

# Dictionary for Civil Registration and Identification

2015

Mia Harbitz and Kristo Kentala



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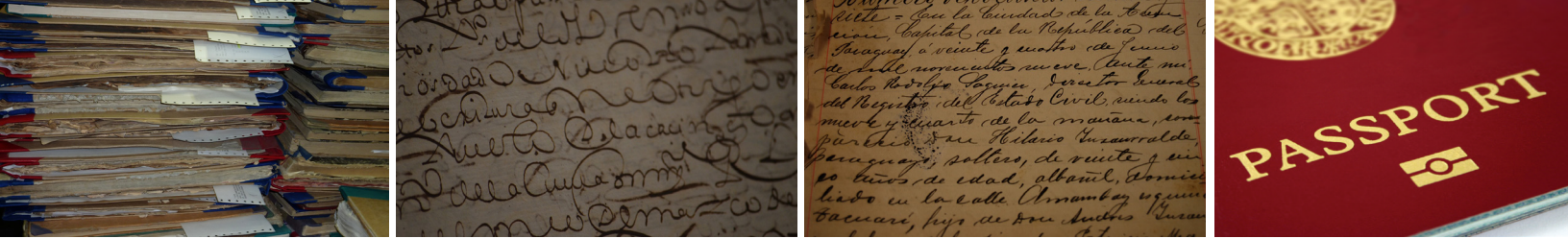
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# Introduction

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In the world today, there are more than 400 million native English speakers and probably at least three times as many who speak English as a second language. Communicating with precision and clarity can be daunting, particularly in an area like civil registration and identification, which is becoming increasingly important as a tool for strengthening institutions and democracies around the globe. Furthermore, identity and identification is being recognized as a factor in aid distribution and sustainable development.

This dictionary is an attempt to develop a common understanding of existing terminology and terms that have not been described anywhere else by combining them all in one document. To produce this technical dictionary, we were fortunate to enlist the support of a group of renowned experts and practitioners.

We are extremely grateful for the work of the editorial advisory committee, who generously volunteered their time to meticulously enrich the dictionary with additions, corrections, adjustments, and rectifications. Alvin Onaka, State registrar, Hawaii, USA; Edward Duffus, Plan International; Kendra Gregson, UNICEF; Kaushal Joshi, Asian Development Bank; Maurice Mubila, African Development Bank; Alejandro Pareja Glass, Inter-American Development Bank; Raj Gautam Mitra, UNECA; Sivaselvi Supramaniam, UNICEF; Gabriela Vega, Inter-American Development Bank; and Jain Vibhor, Ernst & Young, India. A special thanks to Sarah Schineller for expertly guiding us through the production process, and to Sheila Mahoney for her excellent work in editing the entries.

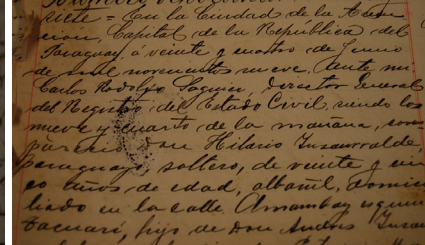
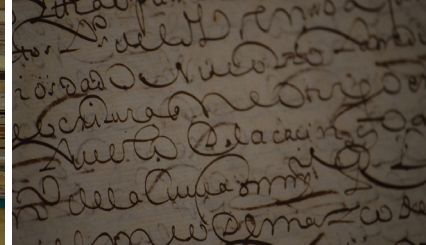
We are also immensely grateful for the constructive critique from our peer reviewers, Neo Lelang, Director of Civil and National Registration, Botswana; Cem Dener, Global Lead, Integrated Digital Solutions, The World Bank; and Denzil Plummer, Project Director, National Identification System, Jamaica.

It is our hope that this dictionary will broaden the understanding of the concepts and terms pertaining to civil registration and identification, and thus contribute in a small way to accurate and concise communication in this area.

Mia Harbitz  
Lead Specialist, Registries

Kristo Kentala  
Consultant





# A

## Abandonment of citizenship

Process by which a person renounces his or her rights of citizenship in a given country, generally to acquire citizenship in another country.

## ABC

See *Automated Border Control*.

## Abduction

The act of leading someone away by force or fraudulent persuasion, or of removing a child in breach of right of custody attributed to the child's natural parents or legally appointed guardians. See also *kidnapping*, *trafficking of persons*.

## Abide

Accept the authority, order, and determined legal norms without objection.

## ABIS

See *Automated Biometric Identification System*.

## Abolition

Act by which a statutory provision is revoked, cancelled, or abolished. It can be expressed, if another law so states, or tacit, if a subsequent law is contrary.

## Abortion

The spontaneous or intentional termination of a pregnancy.

## Abortion rate

The number of abortions per 1,000 women ages 15 to 49 in a given year.

## Absolute lack of documentation

Absence of any kind of identity document, including birth certificate.

## Absolute lack of registration

No civil or vital records of a vital event that has occurred.

## Abuse of authority

(a) Excessive use of political, economic, social, cultural, or professional power to prejudice an individual or group of persons. (b) While in public office, this refers to the use of power to one's own advantage or that of another person or group.

## Access control

Hardware and software that automates authentication and authorization processes to give access to a device, a network or a restricted area. The access requester could be a human or a machine (another computer or system).

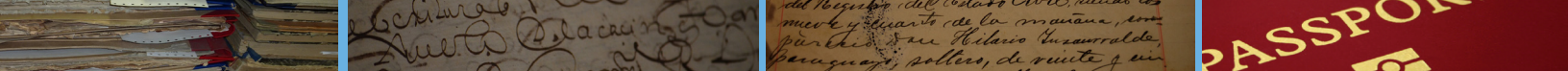
## Accreditation

(a) With respect to a digital signature, the act by which the competent authority, in accordance with the law, enables a soliciting entity (certification authority) to provide digital signature services. (b) With respect to identification, the provision of assurances that people are who they say they are or appear to be.

## Acculturation

Progressive adoption of elements of other cultures (ideas, language, values, norms, behavior, and institutions) by persons, groups, or classes of a given culture as a result of contacts and interactions between





different cultures through migration and trade relations. *See also assimilation.*

### Accuracy of register-based vital statistics

A state where data items on a statistical report are said to be completely accurate when they have been correctly and completely filled out and no errors have been introduced during transcription of data from civil records onto the statistical report (if this step occurs) or during the processing stages (coding, editing, input, tabulation).

### Accuracy of registration

A state where data items for each vital or civic event on the vital record are said to be completely accurate when they have been correctly and completely filled out (i.e., there are no response errors or missing items). The measurement of any deviation from accuracy is called “content error.”

### Act

(a) Expression of will that results from the doing of a person, whether natural or legal, which leads to a new status or the modification or termination of an existing one. (b) A law.

### Address

A means of unambiguously identifying a location for delivery of goods and messages.

### Administrative registration

In the civil register, the process by which a vital act is registered.

### Administrative register

An official list or written record of any information. *See also legal register.*

### Admission

Granting entry. A foreigner has been “admitted” if she or he has passed through a border checkpoint (air, land, or sea) and is permitted to enter by border officials. A foreigner who has entered clandestinely has not been officially “admitted.” *See also border officials, entry.*

### Adoption

A process whereby a person (or persons) assumes the parenting of another, usually a child, from the biological or legal parent or parents. In so doing, all rights and responsibilities are transferred from the biological parent or parents to the adoptive parent or parents. Adoptions can take place domestically or internationally.

### Adoptive family

The family that a person, usually a child, joins after being adopted.

### Adulterated document

A document in which content has been partially or totally modified, usually for illicit purposes, since the original was issued by the competent authority.

### Advance Passenger Information System (APIS)

An electronic data interchange system established by U.S. Customs and Border Protection. APIS enhances border security by providing officers with pre-arrival and departure manifest data on all passengers and crew members.

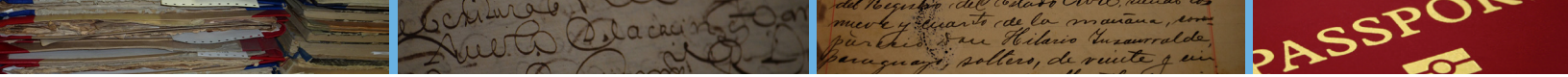
### Advanced electronic signature

An asymmetric key operation where a private key is used to digitally sign an electronic document and the public key is used to verify the signature. Digital signatures have the same validity and legal effects as a handwritten signature. The advanced electronic signature enables the signer to be identified (non-repudiation) and any change to the signed data to be detected (integrity). The signature is linked to the signer in a unique way and has been created by means that the signer keeps under his exclusive control. *See also electronic signature, private key, public key.*

### Affidavit

A written statement, attesting to the facts of a matter and confirmed by oath or affirmation, for use as evidence in court.





### Affinity

Relationship between a person and the relatives of his or her spouse or partner.

### AFIS

See *Automated Fingerprint Identification System*.

### Age

Interval of time between birth and the present time, expressed in completed units of solar time. For adults and children, age is usually measured in completed years, while for infants or very young children, in completed months, weeks, days, hours or minutes of life, as appropriate.

### Age adjustment

Statistical tool used to facilitate comparison of populations and to control the effects of their different components, such as age.

### Age dependence rate

Ratio of dependent people (those younger than 15 or older than 64) to the working-age population (those ages 15–64).

### Agent

A person who has the power to act with appropriate legal authority and effect, usually on behalf of another person.

### Age-specific death rate

The total number of deaths of residents of a specified age or age group in a specified geographic area (e.g., country, state, or county) divided by the population of the same age or age group in the same geographic area for a specified time period, usually a calendar year, multiplied by 100,000.

### Age-specific fertility rate (ASFR)

The number of live births born to woman of a given age or age group by the mid-year female population of the same age or age group during the same year. This refers to average number of births per 1000 females of specific age group.

### Age-specific mortality rate

The number of deaths at a specific age per 100,000 population in a given geographic area during a given period.

### Aging of population

Gradual process in which the proportion of adults and elderly increases in a population, while the proportion of children and adolescents decreases. This process results in a rise in the median age of the population. It occurs when fertility rates decline while life expectancy remains constant or improves.

### AKA

See *also known as*.

### Algorithm

Finite sequence of instructions or steps to be performed by a computer system in order to process data to solve a certain problem. See *artificial neural network*.

### Alias

See *pseudonym, also known as*.

### Aliasing

The misidentification of a signal frequency, introducing distortion or error; the use of aliases to designate files, commands, addresses, or other items. See *also identity theft*.

### Alien

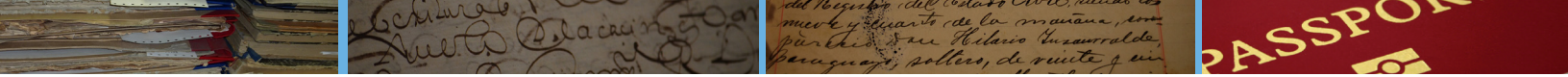
Most commonly used in the United States to describe a person who is not a national of a given state or country that he or she is entering or visiting. See *also foreigner*.

### Alphanumeric

Classification of characters (symbols) that encompasses letters, numbers, and punctuation marks.

### Also known as (AKA)

Term used to identify other names by which a person can be identified. See *also alias, pseudonym, nom de guerre*.



### Amend

In documents, to effect change in law or records to rectify perceivable material mistakes or factual errors.

### American National Standards Institute (ANSI)

A private, nonprofit organization that administers and coordinates the U.S. voluntary standardization and conformity assessment system. Its mission is to enhance both the global competitiveness of U.S. business and quality of life by promoting and facilitating voluntary consensus standards and conformity assessment systems, and safeguarding their integrity.

### Analog transmission

A transmission method of conveying voice, data, image, or video information using a continuous electromagnetic signal. The variations of this signal in amplitude, phase, or some other property represent the information being conveyed.

### Ancestor

A person from whom another person is descended and who is usually more remote in the line of descent than a grandparent. *See also descendant.*

### Annulment

The invalidation or voiding of a legal marriage by a competent authority, according to the laws of the country, thus conferring on the parties the status of never having been married to each other.

### Anonymity

The condition by which a person does not reveal his or her identity.

### ANSI

*See American National Standards Institute.*

### Anti-aliasing

The electronic measures taken to combat problems of aliasing. *See also aliasing.*

### Anti-natalist

The policy orientation of a government, society, or social group to slow population growth by attempting to limit the number of births.

### Apgar score

System of scoring infant's physical condition at one minute and five minutes after birth. The heart rate, respiration, muscle tone, skin color, and response to stimuli are scored 0, 1, or 2. The maximum total score for a normal baby is 10. Those with low scores require immediate medical attention if they are to survive.

### APIS

*See Advanced Passenger Information System.*

### Apostille

A form of authentication issued to documents for use in countries that participated in the Hague Convention of 1961.

### Appeal

A procedure undertaken to review a decision by bringing it to a higher authority. Often the submission of a lower court's or agency's decision to a higher court for review and possible reversal.

### Arch

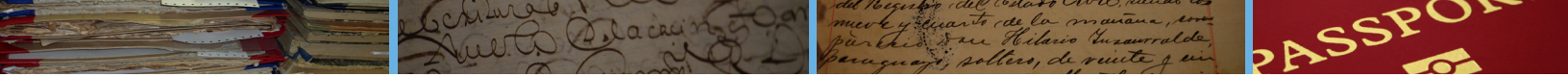
In biometrics, the fingerprint pattern in which the friction ridges enter from one side, make a rise in the center, and exit on the opposite side. The pattern will contain no true delta point. *See also delta point, loop, whorl.*

### Archive

Ordered data or documents, physical or digital, compiled by an individual or institution, usually implying documents that are not actively in use. It can also refer to a place where such data or documents are stored. *See also digital archiving system.*

### Archiving system

A document and records repository and management system. *See also digital archiving system.*



### Arithmetic growth

Concept which implies that population growth has a linear behavior and therefore the rate of change can be estimated as constant; that is, it increases the same amount per unit of time considered.

### Arrival/departure card

A card that is filled out by an individual prior to or upon arrival in the country of destination and presented (along with passport and, if requested, visa) to officials at the checkpoint. *See also* passport, visa.

### Article

A numbered part of a law or a set of laws, regulation, resolution, contract, legal document, etc.

### Artificial intelligence

The science and engineering of making intelligent machines.

### Artificial neural network

A family of statistical learning (adaptive) algorithms based on the way that the central nervous system functions. It can compute values from inputs, acting via an interconnected system of nodes (neurons) to produce an output. It is used to estimate or approximate functions that can depend on a large number of inputs and are generally unknown. *See also* algorithm.

### ASFR

*See* age-specific fertility rate.

### Assimilation

Adaptation of one ethnic or social group—usually a minority—to another. Assimilation can imply the adoption of language, traditions, values, and behavior, or even fundamental vital interests. Assimilation goes further than acculturation. *See also* acculturation.

### Assistant registrar

A citizen who registers vital events in urban areas, mountainous areas, or areas with difficult access. Normally these are people who are residents in the same geographic areas in which they are assigned

and have been given powers under the law to register events on behalf of the registrar. The power can be absolute or delegated.

### Assisted migration

The movement of migrants with the assistance of one or more governments or international organizations, as opposed to spontaneous, unaided migration.

### Assisted voluntary return

Counseling and reintegration assistance, including logistical and financial support for rejected asylum-seekers, stranded migrants, victims of trafficking, and other vulnerable groups, including unaccompanied migrant children or those with health-related needs. Assistance is for those who are unable or unwilling to remain in the host country and volunteer, without coercion, to return to their country of origin. *See also* repatriation, return.

### Asymmetric cryptography

A class of cryptographic algorithms that transforms ordinary text into encrypted text by means of an encryption key (called the public key) and allows the decryption of the encrypted text into the original ordinary text by means of a different encryption key (called the private key). *See also* pair of keys, private key, public key.

### Asynchronous communication

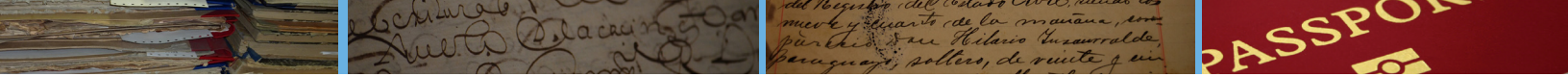
Data transfer method in which units sending and receiving operate irregularly and at different speeds (there is no external clock coordinating transmission and reception).

### Attempt

In identification tasks, the submission of a single set of biometric samples to a biometric system for identification or verification. Some biometric systems permit more than one attempt to identify or verify an individual.

### Attendant at birth

The person who assisted the mother in giving birth, such as a physician, midwife, nurse, other paramedical person, or lay person.



### Attributes

Distinctive features and qualities that are unique to an individual. They can be physical or biometric.

### Audience

Act or process through which an administrative or judicial authority hears the parties or receives evidence.

### Authentic document

An original document that has not been altered and may have been notarized or legalized. *See also legalization.*

### Authentication

(a) The process of establishing confidence in the truth of a claim, which could be any declarative statement. (b) The process by which a user conveys data into a system in order to be recognized and to be able to interact with the system. (c) In biometrics, sometimes used as a generic synonym for certification. *See also certification, information assurance, integrity, availability, confidentiality, and nonrepudiation.*

### Authentication factor

The three elements used to authenticate the identity of an individual: (a) something one knows (e.g., a password or PIN); (b) something one has (e.g., token, card, or passport); and (c) some physiological characteristic (biometrics).

### Authentication protocol

A message exchange that verifies possession of a token to remotely authenticate a claimant. Some authentication protocols also generate cryptographic keys that are used to protect an entire session, thus the data transferred in the session is cryptographically protected.

### Authentication stamp

Generally refers to a physical or electronic stamp added to a document so it can be considered to prove the authenticity of the original.

### Authenticity

Proof of veracity. Guarantee that digital or physical data originated from its purported source.

### Authorization

In computer systems, the process by which a user is allowed to access the system.

### Authorized representative

An agent designated in a written and witnessed statement signed by the registrant or other qualified applicant. *See also agent.*

### Automated agent

Processes and hardware programmed to check predefined requirements and to give automatic responses without human intervention.

### Automated Biometric Identification System (ABIS)

A system of the U.S. Department of Homeland Security that is used to store and process biometric and biographic information. More commonly known as IDENT.

### Automated Border Control (ABC)

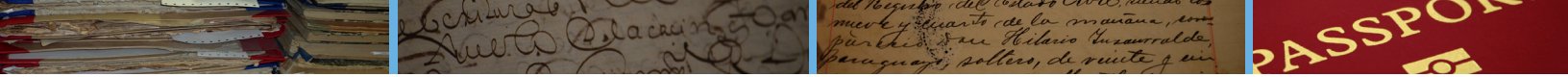
A European Union-wide project that involves a Consortium of 15 partners from eight countries. The aim is to make border control more flexible by enhancing the workflow and harmonizing the functionalities of ABC gates.

### Automated Fingerprint Identification System (AFIS)

A highly specialized biometric system that compares a submitted fingerprint record (usually of multiple fingers) to a database of records to determine the identity of an individual.

### Automation

A machine making a specific combination of actions without human assistance.



### Availability

In managing personal data, protection the data is also subject to availability to authorized users only. *See also information assurance.*

### Available data

Data that have been collected, processed, and stored in a system that contains information on civil

registration and vital statistics. The data are accessible to users in a user-friendly format.

### Average age

The average age of all members of a population.

## ■ B ■

### Backbone network

Refers to the high-capacity communication facilities that connect primary nodes. It is the highest level of a network hierarchy and the main pathway to exchange information between sub-networks. It provides the greatest capacity and speed.

### Backup

Copies of files, replacement equipment, or alternative procedures in case of emergencies caused by total or partial failure of a computer system.

### Balancing equation

A basic demographic formula used to estimate total population change between two points in time or to estimate any unknown component of population change, provided that the other components are known. The balancing equation includes all components of population change: births, deaths, immigration, and emigration.

### Bandwidth

The amount of information per unit of time that a given Internet connection is able to convey.

### Bankruptcy

Term used in a situation in which companies or people cannot meet their obligations to pay because of a state of definitive insolvency. The bankruptcy petition may be requested by the company itself or by a creditor.

### Barcode

Graphic representation of information relating to the object to which it is attached, comprising a set of parallel vertical lines of differing thickness and spacing. Barcodes may be classified as 1D or 2D. Generally, 2D barcodes come in patterns other than lines, such as dots, squares, hexagons, and other geometric patterns.

### Base population

The number of people in a given area (e.g., a nation, province, or city) to which a specific vital rate applies; the population determined by a census. It is the denominator of the crude birth rate or death rate.

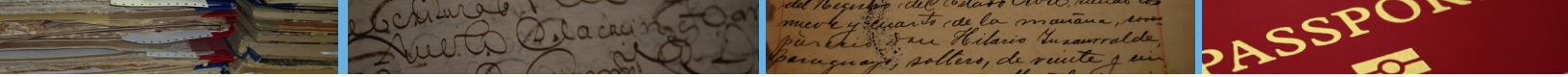
### Base64

A coding system that uses 64 different characters (26 upper-case letters, 26 lower-case letters, 10 digits [0-9], and two other symbols) to encode an ASCII (American Standard Code for Information Interchange) string into text composed only by the 64 symbols. It is used on text transmissions for compatibility purposes.

### Behavioral biometric characteristic

A biometric characteristic that is learned and acquired over time. Examples include signature recognition and keystroke dynamics. *See also biological biometric characteristic.*





### Beneficiary

Natural or legal person who receives a benefit or compensation from the state, an insurance company, or other based on a contract or an insurance policy that covers an unexpected accident or illness.

### Bifurcation

The point in a fingerprint where a friction ridge divides or splits to form two ridges.

### Bigamy

The condition of being married simultaneously to two spouses.

### Binary numeric system

Numbering system of only two digits—usually 0 and 1.

### Binning

The process of parsing (examining) or classifying data in order to accelerate and/or improve biometric matching.

### Biographic data

The name, date, and place of birth, and the names of the parents of a person.

### Biographical enrollment

The registration of the biographical information of a person (name, date of birth, and address) in a civil register or an identity control system. This information is cross checked with other databases, including the birth certificate, social security number or driver's license records, or third party databases, such as commercial data. *See also data capture.*

### Bio hash®

Privacy-enhancing technology (PET) that allows for storage and matching of biometric information using an irreversible cryptographic hash function

### Biological biometric characteristic

A biometric characteristic based primarily on an anatomical or physiological characteristic. *See also behavioral biometric characteristic.*

### Biometrics

A measurable physical characteristic or personal behavioral trait used to recognize the identity or verify the claimed identity of an individual, such as the facial image, fingerprints, gait, or iris.

### Biometric accuracy

How well a biometric system performs. The actual statistic for performance varies by task (verification, open-set identification [watch list], or closed-set identification). *See also verification, open-set identification, watch list, closed-set identification.*

### Biometric characteristic

A mathematical reference derived from a biometric sample used to generate biological (anatomical and physiological) and behavioral references that can be used for automated recognition of individuals.

### Biometric claim against credential

When the biometry is queried against reference biometric data on the credential (e.g., identification card).

### Biometric claim against database

When the biometry is queried against reference biometric template stored in a database.

### Biometric data

A term for computer data created during a biometric process. It encompasses raw sensor observations, biometric samples, models, templates, and/or similarity scores. Biometric data are used to describe the information collected during an enrollment, verification, or identification process.

### Biometric data collection

*See biometric enrollment.*

### Biometric enrollment

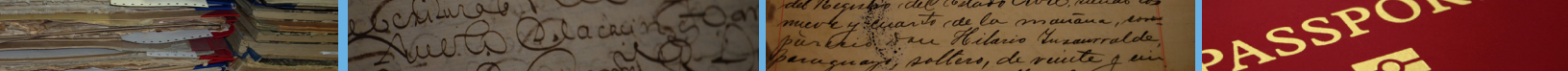
Capturing and validating biometric parameters into a database for the purpose of future authentication of identity.

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person, or lay person. *See also attendant at birth, midwife.*

### Birth certificate

An original document or certified extract, usually issued by a government authority, stating when and where a person was born and usually identifying one or both of his or her parents as per the legal requirements of each country. *See also breeder document.*

### Birth history

A list of all live births to a given woman, or all births prior to a specified date, providing information on the date of birth and the sex of the child/children. When the birth history includes births prior to a specified date, the list will usually also include information on whether each child born is surviving as of that date and, if not, the date of death and/or age at death. Birth histories are sometimes partial, limited to births occurring during a particular time period.

### Birth notification

Notice by an individual or institution of the occurrence of a birth, such as health authorities to civil registrars, who then register the birth.

### Birth order

Refers to the numerical order of a child in relation to all previous pregnancies of the mother.

### Birth records

Compiled records of the births that have occurred and are registered. *See also administrative register.*

### Birth register

The repository of all birth records in a country or state. *See also civil register.*

### Birth registration

The continuous, permanent, and universal recording, within the civil register, of the occurrence and characteristics of births in accordance with the legal

requirements of a country. The recording can be physical (in a book) or electronic.

### Births attended by skilled health staff (% of total)

The percentage of deliveries attended by personnel trained to give the necessary supervision, care, and advice to women during pregnancy, labor, and the postpartum period; to conduct deliveries on their own; and to care for newborns.

### Bit

Short for binary digit, the smallest unit of information in computing; has a value of 0 or 1. *See byte.*

### Bits per second

In computing, the measure of bandwidth or speed of communication.

### Bona fide

(Latin) "in good faith." Made without fraud or deceit; sincere, genuine. *See also mala fide.*

### Book restoration

The process by which books that contain vital acts and events receive special treatment to prolong their useful life and preserve the information contained in them.

### BOPS

*See Biometric Open Protocol Standard.*

### Border

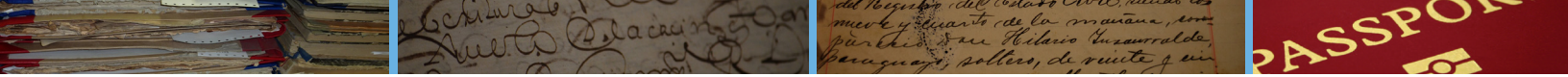
A geographic political division separating two countries, provinces, or states.

### Border control

A state's regulation of the entry of persons to its territory, in exercise of its sovereignty. *See also border management.*

### Border integration zone

Territory adjacent to the border area where plans, programs, and projects are executed in a joint,



shared, and coordinated effort in order to promote development across the neighboring countries.

### Border management

Facilitation of authorized flow of persons, with the aim of detecting and preventing illegal entry of individuals and goods into a given country, sometimes also applicable within internal borders. Measures to manage borders include visa requirements, sanctions against transportation companies bringing irregular foreigners to the territory, and interdiction at sea. International standards require a balance between facilitating the entry of legitimate travelers and preventing travelers from entering for inappropriate reasons or with false or invalid documentation. See *also border control*.

### Border officials

A generic term describing officials whose primary task is to guard the border and enforce immigration (and occasionally customs) laws. Also called border guards or border police.

### Border population

The people that reside in territories contiguous to another country or countries.

### Border zone

A portion of land or waterway contiguous to the territory of another country in which a country's laws are applicable.

### Born in wedlock

A characteristic of a live-born infant or dead fetus whose mother and father were legally married (any recognized union according to the laws or customs of the country) at the time of delivery.

### Born out of wedlock

Characterization of a live-born infant or dead fetus whose mother was not legally married (through any union recognized by the laws or customs of the country) at the time of delivery.

### Boundary

See *border*.

### Breach notification

Legislation that requires any government or non-government agency, corporation, institution, or individual that manages personal and financial data to notify all persons whose information may have been compromised by unauthorized access.

### Breeder document

An identification document issued to support a person's identity and used to obtain another document or privilege of greater perceived value, such as a passport or driver's license. The most important breeder document is the birth certificate. See *also birth certificate*.

### Burden of proof

Legally, the obligation of the parties in a trial to prove the facts on which they base the request of their claims or rights.

### Burial permit

An official document, usually issued only for a legally registered death, authorizing the removal of the corpse to the cemetery or other final destination.

### Byte

A binary unit of computer storage consisting of 8 bits.



### CAC

See *common access card*.

### Cache

A collection of data duplicating original values stored elsewhere on a computer, generally used to improve systems performance. One example is collecting visited web pages by a user in order to save resources when revisiting.

### Cache memory

An area of the high-speed memory on the computer processor where the most frequently used information is stored. It is a relatively small and very fast memory reserved for temporary storage of data or instructions that the processor will use again shortly.

