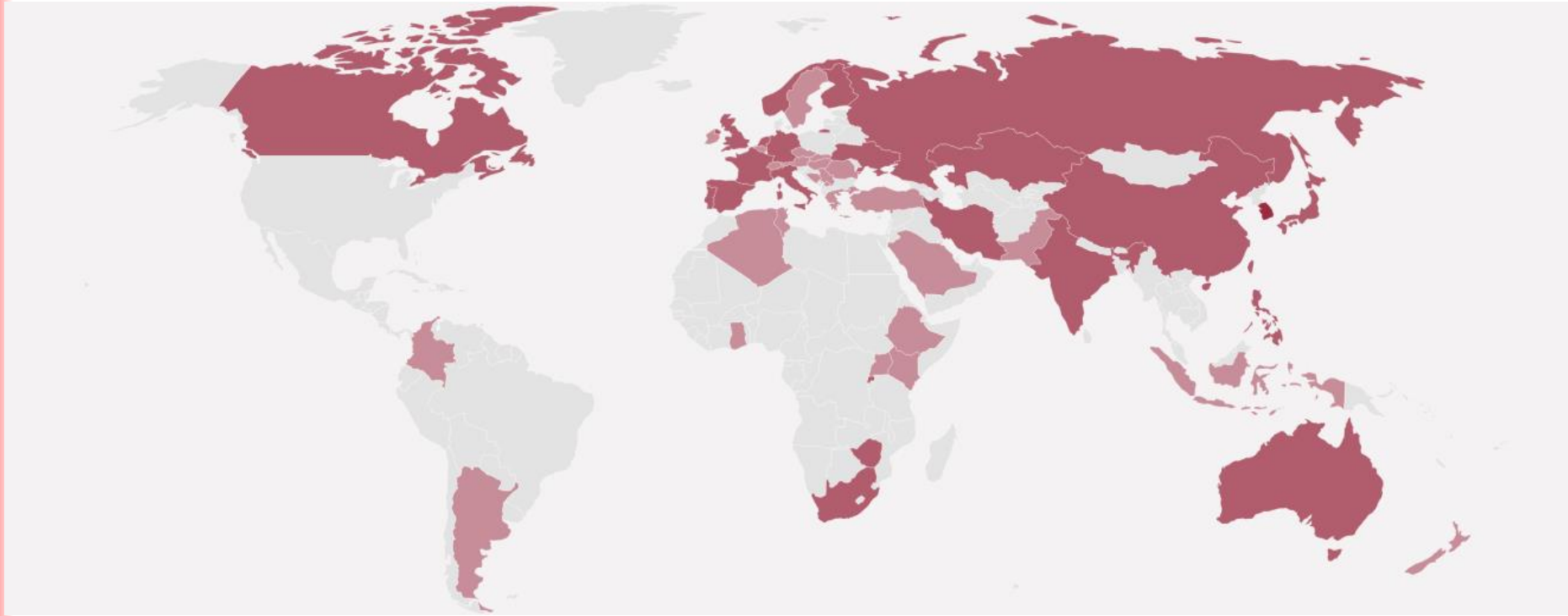


Creation : 1998

- Secretariat : AFNOR (FRA)
- Participating Countries (P-Member) : 19
- Observing Countries (O-Member) : 19