### Cancellation

Action and effect to cancel, terminate, or render ineffective an act or public document, a registration, a note or obligation that had authority or force.

### Capacity building

Building the capacity of governments, private sector, and civil society by strengthening their human capacity (knowledge, skills, and aptitudes), their processes, and technologies. In all cases, capacity building aims to improve a country's management capacity.

### Capacity to act

In law, whether a person can make decisions related to their rights and responsibilities, such as getting married or signing contracts. A person may be considered incapable as a result of, for example, illness, age, or mental defect.

### Capture

In biometrics, the process of collecting a sample from an individual using a sensor.

### Case rate

The number of reported cases of a specific disease per 100,000 inhabitants in a given year.

### Cause of death

Any event(s) related to the cessation of vital functioning of an individual or living being. Diseases or injuries that resulted in or contributed to death. See *also underlying cause of death, contributory cause of death*.

### Cause-specific mortality rate

The number of deaths from a specific cause per 100,000 population in a given geographic area during a given period.

### CBEFF

See *Common Biometric Exchange File Format*.

### CEN

See *European Committee for Standardization*.

### Census

The total process of collecting, compiling, evaluating, analyzing, and publishing or otherwise disseminating statistical data pertaining, at a specified time, to all living quarters and occupants thereof in a country or in a well-delimited part of a country.

### Centralization

An administrative arrangement in which entities are grouped in a hierarchical fashion.

### Central Processing Unit (CPU)

The electronic circuitry within a computer that carries out the instructions of a computer program by performing the basic arithmetic, logical, control, and input/output (I/O) operations specified by the instructions. Includes a control unit, an arithmetic/logic unit, and sometimes the cache or RAM.



## CER

See *crossover error rate*.

## Certificate

(a) Public or private document that attests to the occurrence of an event. (b) In cryptography, an electronic document used to prove ownership of a public key. See also *asymmetric cryptography*, *pair of keys*, *public key*, *private key*.

## Certificate amendment

An act by which a factual error or mistake is corrected by a competent authority on the vital record. See also *marginal note*.

## Certificate deposit

A system that stores certificates, as well as information pertaining to these, available for retrieval by telematics means. See also *archiving system*.

## Certificate of existence

A document issued by the civil register in order to prove the existence of a person. A person's existence can also be proven by an affidavit.

## Certificate of identity

A document (other than a passport) issued by a government to an individual in order to establish his or her identity or to facilitate his or her entry into or exit from the country. See also *proof of identity*, *travel document*.

## Certificate revocation list

A list of certificates that have been revoked, and therefore, entities presenting those (revoked) certificates should no longer be trusted.

## Certification

The act by which a person or institution attests that something occurred. A document, in paper or electronic format, issued by the registrar and containing all or a part of the exact information contained in the original vital record, and which, when issued by the registrar, has the full force and effect of the original vital record. See also *authentication*.

## Certification authority

A trusted entity that issues and revokes public-key certificates.

## Certified document

A document that has been certified by a competent authority, in which the veracity of an event is assured. See also *notary*, *notarization*.

## Certifier of cause of death

A person authorized by law to issue a certificate, in a prescribed format, stating the underlying and contributory causes of death and other facts related to the event. The certifier is usually the physician who attended the deceased in his or her last illness. If the person was not attended by a physician during his or her last illness or died due to violence or injury, the certifier is the forensic medical officer (e.g., coroner or medical examiner).

## Chalcography

Printing technique by which the printed image is engraved on the surface of a printing plate.

## Challenge-response authentication

A set or group of protocols in which the verifier sends a challenge to the other party, which the other party combines with a shared secret to generate a response that is sent to the verifier for authentication of identity. The verifier knows the shared secret and can compute the response and compare it with the response generated by the other party. In cases when both are equal, the other party is considered to have identified him or herself positively. See also *personal identification number*.

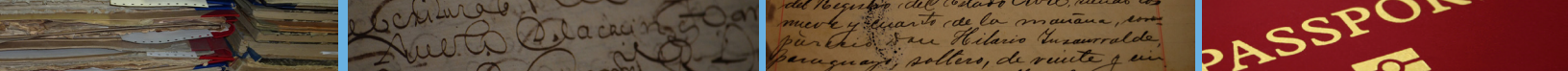
## Challenge-response protocol

A protocol in which one party presents a question (challenge) and another party must provide a valid answer (response) to be authenticated.

## Change of immigration status

A procedure whereby a foreigner, legally present in a state, may seek a different immigration status. For





example, legal provisions may be made so that, upon completion of his or her studies, a non-national on a student visa is able to seek a work visa. *See also foreigner, immigration status, visa.*

### Change in marital status

Administrative or judicial proceeding whereby a person with a particular legal marital situation may apply for another.

### Check digit

The last digit of a personal identification number or a barcode that ensures proper verification of the number by way of an algorithm.

### Child

A person below the age of 18, unless the laws of a particular country set a different legal age for adulthood. *See also minor.*

### Chip

A very thin microprocessor that has thousands or millions of interconnected electronic components. Its area can be 2 centimeters or less.

### CID

*See consular identification card.*

### CIEC

*See International Commission on Civil Status.*

### Cipher

A transformation that converts plain text to cipher-text (encrypted text) using a cryptographic algorithm.

### Citizen

A person who by birth or naturalization is a member of a sovereign state or jurisdiction and is entitled to enjoy all of its civil rights and protections. *See also national.*

### Citizen participation

The right of citizens to be part of the social and political life of the community and the country, and to

participate in the decision-making process and other aspects affecting citizenship.

### Citizenship

The legal nationality of a person. Rights, responsibilities, and duties of citizens. The most common distinguishing feature of citizenship is that citizens have the right to participate in the political life of the state, such as by voting or standing for election. *See also nationality.*

### Civil

(a) Of or pertaining to citizens. (b) Relating to the internal organization of a society, state etc. (c) A legal process which is not criminal, political, or ecclesiastical. (d) Relating to private relations between members of a community.

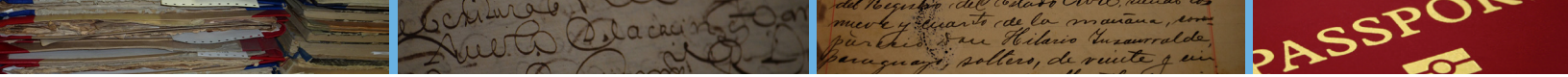
### Civil and political rights

The rights provided in the *International Covenant on Civil and Political Rights, 1966*. These include self-determination; free disposition of natural wealth and resources; non-discrimination; equal rights of men and women; the right to life; freedom from torture, cruel, inhuman, or degrading treatment or punishment; freedom from slavery and servitude; freedom from arbitrary arrest or detention; freedom of movement within a state; the right to liberty and security of person; equality before the courts; the right to a fair and public hearing by an impartial tribunal with respect to criminal charges; the right of recognition as a person before the law; freedom of thought, conscience, and religion; freedom of expression; the right to peaceful assembly; and freedom of association and of participation in public affairs.

### Civil disability

The revocation of a person's legal rights or privileges as a result of a criminal conviction. This can go beyond the sentence imposed and can include such conditions as the denial to vote, to hold public office, or to hold certain jobs.





### Civil identification

The verification, registration, management, and conservation of personal data of citizens, with the goal of establishing a unique civil identity. Civil identification includes all of the data from the civil registration on that particular citizen as well as other attributes such as a unique number and/or biometric data. The civil identification serves as a basis for the verification of identity (i.e., passport or national identification documents).

### Civil partnership

A relationship between partners without the wider rights or benefits of civil unions. *See also civil union.*

### Civil register

The repository of loose-leaf file, ledger book, electronic file, or any other official file set up for the universal, continuous, and permanent recording, in accordance with established procedures, of each type of vital event and its associated data of the population of a defined area (e.g., county, district, municipality, or parish).

### Civil register book

A book containing complete records in chronological order of vital events, including births, marriages, deaths, adoptions, emancipations, tutelage, and naturalizations.

### Civil registrar

Official in charge of civil registration of vital events in a defined area (e.g., country, district, municipality, or parish) and responsible for recording and timely reporting of information on those vital events for legal and statistical purposes.

### Civil registration

Continuous, permanent, compulsory, and universal recording of the occurrence and characteristics of vital events (live births, deaths, fetal deaths, marriages, and divorces) and other civil status events pertaining to the population as provided by decree, law, or

regulation, in accordance with the legal requirements in each country. An essential source of vital statistics.

### Civil registration certificate

Any certificate issued by the civil register pertaining to an individual's civil status.

### Civil registration system

The institutional, legal, and technical norms established by government to conduct civil registration in a technical, sound, coordinated, and standardized manner throughout the country, taking into account cultural and social circumstances particular to the country.

### Civil registry

*See civil register.*

### Civil registry officer

The place or office where the civil register or records are kept.

### Civil relationship

A relationship or linkage established by law between the adopting family and an adopted child.

### Civil right

The civil status of individuals, their rights and obligations, and the acquisition, use, and enjoyment of property and public or private goods.

### Civil society

The whole body or community of citizens. The organization and internal affairs of the body politic or state.

### Civil status

The legal situation of a person before the state, society, and family.

### Civil status certificate

Document issued by a competent civil register authority that certifies the legal civil status of a person.



### Civil status usurpation

Conduct by which a person deliberately tries to impersonate another person in order to claim his or her rights. *See also identity theft.*

### Civil union

A non-religious state-sanctioned partnership similar to marriage.

### Civil wedding

A wedding celebrated before a competent officer of the law.

### Claimed signatory

From the verifier's perspective, the entity that purportedly generated an electronic certificate.

### Claim of identity

A statement that a person is or is not the source of a reference in a database. Claims can be positive (subject is in the database), negative (subject is not in the database), or specific (subject is user "N" in the database).

### CLARCIEV

*See Latin American Council for Civil Registration, Identification, and Vital Statistics.*

### Clause

A certain part of an article, stipulation, or proviso in a treaty, bill, or contract. It can also refer to the provision amending or lightening the overall content.

### Close relative

A person directly related to another person by consanguinity; a "blood relation."

### Closed circuit television

Video surveillance technology designed to monitor a variety of places. It is called "closed" because it is designed for a limited number of controllers and it is not openly transmitted.

### Closed population

A theoretical population that lacks immigrating or emigrating trends and in which population change can thus only occur as a result of births and deaths.

### Closed-set identification

A biometric task where an unidentified individual is known to be in the database and the system attempts to determine his or her identity.

### Closed set of observations

Subset of entries in a database, usually created by limitations that delimit entries to those met by pre-defined conditions.

### Cloud computing

Sharing computing resources rather than having local servers or personal devices to handle applications.

### Cloud database

A database that runs on a cloud computing platform, meaning on an unspecified location across the Internet.

### CMC

*See cumulative match characteristic.*

### Cohabitation

Where two people, regardless of their sex, gender identity, sexual orientation, or preference, who are not married, live together in an emotionally and/or intimate relationship on a long-term or permanent basis. *See also civil partnership.*

### Cohort

A group of people who share demographic events during a given time span. For instance, the birth cohort of 1900, which refers to all people born in that year, a marriage cohort, or a school grade cohorts. *See also cohort analysis.*

### Cohort analysis

Observation of a cohort's demographic behavior during a certain period of time. *See also cohort.*



### Cohort measure

Statistics that measure events that affect a cohort within a specific time period. *See also cohort, cohort analysis.*

### Common access card (CAC)

A hybrid identity card used in the United States that is the *de facto* standard for government-issued employee cards. *See also personal identity verification card.*

### Common Biometric Exchange File Format (CBEFF)

This standard allows different biometric devices and applications to efficiently exchange biometric information between system components.

### Comparative law

The study of differences and similarities between the laws of different countries.

### Comparison

The process of comparing a biometric reference with a previously stored reference or references to decide about an identification or verification.

### Compatibility

Ability to use systems and devices from one computer to another, without requiring any changes.

### Compilation

Gathering a set of pre-existing materials. The set should show originality in selection, coordination, and arrangement, without any internal changes.

### Compilation of vital statistics data

The process of classifying and summarizing information on vital events by tabulating data into categories or groups.

### Compiler

A computer program (or set of programs) that transforms source code written in a programming language (the source language) into another computer language (the target language), often having a binary form known as object code. *See also object code.*

### Complaint

Statement to the competent authority of the commission of an act contrary to law.

### Complete civil registration

When every vital event that has occurred for the members of the population of a particular country (or area) has been registered in the civil registration system within a specified period (contained in a vital registration record). Thus, the system has attained 100 percent coverage. Any deviation from complete coverage is considered coverage error.

### Complete vital statistics

When the required statistical compilation of vital events for a given time period, usually one year, corresponds with the additional reporting from the civil register. *See also complete civil registration.*

### Computer forensics

The discipline that combines elements of computer science and law to collect and analyze data from computer systems, networks, wireless communications, and storage devices in a way that is admissible as evidence in a court of law.

### Computing platform

A pre-existing environment (determined by a specific hardware, a specific operating system, and other specific software for executing programs) that a piece of software is designed to run within, obeying its constraints.

### Concubinage

A situation where two people, regardless of their sex, gender identity, sexual orientation or preference, maintain a relationship of a sexual nature that is exclusive, unique, stable, and permanent, without being bound by marriage. While long-term sexual relationships instead of marriage have become increasingly common in the Western world, these are usually not termed concubinage. *See also cohabitation.*



## Concubine

Generally a woman in an ongoing, matrimonial-like relationship with a man, whom she cannot marry for a specific reason. The reason may be because she is of lower social rank than the man or because the man is already married.

## Confidentiality

Maintaining restrictions on access to and disclosure of information, except for authorized users. See also *privacy, intimacy, right to privacy, information assurance*.

## Connected governance

The means to achieve maximum cost savings and improved service delivery in the public sector. The underlying principle is to improve the internal workings of the public sector by reducing financial costs and transaction time; to better manage the workflow and processes; to improve institutional linkages between different government agencies, ministries, and units; and to enable a better flow of resources and allocation of responsibilities to promote the delivery of public services. See also *e-government*.

## Consanguinity

Relationship or linkage of people who descend from the same family, have the same origins, or are related by blood.

## Consensual union

See *cohabitation*.

## Consent

The expression of a positive will, explicitly or implicitly, which is one of the fundamental elements of certain legal acts.

## Constitution

(a) The fundamental law of a state that establishes the concept, character, and organization of its government; the scope of its sovereign power; and the way that it exercises power. (b) A treaty, pact, statute,

or agreement by which an international organization is constituted and which defines its mandate, structure, and functioning.

## Consul

See *consular officer*.

## Consular fee

A tariff charged by consulates to provide services or transactions to their nation's citizens.

## Consular functions

Protecting the interests of the consul's state and of its nationals and corporate bodies residing or doing business in the foreign state, within the limits permitted by international law.

## Consular identification card (CID)

A card issued by some governments to citizens living in a different country. The card does not certify legal residence in the foreign country.

## Consular office

Any general consulate, vice-consulate, or consular agency (Art. 1(a), *Vienna Convention on Consular Relations, 1963*). See also *consular officer, consular functions*.

## Consular officer

Any person, including the head of a consular post, entrusted with the exercise of consular functions (Art. 1(d), *Vienna Convention on Consular Relations, 1963*). See also *consular offices, consular functions*.

## Consular protection

Consular functions intended to assist in protecting the rights and interests of nationals abroad. In particular, protection extended to citizens arrested or committed to prison or custody in another state. Such citizens must be informed without delay of the right to communicate with consular authorities (Art. 36(1), *Vienna Convention on Consular Relations, 1963*). See also *consular functions*.



### Consular registration

The consular office has the authority to register births, adoptions, marriages, divorces, deaths, and other acts related to the civil status of citizens residing abroad or in transit.

### Consulate

See *consular office*.

### Contact microchip

Integrated circuit (microchip) for storing and processing data that is embedded, for example, in ID cards. The secure electronic chip contains personal data such as name, date of birth, place of birth, issuing office, and a digitized version of the image of the holder. An ID card with a contact chip must be inserted into a reader for the information to be readable. A contact microchip must comply with ISO 7816 standards.

### Contactless microchip

An integrated circuit (microchip) embedded in, for example, passports, ID cards, and biometric residence permits, to store and process data. The chip, not visible in most documents, communicates with the card reader using radio frequency identification. To initiate transmission, the chip, which must comply with ISO 14443 standards, must be located near the reader. See also *radio frequency identification*.

### Contactless smart card

A card with a chip that establishes communication with the reading device through induction, without direct contact between the card and the reading device.

### Contact smart card

A card that contains visible metallic and duly standardized contacts. The card must be inserted in a slot to interact. The reading device updates the information on the card electronically and sends data to interoperate with the card according to the defined standard.

### Context of use

The purpose for which personally identifiable information is collected, stored, used, processed,

disclosed, or disseminated. See also *personally identifiable information*.

### Contrast

Generally refers to the differences in intensity between adjacent parts of an image. In radiology, the contrast is defined as the difference of the intensities divided by the average signal intensity between two adjacent regions.

### Contributory cause of death

Significant medical condition that contributes to death but is not related to the disease or condition directly causing death. See also *cause of death*, *underlying cause of death*.

### Control code

A mechanism used to detect errors and to verify that the information has been corrected. The control digits are used mainly to detect mistakes when typing or transmitting data.

### Control digit

See *check digit*.

### Control panel

An element of a computer's user interface that allows users to view and manipulate basic system settings and controls via applets, such as adding hardware, adding and removing software, controlling user accounts, and changing accessibility options.

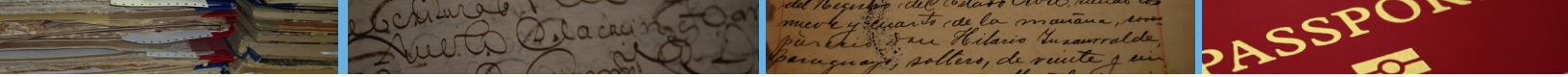
### Convention

An international agreement between countries covering particular matters, especially relating to issues of common interest and less formal than a treaty. Conventions may be forerunners for treaties. See also *international treaty*.

### Convention on the Rights of the Child

A United Nations convention that sets out the civil, cultural, economic, social, and political rights of children.





### Cooperative user

An individual who willingly provides his or her biometric information to the biometric system for capture.

### Core identity document

A document that proves the existence of a person and serves as the basis for obtaining other identification documents. The birth certificate is the core identity document most widely used. *See also birth certificate, birth registration, breeder document.*

### Core point

In biometrics, the center(s) of a fingerprint. In a whorl pattern, the core point is found in the middle of the spiral/circles. In a loop pattern, the core point is found in the top region of the innermost loop. More technically, a core point is defined as the topmost point on the innermost upwardly curving friction ridgeline. A fingerprint may have multiple cores or no cores. *See also arch, delta point, friction ridge, loop, whorl.*

### Coroner

An officer of a county, district, municipality, parish, etc., authorized by law to hold an inquest regarding the deaths of persons who may have died by violence, injury, or under suspicious circumstances, to determine if the death was due to non-natural causes, such as accident, suicide, or homicide. *See also medical examiner.*

### Correction

A change in a vital record or legal act whereby an error is corrected or amended and saved by the respective authority. *See also marginal note.*

### Corroboration

Confirmation of an event after having provided sufficient evidence. *See also verification, authentication.*

### Counterfeit

Fraudulent imitation or forgery.

### Country of destination

A country that is a destination for migratory flows (legal or illegal). *See also receiving country.*

### Country of habitual/usual residence

The country in which a person lives; that is, the country in which he or she has a place to live and normally spends the daily period of rest. Temporary travel abroad for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment, or religious pilgrimage does not change a person's country of usual residence. *See also habitual/usual residence, permanent residence, residence.*

### Country of origin

(a) State or country of which an individual is/was a national. (b) Country from which migratory flows proceed (legal or illegal).

### Court of competent jurisdiction

A court within the country with jurisdiction over the registrant and such other individuals that the court deems necessary.

### Covert information gathering

The manner of collecting biometric samples without people's authorization or awareness. An example of a covert environment might involve an airport checkpoint where face images of passengers are captured and compared to a watch list without their knowledge. *See also overt information gathering, function creep.*

### CPU

*See central processing unit.*

### Cracker

Person trying to access a computer system without authorization. They often have bad intentions, unlike hackers, and often possess different means and a lot of knowledge of how to penetrate a system. *See also hacker.*

### Credential

A document or token that establishes the identity and proves the condition of a person and his or her competency or authority to perform a certain activity or function. *See also token.*





### Credentialing

Establishing and recognizing parameters that create authority or confidence.

### Credential service provider (CSP)

A trusted entity that issues or registers subscriber tokens and issues electronic credentials to subscribers. The CSP may encompass registration authorities and verifiers that it operates.

### CRNI

See *crude rate of natural increase*.

### Crossover error rate (CER)

See *equal error rate*.

### Crude birth rate

The number of live births among the population of a given geographical area during a given period of time, usually a year, per 1,000 inhabitants.

### Crude death rate

The number of deaths among the population of a given geographical area during a given period of time, usually a year, per 1,000 inhabitants.

### Crude divorce rate

The number of divorces per 1,000 inhabitants in a given year. This rate is calculated using the number of divorces rather than the number of people obtaining a divorce.

### Crude marriage rate

The number of marriages per 1,000 inhabitants in a given year. This rate is calculated using the number of marriages rather than the number of people getting married.

### Crude rate of natural increase (CRNI)

The difference between the crude birth rate and the crude death rate.

### Cryptographic key

A code used along with a cryptographic algorithm to transform, validate, authenticate, encrypt, or decrypt data.

### Cryptographic strength

The measure of the expected number of operations required to defeat a cryptographic mechanism.

### Cryptographic token

Usually a hardware device with a secure cryptographic key for verification and/or authentication purposes. See also *cryptographic key*.

### Cryptography

The transformation of information in order to protect it from modifications and unauthorized use. It uses complex mathematical algorithms to encrypt information and to return encrypted information to its original form. See also *credential service provider*.

### CSP

See *credential service provider*.

### Cultural diversity

The existence of cultures of groups and societies are expressed and passed on within and among groups and societies.

### Cultural identity

The cultural heritage of a community, group of people, region, country, or nation. Conscious of being part such cultural heritage. See also *social identity*, *national identity*.

### Cumulative match characteristic (CMC)

A method of showing measured accuracy performance of a biometric system operating in the closed-set identification task. Biometric templates are compared and ranked based on their similarity. The CMC shows how often these templates appear in predefined ranks based on the match rate.

# ■ D ■

## Dactylogram

In biometrics, a set of ridges and papillary fingerprint grooves set by a digital printing.

## Dactyloscopist

A person specialized in classifying and identifying people by studying their fingerprint patterns.

## Dactyloscopy

The set of techniques and procedures in the study and classification of fingerprints.

## Daily average

Refers to the arithmetic mean of birth, death, or marriage occurrences per day.

## Daily index

The increase/decrease from the overall daily average of event occurrences.

## Dark fiber

(a) An unused optical fiber that is available for use in fiber-optic communication. (b) The fiber installations not owned or controlled by traditional carriers.

## Data

Symbolic representation (numeric, alphabetic), attribute, or characteristic of an entity.

## Data authentication

Verifying the origin and integrity of data.

## Data bank

An *organized* set of personal information that has been subjected to treatment or processing, electronically or not, regardless of the manner in which it has been arranged, stored, organized, or accessed.

## Data capture

Process or means of collecting information from (a) paper documents or (b) external data by analyzing

images and saving them to databases. See also *biographical enrollment*, *biometric enrollment*.

## Data communications

All forms of exchange of information between computers. Data communication can take place between two computers in the same building via a local area network (LAN), throughout a country through telephone lines, or worldwide via satellite link.

## Data compression

Method of decreasing the volume of data by encoding it more efficiently, thus reducing processing, transmission time, and required storage space.

## Data integrity

Assurance that data have not been accessed or altered by an unauthorized entity and there is no variance across data banks in data for a particular entity.

## Data message

The information generated, sent, received, filed, or communicated through electronic, optic, or other means, which could include electronic data interchange, email, telegram, or telefax. See also *electronic data interchange*.

## Data package

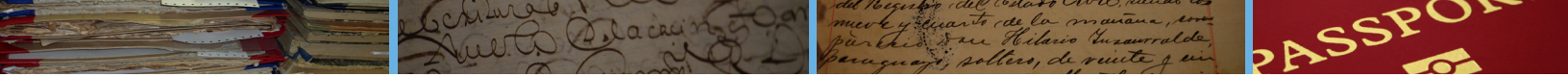
Data unit sent over a network.

## Data processor

The technique of collecting primary input data, and then evaluating and sorting it in order to obtain useful information that can be analyzed by the end user to make a decision or take appropriate action.

## Data transfer rate

The speed at which information between devices is transferred, such as between computers, systems, or a scanner and a computer, or between components



within a device (i.e., between the memory and the drive of a computer).

### Database

An organized collection of data. In biometric systems, data can include sensor readings, templates, match results, and related end user information.

### Database administrator

A professional responsible for the installation, configuration, upgrading, administration, monitoring, maintenance, and security of databases in an organization.

### Date of birth

Day, month, and year of birth, to determine age in completed units of time.

### Date of occurrence

Day, month, and year of occurrence of a vital event, including hours and minutes in the case of births and of deaths of infants in the first week of life.

### Date of registration

Day, month, and year when an entry of a vital event is made into a register within the civil registration system.

### Daugman's algorithm

An algorithm developed for identification by recognition of the iris.

### De facto

(Latin) "existing as a matter of fact." *See also de jure.*

### De facto partner

A relationship between unmarried adults recognized by a growing number of states for purposes of granting permanent residence or other immigration status.

### De facto population

A concept under which individuals (or vital events) are recorded (or are attributed) to the geographic

area where they were present (or occurred) at a specified time.

### De facto refugees

Persons not recognized as refugees within the meaning of the *UN Convention Relating to the Status of Refugees, 1951* and *Protocol Relating to the Status of Refugees, 1967*, and who are unable or unwilling, for political, racial, religious, or other valid reasons to return to their countries of origin. *See also externally displaced persons, internally displaced persons, refugee.*

### De facto stateless person

A person outside of his or her country of nationality who is unable or, for valid reasons, unwilling to avail him or herself of the protection of that country. Persons who have more than one nationality are de facto stateless only if they are outside all the countries of their nationality and are unable or, for valid reasons, unwilling to avail themselves of the protection of any of those countries. *See also nationality, statelessness.*

### De facto statelessness

Generally refers to persons who do not enjoy the rights attached to their nationality; persons who are unable to establish their nationality or who are of undetermined nationality; and persons who, in the context of state succession, are attributed to the nationality of a state other than that of the state of their habitual residence.

### De jure

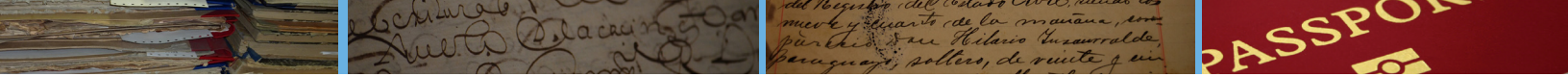
(Latin) "existing by right or as a matter of law." *See also de facto.*

### De jure population

Whereby individuals (or vital events) are recorded (or are attributed) to a geographical area on the basis of the place of residence.

### Death

When all evidence of life has permanently ceased any time after live birth, excluding fetal death.



### Death certificate

A document of proof produced by the civil register to certify the death of a person, including the cause(s) of death.

### Death records

A compilation of all deaths recorded in a given year.

### Death registration

The official recording of the death of a person through a public administrative process.

### Decentralization

In public administration, the granting of a certain degree of autonomy to specialized agents acting on behalf of central institutions, which supervise the agents' activities.

### Decision (matching)

In biometrics, the final step in a biometric authentication process where the entered biometric information has been compared to the stored template component and the system decides whether there is a match or not.

### Declaration of certification practices

A document officially presented by a certifying entity to the competent administrative authority that defines its certification practices.

### De-concentration

The process by which the agents of central government control are relocated and geographically dispersed.

### Decryption

The process by which, after applying an algorithm and corresponding keys, the original readable text is obtained from cipher-text. *See also encryption.*

### Deduplication

Assurance through comparisons of biographic or biometric data that no enrolled person has been enrolled more than once.

### Deed

Document issued by a public notary or other official legal authority confirming a legal act or contract between parties.

### Default settings

In computer systems, the original configuration of an application or program that can be changed to include additional features or to adapt it to user's preferences.