ISO/IEC JTC 1/SC 36

学習，教育，研修のための情報技術

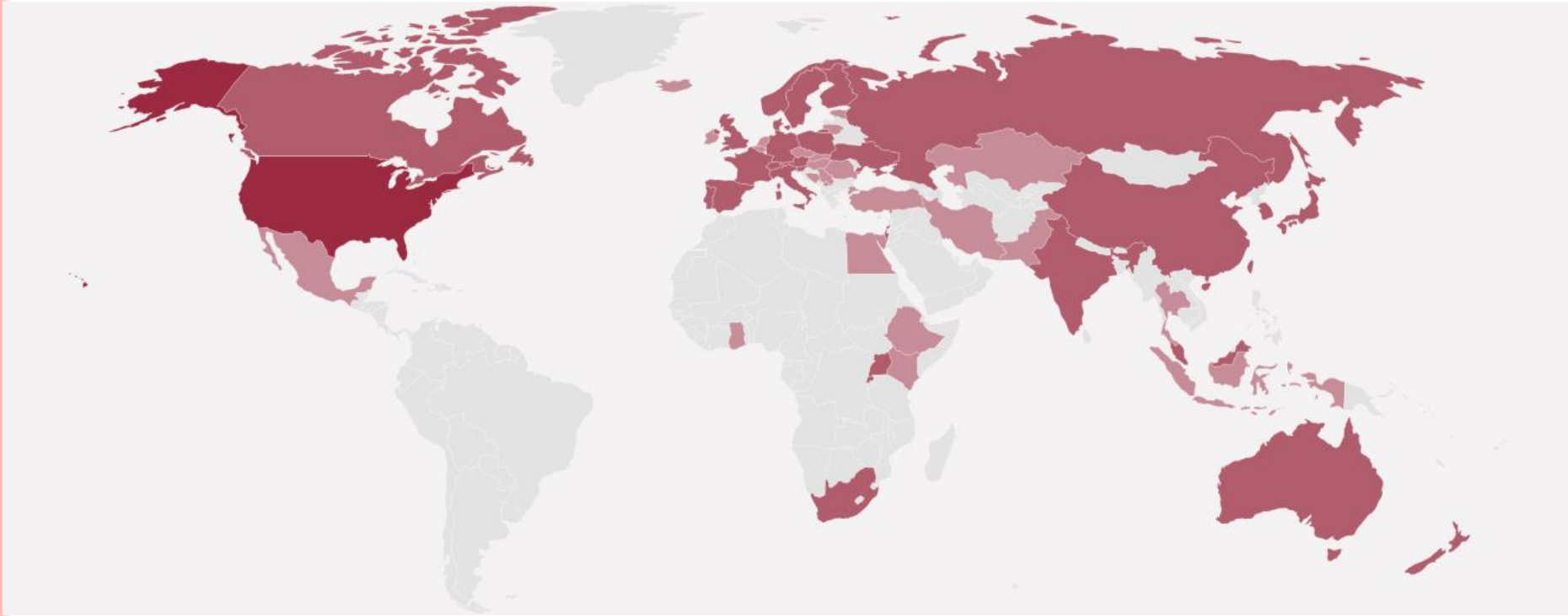


Creation : 1999

- Secretariat : KATS (KOR)
- Participating Countries (P-Member) : 23
- Observing Countries (O-Member) : 26