### Degrees of freedom

The number of statistically independent features (parameters) contained in biometric data.

### De-identified information

Records that have had enough personally identifiable information removed or obscured such that the remaining information does not identify an individual. *See also personally identifiable information.*

### Delayed birth registration

*See late registration, untimely birth registration, regular registration of births.*

### Delayed registration

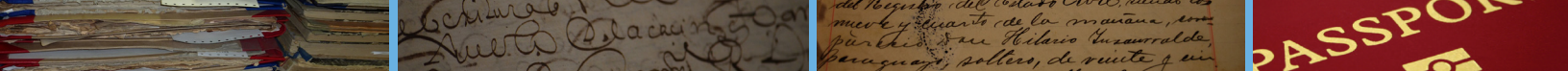
Registration of a civil or vital event after the prescribed period indicated in existing laws, rules, or regulations (including any grace period, if one is specified). In most countries, late registration is the registration of a vital event after the prescribed time period but within a specified grace period. Delayed registration is usually considered the registration of a vital event one year or more after the vital event has occurred.

### Delegate

Authorize another person to represent or act on one's behalf.

### Delta point

In biometrics, the part of the pattern of a fingerprint that resembles the Greek letter Δ (delta). Technically, it is the point on a friction ridge at or nearest to the



point of divergence of two type lines and located at or directly in front of the point of divergence.

### Demographic transition

The historical shift of birth and death rates in a population.

### Demography

The scientific study of human populations, including their size, composition, distribution, density, growth, and other demographic and socioeconomic characteristics, and the causes and consequences of changes in such factors.

### Denationalization

See *loss of nationality*.

### Deoxyribonucleic acid (DNA)

A molecule that contains and transmits the genetic instructions used in the development and functioning of all known living organisms except some viruses (retroviruses). The molecule is formed by two complementary chains of nucleotides that are entwined and form a double helix that remains united by hydrogen bonds. The four types of nucleotides that form DNA are adenine, guanine, cytosine, and thymine.

### Depopulation

The active removal or reduction of a population of a given territory.

### Deportation

The act of a state, in the exercise of its sovereignty, to remove a foreigner from its territory to a certain place after refusal of admission or termination of permission to remain. See also *expulsion*.

### Deported

A person subject to the penalty of deportation. See also *deportation*.

### Deposition

The testimony of a party or witness in a civil or criminal proceeding taken before trial, usually in an attorney's office.

### Deprivation of nationality

Withdrawal of nationality initiated by the authorities of a country. See also *nationality*, *statelessness*.

### Deputy registrar:

See *assistant registrar*.

### Descendant

A person who is originated from a specific ancestor. See also *ancestor*.

### Descriptive epidemiology

The study of the occurrence of disease or other health-related characteristics in human populations, usually concerned with the relationships of disease to basic variables, such as age, sex, race, ethnicity, geographic location, occupation, and socioeconomic measures.

### DET curve

See *detection error trade-off curve*.

### Detection and identification rate

The rate at which individuals in a database are properly identified in an open-set identification (watch list) application. See also *open-set identification*, *watch list*.

### Detection error trade-off (DET) curve

A graphic depiction of measured error rates that typically plot matching error rates (false non-match rate versus false match rate) or decision error rates (false rejection rate versus false acceptance rate). See also *false match rate*, *false non-match rate*, *false acceptance rate*, *false rejection rate*.

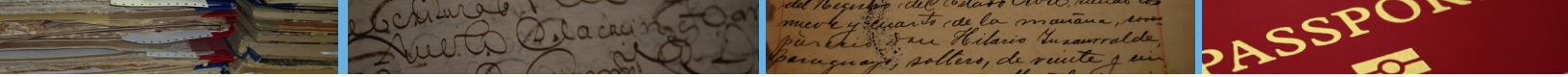
### Diaspora

Any national or ethnic population that leaves their homeland, individually or as part of organized networks, and that maintains ties to their homeland.

### Difference score

A value returned by a biometric algorithm that indicates the degree of difference between a biometric





sample and a reference. *See also Hamming distance, similarity score.*

### **Diffractive optically variable image device (DOVID)**

Devices that contain gratings (usually in the form of surface reliefs) that can modify light by diffraction. They can be used to create different effects, such as two- or three-dimensional images or kinematic and color-changing effects.

### **Digital**

The language of binary numbers (ones and zeros) used by computers to store and process data.

### **Digital archiving system**

A system designed to file documents, including the functions of storage, hierarchical organization, classification, manipulation, navigation, access, and data query.

### **Digital certificate**

An electronic document used to prove ownership of a public key. The certificate includes information about the key, information about its owner's identity, and the digital signature of the certification authority that has verified the certificate's contents are correct. *See also certification authority.*

### **Digital credentials**

Digital documents used to prove qualification, competence, or clearance attached to a person. May contain personal information such as the person's name, birthplace, birthdate, and/or biometric information, such as a picture or a fingerprint.

### **Digital footprint**

The sum of activities recorded by an entity (e.g., a person) when interacting in a digital environment, including login and logout, visits to web pages, and file creation and access.

### **Digital identity**

A set of features that individualize a person in a computer-based environment.

### **Digital signature**

An asymmetric key operation where the private key is used to digitally sign an electronic document and the public key is used to verify the signature. Digital signatures provide authentication and integrity protection. They have the same validity and legal effects as a handwritten signature. *See also advanced electronic signature, electronic signature.*

### **Digital signature algorithm (DSA)**

An information processing standard for digital signatures.

### **Digital signature holder**

A person or entity to whom a digital certificate can be exclusively attributed, identifying him or her objectively in relation to a data message.

### **Digital signature mechanisms**

A configured computer program or device used to apply data in creating a signature. The mechanisms vary according to the level of security applied.

### **Digital stamp**

Evidence that proves that a digital document was received by the appropriate authority. *See also advanced electronic signatures, public key infrastructure.*

### **Digital transmission**

Data transfer using discrete electromagnetic signals.

### **Digital vault**

A properly secured encrypted space on the Internet where digital assets can be saved.

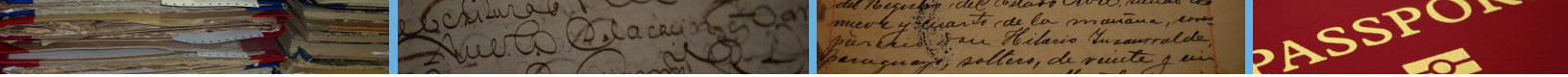
### **Digitalize**

To transform any kind of information—graphic, audio, video, or other—into binary data that is readable by computers.

### **Diplomatic passport**

Special travel document that is issued specifically for foreign service officers (e.g., diplomatic and consular





officers) and members of their families to be used in their overseas postings.

### Disciplinary offense

The omission of rules by an official, making him or her liable to a disciplinary punishment.

### Disclosure

To make available or make known personally identifiable information contained in a vital record by any means of communication.

### Discrimination

Treating a group or individual unfairly or prejudicially based on sex, racial origin, ethnicity, religion, convictions, incapacity, age, sexual orientation, or some other quality. Denying a person or group of people social participation or human rights.

### Discrimination against women

Any distinction, exclusion, or restriction on the basis of sex that impairs or nullifies women's recognition, enjoyment, or exercise of their human rights and fundamental freedoms in the political, economic, social, cultural, civil, or any other realm.

### Discrimination based on race

See *racial discrimination*.

### Displaced person

A person forced to flee his or her state because of internal conflict, natural or human-made disasters, or other reasons beyond their control. See also *de facto refugees*, *externally displaced persons*, *internally displaced persons*.

### Displacement

Forced removal of a person from his or her home or country, generally because of armed conflict or natural disaster.

### Disqualification

The loss of a person's right to vote during incarceration due to committing felony.

### Distinguishable information

Information that can be used to identify an individual.

### Divorce

Legal dissolution of a marriage. A separation of husband and wife that confers on the parties the right to remarry under civil, religious, and/or other provisions in accordance with the laws of the country.

### Divorce rate

The number of divorces per 1,000 population in a given year.

### DNA

See *deoxyribonucleic acid*.

### Document authentication

Validation and notarization of documents by a publicly designated authority to guarantee the veracity of the document.

### Document renovation

The process by which a person obtains or replaces an identity document due to loss or expiration.

### Documentation

Used generically to refer to identity and identification documents.

### Documentation campaigns, enrollment, or information

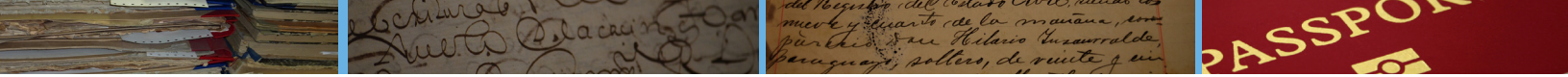
Time limited social interventions conducted by the state or groups in specific territories and populations that are designed to detect and/or resolve problems of undocumented persons.

### Documented migrant

A person who enters a country legally and remains in the country in accordance with his or her admission criteria.

### Domain

A group of computers that can be accessed and administered with a common set of rules, and that



may also block outside traffic from accessing computers within the network, thus adding an extra level of security.

### Domicile

The place where a person lives and regards as home, even if they are temporarily residing elsewhere. The state a person considers him- or herself to be legally established for the fulfillment of his or her obligations and the exercise of his or her rights. *See also residence.*

### Dossier

Files and documents that register the procedural acts that take place in a court, arranged chronologically and foliated in book form with a cover.

### Double or multiple births

Births that happen one followed by the other, differentiated only by small units of time. *See also simultaneous births.*

### Doubling time

The number of years required for the population of an area to double given the current rate of population growth.

### DOVID

*See diffractive optically variable image device.*

### D-prime (D')

A statistical measure of how well a system can discriminate between a signal and a non-signal. *See also signal.*

### DSA

*See digital signature algorithm.*

### Dual citizen

A person who has citizenship in two countries. Not all countries allow a person to be a citizen of another country simultaneously and thus the person must choose to relinquish or renounce citizenship in one country to apply for citizenship in the other.

### Dual-interface card

A smart card with a single chip that can operate in both contact and contactless mode. *See also smart card.*

### Dual records system

The simultaneous collection of vital statistics data, mainly births and deaths, using two methods theoretically independent of each other. One is the continuous collection of vital statistics, which can be the responsibility of another institution besides the civil register; the other is a periodic household survey within the same geographic area. Accuracy of information is improved by cross referencing that gathered by both methods.

### Due care

*See due diligence.*

### Due diligence

The level of judgment, care, prudence, determination, and activity that a person would reasonably be expected to do under particular circumstances.

### Duplicate

A second document or text with the same contents and value as the original.

### Duplicate records

An anomaly or deficiency in the registration of vital acts. An example is the existence of two or more entries of the same event.

# ■ E ■

## Early neonatal death

Refers to death among live births during the first 7 days of life.

## Eavesdropping

Surreptitiously obtaining data from an unknowing end user. An example involves having a hidden sensor co-located with a legitimate sensor.

## e-Book

A book that can be viewed, read, or printed from an electronic device.

## ECC

See *elliptic curve cryptography*.

## ECDSA

See *elliptic curve digital signature algorithm*.

## e-Credential

Evidence of identity that is purely electronic and is not necessarily tied to a specific physical token. The e-credential establishes identity and may be used to authenticate the person to sign documents and messages or to encrypt data. See also *token*.

## e-Democracy

The use of ICT to create the social, economic, and cultural conditions to enable the practice of political participation.

## EDI

See *electronic data interchange*.

## EDL

See *enhanced driver's license*.

## EER

See *equal error rate*.

## e-Government

Government agencies' use of information technologies to transform and optimize relations between the government and citizens, businesses, and other sectors of government. See also *connected governance*.

## e-ID

See *electronic identification documentation*.

## eKYC

See *electronic know your customer*.

## Elder

A person who is or has exceeded a particular age, usually 60 or 65 years, depending on the country.

## e-Learning

An education process that does not require the student to attend classes in a specific building. Classes and learning materials can be provided on the Internet, an intranet, a CD-ROM, or using multimedia presentations.

## Electoral card

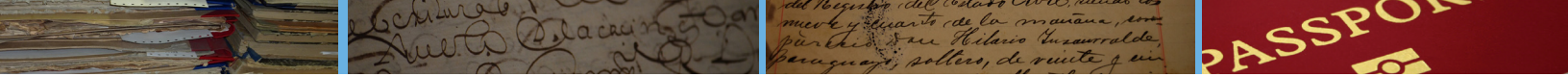
An identity card issued by an election authority that must be used to exercise one's right to vote. In many countries, the identity card used for legal identification is also used for voting. In other countries, citizens must obtain both documents when they come of age. The voter ID card is also used to determine the electoral residence and hence it includes where the citizens are registered to exercise their right to vote.

## Electoral census

Process of making the official list of those who are entitled to vote in a certain district or country. See also *voter registration list*.

## Electorate

The people in a country or geographic area eligible to vote in elections.



### Electronic copy of electronic documents

Reproduction of electronic documents issued by the interested party or a public entity by electronic means. They are considered authentic copies with the same validity as the original electronic document, to the extent that the law recognizes them as such.

### Electronic copy of paper documents

Using electronic means to reproduce documents originally issued on paper by a public entity. They are considered true copies provided a clear record is stated with regards to the original, including date, time, place of issue, and signature.

### Electronic data interchange (EDI)

A standard for the exchange of structured information between computers.

### Electronic governance

Using information and communication technologies at various levels of the government and the public sector and beyond to enhance governance. *See also e-government, connected governance.*

### Electronic identification documentation (e-ID)

A token that proves an individual's identity and is used to identify, authenticate, and act as an electronic signature. Generally, a smart card that contains a contact or contactless chip. *See also smart card.*

### Electronic identity

The set of data or attributes that enables persons to prove electronically who they are to access services or reserved information. *See also electronic signature.*

### Electronic identity card

Card equipped with a microprocessor chip.

### Electronic know your customer (eKYC)

Collecting "know-your-customer" information electronically using e-ID. *See also know your customer.*

### Electronic machine-readable travel document (e-MRTD)

A document that contains a contactless integrated circuit chip to identify an individual.

### Electronic passport

*See biometric passport.*

### Electronic record

An electronically issued record that consists of a date, time, place, and signature. *See also digital stamp.*

### Electronic signature

A set of electronic data that can be used to identify the person or organization signing a document. An electronic sound, symbol, or process attached to or logically associated with a contract or other record and executed or adopted by a person with the intent to attest to the accuracy of the facts in the record. *See also advanced electronic signature, digital signature.*

### Electronic signature holder

A person who can be linked exclusively to a data message signed electronically using a private key. *See also digital signature.*

### Electronic System for Travel Authorization (ESTA)

All travelers seeking to enter the United States under the Visa Waiver Program are required to obtain travel authorization through the ESTA before boarding. ESTA conducts checks on police databases. *See also Visa Waiver Program.*

### Eligible

Meeting the specified requirements in order to participate or have the right to do or obtain something.

### Elliptic curve cryptography (ECC)

A public-key cryptography method based on the algebraic structure of elliptic curves over finite fields. *See also elliptic curve digital signature algorithm, digital signature algorithm.*

### Elliptic curve digital signature algorithm (ECDSA)

A variant of the digital signature algorithm that uses elliptic curve cryptography. *See also elliptic curve cryptography, digital signature algorithm.*

### Email

Electronic mail. A service similar to the regular postal system, but used on computers in a digital format.

### Email address

An identifier of the email box (the equivalent of a mailbox) to which emails are delivered and from where they are sent.

### Email list

Set of email addresses that periodically request and receive specific topic-related messages. The most popular mailing lists are called Listservs, originating from the Bitnet network. These lists cause high traffic because the messages are transmitted as many times as there are list subscribers.

### Emancipate

Freeing from parental control, guardianship, or servitude.

### Emancipated minor

A minor who is freed from control by his or her parents or guardians.

### Emigration

The process of leaving one country to take up residence in another.

### Emigration rate

The number of emigrants per 1,000 population departing an area of origin in a given year.

### Empowerment

Conferring capacity to a person.

### e-MRTD

*See electronic machine-readable travel document.*

### Emulate

To imitate the function of another computer system to accept the same data, execute the same programs, and achieve the same results as the imitated system.

### EMV

*See* Europay, MasterCard, Visa.

### Encrypt

To transform one message into another using a password to prevent that transformed message from being interpreted by those who do not know the password.

### Encryption

The process of encoding messages or information in such a way that only authorized parties can read it. The message or information, referred to as plaintext, is encrypted using an encryption algorithm that generates a cipher-text that contains the same information but that can only be read if decrypted. Usually the encryption algorithm includes the use of an encryption key. *See also decryption.*

### End user

The user of an information system or the person that interacts with a machine.

### Enforcement proceeding

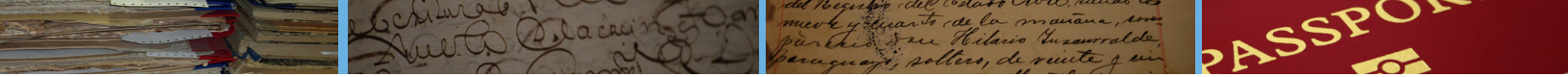
A procedure to make a payment in court. Usually initiated by an asset seizure of the debtors properties, which are later converted into money to pay off the debt.

### Enhanced driver's license (EDL)

In the United States and Canada, a driver's license that incorporates biometrics and can be used to travel in and out of the United States by land and sea.

### Enrollment

The process of collecting a biometric sample from an end user, converting it into a biometric reference, and storing it in the biometric system's database for later comparison.



### Entry

Any entrance of a person into a country other than his or her homeland, whether voluntarily, involuntarily, legally, or illegally. *See also admission.*

### Entry stamp

A mark made by a border official in a person's passport stating the date and place at which that person entered the state. Most countries stamp the passports of all who enter, whether citizens or non-citizens.

### e-Passport

An electronic passport on which biometric data is stored in an embedded microchip that complies with the recommended standards of the International Civil Aviation Organization. *See also eMRTD, biometric passport.*

### Epidemiology

The study of the distribution, determinants, and frequency of health-related factors and human diseases.

### Equal error rate (EER)

A statistic used to show biometric performance, typically during a verification operation. The EER is the location on a detection error trade-off curve where the false acceptance rate and the false rejection rate (or one minus the verification rate) are equal. In general, the lower the EER value, the higher the accuracy of the biometric system. Note, however, that most operational systems are not set up to operate at the EER, so the measure's true usefulness is limited to comparing biometric system performance. The EER is sometimes referred to as the "Crossover Error Rate." *See also detection error trade-off (DET) curve, false acceptance rate, false rejection rate.*

### Equal marriage

Same-sex marriage.

### ESTA

*See Electronic System for Travel Authorization.*

### Ethernet

A family of computer networking technologies for local area networks.

### Ethnicity

Cultural values and practices that distinguish groups of people. There are two dimensions: social and cultural characteristics (language, religious faith, and residence) and a shared sense of identity, tradition, solidarity, or belonging.

### EURODAC

*See European Dactyloscopy.*

### Europay, MasterCard, Visa (EMV)

An interoperation standard for chip cards and point of sale terminals that authenticates credit and debit cards for payment.

### European Committee for Standardization (CEN)

a private organization whose mission is to promote the European economy in global commerce, the welfare of European citizens, and the environment. It has under its jurisdiction the International Society for the Systems Sciences (ISSS). *See also National Institute of Standards and Technology, American National Standards Institute.*

### European Dactyloscopy (EURODAC)

A single-purpose application with a centralized database that is used to ensure that members of the European Union account for asylum-seekers by allowing countries to identify where the person has sought asylum first. The system requires fingerprints from all the fingers of asylum-seekers over 18 years of age. The database does not include any personal details about the individual, such as name. It only lets the user of the system know whether the applicant has already been registered in the database or not. The information is stored for 10 years, after which it is cleared from the database.





### European Visa Information System (VIS)

A centralized database kept by the European Union to ensure the free movement of persons, to provide a common asylum policy, and to remove border checks. It is the system through which people apply for visas to enter the European Union. This database contains all applicant data, which are retained for five years.

### Evidence

Material presented to a court of law to help find the truth about something. Facts or testimony in support of a conclusion, statement, or belief.

### Ex officio

Latin “from the office.” The intent of the phrase is “by right of the office”, meaning that a person is in a particular position because of the office they hold.

### Exclusion

The effect of impeding the participation of a person or certain social groups in aspects of social and political life.

### Exit visa

A document issued to individuals with expired visas who need to extend their visas before leaving the country.

### Exodus

The displacement of large numbers of people or of part of a community or population.

### Expansion slot

A slot on a computer motherboard used to connect additional devices such as network, graphics, or sound cards.

### Expatriation

Voluntary or involuntary abandonment of the homeland.

### Expert

A person with special knowledge in any field, appointed by a judge to report on aspects of a case that are related to their field of specialty.

### Expert report

A written report from an expert to the court regarding his or her findings and opinion about the matters in front of the court.

### Exponential growth

The increase in a population at a constantly growing rate.

### Expulsion

An act by an authority of the state with the intention and the effect of securing the removal of a person or persons (foreigners or stateless persons) against their will from the territory of that state. *See also deportation.*

### Expulsion order

An order of a state informing a non-national that they are prohibited from remaining on its territory. Such an order is given if the individual either entered the territory illegally or is no longer authorized to remain in the state. This order is generally combined with the announcement that it will be enforced, if necessary, by deportation. *See also deportation.*

### Externally displaced persons

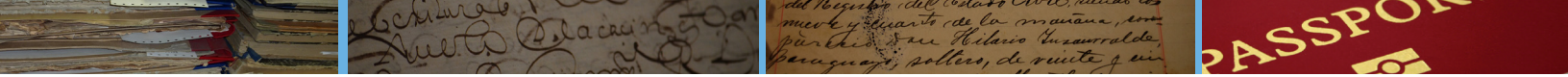
People who have fled their country due to persecution, generalized violence, armed conflict situations, or other man-made disasters. *See also de facto refugees.*

### Extraction

The process of converting a captured biometric sample into biometric data so that it can be compared to a reference.

### Extramarital birth

The birth of a child to a mother who, according to national law or customs, was not married at the time of the birth. This term should not be used to explicitly describe the child on the birth certificate unless specifically required by law; rather, it is a statistical term used to describe the number of out-of-wedlock births that have occurred.



### Extranet

A section of an organization's private network that provides controlled access from outside the organization through the Internet. Access is permitted to

certain partners, vendors, suppliers and other people associated with the organization.

### e-Zine

Magazines that are published online, including the ones that only appear online.

## F

### Face recognition

A biometric modality that uses an image of the visible physical structure of an individual's face for recognition purposes. *See also fingerprint recognition, hand geometry recognition, iris recognition, palm-print recognition, voice recognition.*

### Facial biometry

A biometric modality in which the physical structure of the face is used for recognition purposes. *See also face recognition.*

### Facial detection

*See face recognition.*

### Failure to acquire (FTA)

The inability of a biometric system to capture and/or extract usable information from a biometric sample.

### Failure to enroll (FTE)

The failure of a biometric system to form a proper enrollment reference for an end user. Common failures include end users who are not properly trained to provide their biometrics, capturing incorrect information, or capturing information that is insufficient in quality to develop a biometric template.

### False acceptance

The incorrect matching by a biometric system of an input pattern to a template in the database. In other words, an invalid input that is incorrectly accepted.

### False acceptance rate (FAR)

A statistic used to measure biometric performance when operating in the verification task. The percentage of times a system produces a false accept, which occurs when an individual is incorrectly matched to another individual's existing biometric. *See also false match rate, type II error.*

### False alarm rate

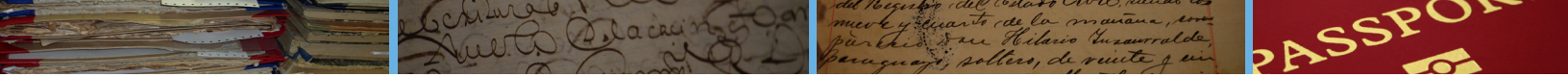
A statistic used to measure biometric performance when operating in the open-set identification (sometimes referred to as watch list) task. It is the percentage of times an alarm is incorrectly sounded on an individual who is not in the biometric system's database, or an alarm is sounded but the wrong person is identified.

### False match rate (FMR)

A statistic used to measure biometric performance. It is similar to the false acceptance rate.

### False negative identification

A term that applies to deduplication transactions only. It is an incorrect decision of a biometric system that an applicant, making no attempt to avoid recognition, has not previously been enrolled in the system, when in fact they have. This failure to match might be caused by any algorithm in use by the system (e.g., segmentation, comparison, binning, quality). *See also deduplication.*



### False negative identification rate (FNIR)

A term applying to deduplication transactions only. It is the ratio of the number of false negative identification decisions to the total number of enrolment transactions by enrolled individuals. This rate depends on the size of the database and the database binning/partitioning used to meet throughput requirements. *See also deduplication.*

### False non-match rate (FNMR)

A statistic used to measure biometric performance. It is the probability that the biometric system will fail to detect a match between the input pattern and a template in the database. In other words, it is the percent of valid inputs that are incorrectly rejected. The FNMR is similar to the false reject rate, except the false reject rate includes the failure to acquire error rate while the FNMR does not. *See also failure to acquire, false reject rate.*

### False positive identification

A term applying to deduplication transactions only. It is an incorrect decision of a biometric system that an applicant has previously been enrolled in the system, when in fact they have not. *See also deduplication.*

### False positive identification rate (FPIR)

A term applying to deduplication transactions only. It is the ratio of the number of false positive identification decisions to the total number of enrolment transactions by unenrolled individuals. This rate depends on the size of the enrolled database and the database binning/partitioning used. *See also deduplication.*

### False rejection

In verification transactions, the rejection by a biometric system of a submitted biometric sample that actually matches the enrolment data of the subject.

### False rejection rate (FRR)

A term applying to verification transactions only. It is the ratio of the number of verification transactions

conducted by data subjects acting in “good faith” resulting in a false rejection to the total number of such good faith transactions. The definition of “transaction” is given by the respondent, with the provision that the same definition is used in determining the false acceptance rate. *See also false acceptance rate.*

### Family

A group of two or more persons who are related by birth, marriage, or adoption.

### Family records

The registered acts pertaining to civil status as well as vital records for the members of a family unit.

### FAR

*See false acceptance rate.*

### Feature(s)

Distinctive mathematical characteristic(s) derived from a biometric sample used to generate a reference. *See also biometric template, extraction.*

### Feature extraction

*See extraction.*

### Fecundity

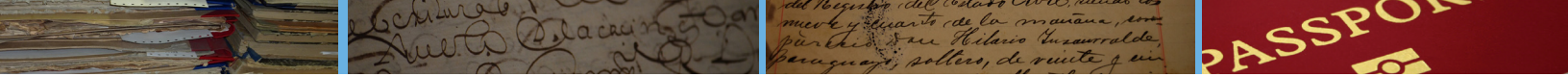
The physiological capacity of a woman to produce a child.

### Federal Information Processing Standards (FIPS)

Compulsory standards and guidelines regarding security and communication for U.S. federal government and agencies employees, including contractors.

### Federated identity

In computing, a way of allowing users to access the networks of multiple entities (companies or different departments) using the same username and password. For a federated identity to work, the identity management systems of all the networks involved must be linked.



### Federated identity management (FIM)

A common set of policies, practices, and protocols for managing the identity and trust of information technology users and devices across organizations.

### Femicide or feminicide

The gender-motivated killing of women.

### Fertility

The reproductive performance of an individual, a couple, a group, or a population.

### Fertility rate

See *general fertility rate, total fertility rate*.

### Fetal death

Death or stillbirth of the product of conception prior to complete expulsion or extraction from its mother, irrespective of the duration of the period of gestation, that is not an induced termination of pregnancy. Death is indicated by the fact that after such separation, the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

### Fetal death rate

The number of fetal deaths per 1,000 total births.

### Fetal death ratio

The number of fetal deaths per 1,000 live births.

### Fetus

The term for an unborn embryo until it becomes a person, which for civil purposes is after birth and after remaining separated from the maternal womb for 24 hours.

### Fiber optics

The technology associated with data transmission over a plastic or glass wire or fiber. It allows greater data quantities and higher speed than a conventional copper wire and is generally not subject to electromagnetic interference, nor does it need to retransmit the signal.

### File administrator

Software application used to facilitate the completion of various tasks related to the storage and preservation of alphanumeric files, text or digital, such as moving, copying, and deleting.