ISO/IEC JTC 1/SC 37

バイオメトリクス

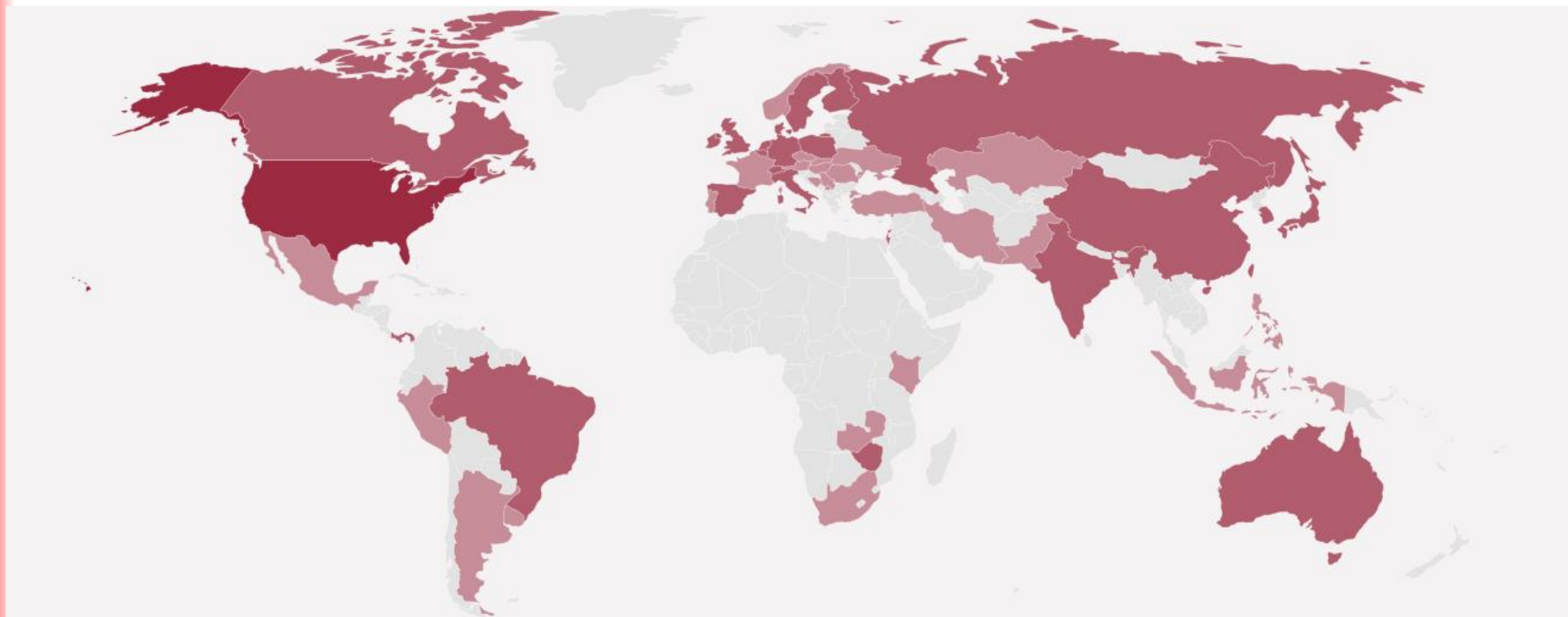


Creation : 2002

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 30
- Observing Countries (O-Member) : 23

ISO/IEC JTC 1/SC 38

クラウド コンピューティングと分散プラットフォーム

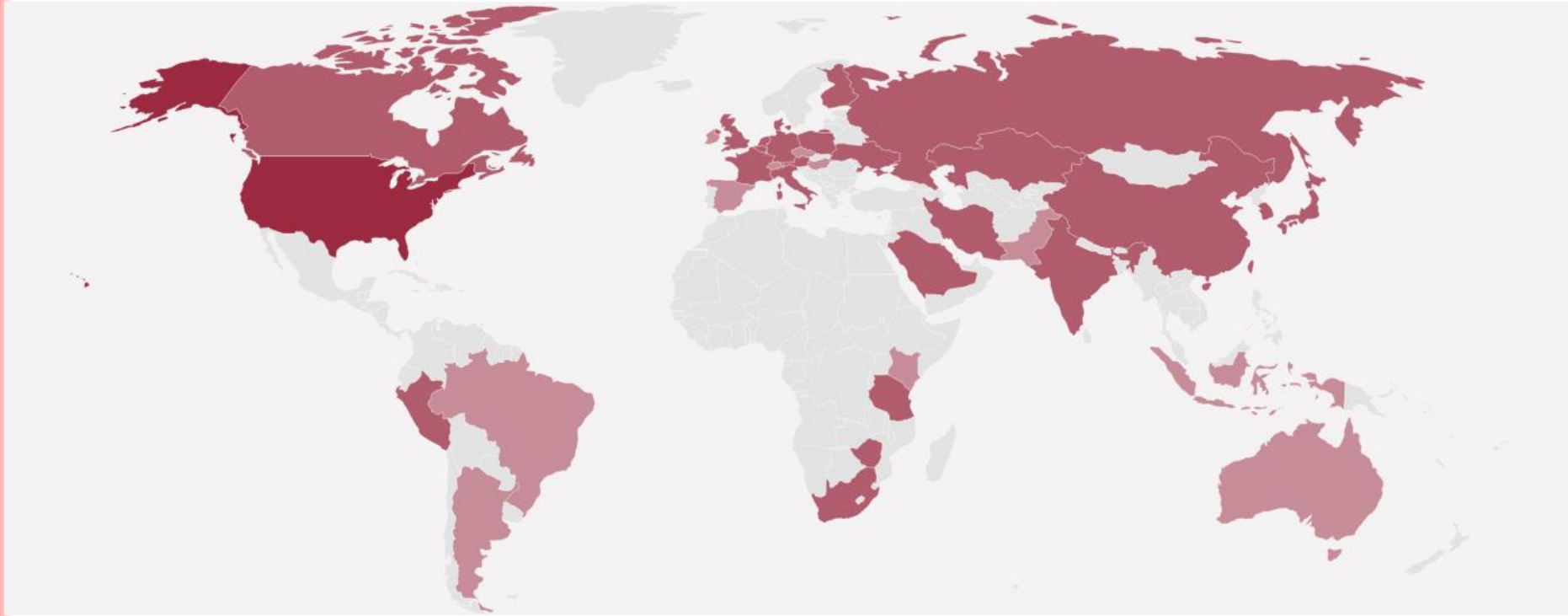


Creation : 2009

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 26
- Observing Countries (O-Member) : 26