### File transfer protocol (FTP)

A standard network protocol used to transfer computer files between computers.

### Filiation

Family relationship between relatives, regardless of degree, in the strictest connotation; the relationship of rights that exists between parent and child.

### FIM

See *federated identity management*.

### Final fertility rate

The number of children born to every woman in a cohort of women by the end of their reproductive period.

### Fingerprint

A visible impression produced by contact of the friction ridges of the fingers with a surface.

### Fingerprint recognition

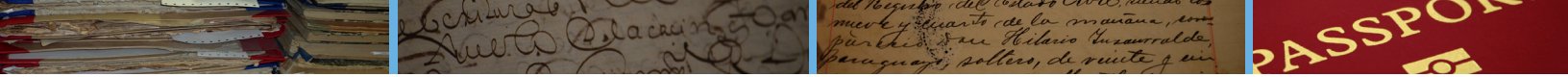
A biometric modality that uses the physical structure of an individual's fingerprint for recognition purposes. Important features used in most fingerprint recognition systems are minutiae points that include bifurcations and ridge endings. See also *bifurcation, dactyloscopy, friction ridge, hand geometry recognition, loop, palm-print recognition, pelmatoscopy*.

### FIPS

See *Federal Information Processing Standards*.

### Firewall

A hardware or software system used as a network's gateway to control incoming and outgoing traffic based on security rules. It establishes an informational barrier between the network and the outside world.



### Firewire

Apple's trademark IEEE 1394 interface standard for the exchange of information between two devices or systems. This standard is comparable to the universal serial bus. Among its typical uses is the transfer of audio and video.

### Firmware

In computing, a set of commands for controlling a device that are embedded within the hardware. This means it is virtually unchangeable (as opposed to commands conveyed through software, which are easier to change). Usually these commands are in read-only memory.

### Flat fingerprints

An image of a fingerprint that is pressed down on a flat surface. *See also rolling fingerprint.*

### Floating point

In computing, a method of representing an approximation of a real number in a way that can support a trade-off between range and precision.

### FMR

*See false match rate.*

### FNIR

*See false negative identification rate.*

### FNMR

*See false non-match rate.*

### Foliate

To number administrative or legal records or actions in a correlative fashion.

### Folio

A page of a book, notebook, or chart. One side of the page is called the even page and the other is the odd page. *See also civil register book.*

### Footprint

An impression of the sole of the foot stamped on clinical records of live births, enabling the identification of babies up to age one year.

### Force majeure

(French) "irresistible force." In law, an event that could not be foreseen or was impossible to avoid.

### Forced migration

A migratory movement in which an element of coercion exists, including threats to life and livelihood, whether arising from natural or man-made causes. *See also refugee.*

### Forced resettlement/relocation

The process of involuntary transfer and reestablishment of the means of subsistence and living conditions of a population as a result of activities beyond the control of the population. *See also internally displaced persons.*

### Forced return

The compulsory return of an individual to the country of origin or transit, or a third country, because of an administrative or judicial decision. *See also deportation.*

### Foreigner

A person who is either temporarily or permanently in a country not of his or her nationality. People who were born in another country and acquire citizenship through naturalization in the country of residence are not considered foreigners. *See also alien.*

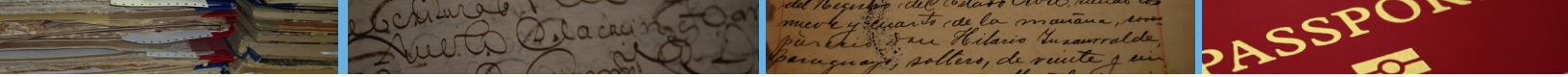
### Forensics

A collection of scientific knowledge needed to solve legal problems that would otherwise be unsolvable. Forensics also provides technical advice and expertise to the development and evolution of the law. *See also computer forensics.*

### Forgery

Creating an item or product that is an intentional and calculated reproduction of a genuine trademarked item or document. The infringing brand or document is identical or substantially indistinguishable from the genuine one. Often counterfeit goods are made imitating a popular product in its appearance to mislead customers into believing they are buying genuine merchandise. *See also identity document.*





### Form

In law, a prototype of an instrument to be employed in a legal transaction or a judicial proceeding that includes the primary essential matters, the appropriate technical phrases or terms, and any additional material required to render it officially accurate, arranged in suitable and systematic order, and conducive to adaptation to the circumstances of the particular case.

### Formulary

A book or collection of pages that contains formulas used for a petition, issuance, or execution of something.

### Fortas®

A highly secure, durable, customizable identity card system using a proprietary material developed exclusively for governments.

### Fortuitous event

See *force majeure*.

### FPIR

See *false positive identification rate*.

### Frame

In the context of a web browser, a part of a web page that displays content independent of the rest of the page, with the ability to scroll or load its content independently.

### Fraud

An act committed intentionally to infringe on the rights or interests of others.

### Fraudulent document

Any identity or travel document (a) that has been falsely made or altered in some material way by anyone other than a person or agency lawfully authorized to make or issue the document; (b) that has been improperly issued or obtained through misrepresentation, corruption, duress, or any other unlawful manner;

or (c) that is being used by a person other than the rightful holder. See also *identity document*, *machine-readable travel document*, *travel documents*.

### Free software

software that gives users the freedom to run the software for any purpose as well as to study, modify, and distribute the original software and the adapted versions.

### Freedom of movement

A human right referring to freedom of movement within the territory of a country (Art. 13(1), *Universal Declaration of Human Rights*, 1948: “Everyone has the right to freedom of movement and residence within the borders of each state.”), and the right to leave any country and to return to one’s own country (Art. 13(2), *Universal Declaration of Human Rights*, 1948: “Everyone has the right to leave any country, including his own, and to return to his country.”).

### Freeware

A computer program that has no cost provided that the conditions of the owner are respected. The source code may or may not be available to end users.

### Friction ridge

In biometrics, the distinctive patterns on the skin of the fingers, toes, palms, and soles of the feet that make contact with a surface under normal touch. On the fingers, the patterns make up the fingerprints. See also *fingerprint*, *minutia(e) point*.

### Frontier

See *border*.

### FRR

See *false rejection rate*.

### FTA

See *failure to acquire*.

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## FTE

See *failure to enroll*.

## FTP

See *file transfer protocol*.

## Function creep

The use of personal information stored in a database for purposes other than those for which it was initially collected. Generally, the information will have been collected and stored for specific or limited purposes and is later used for other objectives with or without the authorization of the people to whom the data belongs.

## Fundamental human rights

Within the scope of human rights, some human rights are claimed to be inalienable. Thus, Art. 4(1), *International Covenant on Civil and Political Rights*, 1966, permits derogation of human rights “in times of public emergency threatening the life of the nation” but prohibits any derogation from Arts. 6 (right to life), 7 (torture), 8(1) and (2) (slavery and servitude), 11 (imprisonment for breach of contractual obligation), 15 (retroactive criminal liability), 16 (recognition as a person in law), and 18 (freedom of thought, conscience, and religion). Permitted derogation notwithstanding, the trend is to regard all human rights as universal, indivisible, interdependent, and interrelated and to be treated fairly and equally, on the same footing and with the same emphasis. See also *human rights*.

# ■ G ■

## G2B

See *government to business*.

## G2C

See *government to citizen*.

## G2G

See *government to government*.

## Gallery

A set of known individuals from a biometric database used for a specific implementation or evaluation experiment.

## Gateway

In computer networking, a node (a router) on a transmission control protocol/Internet protocol network that serves as an access point to another network.

## Gender

The social, historical, and cultural construction of relational differences between males and females.

Gender refers to the roles that societies attribute to each sex and the social power relationships between them. The study of gender strives to explain how people acquire and interpret roles and identities based on sex through the process of socialization in the family, at school, and in different social spheres.

## Gender identity

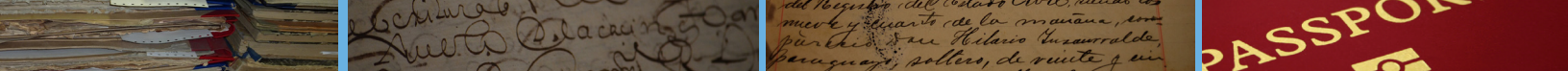
A person’s innate, deeply felt psychological identification as a man, woman, or transgender person, which may or may not correspond to the sex assigned to them at birth (e.g., the sex listed on their birth certificate).

## General fertility rate (GFR)

The number of live births per 1,000 women between the ages of 15 and 49 in a given year in a given geographic area.

## Genuine marriage

A marriage considered authentic by consular or immigration authorities, intended to be continued over



time. In many countries, if the officer cannot determine whether a marriage is genuine, the presumption is that it is genuine unless there is evidence to the contrary.

### **Geometric population growth**

The continual accelerated growth of a population.

### **Geometry of the hand**

See *hand geometry recognition*.

### **Gestation period**

The interval, measured in completed weeks, between the first day of the last menstrual period of the mother and the day of fetal delivery, irrespective of whether the product of conception is a live birth or born with no evidence of life (fetal death).

### **GFR**

See *general fertility rate*.

### **Giga**

A prefix indicating one billion ( $10^9$ ), often used to measure bytes of data storage.

### **Given name**

A word or words used to designate and individualize a person. See also *surname*.

### **Global entry**

A program that allows expedited entry processing for passengers previously approved and of low risk upon arrival to the United States. Participants may enter the United States by using automated kiosks located at select airports. Although it is intended for frequent international travelers, there is no minimum number of trips necessary to qualify for the program.

### **Good faith**

The principle that people act with sincerity and non-harming intentions. In a dispute, a judge will determine whether the person acted in good or bad faith. Good faith can reduce sanctions or legal consequences of an act or committed crime.

### **Government agency**

A unit of local, state, federal, or tribal government.

### **Government to business (G2B)**

Practices in e-government aimed at improving relationships and services delivered to businesses. See also *e-government*.

### **Government to citizen (G2C)**

Practices in e-government aimed at improving the services delivered to citizens. See also *e-government*.

### **Government to government (G2G)**

Practices in e-government aimed at improving operations and services delivered between government agencies. See also *e-government*.

### **Grace period**

An extension of the time allowed for complying with a requirement after the legally prescribed period has passed.

### **Green card**

An identity card issued by the U.S. government to non-nationals who have been granted resident status in the United States. Also called a Permanent Resident Card, it is evidence of a non-national being a lawful permanent resident with the right to live and work in the United States.

### **Groove**

In biometrics, the space between two crests on a fingerprint.

### **Gross rate**

In financing, the rate used for an entire population. See also *specific rate*.

### **Gross reproduction rate (GRR)**

The average number of daughters a woman would have if she survived to the end of her childbearing years, by specific age and for particular years during her reproductive life.



### Grounds of inadmissibility

Definitions set forth in immigration law or regulations of reasons for which non-nationals may be prohibited from entering a state. Even where a person is otherwise eligible for a visa or other immigration status, if he or she falls within the grounds of inadmissibility, the visa or other status may be denied. Grounds of inadmissibility are typically designed to preclude entry of undesirable non-nationals, such as persons without valid travel documents, with criminal convictions, who are believed to be a danger to public health or safety, and who have been previously deported.

### Growth rate

The rate at which a population grows during a given year as a result of natural increases and net migration, expressed as a percentage of the base population.

### GRR

See *gross reproduction rate*.

### Guilloche image

An image composed of fine curvy, continuous lines used on identification cards and other documents as a security measure.

### Guilloches

Interlaced continuous lines arranged in geometric patterns. Security printing composes designs of guilloches or of other fine-line patterns, aiming to raise the barrier for re-origination and reproduction. Guilloches are often combined with rainbow coloring.



### Habeas corpus

(Latin) The right of any detainee or prisoner to appear immediately or publicly before a judge or court of law to determine whether his or her arrest was legal.

### Habeas data

(Latin) The right to request public or private records that include personal data or a relative's data to acknowledge their accuracy. In a case of inaccurate information that may cause discrimination, such as political affiliations and religion, among others, the right to require rectification or deletion.

### Habitual/usual residence

A place within a country where a person lives and normally spends the daily period of rest. See also *country of habitual/usual residence, domicile*.

### Hacker

In computer security, someone who seeks and exploits weaknesses in a computer system or network.

Hackers may be motivated by profit, protest, challenge, or enjoyment. See also *cracker*.

### Hamming distance

A number of non-corresponding digits in a string of binary digits. It is a measure of dissimilarity. Hamming distances are used in many Daugman algorithms for iris recognition.

### Hand geometry

A net of geometric features found on the hands, including the width and location of the fingers, the width of the palm, and finger length. See also *hand geometry recognition*.

### Hand geometry recognition

A biometric modality that uses the physical structure of an individual's hand for recognition purposes. See also *fingerprint recognition, palm-print recognition*.



### Harass

To abuse, bother, or pursue an individual to cause harm, suffering, or humiliation, physically or verbally.

### Hash function

Any function that can be used to map digital data of arbitrary size to digital data of fixed size, with slight differences in input data producing very big differences in output data. The values returned by a hash function are called hash values. The main uses of the cryptographic hash function are in verifying the integrity of files or messages and digital signatures. *See also hash value, message digest.*

### Hash value

The result of applying a hash function to data. *See also hash function, message digest.*

### HCE

*See host card emulation.*

### HDSC

*See high-density smart card.*

### Health research

Systematic study of human health with the goal of improving it. Health research must conform to or be conducted in accordance with generally accepted scientific standards or principles and be designed to develop or contribute to generalizable scientific knowledge.

### Henry classification system

A method by which fingerprints are classified by their physiological features for one-to-many searching. This method was developed for criminal investigation in the late 1800s by Sir Edward Henry and others and is the base for the modern automated fingerprint identification system. *See also automated fingerprint identification system, one-to-many, one-to-one.*

### Hexadecimal numeral system

A system made up of 16 symbols (base 16) in which the following characters are most commonly used: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, and F.

### High-density smart card (HDSC)

A type of smart card capable of increasing memory more than 1,000-fold and increasing communications 100-fold. While their use is still being studied, more storage might lead to the addition of more information to electronic identification.

### Hologram

A fine microscopic diffraction structure used to generate three-dimensional images. Used as a security feature on identity or credit cards and currency.

### Holographic patch

An element that contains a holographic structure with three-dimensional images used as a security feature on identity or credit cards and currency.

### Home birth

A birth at the home of the woman who is giving birth. Generally a midwife or traditional birth attendant attends the birth without further assistance of other medical personnel.

### Homonym

A name that two or more people share.

### Host

A computer on a network that manages services for other computers on the same network. Most web hosts manage more than one service simultaneously (e.g., World Wide Web, file transfer protocol, news).

### Host card emulation (HCE)

A virtual representation of a smart card using only software. It enables merchants to offer mobile, closed-loop, contactless, and real-time payment solutions.

### Household

A family, group of friends, or other grouping of people who live in the same dwelling, normally defined as having a common kitchen, and share meals and living accommodations.



## Housing census

See *census*.

## HTML

See *Hypertext Markup Language*.

## HTTP

See *Hypertext Transfer Protocol*.

## Human remains

A dead body, or any part of the body of a human being, the condition of which can reasonably lead to the conclusion that the person is dead. The term does not include human ashes recovered after cremation.

## Human rights

Liberties and benefits that, by accepted contemporary values and international public law, all human beings should be able to claim “as of right” in the society in which they live. These rights are contained in the *International Bill of Rights*, comprising the *Universal Declaration of Human Rights*, 1948, and the *International Covenants on Economic, Social and Cultural Rights, and on Civil and Political Rights*, 1966, and have been included in other treaties (e.g., *Convention on the Rights of Persons with Disabilities*, 2006; *Convention on the Rights of the Child*, 1989; *Convention on the Elimination of All Forms of Discrimination against Women*, 1979; and *International Convention on the Elimination of All Forms of Racial Discrimination*, 1965). See also *fundamental human rights*.

## Human trafficker

An intermediary who transports persons with the aim of illegally crossing an internationally recognized border of a state, by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power or a position of vulnerability, or the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. See also *human trafficking*.

## Human trafficking

(a) “...the recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation shall include, at a minimum, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude or the removal of organs. ... (c) The recruitment, transportation, transfer, harboring or receipt of a child for the purpose of exploitation shall be considered ‘trafficking in persons’ even if this does not involve any of the means set forth in subparagraph (a)...” (Art. 3(a) of the *Protocol to Prevent, Suppress, and Punish Trafficking of Persons, Especially Women and Children*, supplementing the *United Nations Convention Against Transnational Organized Crime*, 2000). See also *human trafficker*.

## Hybrid card

An identity or other card that contains two kinds of chips: a contact chip and a contactless one.

## Hyperlink

In computing, the description or image of a document that when clicked on a screen transfers the user to another location in the document or to another document.

## Hypertext

Text displayed on a computer screen or other electronic device with references (hyperlinks) to other text that the reader can access by clicking.

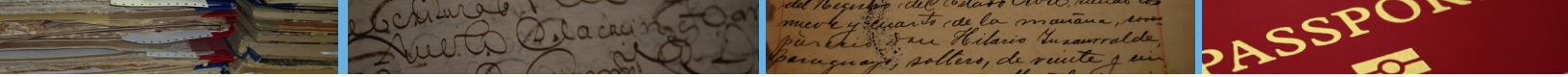
## Hypertext Markup Language (HTML)

The standard markup language used to create web pages.

## Hypertext Transfer Protocol (HTTP)

Rules determining the format and transmission of data.





### IAFIS

See *Integrated Automated Fingerprint Identification System*.

### IAM

See *identity and access management*.

### i-Broker

A trusted third party that helps individuals and organizations share sensitive data in the same way that banks perform fund transfers.

### ICAM

See *Identity, Credential, and Access Management*.

### ICAO

See *International Civil Aviation Organization*.

### ICAO PKD

See *ICAO public key directory*.

### ICAO public key directory (ICAO PKD)

A directory established by the International Civil Aviation Organization to support the global interoperability of electronic passports and to manage the exchange of certificates and revocation certificates. See also *certificate*, *certificate revocation list*, *International Civil Aviation Organization*.

### IC card

See *integrated circuit card*.

### Icon

In computing, a pictogram (picture or symbol) displayed on a computer screen to help the user navigate a system or mobile device. It serves as an intuitive representation of a software tool or function or a data file accessible on the system and functions as an electronic hyperlink or file shortcut to access the program or data.

### ICT

See *information and communication technology*.

### Idemix

See *identity mixer*.

### IDENT

See *Automated Biometric Identification System*.

### Identification

The determination of identity and recognition of who a person is; the action or process of determining what a thing is; or the recognition of a thing as being what it is.

### Identification credential

Information (electronic, token, or paper) that seeks to uniquely identify or provide qualifications or attributes that define the individual identity. See also *identity card*, *identity token*, *identification document*.

### Identification culture

A series of shared and embedded elements of the members of a society that are manifested by their actions related to the registration of vital acts.

### Identification document

A document issued to a person that enables verification of his or her identity. See also, *green card*, *identification credential*, *identification token*.

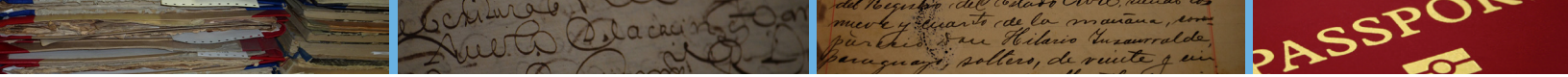
### Identification rate

The rate at which individuals in a database are correctly identified.

### Identify

Establish or recognize as being a particular person based on the biographical or physical characteristics of an individual for subsequent comparison against a reference pattern.





### Identigram®

A holographic security feature used in passports and identification cards combining several individual elements, including a holographic facial image of the holder, a machine-readable zone, and other elements. *See also machine-readable zone.*

### Identity

A unique set of features and characteristics that individualize a person, including the name and other biographical data of the individual. *See also unique identity.*

### Identity and access management (IAM) system

Security framework that facilitates managing electronic identities.

### Identity administration system

An organizational and technical infrastructure used to define, assign, and administer identity attributes.

### Identity card

A document issued to a person that includes personal data such as a photograph, name, signature, and sex. The card enables the holder to perform certain activities or prove membership in a particular group. *See also identification credential, identity token, machine-readable travel document.*

### Identity credential

*See identification credential.*

### Identity, Credential, and Access Management (ICAM)

A U.S. government initiative to promote a consolidated approach for all government-wide identity, credential, and access management activities to ensure alignment, clarity, and interoperability. Its objectives are to provide effective government-wide identity and access management while enabling trust in online transactions through common identity and access management policies and approaches; to reduce the identity and access management burden for individual agencies by fostering common interoperable approaches; to align all identity and access management activities that cross individual agency boundaries; and to collaborate

with external identity management activities through interfederation to enhance interoperability.

### Identity document

A piece of documentation designed to prove the identity of the person carrying it. *See also identity token, passport, travel documents.*

### Identity fraud

*See identity theft.*

### Identity governance framework

A combination of policies and actions that ensure an individual's privacy protection and adequate operations within the individual's identity management.

### Identity knowledge

The descriptive information connectable to an individual.

### Identity management

A combination of systems, rules, and procedures that are defined between an individual and organizations regarding the entitlement, use, and protection of personal information in order to authenticate individual identities and provide authorization and privileges within or across systems and enterprise boundaries.

### Identity management application

A software tool used by administrators to manage users' partial identities.

### Identity management system

The technical and organizational infrastructure used to define, design, and administer the attributes of an identity.

### Identity mixer

IBM software that enables users to make purchases through the Internet without revealing personal information, thus preventing identity theft and other illicit activities with users' personal information.

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### Identity number

A numeric or alphanumeric code assigned to identity documents as a control, follow-up, and linking tool.

### Identity proofing

See *proof of identity*.

### Identity provider

A service provider used to provide identifiers for users looking to interact with a system and to assert to the system that such an identifier presented by a user is known to the provider.

### Identity supplanting

See *identity theft*.

### Identity theft

The illegal acquisition of confidential information so that unauthorized individuals can use it to impersonate the true owner of the identity. See also *civil status usurpation*.

### Identity token

A portable piece of hardware that a user carries and uses to access a network. The token enables the user to prove his or her identity and authentication for the use of a service.

### Identity verification

The process of confirming or denying that a claimed identity is correct by comparing the credentials (i.e., something you know, something you have, and something you are) of a person requesting access with those previously proven and stored on a card or in a system and associated with the identity being claimed.

### IDP

See *internally displaced person*.

### IDS

See *intrusion detection system*.

### IEEE

See *Institute of Electrical and Electronics Engineers*.

### Illegal entry

The act of crossing a border without complying with the necessary requirements for legal entry into the receiving state (Art. 3(b), *UN Protocol against the Smuggling of Migrants by Land, Sea and Air, supplementing the United Nations Convention Against Transnational Organized Crime*, 2000).

### Illegal foreigner

A foreign person who has entered a country without submitting to inspection or adequate documentation, or someone who has not complied with the migratory procedures to remain in a country legally, such as persons remaining beyond the expiration of their tourist or student visas.

### Illegal migrant

Someone who, owing to illegal entry or the expiry of his or her visa, lacks legal status in a transit or host country. The term applies to migrants who break a country's admission rules and to any person not authorized to remain in the host country; also called clandestine, illegal, or undocumented migrant or migrant in an irregular situation.

### Illegitimacy

The quality or state of not being in accordance with or authorized by law, not being in accordance with a rule, or being irregular or abnormal.

### ILO

See *International Labor Organization*.

### Image

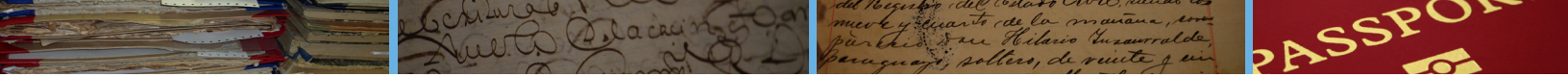
A graphic representation of a physical object, such as a photograph.

### Image analysis

The extraction of meaningful information from images, mainly digital images, by means of digital image processing techniques.

### Imitation

A reproduction of a product or a process.



### Immigration

The process of moving from one country to another to take up permanent residence.

### Immigration rate

The number of immigrants arriving at a destination per 1,000 population at that destination in a given year.

### Immigration status

The legal condition of a person in a political area defined by the laws of the host country. *See also internal migration.*

### Immigration zone

The sea and land territory of a state in which the state's immigration laws are applicable.

### Impostor

A person who intentionally or inadvertently attempts to claim the identity of another person. *See Identity theft.*

### Impunity

Lack of punishment; an offender achieving freedom from punishment.

### Incest

Sexual relations between close relatives or any other persons related within the prohibited degrees for marriage.

### Incidence rate

The number of persons contracting a disease per 1,000 population for a given period in a given geographic area.

### INCITS

*See International Committee for Information Technology Standards.*

### Incline effect

The perceptible change of an image or object in aspects such as brilliance, color, or contents achieved by changing the direction or angle of illumination.

### Incompatibility

In law, to be unable to perform or exercise certain classes of functions, based on the principles of good administration, professional dignity, or morality.

### Incomplete registration

The incomplete recording of a vital or civic fact.

### Index

An orderly alphanumeric listing of data and information and its location within a document or system.

### Indifferent user

An individual who knows that his or her biometric sample is being collected and does not attempt to help or hinder the collection of the sample. *See also cooperative user, uncooperative user.*

### Indigenous peoples

People self-identifying as indigenous at the individual level and accepted by the community as their member based on (a) historical continuity with pre-colonial or pre-settler societies; (b) a strong link to territories and surrounding natural resources; (c) distinct social, economic, or political systems; (d) distinct language, culture, and beliefs; (e) being a non-dominant group in society; and (f) resolving to maintain and reproduce their ancestral environments and systems as distinctive peoples and communities.

### Indisputable

True, full of veracity, trustworthy, authentic.

### Individual

A natural person.

### Induced termination of pregnancy

The intentional interruption of an intrauterine pregnancy with an intention other than to produce a live-born infant and which does not result in a live birth.

### Infant death

Death of live-born children under one year of age.



### Infant mortality rate

The number of deaths of children under one year of age per 1,000 live births in a given year in a given geographic area.

### Informant

An individual whose legally designated responsibility is to report to the local registrar the occurrence of a vital event and to provide all the information and characteristics related to the event. On the basis of such a report, the local registrar may legally register the event.

### Information and communication technology (ICT)

An umbrella term that includes any communication device or application, such as radio, television, cellular phones, computer and network hardware and software, and satellite systems, as well as the various services and applications associated with them.

### Information assurance

Managing risks related to using, processing, storing, and transmitting information or data, and the systems and processes used for those purposes. The five elements of information assurance are authentication, integrity, availability, confidentiality, and nonrepudiation.

### Informed consent

The process for obtaining permission before conducting a healthcare intervention on a person. Informed consent requires that the person providing consent has the capacity to make the decision (i.e., understands the information and can foresee the consequences of having or not having the intervention) and has the information needed to make the decision.

### Infraction

Any violation or breach of a law, agreement, or treaty.

### Infrared (IR) light

Electromagnetic waves between the upper end of the visible light range and the microwave region of the electromagnetic spectrum.

### Infrared pre-printing

Printing visible only when illuminated by an infrared light lamp.

### Inscription

The recording of acts and documents in public registration books.

### Inscription certification

A document provided after inscription in the civil registration that states the occurrence of the inscription.

### Installation

To install a computer program on the hard drive and configure it to work properly. Most programs include installers that do this work almost automatically.

### Institute of Electrical and Electronics Engineers (IEEE)

An organization that produces a wide range of publications and standards and enables the sharing of expertise and information among technology professionals.

### Institutional delivery

A birth that occurs at a health service institution.

### Integrated Automated Fingerprint Identification System (IAFIS)

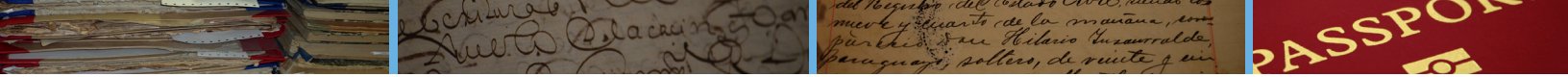
A national fingerprint and criminal history system maintained by the Federal Bureau of Investigation. IAFIS provides automated fingerprint search capabilities, latent searching capability, electronic image storage, and electronic exchange of fingerprints and responses. *See also Automated Fingerprint Identification System.*

### Integrated circuit card

*See smart card.*

### Integrated services digital network

A set of communication standards for simultaneous digital transmission of voice, video, data, and other network services over the traditional circuits of the public switched telephone network.