ISO/IEC JTC 1/SC 39

サステナビリティ，ITとデータセンター

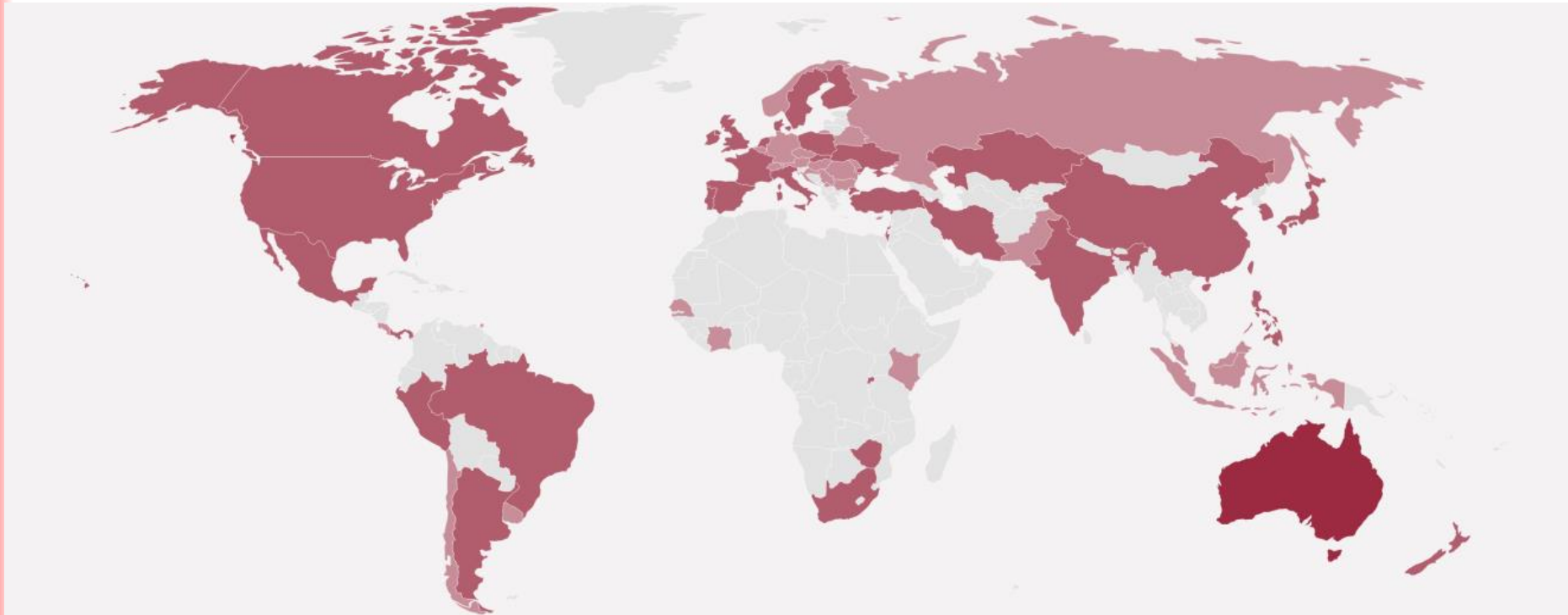


Creation : 2012

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 26
- Observing Countries (O-Member) : 12

ISO/IEC JTC 1/SC 40

ITサービスマネジメントとITガバナンス

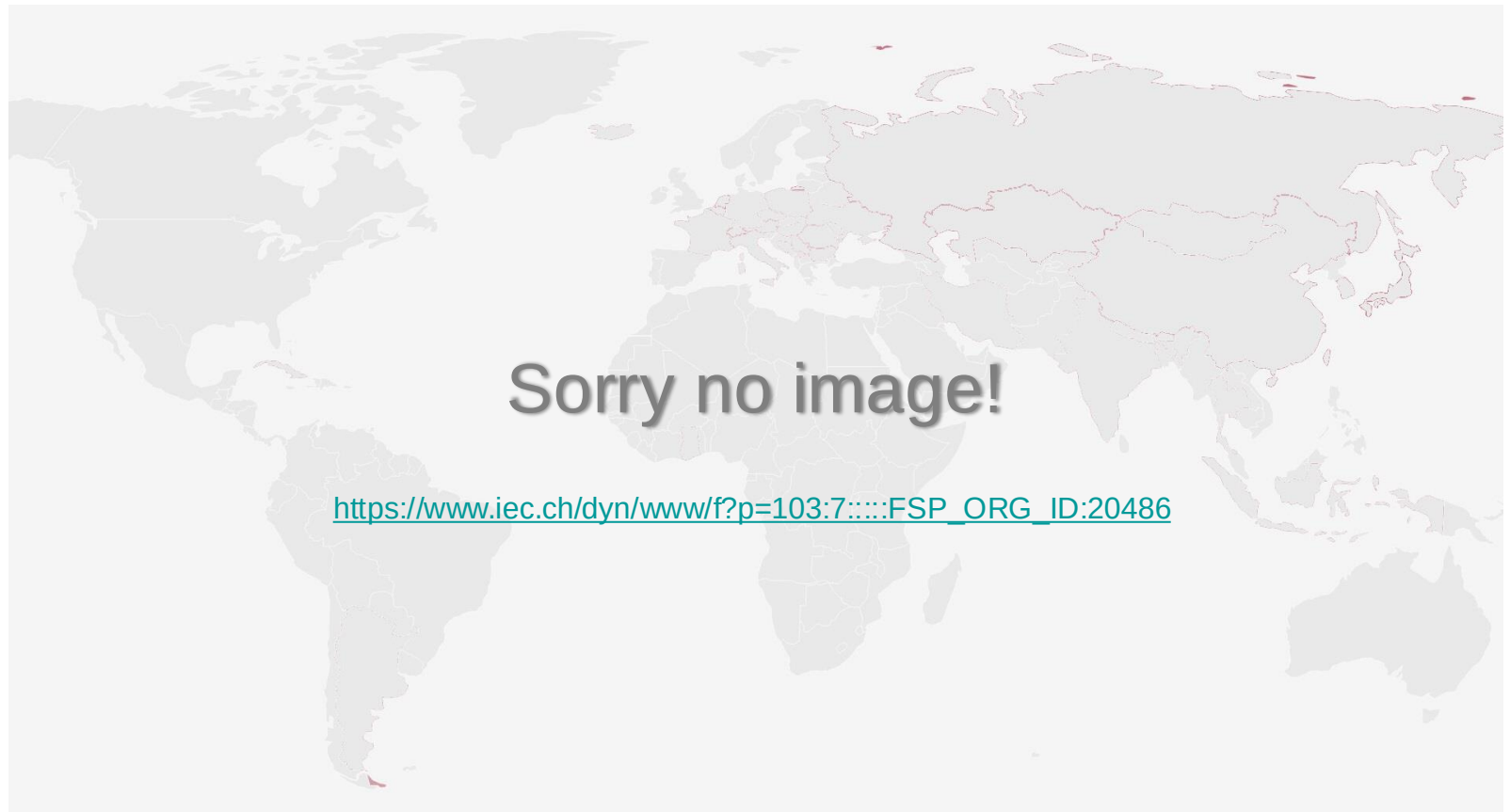


Creation : 2013

- Secretariat : SA (AUS)
- Participating Countries (P-Member) : 35
- Observing Countries (O-Member) : 26