### Integrity

In electronic communication, a feature indicating that a data message or electronic document has not been altered between its transmission and receipt.

### Intellectual property

The right of the author of an artistic or scientific writing to freely exploit or dispose of the work at their discretion.

### Intellectual property infringement

Theft or violation of original creation with specific intellectual property rights.

### Interconnection

In computing, communication between two or more points to create a bond between them, even temporarily, to make a punctual or fixed transmission, with the permanent connection of two machines.

### Intercultural

Co-existence and equitable interaction of diverse cultures and the possibility of generating shared cultural expressions through dialogue and an attitude of mutual respect.

### Interface

A means by which a user can interact with a computer, machine, or other electronic device. It comprises all of the contact points between the user and the machine.

### Interjurisdictional exchange

A process whereby a registration area agrees to exchange vital record information with the registrar of other jurisdictions, territories, or neighboring countries.

### Interment

The disposition of human remains by entombment or burial.

### Intermediate fetal death

Death occurring after 20 completed weeks of gestation but before 28 weeks.

### Internal migration

The movement of people from one area of a country to another for the purpose or with the effect of establishing a new residence. This migration may be temporary or permanent. Internal migrants remain within their country of origin (e.g., rural to urban migration). *See also de facto refugees, internally displaced persons, international migration, rural-urban migrants, urban-rural migrants.*

### Internal passports

Designated identity documents to regulate movement within the jurisdiction of a country. Also known as passes.

### Internally displaced person (IDP)

Persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict or natural or human-made disasters and who have not crossed an internationally recognized state border.

### International Civil Aviation Organization (ICAO)

Part of the UN Systems Organizations, established in 1944 by 52 nations. Its goal is to ensure the secure, orderly, and economic development of international air transport.

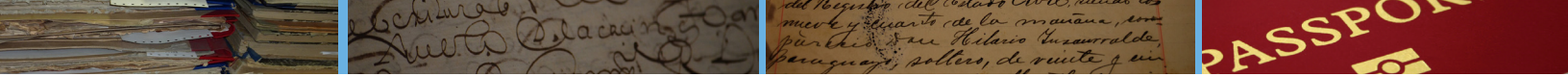
### International Commission on Civil Status (CIEC)

An intergovernmental body that seeks to facilitate exchanges of legal texts and to improve the operation of national organizations concerned with civil status. It maintains documentation on legislation of member states, provides information and assistance, carries out technical and legal studies, prepares publications, draft projects and recommendations, and holds conferences.

### International Committee for Information Technology Standards (INCITS)

A body that promotes the efficient use of information and communication technology through standardization, balancing the interests of all stakeholders,





and increasing global competitiveness of the member organizations.

### **International Labor Organization (ILO) seafarer's identity document**

A document that possesses a 2D barcode and that is issued by nation states as a form of identification of seafarers; it is not recognized as a travel document (passport).

### **International migration**

The movement of persons who leave their country of origin or country of habitual residence to establish themselves either permanently or temporarily in another country. *See also internal migration.*

### **International Organization for Standardization (ISO)**

A nongovernmental network of national standards institutes in 157 countries. Its main function is to promote the standardization of norms on products and safety for businesses and organizations on an international level.

### **International Police (INTERPOL)**

The world's largest police organization, with 187 member countries. It facilitates cross-border police cooperation and supports and gives assistance to all organizations, authorities, and services whose mission is to combat or prevent international crime.

### **International Standards for the Protection of Privacy**

The incorporation of principles, rights, and common concepts into major international tools on data protection and privacy. As approved by the *International Conference of Data Protection and Privacy* in 2009.

### **International technical standards**

Technical requirements used on an international level that must be observed and complied with in the issuance of electronic signatures and in document certification practices. *See also International Committee on Information Technology Standards.*

### **International Telecommunication Union (ITU)**

A UN agency that specializes in information technology and communication. *See also information and communication technology.*

### **International treaty**

An agreement under international law entered into by actors in international law, namely sovereign states and international organizations.

### **Internet**

A global system of interconnected computer networks that links several billion devices worldwide.

### **Internet address**

An Internet protocol address. A numerical label assigned to each device (e.g., computer, printer) participating in a computer network that uses the Internet protocol for communication. *See also Internet protocol.*

### **Internet protocol (IP)**

The principal communications protocol in the Internet for relaying datagrams (data packages) across network boundaries. Its routing function enables internetworking and essentially establishes the Internet.

### **Internet protocol (IP) number**

A number consisting of four parts separated by dots (e.g., 128.0.255.45), each ranging from 0 to 255, that uniquely identifies a device inside a network. Each computer on the network has an IP number only. This number is related to domain names and, through them, particular resources can be located. *See also Internet address.*

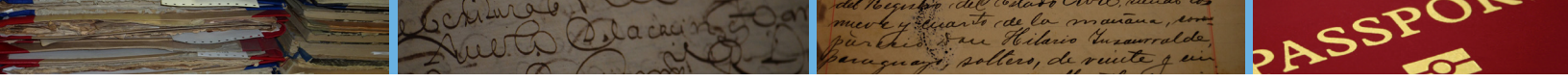
### **Internet service provider (ISP)**

An organization (usually commercial) that provides Internet services to end users.

### **Interoperability**

The ability of information systems and procedures to share or authenticate data and enable the exchange of information and knowledge among them. This exchange





is necessary to ensure cooperation, development, integration, and delivery of joint services by public institutions. It is also necessary to implement various public policies, principles, and rights; transfer technology; and use applications that enable new services and result in better efficiency and cooperation among different applications. All of this facilitates the development of an e-government and information society.

## INTERPOL

See *international police*.

## Interpupillary distance (IPD)

The distance between the centers of the pupils of the two eyes; used in biometrics.

## Intersectorial

Integration of different sectors to solve complex and multidimensional social problems. It creates better solutions than do sector-specific approaches because it allows the sharing of each sector's resources. The challenge of the intersectorial approach is the conceptual interoperability of objectives, the integration of certain administrative processes, and the breakdown (at least hypothetically) of "closed shops" or "fiefdoms."

## Intersex

The condition of having sexual anatomy not considered standard for a male or a female. Intersex can be an umbrella term covering differences of sexual development, which can consist of diagnosable congenital conditions in which development of chromosomal, gonadal, or anatomic sex is atypical. The term is not interchangeable with, nor is it a synonym for, transgender. See also *transgender*.

## Intimate

Pertaining to something of a personal or private nature.

## Intranet

A computer network that uses Internet protocol technology to share information, operational systems, or computing services within an organization. Sometimes the term refers only to the organization's

internal website, including several corporate services such as appointment scheduling, private instant messaging, or file storage.

## Intrusion detection system (IDS)

A device or software application that monitors network or system activities for malicious actions or policy violations and produces and automatically reports to a management station.

## Invisible personal information (IPI)

A system that encodes into a photo personal data that is invisible to the naked eye and requires a decoding lens.

## Involuntary repatriation

Return of refugees to their country of origin, induced by the receiving country by creating circumstances that do not leave any alternative for the refugees. Because repatriation is a personal right (unlike expulsion and deportation, which are primarily within the domain of state sovereignty), neither the state of nationality nor the state of temporary residence or detaining power is justified in enforcing repatriation against the will of an eligible person, whether refugee or prisoner of war. In accordance with contemporary international law, war prisoners or refugees who refuse to be repatriated, particularly if they have a reasonable fear of persecution in their own countries, must be protected and benefit, if possible, from temporary or permanent asylum. See also *deportation*, *repatriation*, *voluntary repatriation*, *voluntary return*.

## IP

See *Internet protocol*.

## IPD

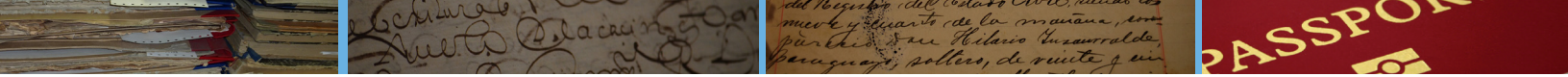
See *interpupillary distance*.

## IPI

See *invisible personal information*.

## IR

See *infrared*.



### Iridescence

Radiant shine shown by matter that produces a change of color, depending on the illumination and the angle at which it is seen. Iridescence is based on the diffraction and interference of light.

### Iridescent ink

Ink that fluctuates in shine and color, depending on the angle of light and observation. It differs from regular ink, whose shine and color is virtually independent of the angle of illumination and observation. When used on cards, iridescent ink provides copy protection. There are different types of iridescent inks: metallic, pearl luster, and optically variable.

### Iriodin®

Metalized pigments in transparent color that give a metallic effect. It is used in identification documents as a security measure.

### Iris detection

See *iris recognition, iris scanner.*

### Iris recognition

A biometric modality that uses an image of the physical structure of an individual's iris for recognition purposes. See also *iris scanner, IrisCode, Daugman algorithm.*

### Iris scanner

A device that uses a digital camera to check the unique patterns of the irises of an individual's eyes.

### IrisCode®

A biometric feature format used in the Daugman algorithm for iris recognition. See also *Daugman algorithm.*

### Irregular migrant

Someone who, owing to illegal entry or the expiry of his or her visa, lacks legal status in a transit or host country. The term applies to migrants who break a country's admission rules and to any other persons not authorized to remain in the host country. See also *illegal foreigner, illegal migrant.*

### Irregular migration

Movement of people outside the regulatory norms of the sending, transit, and receiving countries. See also *illegal foreigner, illegal migrant, regular migration, undocumented foreigner.*

### Islet

In biometrics, a small isolated line that is bigger than the point in fingerprinting.

### ISO

See *International Organization for Standardization.*

### ISP

See *Internet service provider.*

### ITU

See *International Telecommunication Union.*



### Java

Widely used object-oriented computer programming language.

### Joint Photographic Experts Group (JPEG)

A standard compression and coding format for still image files.

### Joint United Nations Programme on HIV/AIDS (UNAIDS)

UNAIDS's mission is to lead, strengthen, and support an expanded response to HIV and AIDS that includes preventing transmission of HIV, providing care and

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support to those already living with the virus, reducing the vulnerability of individuals and communities to HIV, and alleviating the impact of the epidemic.

### JPEG

See *Joint Photographic Experts Group*.

### Judgment

Opinion or ruling issued by advisory bodies on issues under their consideration.

### Judicial duty

Acts or omissions imposed by law, by an agreement, or by an irrevocable unilateral decision as an obligation to something or someone, which satisfies the purpose of the common good.

### Judicial incompetence

Lack of jurisdiction of a court or administrative authority to hear a case.

### Judicial inscription

In the civil register, registration of an act after a ruling by a court or judge.

### Judicial separation

See *legal separation*.

### Juridical act

A manifestation of will destined to create, modify, or extinguish juridical relationships.

### Juridical capacity

The ability to have rights and obligations acquired at birth.

### Juridical person

Any entity legally constituted or organized under applicable laws, whether for profit or not, private or public, including corporations, limited liability companies, associations, and foundations.

### Jurisdiction

A public authority in civil, criminal, or administrative matters and sentencing according to the relevant laws.

### Jurisdiction strife

A dispute arising between two judges, courts, or other authorities with respect to knowledge about and the decision on a judicial or administrative issue.

### Jurisprudence

(a) A review or systematic reproduction of judgments; (b) knowledge of or skill in law, the science of human laws, or the philosophy of law.

### Jus sanguinis

(Latin) “the right of the blood.” The concept that the place of origin of a family, or the blood, rather than the place of birth determine the nationality and the rights of a person. See also *jus soli*.

### Jus soli

(Latin) “the right of the soil.” The concept that a person’s nationality is determined by place of birth. See also *jus sanguinis*.

### Justice

The maintenance of legal, social, or moral principles by the exercise of authority or power; the assignment of a deserved reward or punishment.

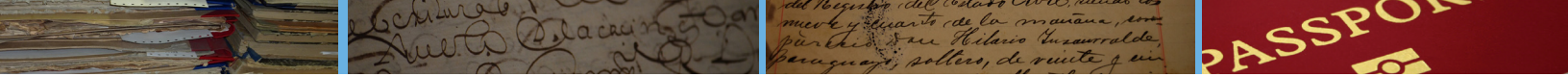
## ■ K ■

### Kbps

See *kilobits per second*.

### Key

In cryptography, a parameter that, when applied along a cryptographic algorithm to plaintext,



produces cipher-text, or during decryption transforms cipher-text into plaintext.

### Keystroke dynamics

A biometric modality that uses the cadence of an individual's typing pattern for recognition.

### Kidnapping

The unjustifiable capture and holding of a person and demanding of a ransom or other requirement in exchange for the person's release.

### Kilobits per second (Kbps)

A unit of data transfer speed or bandwidth.

### Kinefilm®

A heat-applied laminate with an integral Kinegram patch, existing in both metallic and transparent versions. Laminates can incorporate specific security features that are not usually available on the market.

### Kinegram®

A computer-generated hologram capable of producing multiple high-resolution images that contain special types of computer-generated diffractive optical elements with symmetric and asymmetric

surface reliefs (gratings). These gratings are typically arranged like vector graphics and can be designed in different ways to exhibit kinematic, color changing, contrast reversal, and other special effects.

### Kinship

The relationships among people who have common ancestors or that derive from others, united by consanguinity, marriage or adoption.

### Kinship degree

The nature and closeness of the relationship between two persons related by consanguinity.

### Kinship line

A series of relationship degrees, which can be straight or transverse.

### Know your customer (KYC)

The process used by businesses to verify the identity of their clients or residents in which data such as name, address, date of birth, phone number, and other relevant information is collected.

### KYC

*See know your customer.*



### Laissez-passer

(French) "let pass." A travel document issued by the United Nations (and recognized and accepted as a valid travel document by states in combination with a national passport) to its staff for official travel (*General Convention on the Privileges and Immunities of the United Nations, 1946*).

### LAN

*See local area network.*

### Late civil registration

The registration of a vital event after the legally specified time established in existing laws, rules, or regulations, but within a specified grace period if such has been defined. *See also delayed registration.*

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### Late fee

A pecuniary penalty imposed for a penal, administrative, or police infraction. *See also pecuniary penalty.*

### Late fetal death

Death that occurs at 28 or more weeks of gestation.

### Late registration

*See late civil registration.*

### Late registration of birth

*See late civil registration.*

### Latent fingerprint

A fingerprint “image” left on a surface touched by an individual. The transferred impression is left by surface contact with the friction ridges, usually caused by oily residues produced by sweat glands in fingers.

### Latin American Council for Civil Registration, Identification, and Vital Statistics (CLARCIEV)

The body that brings together civil registration institutions in Latin America and the Caribbean, enabling knowledge transfer among the region’s registration institutions.

### Lawful admission

Legal entry of a foreigner into a country, including under a valid immigrant visa.

### Legal code

A set of legal precepts united in an organic and methodical way in a single legal body to regulate a particular area of the law.

### Legal identity

Legal civil status obtained through civil registration at birth and civil identification of unique attributes such as a personal identification number and biometrics that recognizes the individual as a subject of law and protection of the state.

### Legal order

A set of valid legal norms forming a unitary and coherent system.

### Legal register

An official list or written record of information that entitles and affords rights and protection as defined in the law, such as a civil or identification register or property register. *See also administrative register.*

### Legal representative

A person who represents or stands in for another under authority recognized by law.

### Legal separation

The disunion of married persons, without conferring on the parties the right to remarriage, according to the laws of a country.

### Legalization

A written official declaration by a competent authority certifying the authenticity of a signature in a public or private act, providing validity to it wherever submitted.

### Legally incapacitated

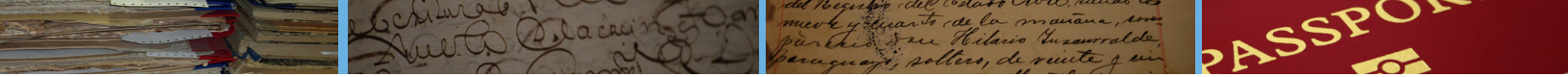
The lack of legal ability of an individual to enjoy and exercise his or her rights or to commit him- or herself legally.

### Legislation

All the laws of a country.

### Legitimate birth occurred

The birth of a child to a mother who, according to national law or customs, was married at the time of the birth. This term should not be used to explicitly describe the child on the birth certificate unless specifically required by national law, but rather may be considered as a statistical term for counting such births. *See also born in wedlock.*



### Legitimation

Formal vesting of a person with the same status and rights as granted a person born in wedlock.

### Liability

A set of circumstances that establish cause and effect between a criminal act and a subject that is considered an agent.

### Life expectancy

The average number of additional years a person could expect to live if current mortality trends were to continue for the rest of that person's life.

### Life span

The maximum age that human beings would be able to reach under optimal conditions.

### Link

In the hypertext system, a reference to another document that is activated by clicking on it.

### Linkable information

Information that is not sufficient to allow the recipient to distinguish any individual, but that may be matched to or compared with information from a secondary data source, available to the general public or otherwise obtained, in order to link together information and potentially distinguish an individual.

### Linked information

Information that is not sufficient to distinguish an individual when considered separately, but that could distinguish an individual when taken collectively or if considered in conjunction with other data elements in the same system or a closely related system.

### Linux

A freely distributed operating system based on the UNIX operating system. Linux runs on several hardware platforms, as well as with Intel and Motorola processors. It has been developed by hundreds of programmers around the world and has become a very popular operating system.

### List of registered voters

See *voter registration list*.

### Litigation

Judicial procedure carried out in court when there is a disagreement between parties.

### Live birth

The result of the complete expulsion or extraction from its mother of a product of conception, which after separation breathes or shows other evidence of life (such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles), whether or not the umbilical cord has been cut or the placenta is attached. Heartbeats are to be distinguished from transient cardiac contractions; respirations are to be distinguished from fleeting respiratory efforts or gasps.

### Live-birth certificate

A document provided by the doctor who attends a birth that certifies the birth of the child. It contains information such as the date and place of birth and the names of the child's parents.

### Live capture

Typically, a device that electronically captures fingerprint images using a sensor rather than scanning ink-based fingerprint images on a card or lifting a latent fingerprint from a surface. See *also enrollment*.

### Liveness detection

A technique used to ensure that a biometric sample submitted is from a live end user.

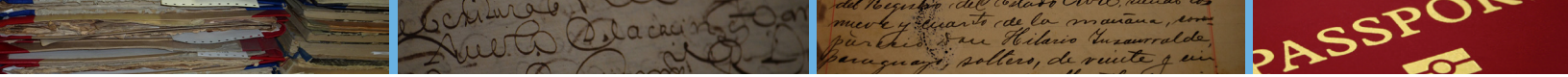
### Local Area Network (LAN)

A computer network that interconnects computers within a limited area such as a home, school, computer laboratory, or office building.

### Login

The procedure by which a user can gain access to a computer system with a user name and a password.





### Logout

The action that closes personal access to a computer system that had previously been accessed by a login.

### Longevity

Long life; great duration of life.

### Loop

A fingerprint pattern in which the friction ridges enter from either side, curve sharply, and pass out near the same side they entered. This pattern will contain

one core and one delta. *See also arch, core point, delta point, friction ridge, whorl.*

### Loss of nationality

Automatic withdrawal of nationality by operation of law, i.e. when certain conditions of the law are met. *See also nationality, statelessness.*

### Lux

Luminous flux per unit area. A unit to measure luminance. Generally, levels between 1,000 and 3,500 lux are acceptable for telemedicine applications.

## M

### MAC

*See message authentication code.*

### Machine-readable passport (MRP)

A passport with barcodes that compile the bearer's biographic and or biometric data and that can be read by a machine. *See also machine-readable travel document, electronic passport.*

### Machine-readable travel document (MRTD)

An international travel document that contains some information readable by humans and other information readable only by machine. All MRTDs include the holder's identification details, including picture or digital image, with compulsory identification elements included in a device-readable zone.

### Machine-readable zone (MRZ)

Part of an MRTD or MRP that contains some of the information from the visual inspection zone in the form of a sequence of alphanumeric characters and the symbol "<" that forms two or three lines. Document readers can read the characters to facilitate inspections of travel documents. To preserve the security of the data, a basic access control is applied in the MRZ (the reader can read the chip only once it has

been activated by a validated personal access key), as well as a broader access control (authentication of the terminal). The authentication of data is protected through a codified protocol of key public infrastructure. *See also machine-readable travel document, machine-readable passport, visual inspection zone.*

### Machine-verifiable feature

A security feature that can be read and verified by document readers. It authenticates a travel or identity document by detecting or measuring special physical properties of document elements or structures.

### Macro

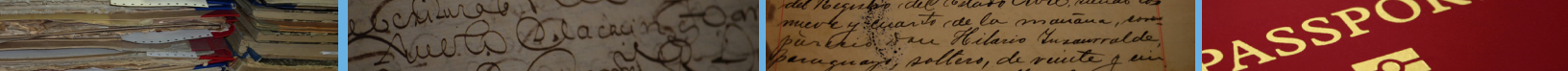
A command from a source program that performs a set of operations in another program.

### Magistrate

Minister or member of the court or superior court or in charge of administering justice on behalf of the state. The title is also given to representatives of the justice ministry (or similar) and prosecutors.

### Magnetic stripe

A dark stripe often found on credit cards, public transportation tokens, and personal identification



cards that stores information. The magnetic stripe is recorded or read through physical contact when passed through a reader/writer.

### Mainframe

A very large computer used primarily by corporations and governments for critical applications, bulk data processing (e.g., census, industry, and consumer statistics), enterprise resource planning, and transaction processing. Mainframes can simultaneously support hundreds or even thousands of users.

### Mala fide

(Latin) “in bad faith.” A deceitful or malicious action, knowingly or most likely knowingly, conducted against the law. *See also bona fide.*

### Malware

Short for malicious software. Any software used to disrupt computer operation, gather sensitive information, or gain access to private computer systems.

### Manuscript signature

The name and surname (or symbols) that a person writes with their hand on a document to provide authenticity or to express agreement with its contents. *See also digital signature.*

### Marginal note

A note written at the margin of a main public record, especially within the civil register, that contains modifications or corrections of legal information.

### Marginal notes book

A separate book compiled in parallel with the birth register that contains annotations or updated information on birth registration. Use of marginal notes books is not universal; only a few countries have adopted this modality.

### Marginalization

*See certificate amendment.*

### Marital fertility rate

The number of live births to married women per 1,000 married women ages 15 to 49 in a given year.

### Marriage

The act, ceremony, or procedure by which the legal relationship of a couple is constituted. The legality of the union can be established through civilian or religious means or by any other methods recognized by the laws of the country.

### Marriage certificate

The document that verifies the legal union of a couple, which necessarily and simultaneously applies to both people. It is the only certificate on which the participants declare and sign personally.

### Marriage in extremis

A marriage held when one party is about to die, which by law allows the necessary procedures to be accelerated.

### Marriage records

Documentation of all marriages registered over the years.

### Marriage registration

The official recording of marriages through a public administrative process.

### Match

The decision that a biometric sample and a stored biometric template come from the same human source, based on their high level of similarity (difference score or Hamming distance). *See also Hamming distance.*

### Match on card (MOC)

A smart card for applications in which biometric matching takes place on the card itself. MOCs place the decision stage in the same physical location as the data storage.



### Matching

The process of comparing a biometric sample against a previously stored template and scoring the level of similarity (difference score or Hamming distance). Systems then make decisions based on this score and its relationship above or below a predetermined threshold. *See also comparison, difference score, threshold.*

### Maternal death

The death of a woman while pregnant or within 42 days of the termination of pregnancy, irrespective of the duration or site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

### Maternal mortality ratio (MMR)

The number of maternal deaths during a given time period per 100,000 live births during the same period in a given geographic area.

### Maternal mortality rate (MM Rate)

The number of maternal deaths in a given geographic area, divided by the number of women of reproductive age, usually expressed per 1,000 women.

### Maternity

The state or quality of being pregnant. It includes the period from fertilization of the egg to delivery.

### Maximum population

The highest number of inhabitants that an ecosystem can support.

### Mb

*See megabit.*

### MB

*See megabyte.*

### Mbps

*See megabits per second.*

### Means of proof

Elements that the law allows to prove the truth of allegations in court.

### Measurement during a period

A statistic that measures the events occurring among all or part of a population during a specified period.

### Median age

The age that divides a population into two numerically equal groups; that is, half the people are younger than this age and half are older.

### Medical death certificate

A document issued by an authorized and duly trained physician that certifies the principal and underlying causes of death.

### Medical examiner

Usually an appointed public officer with duties similar to those of a coroner but who is required to have specific medical training (e.g., in pathology) and is qualified to conduct medical examinations and autopsies. *See also coroner.*

### Mega

A prefix meaning million in the decimal system. In the binary system, which is used in computing, mega means  $2^{20}$ .

### Megabit (Mb)

A digital download speed unit equal to 1,024 kilobits. When used to describe data transfer rates in a network, one Mb is equivalent to 1 million bits.

### Megabits per second (Mbps)

Data transfer speed in a network, measured in millions of bits per second.

### Megabyte (MB)

A digital storage unit. In the binary system, which is used by computers, one megabyte means 220, or 1,048,576 bytes.

### Megahertz (MHz)

One MHz represents 1 million cycles per second. A microprocessor's speed is measured in MHz.

### Memory

The primary storage of a computer, including random-access memory (RAM) or read-only memory (ROM).

### Menu

In computing, the list of options displayed on a screen from which the user can select.

### Message

In information and communication technology, data that are signed and sent to a receiver.

### Message authentication code (MAC)

A cryptographic checksum on data that uses a symmetric key to detect both accidental and intentional modifications of the data.

### Message digest

Secure one-way hash function. *See also hash function, hash value.*

### Meta tags

Invisible HTML tags in a formatted page used by search engines for indexing.

### Metadata

Methodological information or information that is attached to regular data entries, the purpose of which is to describe the data (e.g., where it came from, its format, its provenance [data history], its relationship to other data and to concepts).

### Metropolitan area

A large concentration of population, normally within an area of 100,000 or more inhabitants, having an important city at its core and with suburbs surrounding the city that have social and economic relationships with the city. The metropolitan area's territory falls under the jurisdiction of more than one local authority. *See also metropolitan zone.*

### Metropolitan zone

A large concentration of population, ordinarily an area with 100,000 or more inhabitants, that encompasses surrounding administrative areas that are socially and economically integrated into it. *See also metropolitan area.*

### m-Government

The extension of e-government to mobile platforms. Allows wireless Internet access to government services and applications using devices such as mobile phones, laptops, PDAs, and tablets.

### MHz

*See megahertz.*

### Micro impression

*See microtext.*

### Microcomputer

A computer that has a microprocessor as its central processing unit.

### Microtext

Text with very small characters giving the impression that it is a fine line, although they can be read with a magnifying glass. This type of text offers protection against unauthorized photocopying.

### m-ID

The mobile extension of the digital identity by which the authentication is provided by mobile devices and networks.

### Midwife

A person, with or without medical training, who helps women giving birth. *See also birth attendant.*

### Migrant

A person who freely migrates for personal reasons and without the intervention of an external compelling factor. This term applies to persons and families moving to another country or region to better their material or social conditions and improve their



prospects. There is no universally accepted definition of the term.

### Migrant worker

Someone working outside of their home country.

### Migration

Movement of persons across a political or administrative division for the purpose of establishing a new permanent residence. It includes international (between countries) and internal (within a country) migration.

### Mimic

The presentation of a live biometric measure in an attempt to fraudulently impersonate someone other than the submitter.

### Minor

A person who, according to the law of the relevant country, is under the age of majority; that is, he or she is not yet entitled to exercise specific civil and political rights. *See also child.*

### Minority

Although in international law there is no universally accepted definition of minority, it may be considered as a group that is fewer in number than the rest of the population of a state and is in a non-dominant position. Members possess ethnic, religious, or linguistic characteristics that differ from those of the rest of the population and maintain a sense of solidarity directed toward preserving their culture, traditions, religion, or language.

### Minutia(e) point

In biometrics, friction ridge characteristics used to individualize a fingerprint image. Minutiae are the points where friction ridges begin, terminate, or split into two or more ridges. In many fingerprint systems, the minutiae (as opposed to the images) are compared for recognition purposes. *See also friction ridge, ridge ending.*

### Mirror

A website that republishes information from another site without exercising independent editorial control.