ISO/IEC JTC 1/SC 41

IoTとデジタルツイン

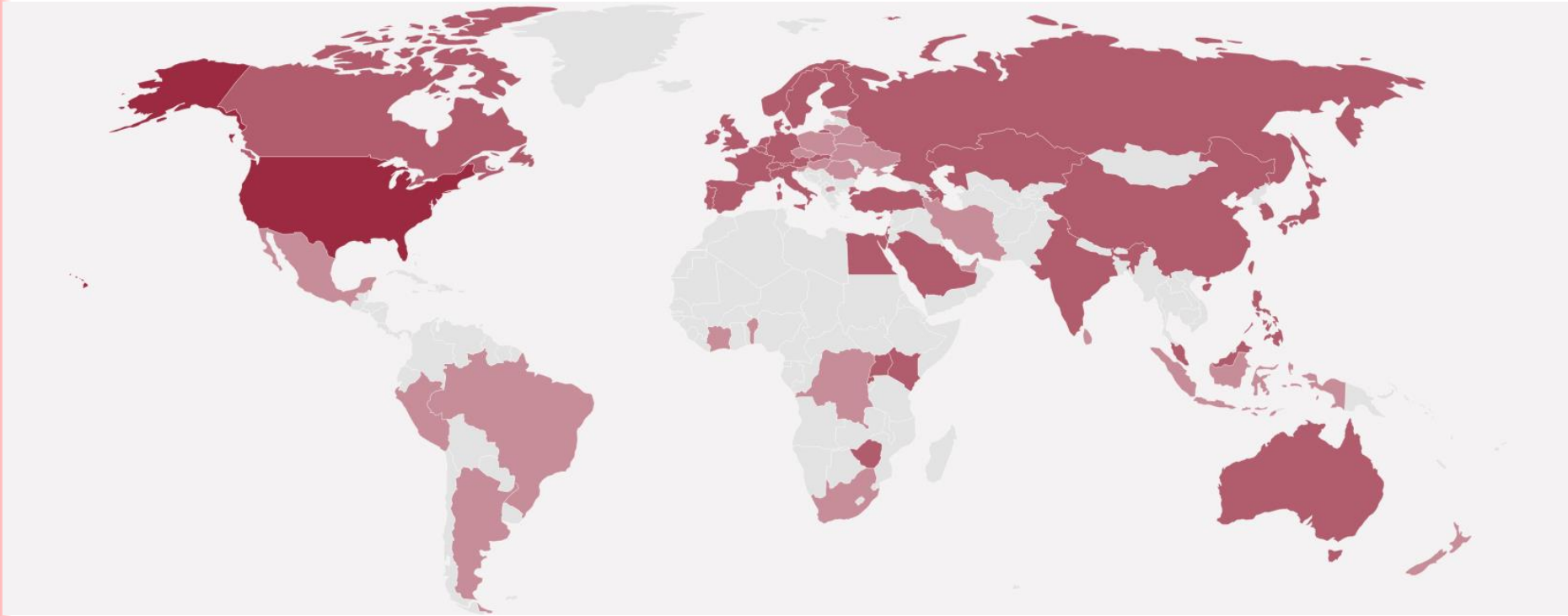


Creation : 2016

- • Secretariat : KATS (KOR)
- • Participating Countries (P-Member) : **31**
- • Observing Countries (O-Member) : **11**

ISO/IEC JTC 1/SC 42

人工知能



Creation : 2017

- Secretariat : ANSI (USA)
- Participating Countries (P-Member) : 40
- Observing Countries (O-Member) : 24

ISO/IEC JTC 1/SC 43

ブレイン・コンピューター・インターフェース



Creation : 2022

- • Secretariat : SAC (CHN)
- • Participating Countries (P-Member) : 13
- • Observing Countries (O-Member) : 11

ISO/IEC JTC 1/SC 44

Consumer protection in the field of privacy by design

Scope:

Standardization of consumer protection in the field of privacy by design for products, goods and services, including their data lifecycles.

Creation : 2024

- • Secretariat : BSI (GBR)
- • Participating Countries (P-Member) : nn
- • Observing Countries (O-Member) : nn

JTC 1 直下の WG

- WG 11 “Smart cities” (CHN)
昨年5月の総会でSC設立を決議したものの、TMB/SMBの承認に至っていない。TMB/SMB JahGで議論され、スマートシティの新JTCが設立される見込み。
- WG 12 “3D Printing and scanning” (KOR)
- WG 13 “Trustworthiness” (LUX)
- WG 15 “Vocabulary” (USA)

JTC 1 直下の AG と AHG

- AG 01 “Communications “
- AG 02 “JTC 1 Emerging Technology and Innovation (JETI)”
- AG 14 “Systems Integration Facilitation (SIF) “
- AG 15 “Standards and Regulations “
- AG 19 “Coordination with ISO TC 20/SC 16 on Unmanned Aircraft Systems (UAS)”
- AG 20 “Coordination with ISO/TC 268/SC 1 on Smart Community Infrastructures”
- AHG 5 “JTC 1 Standards Made Freely Available”
- AHG 7 “Supplement alignment”
- AHG 8 “Succession planning”

JTC 1のスコープと規模

(2024.11.12 現在)

The screenshot shows the ISO/IEC JTC 1 website. A blue dashed box highlights the text "Standardization in the field of information technology". Below this, a blue dashed box contains the numbers 3532, 520, 41, and 62, with callouts for "発行済み規格数" (Number of published standards) and "開発中規格数" (Number of standards under development). The website content includes the ISO logo, navigation links, a search bar, and sections for "About", "Scope", "Quick links", and "Public material".

ISO/IEC JTC 1
Information technology

About
Secretariat: **ANSI**
Committee Manager: **Mrs Lisa Rajchel**
Chairperson (until end 2026): **Mr Phil Wennblom**
ISO Technical Programme Manager (TPM): **Mr Andrew Dryden**
ISO Technical Programme Manager (TPM): **Mr Stephen Duttall**
ISO Editorial Manager (EM): **Ms Alison Reid-Jamond**
Creation date: 1987

Scope
Standardization in the field of information technology

Quick links
Work programme
Drafts and new work items
Business plans
TC Business plans for public review
Working documents (user account required)
Working documents (user account required)
Public material
Browse documents made available by this group

発行済み規格数
3532
Published ISO standards *
of which 637 under the direct responsibility

開発中規格数
520
ISO standards under development *

41
Participating members

62
Observing members

IoTとは？

Internet of Things

IoT

infrastructure of interconnected entities, people, systems and information resources together with services which processes and reacts to information from the physical world and virtual world

物理世界及び仮想世界からの情報を処理し、それに反応するサービスとともに相互接続されたエンティティー，人々，システム及び情報資源のインフラストラクチャ

[ISO/IEC 20924:2024 Internet of Things (IoT) and digital twin — Vocabulary]

セキュリティ要件適合評価及びラベリング制度

(JC-STAR : Labeling Scheme based on Japan Cyber-Security Technical Assessment Requirements)

- 経済産業省が公表した「IoT製品に対するセキュリティ適合性評価制度構築方針」に基づき構築
- IoT製品を対象としてセキュリティ機能を評価・可視化
- 独立した第三者が評価
 - ★4(レベル4)／★3(レベル3)
- IT製品ベンダーが自ら宣言
 - ★2(レベル2)／★1(レベル1)

JTC 1/SC 27のスコープと規模

(2024.11.12 現在)

The image shows a screenshot of the ISO/IEC JTC 1/SC 27 website. A blue dashed box highlights the 'Scope' section, which describes the development of standards for the protection of information and ICT. Below the website screenshot, a blue dashed box contains a large text overlay. At the bottom, four statistics are presented with callout boxes: '発行済み規格数' (Number of published standards) pointing to 247, '開発中規格数' (Number of standards under development) pointing to 72, '53' for 'Participating members', and '37' for 'Observing members'.

ISO/IEC JTC 1/SC 27
Information security, cybersecurity and privacy protection

About
Secretariat: DIN
Committee Manager: Mr Sobhi Mahmoud
Chairperson (until end 2024): Mr Dr Andreas Wolf
ISO Technical Programme Manager (TPM): Mr Hakim Mkini
ISO Editorial Manager (EM): Ms Isabel Veronica Nelson
Creation date: 1989

Scope
The development of standards for the protection of information and ICT. This includes generic methods, techniques and guidelines to address both security and privacy aspects, such as:

- Security requirements capture methodology;
- Management of information and ICT security in particular information security management systems, security processes, and security controls and services;
- Cryptographic and other security mechanisms, including but not limited to mechanisms for protecting the accountability, confidentiality, integrity and confidentiality of information;
- Security management systems and security management systems in the use of information security for the registration of security components;
- Security aspects of identity management, biometrics and privacy;
- Conformance assessment and certification and security measurements in the use of information security management systems;
- Security evaluation criteria and methodology.

SC 27 engages in active liaison and collaboration with appropriate bodies to ensure the proper development and implementation of standards and to respond to the needs of its members.

JTC 1/SC 27 Website
Visit the Technical Committee's own website for more information.

Quick links
Work programme
Drafts and new work items
Working area
Working documents (user account required)
ISO Electronic applications
IT Tools that help support the standards development process
Public material
Browse documents made available by this group

発行済み規格数
247
Published ISO standards*

開発中規格数
72
ISO standards under development*

53
Participating members

37
Observing members

IoTとセキュリティ -1

- ISO/IEC 27400:2022
Cybersecurity — IoT security and privacy — Guideline
- ISO/IEC 27402:2023
Cybersecurity — IoT security and privacy — Device baseline requirements
- ISO/IEC 27403:2024
Cybersecurity – IoT security and privacy – Guidelines for IoT-domotics
- ISO/IEC DIS 27404
Cybersecurity — IoT security and privacy —
Cybersecurity labelling framework for consumer IoT

IoTとセキュリティ -2

- ISO/IEC AWI TS 5689

Cybersecurity – Security frameworks and use cases for **cyber physical systems**

- ISO/IEC TR 5891:2024

Information security, cybersecurity and privacy protection — **Hardware monitoring technology** for hardware security assessment

IoTとセキュリティ -3

- ISO/IEC 19086-4:2019

Cloud computing — Service level agreement (SLA) framework — Part 4: **Components of security and of protection of PII**

- ISO/IEC 27017:2015

Information technology — Security techniques — **Code of practice for information security controls** based on ISO/IEC 27002 for cloud services

IoTとセキュリティ -4

➤ ISO/IEC 27036-4:2016

Information technology — Security techniques —
Information security for supplier relationships — Part 4:
Guidelines for security of cloud services