### Mixed migration

Complex population movements, including refugees, asylum-seekers, economic migrants, and other migrants.

### MMR

*See maternal mortality ratio.*

### MM Rate

*See maternal mortality rate.*

### Mobile units

Units made up of technological equipment, a workforce, and vehicles used to move the civil registration and identification service to remote areas with isolated populations.

### Mobility

Demographic movement of people.

### MOC

*See match on card.*

### Modem

A device for transferring digital information through the public switched telephone line. For Internet connection, modems with speeds of 9,600 bits per second (bps) or more are recommended.

### Monitoring a civil registration or vital statistics system

A check on civil registration and vital statistics system operations designed to continuously control efficiency, accuracy, timeliness, and coverage.

### Monogamy

A matrimonial system characterized by the union of a couple, without the legal possibility of either spouse being able to enter a new marriage without a divorce or the death of one of the spouses.



### Morbidity

The incidence of disease in a population.

### Mortality

The proportion of deaths to population in a given time or place.

### Mortality rate

See *crude death rate*.

### Mortality table

Data used to estimate the probability that a certain number of deaths will occur within a given period.

### Mortality under-registration rate

The gap between the number of estimated deaths, according to the life expectancy charts of the period, and the number of registered deaths in a given year in a geographic area. A death is also considered unregistered when it has not been duly recorded in the civil register a year after the death occurred.

### Mortgage

Formal contract by which a person or entity (the mortgage debtor) encumbers assets, property, or transferrable real rights as security for the performance of an obligation to another person or entity (the mortgage creditor). For the contract to be valid, it must be recorded in the Property Register.

### Motherboard

The main printed circuit board found in computers and other expandable systems. It holds many of the crucial electronic components of the system, such as the central processing unit and memory, and

provides connectors for other peripheral devices (e.g., sound, video, and network cards; hard drives, and other forms of persistent storage; and a variety of other custom components).

### MRP

See *machine-readable passport, machine-readable travel document*.

### MRTD

See *machine-readable travel document, machine-readable passport*.

### MRZ

See *machine-readable zone*.

### Multimodal biometric system

A biometric system in which two or more of the modality components (biometric characteristic, sensor type, or feature extraction algorithm) are used at the same time.

### Multiprocessing

The use of two or more central processing units within a single computer system.

### Multitask

Simultaneous execution of more than one program on one computer. Execution of the tasks alternates so fast that the user does not notice any interruption.

### Municipal regulations

Legal text documents that contain rules on the organization and development of municipal activities, especially those pertaining to public services.



# ■ N ■

## Name

A word that distinguishes a person from others in his or her legal and social relationships. It can be composed of the first name and a surname.

## Name server

A program that translates names from one form to another. For example, the Internet uses name servers to translate domain names (e.g., www.globalnet.com) to an Internet Protocol address (e.g., 200.15.25.6).

## Nansen passport

A travel and identity document for stateless people seeking asylum in other nations, first issued during the Russian refugee crisis in 1922.

## National

A person who, either by birth or naturalization, is a member of a political community, owing allegiance to the community and being entitled to enjoy its civil and political rights and protections; a member of the state, entitled to its privileges; a person who holds nationality in a given state. The term can include both citizens and non-citizens. “Citizen” and “subject” are also used. *See also citizen, nationality, naturalization.*

## National identity

The human, demographic, cultural, and behavioral features of a nation perpetuated through rites and symbols.

## National Institute of Standards and Technology (NIST)

A federal agency within the U.S. Department of Commerce that develops and promotes measurement, standards, and technology to enhance productivity and citizen safety, facilitate trade, and improve quality of life.

## Nationality

Under traditional understanding of international law, the legal bond between an individual and a state. A national is a person over whom a state considers it has jurisdiction on the basis of nationality, including the right to bring claims against other states for their ill-treatment. Nationality also refers to membership in an ethnic, linguistic, or religious group. Within a state there may be various categories of nationality with differing names and associated rights. *See also national.*

## Nationality loss

May result from an act of the individual (expatriation, deliberate renunciation of nationality, or automatic loss of nationality upon acquisition of another nationality) or of the state (denationalization). Art. 15(2) of the *Universal Declaration of Human Rights* states that “No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.” *See also nationality, statelessness.*

## Native

A juridical or legal condition of a person, determined by birth alone, pertaining to the country in which he or she was born.

## Nativity

In demography, the number of births in a given place over a given period.

## Nativity rate

The number of live births for every 1,000 inhabitants in a given place during a given year.

## Natural growth rate

The natural rate, expressed as a percentage of the base population, at which a population is increasing (or declining) during a given year as a result of births and deaths. This rate does not include the effects of immigration or emigration.

### Natural increase

Excess of births over deaths in a population in a given period.

### Naturalization

The formal act of granting privileges of citizenship to a foreigner by the state. International law does not provide detailed rules for naturalization, but it recognizes the competence of every state to naturalize those who are not its nationals and who apply to become its nationals. *See also* citizen, citizenship, national, nationality.

### Naturalize

To grant the privileges of citizenship by lawful procedures to a foreigner.

### Naturalized citizen

One who, being born in a different nation, has lawfully become a citizen of the country under the constitution and laws.

### Near field communication (NFC)

A set of short-range wireless technologies, typically requiring a distance of 4 centimeters or less to initiate a connection and share data between electronic devices that contain an NFC tag, such as cellphones.

### Negative growth of the population

A net decline in the size of the population.

### Neonatal period

The period commencing at birth and ending 28 completed days after birth.

### Neonatal mortality

Death during the first 28 completed days of life.

### Neonatal mortality rate

The number of infants dying aged up to but less than 28 completed days of life per 1,000 live births in a given geographical area during a given year. Early neonatal death is death within 7 days of birth.

### Neonate

Child less than 28 days old.

### Net migration

The net effect that immigration and emigration have on an area's population (increase or decline).

### Net migration rate

The net effect of immigration and emigration on an area's population, expressed as an increase or decrease per 1,000 population in a given year.

### Net reproduction rate (NRR)

The average number of daughters that would be born to a woman (or a group of women) if she passed through her life conforming to the age-specific fertility and mortality rates of a given year.

### Netiquette

Internet etiquette. A set of unwritten guidelines that govern the use of email, blogs, and forums.

### NetMeeting

Software that allows online meetings using a network. Groups can conduct conference calls using the Internet as the transmission medium. NetMeeting supports voice chat sessions, an electric whiteboard, and application sharing. It comes with Microsoft Internet Explorer.

### Network

In computing, a connection between two or more computers for the purpose of sharing resources.

### Network file system (NFS)

A system to access files on a remote computer that is listed as a local volume.

### Network interface

Connectivity options for different systems.

### Network news transfer protocol (NNTP)

High-level protocol used for the distribution, inquiry, retrieval, and posting of Netnews articles, allowing



end users to retrieve news articles stored in a central database.

### Next generation identification (NGI)

A state of the art biometric identification system used by the Federal Bureau of Investigation (FBI).

### Next of kin

The person or persons most closely related to someone by consanguinity, marriage, or adoption.

### NEXUS

A program that allows pre-screened travelers expedited processing by the U.S. and Canadian authorities at special kiosks or lines at ports of entry on the northern border, at certain Canadian airports, and at places of maritime reporting.

### NFC

See *near field communication*.

### NFS

See *network file system*.

### NGI

See *next generation identification*.

### NIST

See *National Institute of Standards and Technology*.

### NNTP

See *network news transfer protocol*.

### Node

In a network environment, a link point, a technical center that enables the connection of different networks, enabling users and operators to spread the available information on other centers that may be in use.

### Noise

Unwanted components in an electromagnetic signal that degrade the quality of data or interfere with the desired signals processed by a system. See *also signal*.

### Nom de guerre

(French) “war name.” A pseudonym used by a person to conceal his or her identity. See *also alias, pseudonym, also known as*.

### Nomen juris

(Latin) “the name of the law.” The title of each offense.

### Nominal value

Emission value of a share, debenture, bill, or coin; the amount specified in the corresponding title; the face value.

### Nominative

Name used to describe the extension of a document on behalf of a natural or legal person.

### Noncooperative user

An individual who is not aware that his or her biometric sample is being collected.

### Noninstitutional birth

See *home birth*.

### Non-national

See *foreigner, third-country national*.

### Nonrepudiation

The impossibility for the author of an electronic signature to reject a document in which the signature appears.

### Non-signal

The non-transmission of a codified message or data.

### Normalization

A statistical technique used to facilitate comparisons among populations, controlling for the effects of the different variables, such as age (known as age adjustment).

### Notary

A public official authorized to authenticate, by law, contracts and other extrajudicial acts; a person who

can attest to the acts that he or she witnesses. See also *certified document*.

### Notebook

A small portable computer with high computing power and a battery that enables one to work without being permanently connected to the electrical grid.

### Notifier

An individual appointed by the local registrar to act as an intermediary between the local registrar and the informant in providing all information and characteristics of an event that is to be legally registered by the local registrar.

### NRR

See *net reproduction rate*.

### Nullity

The inefficiency of a legal act due to the absence of a condition of substance or form required for validity. See also *cancellation*.

### Number of deaths in a given year attended or certified by a doctor

The number of death certificates from natural causes signed by a medical practitioner as a percentage of all deaths from natural causes in the same year in a given geographic area.

### Nuptial rate

The number of marriages for every 1,000 population in a given year and geographic area.

### Nuptiality

The frequency, characteristics, and dissolution of marriages in a given period and geographic area.



### Obedience

Restraint, subordination, or subjection to the will of another to execute their mandates, precepts, or rules.

### Object code

A program expressed in machine/binary language (zeros and ones) so that it can be executed by a computer.

### Obligation

In law, a tax or levy imposed on a person or thing; a requirement resulting from status, employment, or occupation.

### Obscured data

Information that has been distorted by cryptographic or other means to hide it.

### Occupational disease

Pathological condition of an employee resulting from the exercise of a job, but without it being a result of an accident while working.

### OCSP

See *online certificate status protocol*.

### ODBC

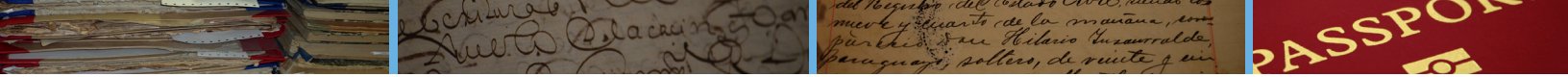
See *Open Data Base Connectivity*.

### Of age

At the age that the law establishes for full legal capacity as a person. See also *minor*.

### Offense

Damage, injury, or harm done to a person by word or deed.



### Offline

Describing equipment or devices not in direct communication or turned off. *See also online.*

### Official passport

A passport given to government officials traveling abroad, established under the Vienna Convention. Although it does not include the same information as a diplomatic passport, the official passport is still higher ranking than a normal passport. *See also diplomatic passport, passport.*

### Old population

A population with a relatively high proportion of middle-aged and elderly persons, a high median age, and thus lower growth potential.

### One-to-many (1:N)

A search methodology used in biometrics to describe a system that compares one reference to many enrolled references to make a decision. The phrase typically refers to identification or watch list tasks.

### One-to-one (1:1)

A search methodology used in biometrics to describe a system that compares one reference to one enrolled reference to make a decision. The phrase typically refers to verification tasks (though not all verification tasks are truly one-to-one). The identification task can be accomplished by a series of one-to-one comparisons.

### Online

Connected. Describing equipment or devices in direct communication or switched on. *See also offline.*

### Online certificate status protocol (OCSP)

An online protocol used to determine the status of a public-key certificate. *See also public-key certificate.*

### Online identity

A computer-based persona created to navigate the Internet.

### Open Data Base Connectivity (ODBC)

A standard programming language for accessing database management systems intended to be independent of database systems and operating systems. An application written using ODBC can be ported to other platforms, both on the client and server side, with few changes to the data access code.

### Open set of observations

The total universe of entries within a database.

### Open-set identification

A biometric task that more closely follows operational biometric system conditions to (a) determine whether someone is in a database and (b) find the record of the individual in the database. *See also watch list.*

### Open source

Software that is developed and distributed with free licenses. There is free access to the source code of any software or operating system of this type (e.g., Apache, Debian, Drupal, Fedora Project, GNU, Java, Linux, MySQL, Open Office, php).

### Operating system

A control program that manages a computer's hardware. It is often a set of programs that interact.

### Operational evaluation

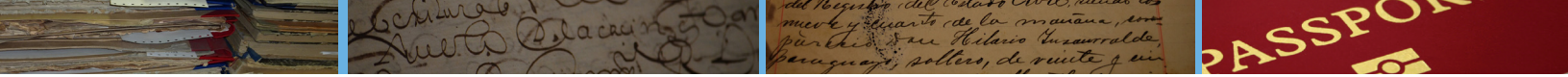
One of the three types of performance evaluations. The primary goal of an operational evaluation is to determine the workflow impact of adding a biometric system. *See also technology evaluation, scenario evaluation.*

### Optical stripe

A laser-readable memory device with a relatively large storage capacity.

### Optical variable device (OVD)

Complex, pixilated images created by millions of pulse laser emissions that are bright and do not



interfere with data playback. Simulation is exceptionally difficult.

### Optically variable inks

Iridescent or pearl-luster inks that reflect light rays differently in white light, depending on the angle of observation on the surface. Used to counteract counterfeiting, they cause interference with the incident light, which creates shiny, pearl-like shimmering effects with changes in color when the angle of view or illumination changes.

### Optimum population

The ideal number of people that can be supported in a given area. *See also overpopulation, underpopulation.*

### Ordinance

A set of rules for a branch of public administration. Also referred to as regulation.

### Organizational interoperability

The ability of institutions to develop processes through which activities are conducted to achieve mutually agreed goals in relation to the services they provide, notwithstanding the respective institutional structures and internal processes that support them.

### Outsource

To hire, and delegate non-critical procedures to, a specialized provider to achieve greater effectiveness and to focus efforts on more critical needs for the fulfillment of a mission.

### OVD

*See optical variable device.*

### Overlapping objects

Objects, such as signatures or stamps, that overlap other fields, such as a person's photo, to prevent alteration of identity documents.

### Overpopulation

A condition in which population density exceeds the threshold of environmental resources; therefore, basic needs, such as housing, food, and other variables, cannot be satisfied.

### Overt information gathering

Biometric sample collection in which end users know the sample is being collected. *See also covert information gathering.*

## ■ P ■

### Pair of keys

In an asymmetric cryptographic system, a pair of keys comprises a private key and its correspondent public key, associated mathematically. *See also private key, public key.*

### Palm-print recognition

A biometric modality that uses the physical structure of an individual's palm print for recognition purposes. *See also fingerprint recognition, hand geometry recognition.*

### Paper copies of electronic documents

Copies of electronic administrative documents made by a public entity are valid when the print includes an electronically generated code or other verification system to verify their authenticity through access to the corresponding electronic files.

### Papilla

In biometrics, each of the small conical protrusions, generally sensory, formed in the skin and mucous membranes on the fingertips.





### Parental authority

The duties and responsibilities of parents toward the persons and goods of the dependent children.

### Parish records

A series of books compiled by a church throughout its history, through its parishes, recording births, baptisms, confirmations, marriages, and deaths of the congregation. These records set the precedent for civil registration.

### Parity

Number of children born alive to a woman at a given point in time. For example, double-parity women are those who at that time have had two children and zero parity women are those who have not had any.

### Partial identity

A subset of one or more attributes that do not necessarily identify a person unequivocally.

### Party

A person who participates with another or others in a legal act and has a personal interest in it.

### Passport

A government-issued document identifying a person as a national of the issuing state, which is evidence of the holder's right to return to that state. In Western countries, passports have been used for foreign travel purposes, not as domestic identity documents. The passport is the internationally accepted certificate or proof of nationality. *See also enhanced driver's license, identity document, travel documents, MRP, MRTD.*

### Passport card

*See enhanced driver's license.*

### Password

A secret code used to identify a user when entering any kind of system that requires authentication.

### Patent

A concession granted by a federal government to an inventor by which he or she acquires the right to exclude others from making, using, or selling the invention.

### Paternity

The state or quality of being a biological father; the fact of being the true father of a child whose paternity is attributed to him.

### Pathogenicity

The ability of an organism to infect and cause disease in a person.

### Patrimony

The total of all personal and real entitlements, including movable and immovable property, belonging to a real person or a juristic person; in some respects similar to the common-law concept of a person's estate.

### Patronymic information

Information that refers to the filiation and identity of a person. *See also filiation.*

### PC

*See polycarbonate.*

### PDF

*See portable document format.*

### Pecuniary penalty

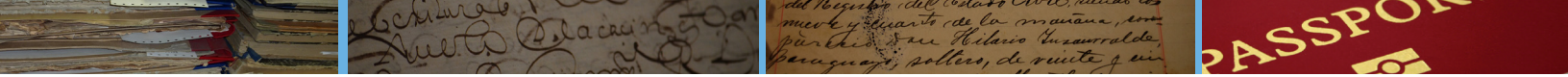
An administrative or legal sanction that consists of the obligation to pay a determined amount of money.

### Pelmatoscopy

The science that studies the friction ridges of the fingers. *See also friction ridge.*

### Penalty

A punishment imposed for breaking a law, rule, or contract.



### Performance

A generic phrase for describing a measurement of the characteristics, such as accuracy or speed, of a biometric system or its algorithms.

### Perinatal mortality

The death of fetuses weighing at least 500 grams or of at least 22 completed weeks of gestation, and of infants up to 7 days of age.

### Perinatal mortality rate

The number of fetal deaths after 28 weeks of gestation (late fetal deaths), plus the number of deaths of infants under 7 days of age, per 1,000 live births.

### Perinatal period

The period from 22 weeks (154 days) of gestation (the time when birth weight would normally be approximately 500 grams) to 7 completed days after birth.

### Period analysis

Study of a population over a specified or defined period of time.

### Permanent residence

The right, granted by a host State to a non-national, to live and work therein on a permanent (unlimited) basis.

### Person in transit

A person coming from one country to another with the intention of continuing their journey to a third country.

### Personal data

Any kind of information related to an identified or identifiable subject.

### Personal data cross-border flow

The flow of personal data across borders without regard for State jurisdiction.

### Personal database

An organized set of personal data, processed electronically or otherwise, irrespective of the mode of formation, storage, organization, or access.

### Personal identification number (PIN)

A unique alphanumeric code or password used to authenticate an identity and provide access to a system.

### Personal identity verification (PIV) card

A physical artifact (e.g., identity card, “smart” card) issued by the U.S. Federal Government to an individual that contains stored identity credentials (e.g., photograph, cryptographic keys, digitized fingerprint representation) so that the claimed identity of the cardholder can be verified against the stored credentials by another person (human readable and verifiable) or an automated process (computer readable and verifiable).

### Personalization

The process by which a person’s data is included on a substrate that will become an identity or travel document.

### Personally identifiable information (PII)

Information that can be used to distinguish or trace an individual’s identity, such as name, unique identification number, social security number, or biometric records, alone or combined with other personal or identifying information linked or linkable to a specific individual (e.g., date and place of birth, mother’s maiden name).

### Persons with disabilities

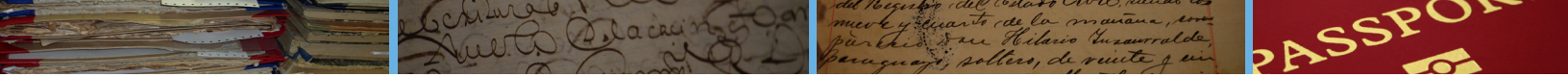
Persons with long-term physical, mental, intellectual, or sensory impairments that, in interaction with various barriers, may hinder their full and effective participation in society equally with others.

### PET

See *privacy-enhancing technology and polyethylene terephthalate*.

### Petabyte

One thousand terabytes; a measurement of memory or storage capacity or data size.



### Petition

(a) A formal written request, typically signed by many people, appealing to an authority in respect of a cause. (b) An application to a court for a writ or a judicial action in a suit. (c) An action in writing with attention to certain forms, presented to a judge or administrative authority to ask for an authorization or to order a procedural.

### Phishing

An attempt to trick individuals into disclosing sensitive personal information through using deceptive computer-based deception means.

### Physical person

A human recognized by law as subject to rights and obligations, regardless of age, sex, race, or condition. Also called a natural person.

### Physician

A person skilled in the art of healing; specifically one educated, clinically experienced, and licensed to practice medicine as usually distinguished from surgery.

### PIA

See *Privacy Impact Assessment*.

### PII

See *personally identifiable information*.

### PII Confidentiality Impact Level

The level of impact on organizations and individuals should there be a breach of confidentiality involving personally identifiable information. The defined levels are low, moderate, and high.

### PIN

See *personal identification number*.

### PIV

See *personal identity verification card*.

### Pixel

The smallest element of a digital image or display that can be assigned a color value.

### Pixels per inch (PPI)

A measure of the resolution of a digital image. The higher the PPI, the more information is included in the image and the larger the file size.

### PKI

See *public-key infrastructure*.

### Place of birth

The municipality; province, department, or state; and country in which a birth occurred.

### Place of habitual residence

See *country of habitual/usual residence*.

### Place of occurrence

The geographical unit; municipality; province, department, state, or country, in which an act or vital event occurred.

### Plaint

A mode of starting a criminal case; an indictment that can be made by an offended person or his or her legal representative as a result of a public offense. A plaint is generally formulated in writing before a judge or court of the corresponding jurisdiction according to the requirements demanded by procedural laws.

### Plaintiff

A party who brings a civil suit (by filing a complaint) in a court of law. See also *defendant*.

### PoA

See *proof of address*.

### PoC

See *proof of concept*.



### Point

In biometrics, minimum expression of a papillary ridge in fingerprinting.

### Polycarbonate (PC)

A group of thermoplastic polymers, easy to work on, mold, and thermoform, widely used in the manufacture of smart cards.

### Polyethylene terephthalate (PET)

A transparent plastic used in identity documents because it allows personalization. Also known as PET-G.

### Polygamy

A family regime in which a person is able to marry several people of the opposite sex.

### Polyvinyl chloride (PVC)

A rigid or flexible thermoplastic polymer, commonly used for identification cards.

### PoP

See *proof of possession*.

### Population

(a) A group of objects or organisms of the same species. (b) In biometrics, the set of potential end users for an application.

### Population age and sex structure

The composition of the population according to the number of males and females in each age bracket. The structure of the population by age and sex is the aggregate result of retrospective tendencies from fecundity, mortality, and migration.

### Population at risk

The population that is subject to the occurrence of a vital event, such as the total population in the case of deaths or the legally married population in the case of divorces.

### Population born abroad

People born outside the borders of their parent's country or territory of residence.

### Population census

The process of collecting, compiling, evaluating, analyzing, and publishing or otherwise disseminating demographic, economic, and social data pertaining, at a specified time, to all persons in a country or in a well-delimited part of a country.

### Population density

The number of inhabitants per unit (e.g., square kilometer or square mile) in a geographic area.

### Population distribution

The settlement or dispersion pattern of a given population.

### Population implosion

The change in a population's distribution in geographical space due to declining birth rates.

### Population increase

The net increase in a population resulting from the interaction of births, deaths, and migration during a specific term.

### Population momentum

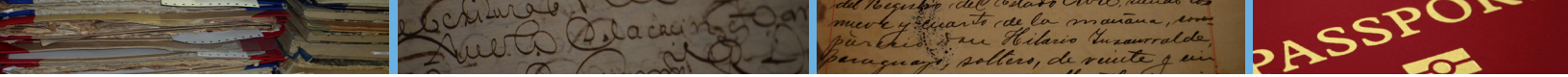
The tendency of a population to continue its growth after reaching its replacement-level fertility. See also *replacement-level fertility*.

### Population policy

Explicit or implicit measures implemented by a government to influence the size, growth, distribution, or composition of a population.

### Population projection

An estimation of future changes in the number of people in a geographic area, subject to certain hypotheses regarding future trends in the fecundity, mortality, and migration rates. Demographers



usually posit low, moderate, and high projections for the same populations, based on different hypotheses about the change of these rates in the future.

### Population pyramid

A horizontal bar chart that shows the distribution of a population by age and sex. The bars represent the number or proportion of men and women in each group. The pyramids show groups by individual or grouped ages.

### Population registry

A government data collection system in which the demographic and socioeconomic characteristics of all or part of the population are continuously recorded. Norway, Denmark, Sweden, and Israel are among the countries that maintain universal registers for demographic purposes, recording vital events (birth, marriage, moves, and death) so that up-to-date information on the whole population is readily available. *See also civil register book.*

### Port

In computer networking, a communications endpoint in a computer's host operating system. Ports uniquely identify different applications or processes running on a single computer and thereby enable them to share a single physical connection to a network, such as the Internet. *See also internet protocol.*

### Portable digital signature

A digital signature generated on a mobile phone and on its SIM (Subscriber Identity Module) card.

### Portable document format (PDF)

A file format developed by Adobe Systems to capture information from a variety of applications so that the resulting files can be sent via email, placed on the Internet, and transferred to any computer. Converting a file to PDF is like taking a picture of it as seen in the application in which it was created.

### Portal

A website that aims to provide users easy and integrated access to a range of resources and services, including search engines, forums, and online shops.

### Positive discrimination

Extraordinary protection given to groups historically discriminated against, especially on the basis of race; color; sex; language; religion; political or other opinions; national, ethnic, or social origin; property; disability; birth, or other status, in order to achieve full social integration or to put the group on an equal footing.

### Power of attorney

A document in which a legal entity or a natural person grants to another the power to act on the entity or person's behalf, either generally or in limited terms.

### PPI

*See pixels per inch.*

### Practice statement

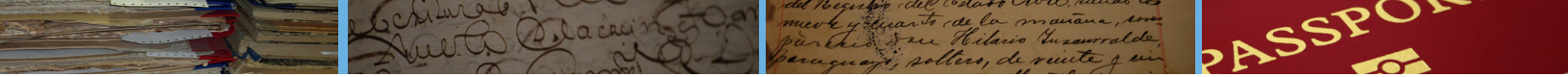
A formal statement of the practices followed by an authentication entity (e.g., registration authority, certification service provider, or verifier). Typically, it includes the specific steps taken to register and verify identities, issue credentials, and authenticate claimants.

### Precautionary measures

Provisions taken to prevent irreparable harm to persons or to the subject matter of the proceedings in connection with a pending petition or case.

### Preconsular support services

Services that assist governments and migrants with visa applications prior to the submission of the application. Services may include assistance in completing and filing visa application forms; assistance with compiling supporting documentation for the visa application; verification of legal, educational, and employment-related papers; and translation of documents.



### Premature fetal death

Death that occurs before 20 completed weeks of gestation.

### Presumption

In law, the act of accepting that something is true until it is proved not true.

### Prevalence

The proportion of people with a particular illness within a population in a specific period of time.

### Prevalence rate

The number of people with a particular illness in a specific period for every 1,000 inhabitants.

### Prima facie

(Latin) “at first view.” Evidence that is sufficient to raise a presumption of fact or to establish the fact in question unless rebutted.

### Principal purpose of data protection

The principal that data may not be used for purposes other than those for which it was obtained and should be removed when no longer necessary or relevant for the purposes for which it was collected, with the exception of data of historical, statistical, or scientific value or when required to be kept for a specific standard.

### Privacy

Protection from interference in one’s private life, to which everyone is entitled. *See also intimacy.*

### Privacy-enhancing technology (PET)

A set of computer tools and applications that enable a person to influence the availability of personal information and restrict the level of its exposure to third parties.

### Privacy guidelines

Unanimous general international guidelines for the collection and management of personal data. Also known as guidelines for the protection of

cross-border flows of personal data. They acknowledge that personal data should be protected by reasonable security safeguards against such risks as loss or unauthorized access, destruction, use, modification, or disclosure.

### Privacy Impact Assessment (PIA)

An analysis of how information is handled, which ensures that handling conforms to applicable legal, regulatory, and policy requirements regarding privacy; determines the risks and effects of collecting, maintaining, and disseminating information in identifiable form in an electronic information system; and examines and evaluates protections and alternative processes for handling information to mitigate potential privacy risks.

### Private key

The secret part of an asymmetric key pair typically used to digitally sign or decrypt data and maintained in reserve by the holder of the electronic signature. *See also pair of keys, public key.*

### Pro-natalist

A policy of a government, society, or social group to increase population growth by attempting to raise the number of births.

### Probability sample

A sample selected from a population by a method based on the theory of probability (random process); that is, a method involving knowledge of the likelihood of any unit being selected.

### Probe

A biometric sample submitted to the biometric system to compare against one or more references in a gallery. *See also gallery.*

### Profile

A structured set of characteristics of a person or thing that describe specific properties or qualities in specific contexts.





## Program

In computing, a sequence of instructions that directs a computer to perform specific operations to obtain a desired result.

## Programmer

A person who defines the solution to a problem and writes the instructions required by a computer to perform this solution. A programmer who also performs systems analysis and design is often called a programmer analyst.

## Proof of address (PoA)

A document or process by which a credential service provider and a registration authority validate sufficient information to attest to the address of a person. *See also credential service provider, address.*

## Proof of concept (PoC)

A test of a certain method or process to demonstrate its viability or practicality.

## Proof of identity

A document or process by which a credential service provider and a registration authority validate sufficient information to attest to the identity of a person. *See also credential service provider.*

## Proof of possession (PoP) protocol

Protocol in which a claimant proves to a verifier that he or she possesses and controls a token (e.g., a key or password).

## Property registry

A register in which the acts and contracts related to ownership and other property rights are inscribed. The contents of the register can be freely consulted by interested parties, and it is possible to obtain different types of certificates.

## Proportion

In demography, the relationship between a subset of the population and the whole.

## Proportion of gestating population attended by medical personnel during pregnancy

The number of pregnant women who received at least one medical checkup during pregnancy from a trained health worker. The proportion is expressed as the percentage of the population of live-born children for a given year in a given geographic area.

## Proprietary software

Any program that users have limited possibilities to use, modify, or redistribute or for which source code is unavailable or access is restricted.

## Protocol

A set of rules that determine the interactions between computers and applications.

## Protocol run

An instance of the exchange of messages between a claimant and a verifier in a defined authentication protocol that results in the authentication (or authentication failure) of the claimant.

## Proxy

In a computer network, a proxy is located between the user's machine and the Internet. It acts as a barrier that protects the machine or as a broker with regards to requests from other users.

## Pseudonym

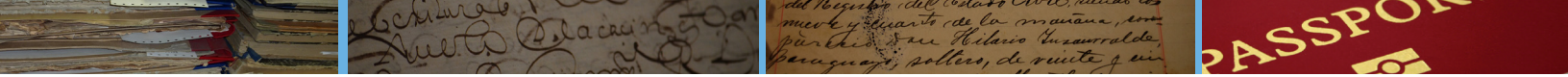
A fictitious name. *See also alias, nom de guerre, also known as.*

## Public key

The public part of an asymmetric key pair typically used to verify signatures or encrypt data. *See also private key, pair of keys.*

## Public-key certificate

A document issued and signed digitally by the private key of a certification authority, which binds the name of a subscriber to a public key. The certificate indicates that the subscriber identified in the certificate has sole control and access to the private key.



### Public-key encryption

Form that uses a cryptographic key pair (a public key and a private key) to encrypt and decrypt data. Encoding is based on a key pair in a way that the message is encrypted with the public key and cannot be decrypted if the receiver does not have the corresponding private key. *See also public-key infrastructure.*

### Public-key infrastructure (PKI)

In cryptography, a combination of hardware, software, settings, and safety procedures needed to create, manage, distribute, use, store, and revoke digital certificates. This is an arrangement that binds public keys with respective user identities by means of a certificate authority.

### Public policies for identity management

Policies that cover government actions that aim to reformulate and update existing legal administrative models. The goal is to transform and incorporate technological innovations to improve the service of identity authentication, building a positive relationship with citizens through a guaranteed universal ability to exercise one's right to a legal identity and management based on transparency and accountability in institutions.

### Public trust

(a) Confidence and truthfulness attributed to public officials (e.g., notaries, clerks, consuls) in events, acts, and contracts. (b) Legitimate authority attributed to notaries, clerks, agents of change, the stock exchange, consuls, court clerks, and other official institutions and the documents they emit and authorize to be considered authentic.

### Public writing

A document prepared by a notary public in the presence of the parties who sign it before witnesses.

### Purging the voter registration

Action to clean up the electoral register of duplicate registrations or any person not eligible to exercise their right to vote.

### Push-pull hypothesis

A migration theory suggesting that circumstances at the place of origin (e.g., poverty or unemployment) repel or push people out of that place to other places that exert a positive attraction or pull (e.g., a high standard of living or job opportunities).

### PVC

*See polyvinyl chloride.*



### Qualitative errors

Errors arising from ignorance or forgetting of the facts, refusal to reply to a question, failure to understand a question, or failure of an interviewer to put the question clearly or to record its answer properly.

### Quality of data

In a civil registration or vital statistics system, measured according to the data's degree of completeness, correctness (accuracy), timeliness, and availability.

### Quality of a vital event record

The completeness of an element of a vital event report as the preferred legal proof that the event occurred, and the accuracy and timeliness of the element's subsequent compilation for statistical purposes.

# ■ R ■

## Racial discrimination

Any distinction, exclusion, restriction, or preference based on race, color, descent, or national or ethnic origin that is intended to or has the effect of nullifying or impairing the recognition, enjoyment, or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural, or any other field of public life.

## Racism

(a) The belief that each race or ethnic group possesses specific characteristics, abilities, or qualities that distinguish it as inferior or superior to other groups. (b) Discrimination against or antagonism toward other races or ethnic groups based on such a belief.

## Rack

Used to hold servers and telecommunications components (e.g., routers, patch panels, switches).

## Radio frequency chip

A microchip embedded in modern passports and identification cards from many countries that contains additional security information for the validation of a passport. The chip can be read automatically when held close to a reader. *See also contact microchip, contactless microchip.*

## Radio frequency identification (RFID)

A remote storage and retrieval system that uses tags or other elements capable of sending radio frequencies. The main purpose of the technology is to transmit the identity of a document (similar to a unique serial number) through radio waves.

## Rainbow printing

Ultra-fine lines or patterns that change gradually from one color to another used as an anti-counterfeiting measure.

## RAM

*See random-access memory.*

## Random-access memory (RAM)

Memory in a computer where programs are executed, images are processed, and information is stored within a few seconds of real time.

## Random storage

Data storage method that allows direct access to the data without having to go through other data, thus allowing faster access.

## Raster graphics

Images that are made up of a grid of pixels, such as photos from a digital camera.

## Rate

Frequency of demographic events in a population during a specified period (usually one year) divided by the population liable to experience the event during that time. Rates indicate how commonly events happen. Most rates are expressed per 1,000 inhabitants.

## Rate of new marriage

Number of remarriages among 1,000 people who have been previously married (i.e., widowed or divorced) in a given year.

## Ratio

In demography, the relationship between a subpopulation and the total population or other subgroups.

## Read-only memory (ROM)

Permanent memory that is an integral part of a computer. The programs and information stored in ROM are preserved when the computer is turned off.

### RealAudio/Video

Technology to transfer audio or video data over the Internet in real time. RealAudio was developed by Real Networks and supports FM stereo sound quality. To listen to a RealAudio file on a web page, a plug-in is required.

### Real ID Act

A U.S. law that aims to improve the security of driver's license and personal identification cards by imposing security, authentication, and issuance procedure standards to be accepted for official federal government purposes.

### Real time

Format that allows audio, video, and/or data to be sent or received simultaneously, with no more than a fraction of a second of delay.

### Real-time processing

A processing technique that updates the data of an event as it happens.

### Receiving country

The country of destination or a third country that has agreed to receive a certain number of refugees and migrants annually by presidential, ministerial, or parliamentary decision. In the case of return repatriation, the receiving country is also the country of origin.

### Recipient

In computing, the person or entity that is addressed by the originator to receive a data message, electronic document, or funds, for example.

### Recognition

A generic term used in the description of biometric systems (e.g., face recognition or iris recognition) relating to their fundamental function. The term recognition does not inherently imply verification, closed-set identification, or open-set identification (watch list).

### Recognition of extramarital children

A juridical act through which a father or mother declares their paternity or maternity of a child born out of wedlock. This is an irrevocable act and cannot be subsumed under any modality that alters its legal consequences or requires the acceptance of the child. The father or the mother may do this, together or separately, through a statement to the civil register. Recognition might be declared at the time of the inscription of the birth or later, through public or private instruments and sometimes by will.

### Recognize

(a) To observe with attention the identity or quality of a person or thing. (b) To admit something as one's own, be it an act, a document, or a manifestation. (c) To confess natural or legitimate paternity.

### Recognized certificate

An electronic document issued by a certification service provider that complies with the requirements established by law regarding identity verification. It offers reliability and guarantees the services provided.

### Recognized electronic signature

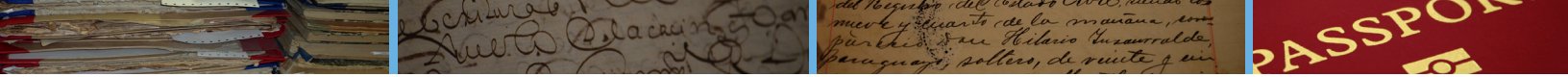
An electronic signature is considered recognized when it is based on a recognized certificate and generated by means of a secure signature-creation device.

### Record

(a) An item in a list, in a paper register, in a digital spreadsheet, or in an electronic database. (b) A report of a vital event that has been registered by the registrar.

### Record linkage

A process, usually computer-based, that brings together information from two or more data files into a new combined file containing selected information about individuals or events.



### Record of foreign live birth

A document registered by the registrar for a person born in a foreign country who may or may not be a citizen of the jurisdiction they are entering and who was adopted through a court with competent jurisdiction.

### Record reposition

The process by which a person obtains a birth, marriage, and/or death certificate previously registered that has been lost or damaged.

### Recount

The gross account of population or demographic events that serves as the basis for other analyses and statistical studies.

### Reference

The biometric data stored for an individual for use in future recognition. A reference can be one or more templates, models, or raw images. *See also biometric template, template.*

### Reference period error

A type of false or mistaken result obtained in a survey or census as a result of the failure of the respondent to place past events in the proper time period.

### Reference term error

A type of erroneous data obtained by means of a survey or census in which an event cannot be placed within a proper time frame.

### Refugee

A person who, “owing to well-founded fear of persecution for reasons of race, religion, nationality, membership in a particular social group, or political opinion, is outside the country of his nationality and is unable or, owing to such fear, unwilling to avail himself of the protection of that country” (*Convention Relating to the Status of Refugees, 1951, Art. 1A(2)*, as modified by the *1967 Protocol*). *See also de facto refugees.*

### Refugee resettlement

Refugees that are accepted by a third country that provides legal and physical protection, including access to civil, political, economic, social, and cultural rights similar to those enjoyed by nationals.

### Refugees in transit

Individuals with refugee status who are temporarily admitted into a state with the understanding that they will be relocated elsewhere. *See also refugee resettlement.*

### Refugees sur place

(French) “in place.” Persons who were not refugees when they left their countries of origin, but who become refugees later owing to intervening events. Refugees *sur place* may owe their fear of persecution to a change in the country of origin, such as through a *coup d'état*, or to political activities undertaken in the country of refuge. *See also refugee.*

### Register

An act under which the relevant authority notes, in the form prescribed by law, certain facts or events that have been authenticated by the same authority.

### Register of intellectual property

Public register of works of literary, artistic, or scientific character, and the annotation of acts and contracts that affect them.

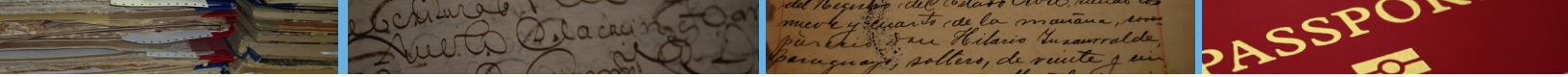
### Registered mark

A name, symbol, figure, letter, word, or mark used by a manufacturer or merchant to designate his or her goods and to distinguish them from those manufactured or sold by others. A trademark is a proprietary term that is usually registered with a patent and trademark office to assure its exclusive use by its owner.

### Registered traveler program

An airline passenger security assessment system. Passengers that apply for and pass prior background screening may use reserved security access lanes in U.S. airports.





### Registration

A process by which the authorities note, in a manner established by law, all facts, acts, and records whose occurrence must be recorded authentically in a specialized register.

### Registration authority

A trusted entity that establishes and vouches for the identity of a subscriber to a credential service provider (CSP). The registration authority may be an integral part of a CSP or it may be independent of a CSP. *See also credential service provider.*

### Registration entry

Sign-in or entry in a public register. *See also registration, register, civil registration.*

### Registration record

A page, book, electronic file, or any other official document for recording every type of vital act, according to the preset procedures for each.

### Regular migration

Migration through recognized, legal channels. *See also irregular migration.*

### Regulations

Rules that state mainly the material legislative functions of public administration.

### Reinscription

*See re-registration.*

### Reinstatement

Rehabilitation or restitution of a person or thing to its former legal capacity.

### Relative lack of documentation

This occurs when an individual's birth has been registered but he or she does not possess a birth certificate or other identifying document or token.

### Religious wedding

The union of two people, celebrated according to religious practices.

### Relying party

Any website or online service using an identity provider to obtain a security credential for a user.

### Remote authentication

Providing authentication services through information and communication technology.

### Renunciation of nationality

Voluntarily giving up one's nationality. *See also nationality, statelessness.*

### Repatriation

The personal right of a refugee or prisoner of war to return to his or her country of national origin under specific conditions laid down in various international instruments (*Geneva Conventions, 1949, and Protocols, 1977; Regulations Respecting the Laws and Customs of War on Land, Annexed to the Fourth Hague Convention, 1907*; human rights instruments, and customary international law). The option of repatriation is bestowed upon the individual personally and not upon the detaining power. Repatriation also entails the obligation of the detaining power to release eligible persons (soldiers and civilians) and the duty of the country of origin to receive its own nationals. Repatriation also applies to diplomatic envoys and international officials in situations of international crisis. *See also assisted voluntary return, involuntary repatriation, return, voluntary return.*

### Replacement-level fertility

The level of fertility at which a cohort of women has, on average, enough female children to replace themselves in the population. By definition, the replacement level is equal to a net reproduction rate of one.

### Reproductive period

The time during which a woman is capable of procreating, which many countries have set at ages 15 to 45 for statistical purposes.





### Re-registration

The process by which a record is registered more than once.

### Resettlement

The relocation and integration of people (e.g., refugees, internally displaced persons) into another geographic area and environment. This term generally covers that part of the process that starts with the selection of the refugees for resettlement and ends with the placement of refugees in a community in the resettlement country.

### Residence

A place where one is physically present for a given period. This differs from domicile, which is the place one intends to make his or her permanent home. A person can have more than one residence but only one domicile. *See also domicile, country of habitual residence.*

### Residence permit

A legal document issued by a state to a foreigner confirming that the foreigner has the right to live in the country. *See also residence, green card.*

### Resolution

In digital imagery, the number of pixels per unit of distance in an image, which describes its sharpness and clarity. *See also pixel, pixels per inch.*

### Response authentication

In computing, a method of confirming the presence of a live person based on a response. The end user will react consciously to something the system presents.

### Responsibility

In law, an obligation to compensate for damage caused to a person, in some cases as determined by law.

### Retinal scanner

An identification device that measures the pattern of veins in the posterior portion of the eye by projecting infrared light through the pupil.

### Return

In migration, the act or process of going back, either within the boundaries of a country, as in the case of returning internally displaced persons and demobilized combatants, or from a host country (either transit or destination) to the country of origin, as in the case of refugees, asylum-seekers, and qualified nationals. Subcategories of return describe the way the return is implemented—e.g., voluntary, forced, assisted, or spontaneous—and who is returning (e.g., repatriation of refugees).

### Return migration

The movement of persons returning to their country of origin or habitual residence, usually after spending at least one year in another country. This return may or may not be voluntary. Return migration includes voluntary repatriation.

### Reversal

A total or partial annulment by the court hearing an appeal of a decision submitted for the court's consideration.

### RFID

*See radio frequency identification.*

### Ridge

In biometrics, the longitudinal succession of papillary prominences in fingerprinting. *See also fingerprint, fingerprint recognition.*

### Ridge ending

In biometrics, a minutia point at the end of a friction ridge in fingerprinting. *See also bifurcation, friction ridge, minutia(e) point, ridge.*

### Right to confidentiality

The right of persons to the privacy of their data, circumstances, documents, procedures, and responses, except with their express consent or when, in cases mandated by law, the authorities must be notified. *See also right to privacy.*

### Right to identity

A human right that covers several distinctive aspects, including the right to a name and nationality. *See also human rights, legal identity.*

### Right to privacy

(a) The right to personal autonomy. (b) The right of a person and the person's property to be free from unwarranted public scrutiny or exposure; the law that protects the most private and intimate aspects of an individual's life from outside interference.

### Right to return

An aspect of the right to freedom of movement. According to Art. 13(2) of the Universal Declaration of Human Rights, 1948: "Everyone has the right to... return to his country." Art. 12(2) of the International Covenant on Civil and Political Rights, 1966 states that: "No one shall be arbitrarily deprived of the right to enter his own country." Nevertheless, paragraph 3 of the Covenant provides for certain restrictions: "The above-mentioned rights [in Art. 12(2)] shall not be subject to any restrictions except those which are provided by law, are necessary to protect national security, public order, public health or morals or the right and freedoms of others, and are consistent with the other rights recognized in the present Covenant."

### Roaming

In telecommunications, connecting to a network while away from one's area of residence. Roaming services are offered by phone operators organized in alliances and agreements to cover different territories.

### Robot

Programmable machine that can perform various physical tasks controlled by a computer program.

### Rolling fingerprint

The individually taken fingerprint images rolled from nail to nail. *Source: [http://www.fbi.gov/about-us/cjis/fingerprints\\_biometrics/recording-legible-fingerprints/takingfps](http://www.fbi.gov/about-us/cjis/fingerprints_biometrics/recording-legible-fingerprints/takingfps)*

### ROM

*See read-only memory.*

### Root

On UNIX systems, the name of the user account that contains the rights of administration, both mono- and multi-user, often called the super-user because it is normally the administrator account.

### Root certificate authority

The origin of the chain of trust from a national public-key infrastructure. It is the agency that issues the root certificates for each of the certification authorities registered and certified to operate in a country. *See also public-key infrastructure.*

### Root directory

The first directory or folder in a hierarchical file system. For example, in the hard disk of a computer, the root directory usually represents the entire disk.

### Router

A computer component or program that ensures the connection between two or more networks..

### RSA

The best-known and most widely used public-key model worldwide, named with the initials of its creators (Rivest, Shamir, and Adleman). The RSA scheme is such that, using a computer program, anyone can generate a pair of large mathematically related numbers, called keys.

### Rubricate

To sign with a mark instead of a name.

### Rural percentage

The proportion of a population that resides in rural areas.

### Rural-rural migrant

Internal migrant moving from a rural area to another rural area. *See also internal migration.*

### Rural-urban migrants

Internal migrants who move from rural to urban areas. *See also internal migration.*

### Rural zone

A populated area that does not encompass urban or semi-urban areas.

## ■ S ■

### S&F

*See store-and-forward.*

### Safeguards to privacy protection

A set of security measures used to protect personal data against risks such as loss, unauthorized access, destruction, modification, or disclosure.

### Sample

In demographics, a representative part of a population or large dataset that reflects the characteristics of the whole population or dataset.

### Sampling

The process of selecting a representative number of cases from all cases in a particular group or population for the purpose of drawing inferences about the entire group or population.

### Sampling error

In demographics, an error to which an analyst exposes a model simply because he or she is working with sample data rather than population or census data. Using sample data presents the risk that results found in the analysis do not represent results that would be obtained from using data involving the entire population from which the sample was derived.

### Sampling frame

A collection of units (e.g., persons, households, institutions, events) from which a sample may be drawn. *See also population.*

### SATA

*See serial advanced technology attachment.*

### Scan

To move a finely focused beam of light or electrons over a surface in a systematic pattern to reproduce or sense and then transmit a digital image. A light reader scans the image point-by-point and line-by-line. The reflection of each point of the image is detected by a photoelectric cell and the measured value is stored in the memory of a computer and then converted into a digital image.

### Scanned signature

The image of a handwritten signature.

### Scenario evaluation

One of the three types of performance evaluations. The primary goal of a scenario evaluation is to measure the performance of a biometric system operating in a specific application. *See also technology evaluation, operational evaluation.*

### Seafarer

A person employed, engaged, or working in any capacity on board a ship, who may be of a nationality other than that of the country of ownership or registration of the ship; a migrant worker employed on board a vessel registered in a state of which he or she is not a national (including fishermen). (Art. 2(2) (c), *International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families, 1990*). *See also migrant worker.*

### Seafarers' identity documents

Documents that have two-dimensional barcodes, issued by a government to identify the crews of vessels. Not recognized as travel documents (passports) (ILO Convention 158).

### Sealed record

An original record of a vital event for which the evidence submitted to support a change shall not be subject to inspection except upon order of a court with competent jurisdiction.

### Search directory

An Internet listing edited and categorized by people so that users can locate what they are looking for on the Internet.

### Secondary memory

A memory that supplements the main or primary memory of a computer, usually using part of the hard disk.

### Secure hash algorithm (SHA)

A popular one-way hash algorithm used to create digital signatures. *See also secure hash standard.*

### Secure hash standard

A standard that specifies four secure hash algorithms (SHA-1, SHA-256, SHA-384, and SHA-512) for computing a condensed representation of electronic data (message). Secure hash algorithms are typically used with other cryptographic algorithms, such as digital signature algorithms and keyed-hash message authentication codes, or in the generation of random numbers (bits). *See also digital signature, cryptography, hash function, message digest.*

### Secure signature creation devices (SSCD)

Devices that provide security for private keys that are used in electronic signatures.

### Secure sockets layer (SSL)

An emerging standard for secure transmission of hypertext documents over the Internet using secure protocols for the transfer of hypertext. *See also Hypertext Transfer Protocol.*

### Secure sockets layer protocol

A certificate that enables the protocol for a secure connection.

### Seed document

*See breeder document.*

### Segmentation

The process of parsing the biometric signal of interest from the entire acquired data system.

### Semantic interoperability

The standard that ensures that information exchange can be performed automatically between computer systems and that information can be understood and/or reused by applications that were not involved in its creation.

### Sensor

Hardware on a biometric device that converts biometric input into a digital signal and conveys this information to the processing device.

### Sensor aging

Gradual degradation in performance of a sensor over time.

### Separate video (S-video)

A signaling standard for standard-definition video. Also known as super-video.

### Separated children

As defined in Art. 1 of the *Convention on the Rights of the Child*, children who have been separated from both parents or from their previous legal or customary primary caregiver, but not necessarily from other relatives. Such children may, therefore, include those accompanied by other adult family members.

### Sequential storage

A method by which a computer accesses data by interacting directly with the data or a physical space where there is other data.

### Serial advanced technology attachment (SATA)

Communication port used for hard drives and optical devices.



## Server

A computer or program that executes commands from another computer or program (client) operated by a user.

## Session key

A single-use symmetric key used to encrypt messages in one communication session.

## Sex

The biological and physiological characteristics that define men and women.

## Sex ratio

The relationship between the number of men and women in a given population, normally expressed as the number of men for every 100 women.

## Sexual abuse

The actual or threatened physical intrusion of a sexual nature, whether by force or under unequal or coercive conditions.

## Sexual exploitation

“Any actual or attempted abuse of a position of vulnerability, differential power, or trust for sexual purposes, including, but not limited to, profiting monetarily, socially, or politically from the sexual exploitation of another” (see <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N03/550/40/PDF/N0355040.pdf?OpenElement>).

## Sexual orientation

The preferred term for referring to an individual's physical or emotional attraction to the same and/or opposite sex. Gay, lesbian, bisexual, and straight are examples of sexual orientations. A person's sexual orientation is distinct from a person's gender identity and expression.

## SHA

See *secure hash algorithm*.

## Shadow image

An electronically generated reduced-density copy of a person's photo printed during personalization as

a background for the text information. This process makes it difficult to alter the person's data without destroying the image.

## Shareware

Software donated by its creator with the aim of having it used on a trial basis and eventually paid for if the user finds it useful.

## Shockwave®

A technology developed by Macromedia, Inc. that enables inclusion of multimedia objects on web pages.

## Signal

(a) In information theory, a signal is a codified message (i.e., the sequence of states in a communication channel that encodes a message). (b) In signal processing, signals are analog and digital representations of analog physical quantities; arbitrary data streams are not considered signals.

## Signatory

An entity that generates a digital signature on data using a private key.

## Signature

Name or title a person writes with his or her own hand on paper to express authenticity or to approve the content.

## Signature dynamics

A behavioral biometric modality that analyzes dynamic characteristics of an individual's signature for recognition, such as shape of signature, speed of signing, pen pressure when signing, and pen-in-air movements.

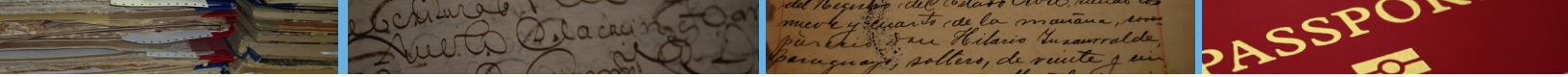
## Signature generation

The process of using a digital signature algorithm and a private key to generate a digital signature on data.

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### Signature validation

Mathematical verification of a digital signature, obtaining of the appropriate assurances.

### Signature verification

The process of using a digital signature algorithm and a public key to verify a digital signature on data.

### Signed data

The data or message on which a digital signature has been computed.

### Signed digital or electronic document

Any electronic media content (i.e., not programs or system files) used either in electronic form or as printed output that incorporates electronic signed data.

### Similarity score

A value returned by a biometric algorithm that indicates the degree of similarity or correlation between a biometric sample and a reference. *See also difference score, Hamming distance.*

### Simultaneous births

Successive or multiple births that take place on the same day. *See also double or multiple births.*

### Single-parent families

A parent (mother or father) living with dependent children, either alone or in a larger household, without a spouse or partner.

### Single sign on (SSO)

An authentication process that enables the user to access multiple systems with single-instance identification.

### Skimming

The act of obtaining data from an unknowing end user who is not willingly submitting the information at that time. *See also eavesdropping, phishing.*

### Slap fingerprint

Fingerprints taken by simultaneously pressing the four fingers of one hand onto a scanner or fingerprint card. Also known as four-finger simultaneous plain impressions.

### Smart card

A card that generally has a chip capable of storing, processing, and encrypting data, including biometric data.

### Social identity

The identity derived from the sense of belonging to a given group.

### Social network

A website or application that allows users to communicate with each other by posting messages, photos, comments, etc.

### Software

A program or set of programs executed on a computer.

### Software application

A set of programs that perform specific data processing tasks.

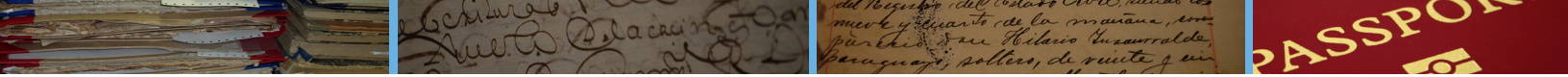
### Source code

A program written in a high-level programming language by a programmer. It is a simple text file that contains the sequence of operations that the computer must run, written in a way readable by people who can program in that language.

### Sovereignty

A concept in international law that has three major aspects: external, internal, and territorial. The external aspect of sovereignty is the right of the state to determine its relations with other states or other entities without the restraint or control of another state. This aspect of sovereignty is also known as independence. The internal aspect is the state's





exclusive right or competence to determine the character of its institutions, to enact laws of its choice, and to ensure their respect. The territorial aspect is the exclusive authority that a state exercises over all persons and things found within its territory, including below the ground and in its airspace.

### Spam

Unsolicited massive-distribution email.

### SPD

See *suspicious presentation detection*.

### Speaker recognition

See *voice recognition*.

### Specific rate

In demographics, a rate of change calculated for a particular subgroup. See also *gross rate*.

### Specification

Detailed description of work or service to be tendered by the public administration.

### Spiral friction ridges

In biometrics, a pattern in which the ridges are circular or nearly circular in fingerprints; also referred to as a friction ridges ring. The pattern contains two or more deltas. See also *delta*, *friction ridge*.

### Spontaneous abortion

The death of the fetus during pregnancy due to natural causes.