➤ ISO/IEC 27018:2018

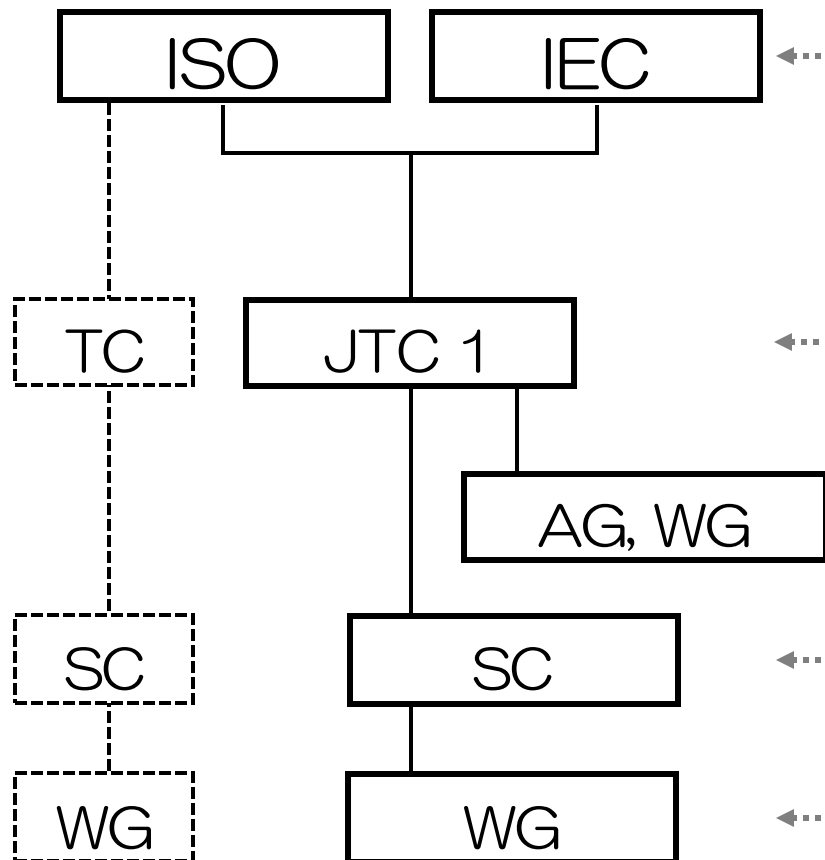
Information security, cybersecurity and privacy protection –
**Guidelines for protection of personally identifiable
information (PII) in public clouds acting as PII processors**

➤ ISO/IEC 15408 Series

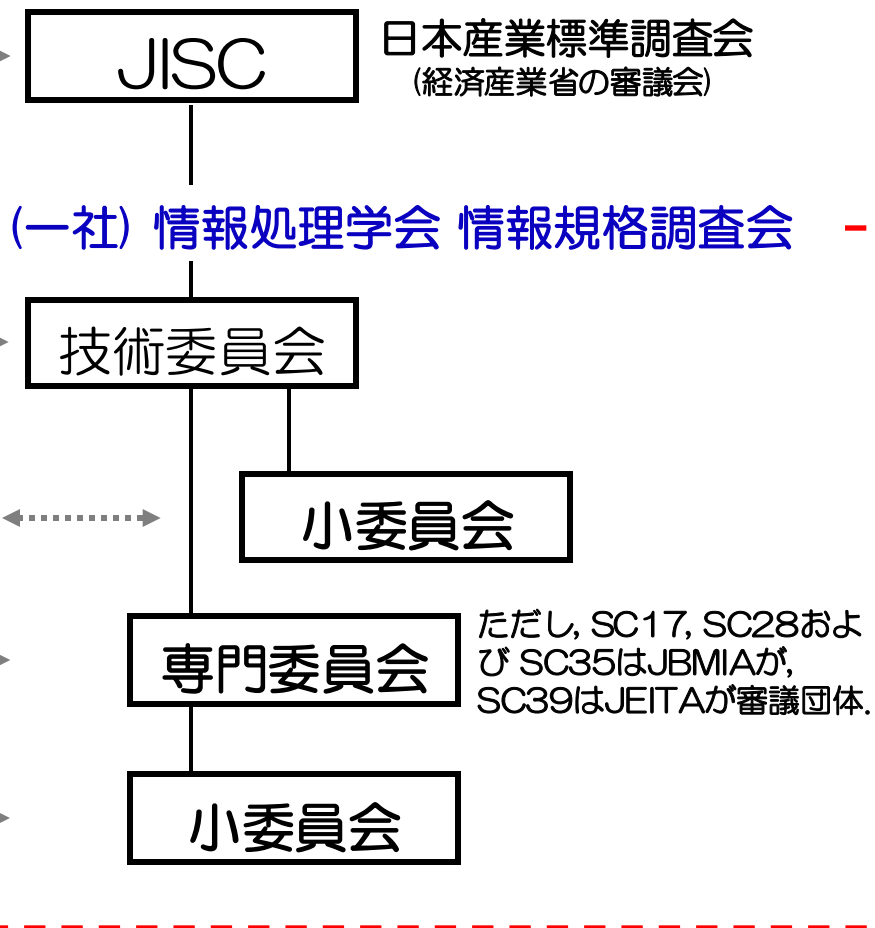
Information security, cybersecurity and privacy protection —
Evaluation criteria for IT security

JTC 1 の国内審議体制

〈国際〉



〈国内〉



標記：ISO/IEC JTC 1/SC nn/WG nn

AG: Advisory Group



みなさまのJTC 1の標準化活動へのご参加をお待ちしています！