### Spoofing

The ability to fool a biometric sensor into recognizing an illegitimate user as a legitimate user (verification) or into missing an identification of someone in the database. It occurs when a person or program obtains access or improper advantage pretending to be someone else by falsifying his or her identity. See also *liveness detection*, *mimic*, *phishing*.

### Spooling

In computing, the process of receiving images or data in which several images or data files can be received simultaneously without the computer jamming.

### Spyware

A set of small programs designed to send information to marketing companies generally related to Internet use. These actions are often carried out without the user's knowledge and often slow down the computer because they consume bandwidth.

### SSCD

See *secure signature creation device*.

### SSL

See *secure sockets layer*.

### SSO

See *single sign on*.

### Stable population

A population whose growth rate and age composition do not change because the nativity and mortality rates remain constant over a prolonged period.

### State

"The state as a person of international law should possess the following qualifications:

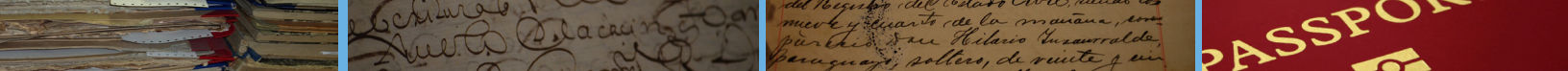
a) a permanent population; b) a defined territory; c) government; and d) capacity to enter into relations with the other states." (Art. 1, *Montevideo Convention on the Rights and Duties of States*, 1933).

### Stateless person

A person not considered a national by any state under the operation of its law (Art. 1, *Convention Relating to the Status of Stateless Persons*, 1954). See also *de facto statelessness*.

### Stateless refugee

A person not considered a national by any state under the operation of its law (Art. 1, *Convention Relating to*



*the Status of Stateless Persons*, 1954) and meets the definition of a refugee in Art. 1, *Convention Relating to the Status of Refugees*, 1951.

### Statelessness

The condition of not being considered a national by any state under the operation of its laws.

### Stationary population

A steady population with a growth rate of zero (because the nativity rate is equal to the mortality rate) and a composition that does not change by age.

### Statistical reporting of vital event data

Transmission of legally recorded statistical reports on vital events to the agency responsible for compiling statistics on these events.

### Store-and-forward (S&F)

Parts of video, audio, images, or data being transmitted or received with some delay (sometimes no more than a minute). For example, email is an application of this methodology. It is an unsynchronized communication with the advantage of not requiring the parties to be together for it to work.

### Streaming

Technology that allows the reproduction of sound or video without the need to first download the entire resource file.

### Structural metadata

The physical and/or logical structure of digital resources; it expresses the intellectual boundaries of complex objects and can be used to describe relationships between an object's component parts.

### Submission

In biometrics, the process whereby an end user provides a biometric sample to a biometric system. See *also capture*.

### Subnet

A sub-network—a logical, visible subdivision of an Internet protocol network.

### Subordinate certification authority (Sub-CA)

The organization responsible for the creation, delivery, withdrawal, and management of electronic documents.

### Summon

An order to appear before a judge or magistrate, or the writ containing it, at a specific place, date, and time.

### Super video graphics array (SVGA)

A screen or computer monitor standard that can support up to 1,600 × 1,200 pixels and 16 million colors.

### Surname

The family name added to the given name of a person. See *also given name*.

### Surrogacy

An arrangement or agreement to carry a pregnancy for the intended parents.

### Survey

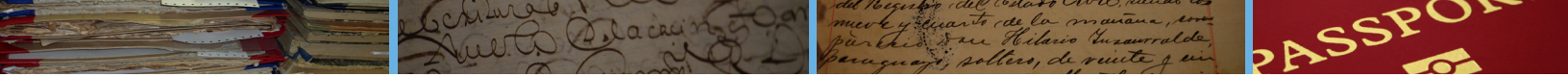
A canvass of selected persons or households in a population, usually used to infer demographic characteristics or trends for a larger segment or all of the population.

### Survival probability

The proportion of people from a specific group (e.g., by age, sex, and/or health status) that were alive at the beginning of an interval (e.g., a period of five years) and are still alive at the end of that interval.

### Suspension of citizen rights

A possibly temporary removal of a citizen's rights when they have not complied with rules or regulations contained in the legislation of the state of which he or she is a citizen.



### Suspicious presentation detection (SPD)

Automated determination of a suspicious presentation. *See also liveness detection, phishing, spoofing.*

### SVGA

*See super video graphics array.*

### S-video

*See separate video.*

### Swap

In computing, space used to store images of processes that are not in a physical memory. On Windows systems this is called virtual memory and by default it is on the same partition where the system is installed. In GNU/Linux, a swap partition has to be installed on an explicit partition, which should be twice the size of the RAM installed on the computer.

### Switch

A part of a computing hub that determines how and where data is sent from the hub.

### Switched line or network

Telecommunication option that works as a phone line. There is often a charge for using switched-line service, especially for long-distance connections, as is the case with telephone communications. In contrast, with a leased line, the connection is constantly open and charges are fixed at a monthly rate.

### Sworn statement

Deposition given personally in front of a competent authority and under oath to give legal value to what is stated or declared.

### Symmetric key

A classic encryption algorithm in which a message is encrypted using a certain key without which the original message cannot be decrypted.

### Synchronous transmission

Electric transfer method in which the input and output speeds are equal.

### Syntactic interoperability

The packaging and transmission mechanisms for data and a pre-requisite for semantic interoperability.

### System analysis

The study of a task or function to understand and find better ways to do it.

### System evaluation

The appraisal of the value, worth, and importance of the operational elements of a civil registration or a vital statistics system.

### System of records

A group of any records under the control of any agency from which information is retrieved using the name of an individual or by an identifying number, symbol, or other particular assigned to the individual.



### Tagged image file format (TIFF)

Graphics file format for PC and Macintosh computers that is compatible with most image editing software.

### TAR

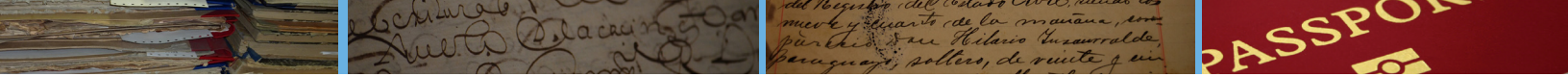
*See true accept rate.*

### TB

*See terabyte.*

### TCP

*See transmission control protocol.*



### Technical cooperation

The sharing of information and expertise on a given subject, usually focused on public sector functions (e.g., development of legislation and procedures, assistance with the design and implementation of infrastructure, or technological enhancement). See *also capacity building*.

### Technical interoperability

The connection between systems and services in information technology, including interfaces, interconnection, data integration and services, presentation of information, accessibility, and security.

### Technology evaluation

One of the three types of performance evaluations. The primary goal of a technology evaluation is to measure performance of biometric systems. See *also operational evaluation, scenario evaluation*.

### Telecommunications infrastructure

The physical elements that provide digital connectivity (e.g., hardware, fiber-optic networks, cell phone towers, antennas, and networks).

### Telematic means

A set of goods and technical computer elements united with telecommunications that enable the generation, processing, transmission, and communication of files, data, and information. See *also telematics*.

### Telematics

The blending of computers and wireless telecommunications technologies. It covers a broad scientific and technological area, encompassing the study, design, management, and application of networks and communication services for the transmission, storage, and processing of any type of information (e.g., data, voice, video), including the analysis and design of computer technologies and systems.

### Teleprocessing

An activity that involves remote transmission and data processing functions. Data is collected at one or more points of origin, transmitted to a central location, and processed. The results are distributed to one or more points of use.

### Telnet

High-level protocol that allows a user to connect to a remote computer. Among other uses, many libraries make the remote consultation of their catalog publicly available using the Telnet protocol.

### Template

A digital representation of an individual's distinct characteristics representing information extracted from a biometric sample. Templates are used during biometric authentication as the basis for comparison. See *also biometric template, reference*.

### Temporary identity card

An official document issued to a person who lacks one or some of the legal requirements for a permanent identity card, with the goal of ensuring people are documented.

### Temporary residence

The right given by a state to a foreigner to live and work within the state's geographic territory for a defined period of time.

### Terabyte (TB)

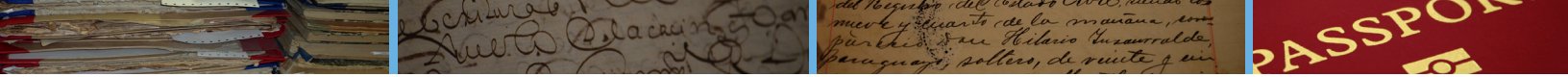
In computing, a storage unit equal to 1,024 bytes.

### Teraflops

A measure of a computer's speed equivalent to 10<sup>12</sup> floating-point operations per second. See *also floating point*.

### Term

In law, the appointed period of time granted to comply with a given act. It is further defined as legal if appointed by law, judicial if appointed by a court, and conventional when appointed freely by the parties.



### Terminal

A device in a system or communication network in which data can only be entered, not processed.

### Teslin

Micro-porous material that by its nature allows customization and is used for printing identity and travel documents.

### Test

In law, the demonstration of the occurrence of a material fact or legal act.

### TFR

See *total fertility rate*.

### Third-country national

Generally, an employee of a multinational company or institution who works in a foreign country and does not have the citizenship of the parent company's home country or of the country of employment. See also *foreigner, non-national*.

### Threat

In computing, an intentional or unintentional potential event that could compromise the security and integrity of the system. See also *vulnerability*.

### Threshold

In biometrics, a user setting for systems operating in verification or open-set identification (watch list) tasks. The acceptance or rejection of biometric data depends on the match score falling above or below the threshold. The threshold is adjustable so that the biometric system can be more or less strict, depending on the requirements of any given biometric application. See also *comparison, match, matching*.

### Throughput rate

The number of successful biometric transactions that a biometric system processes within a stated time interval.

### Thumbnail

A small box containing an image, created using a very small data file and low resolution, used to provide a screen preview.

### TIFF

See *tagged image file format*.

### Time stamp

A set of data in electronic form used to determine when an action took place in relation to electronic data with which the action is associated.

### Timeliness in registration

The difference between the date of the occurrence of a civil or vital event and the date of its registration when compared with the interval specified by legislation.

### Token

A physical object that represents verification and/or authentication that its holder is allowed to access a service or information. See also *identity token*.

### Total fertility rate (TFR)

The average number of children a hypothetical cohort of women would have had by the end of their reproductive period if they were alive at the end of the period and subject during their whole lives to the fertility rates of a given period. See also *reproductive period*.

### Total migration

The sum of all entries of immigrants and all exits of emigrants. See also *net migration*.

### Total number of children born

The number of children born when the mother was in various age categories, which provides a fertility measure of the population (useful only if the age of the mothers is specified). See also *final fertility rate*.



### Total population

All the people counted by the census. In its widest sense, it can include all the people in the country at the time of the census or the usual residents. “Total residents” usually refers to the *de jure* population; and total population present is known as the *de facto* population. *See also* *de facto population*, *de jure population*.

### Trafficker of persons

*See human trafficker.*

### Trafficking in persons

*See human trafficking.*

### Transcript

A handwritten or typed copy of a registration.

### Transfer rate

Number of biometric transactions that a biometric system can process in a given period.

### Transgender

The state of one’s gender identity or gender expression not matching one’s assigned sex.

### Transit

A stopover of passage, of varying length, while traveling between two or more countries, either incidental to continuous transportation or for the purposes of changing planes or joining an ongoing flight or other mode of transport.

### Transit visa

A visa, usually valid for three days or less, to pass through the country issuing the visa en route to a third country destination. *See also* *visa*.

### Transmission control protocol (TCP)

One of the core protocols of the Internet protocol suite. TCP provides reliable, ordered, and error-checked delivery of a stream of octets between programs running on computers connected to a local area network, intranet, or the public Internet.

### Transmission rate

The amount of information per unit of time that conventional technologies; digital telephone lines; integrated services digital networks; and satellite, wireless, or local area networks can transmit.

### Transportation worker identification credential

A common identification credential for personnel requiring open access to secure areas of certain facilities, regulated areas and vessels, and all areas and facilities of a coast guard. Workers who meet the eligibility requirements will be issued a credential containing biometric data (fingerprints) to enable a positive link between the card and the individual.

### Travel documents

A generic term encompassing all documents that are acceptable proof of identity for the purpose of entering another country. Passports and visas are the most widely used travel documents. Some states also accept certain identity cards or other documents. *See also* *certificate of identity*, *passport*, *machine-readable passport*, *machine-readable travel document*.

### Treaty

An international agreement concluded between states in writing and governed by international law, whether embodied in a single instrument or in two or more related instruments and whatever its particular designation (Art. 2.1(a), *Vienna Convention on the Law of Treaties*, 1969).

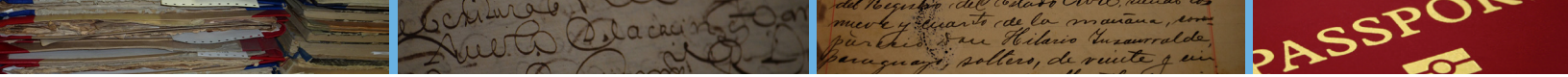
### TRR

*See true reject rate.*

### True accept rate (TAR)

A statistic used to measure biometric performance when operating in verification. It is measured as the percentage of times a system correctly verifies a true claim of identity.





### True reject rate (TRR)

A statistic used to measure biometric performance when operating in verification. It is measured as the percentage of times a system correctly rejects a false claim of identity.

### Trust anchor

In cryptography, a trusted or authoritative entity holding a public key and associated data, usually at the top of the trust chain. *See also certification authority.*

### Trust framework

The governance structure for an identification system founded on the applicable legal framework and defined technical and operational specifications.

### Trusted third party (TTP)

The entity (certificate authority) that guarantees the data related to a person, whether natural or legal, contained in a digital certificate; also called digital notary.

### Trusted traveler

A preapproved low-risk traveler who has undergone biometric background checks and enrolled in programs that facilitate border crossings through dedicated lanes and kiosks.

### TTP

*See trusted third party.*

### Two-factor authentication

A procedure that requires submission of at least two of the following authentications: a factor of knowledge (something the user knows), a factor of possession (something the user has), and an inherent factor (something the user is).

### Type I error

An error that occurs in a statistical test when a true claim is incorrectly rejected. *See also false rejection rate.*

### Type II error

An error that occurs in a statistical test when a false claim is incorrectly accepted. *See also false acceptance rate.*

### Typification

A statistical technique used to facilitate the comparison of populations and control their effects over different components (e.g., age).

## ■ U ■

### UDP

*See user datagram protocol.*

### Unaccompanied children

Children, as defined in Art. 1 of the *Convention on the Rights of the Child*, who have been separated from both parents and other relatives and are not being cared for by an adult who, by law or custom, is responsible for doing so.

### UNAIDS

*See Joint United Nations Programme on HIV/AIDS.*

### Uncooperative user

An individual who actively tries to deny the capture of his or her biometric data (e.g., a detainee mutilates his or her finger on capture to prevent fingerprint recognition). *See also cooperative user, indifferent user, noncooperative user.*

## UNCTAD

See *United Nations Conference on Trade and Development*.

## Underage person

An individual who has not yet legally reached adulthood. In many Western countries, a person comes of age when he or she turns 18.

## Under-five mortality rate

The number of children who die by the age of five years per 1,000 live births per year.

## Underlying cause of death

The disease or injury that initiated the chain of events leading directly to death or the circumstances of the accident or violence that produced the fatal injury.

## Under-registration

Absence of records of vital events from the civil register.

## Under-registration of births

The difference between the actual number of births in given geographical area in a given year and the number of births recorded in the civil register in the same time period. Also, the lack of a record of a vital event, even a late record. The difference between estimated births, according to the expected birth rate charts for a period, and the number of births actually recorded, expressed as a percentage of the estimated births for a given year in a given geographical area.

## Undetermined nationality

Situations in which it is not clear whether a person possesses a nationality or is stateless. Generally, persons with undetermined nationality lack proof of possession of any nationality and have (or are purported to have) links to more than one country.

## Undocumented foreigner

A migrant who enters or stays in a country without the appropriate documentation. This includes, among

others (a) one who has no legal documentation to enter a country but manages to enter clandestinely; (b) one who enters using fraudulent documentation; (c) one who, after entering using legal documentation, has stayed beyond the time authorized or otherwise violated the terms of entry and remains without authorization. See also *illegal foreigner*.

## UNDP

See *United Nations Development Programme*.

## UNEP

See *United Nations Environment Programme*.

## UNFPA

See *United Nations Population Fund*.

## UN-HABITAT

See *United Nations Human Settlements and Sustainable Urban Development Programme*.

## UNICEF

See *United Nations Children's Fund*.

## Unicode

A universal coding system that allows use of multiple languages and currently supports more than 90,000 characters. It is used by Linux, Windows, and Mac operating systems.

## Uniform resource locator (URL)

A system that defines the standard way to write the address of a specific site or piece of information on the Internet. The URL consists of (a) the service protocol (<http://>); (b) the name of the computer (e.g., [www.panamacom.com](http://www.panamacom.com)); and (c) the referral directory and file name.

## Unique identity

The combination of individually assigned numeric or alphanumeric digits with the biographic and biometric data of a person. See also *legal identity*.



### Unique identity number

An attribute in the form of a unique number used to identify individuals upon their inscription in the civil registration or civil identification system.

### United Nations Children's Fund (UNICEF)

An organization that provides long-term humanitarian and developmental assistance to children and mothers in developing countries.

### United Nations Conference on Trade and Development (UNCTAD)

An organization that deals with trade, investment, and development.

### United Nations Development Programme (UNDP)

On organization that focuses on poverty reduction, HIV/AIDS, democratic governance, energy and environment, social development, and crisis prevention and recovery. UNDP also encourages the protection of human rights and the empowerment of women in all of its programs.

### United Nations Environment Programme (UNEP)

An organization whose activities cover a wide range of issues related to the atmosphere, marine and terrestrial ecosystems, environmental governance, and the green economy.

### United Nations Human Settlements and Sustainable Urban Development Programme (UN-HABITAT)

An organization that analyses and studies human settlement patterns and develops methods for controlled settlement with the preservation of the environment in mind.

### United Nations Office for Project Services (UNOPS)

An organization that works in peacebuilding, humanitarian, and development operations.

### United Nations Office on Drugs and Crime (UNODC)

An organization that strives to better equip governments to handle drug-, crime-, terrorism-, and corruption-related issues.

### United Nations Population Fund (UNFPA)

An organization that promotes the right of every woman, man, and child to enjoy a life of health and equal opportunity.

### United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)

An organization whose human development and humanitarian services encompass primary and vocational education, primary health care, relief and social services, infrastructure and camp improvement, microfinance, and emergency response, including in situations of armed conflict.

### United Nations World Food Programme (WFP)

The food assistance branch of the United Nations and the world's largest humanitarian organization addressing hunger and promoting food security.

### Universal Declaration of Human Rights

An international convention signed in 1948 on a common understanding of rights and freedoms for all peoples and nations.

### Universal mobile telecommunication

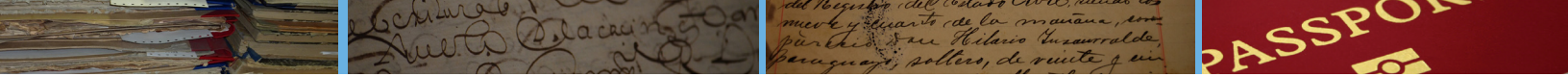
A high-speed and wide band cellular mobile telephone standard (from 2 Mbps up). It is a third-generation system that will replace the Global Systems for Mobile Communications (GSM) and general packet radio service (GPRS) systems and allow connection to the Internet.

### Universal serial bus (USB)

Interface plug-and-play between a computer and peripherals (such as audio players, keyboards, telephones, scanners, and printers). It allows transfer rates up to 12 Mbps.

### UNIX

A portable, multi-user, multitasking computer operating system developed in 1969 by Bell Laboratories of AT&T. Created in the programming language C, UNIX derived systems such as BSD, GNU project, and Linux.



### Unlinkability

In computing, a trait that ensures a user may make multiple uses of resources or services without others being able to link those uses together.

### UNODC

See *United Nations Office on Drugs and Crime*.

### UNOPS

See *United Nations Office for Project Services*.

### UNRWA

See *United Nations Relief and Works Agency for Palestine Refugees in the Near East*.

### Unsharp mask

In imaging technology, a way to designate a type of reinforcement filter for the edges of an image, which is usually used in teleradiology. The mask is created from a low-pass image filter, which is then subtracted from the original image. This process removes some of the background, which helps to create an image with highlighted edges.

### UN Women

A United Nations organization working for the empowerment of women.

### Unzip

In computing, the action of unpacking or decompressing files that have been packaged or compressed into a single file to occupy less space or to be easier to send over a network.

### Upload

The process of transferring information from a personal computer to a website.

### Uprooted people

People forced to leave their communities because of persecution or war, because they were forcibly displaced by environmental devastation, or because they were compelled to seek sustenance in a city or abroad because they could not survive at home. See

also *externally displaced persons, internally displaced persons, refugees*.

### Urban percentage

The proportion of a population that resides in an urban area, expressed as a percentage of the whole population.

### Urban zone

Definitions of “urban zone” vary from country to country; typically, a zone is considered urban when it has a population of 2,000 or more inhabitants.

### Urbanization

An increase in the proportion of people residing in urban areas.

### Urban-rural migrants

Internal migrants who move from urban to rural areas either for new settlement purposes or, for those who have been rural-urban migrants, as return migrants. See also *internal migration*.

### Urban-urban migrant

A person who moves from one urban area to another for work. See also *internal migration*.

### URL

See *uniform resource locator*.

### URL redirection

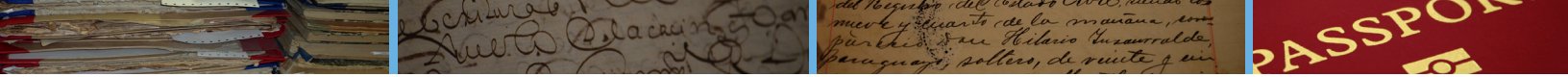
(a) An Internet address that when selected will automatically jump to another address; (b) a URL assigned to the same IP address as another URL. See also *uniform resource locator, Internet protocol*.

### USB

See *universal serial bus*.

### Use of an assumed name

Malicious use of another name with the intention of making an economic or social profit. See also *identity theft, alias, nom de guerre, pseudonym*.



## User

A person, such as an administrator, who interacts with or controls end users' interactions with a biometric system. *See also cooperative user, end user, indifferent user, noncooperative user, uncooperative user.*

## User data

Information describing the online activities specific to a given user.

## User datagram protocol (UDP)

In computing, a simple protocol that provides a service port that is used for network applications that run within a subnet. The UDP does not verify whether packets have arrived at their destination, whereas the transmission control protocol does.

## Username

An identification used by a person to access a computer, network, or online service, often used with a password.

## User rights

In computing, the privileges granted to a user to perform operations that do not involve drastic changes in the system or its configuration.

## U.S. passport card

A travel document that can be used to enter the United States from Canada, Mexico, the Caribbean, and Bermuda at land border crossings or sea ports of entry. It cannot be used for other international air travel.

## Usufruct

In Roman-based legal systems, the temporary right to use and enjoy the property of another, without changing the character of the property. In civil law and mixed jurisdictions, it is a limited real right that unites the two property interests of *usus* (user) and *fructus* (fruit, in a figurative sense).



## Validation

Verification that something is correct or conforms to a certain standard. In data collection or data entry, it is the process of ensuring that the data entered fall within the accepted boundaries of the application.

## Validity of a document

The time span during which a document can be considered valid.

## Variable laser image

A laser-engraved image with tilting effect incorporated into plastic cards. The images are engraved at different angles through an array of cylindrical lenses embossed into the surface of the card and are distinct depending on the angle of view.

## Vector image

An image that is a mathematical function of lines and curves (vectors). Unlike a raster graphic, this type of image can be moved, resized, or recolored without losing its shape. A vector image can be converted into a raster graphic. *See also raster graphics.*

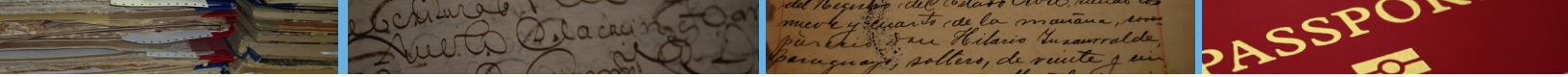
## Verification

A task in which a biometric system attempts to confirm an individual's claimed identity by comparing a submitted sample to one or more previously enrolled templates.

## Verification of a digital signature

The process by which a digital signature algorithm and public key are used to verify the digital stamp of data.





### Verification rate

A statistic used to measure biometric performance when operating in the verification task. It is the rate at which legitimate end users are correctly verified.

### Verified name

A subscriber name that has been verified by identity proofing.

### Verifier

An entity that verifies the claimant's identity by verifying the claimant's possession of a token using an authentication protocol. To do this, the verifier may also need to validate credentials that link the token and identity and check their status.

### Verifying digit

See *control code*.

### Verifying entity

The entity that verifies the authenticity of a digital signature using a public key.

### VESA

See *Video Electronics Standards Association*.

### VGA

See *video graphics array*.

### Victim of human trafficking

An individual who is a victim of the crime of trafficking in persons. See also *human trafficker*.

### Video conferencing

A communication system used on a computer network that allows multiple participants to see and talk to each other in real time.

### Video Electronics Standards Association (VESA)

An association founded by NEC (Nippon Electric Company) in 1989 with the aim of standardizing video protocols. Its standards are the display port, VGA, and Super VGA. See also *super video graphics array*, *video graphics array*.

### Video graphics array (VGA)

An older screen or computer monitor standard with a maximum resolution of 640 × 480 pixels and a maximum of 256 colors.

### Video on demand

The ability to provide instant access to the remote storage of video sources. A video server stores and manipulates large amounts of multimedia data and delivers them as ordered to one or more users.

### Videophone

A video system composed of a small camera, a monitor, speakers, and a microphone. It enables interactive audio and video communication via regular telephone lines without the need for a computer or a large video conferencing system.

### Violation of property rights

Wrongdoing in relation to an exclusive intellectual property right. The violation of a utility patent means the manufacturing, use, or sale without permission of a patented product or process. The violation of a design patent means the fabrication of a design that to the ordinary observer is in essence identical to an existing design, and the purpose of that similarity is to convince the observer to purchase one thing supposing it is another. The violation of a trademark is the use or unauthorized imitation of a mark owned by others in order to deceive, mislead, or confuse. The violation of a property right is to reproduce, adapt, distribute, publicly perform, or publicly display a copyrighted work that belongs to someone else.

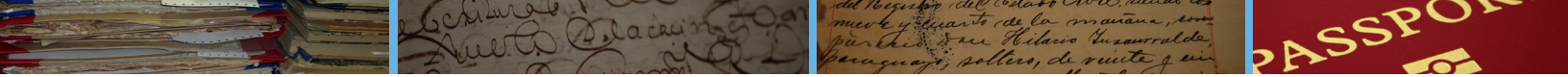
### Virtual

An electronic reality perceived as if it were reality. It can also describe the perception that something remote is three dimensionally present.

### Virtual local area network (VLAN)

A computing network that can be created regardless of where the machines are located. Communication in a VLAN requires a router or the removal of a switch.





It allows users to divide a local network into several virtual networks.

### Virtual memory

In computing, a memory management technique that allows using hard disk space as if it were random-access memory. This technique gives applications the ability to use more memory than the system actually has.

### Virtual private network (VPN)

A restrained-access site that employs some of the resources of a public network.

### Virus

In computing, a program that replicates itself on a computer system that incorporates other programs that are used by multiple systems. This type of program can work in various ways, including (a) only warning the user of its presence, causing no apparent damage; (b) trying to go unnoticed to cause maximum damage; or (c) taking over the computer's main functions (infecting system files). Viruses cannot spread through email messages alone; they must enter a system through binary files sent as attachments to an email message (and Multi-Purpose Internet Mail Extensions, MIME). Other types of viruses affect the function of macros in Word and Excel.

### VIS

See *European Visa Information System*.

### Visa

An authorization to enter, leave, remain in, or transit through a country issued by consular authorities of the country to be visited.

### Visa Waiver Program (VWP)

A program that allows eligible citizens from participating countries to travel to the United States without a visa for stays of 90 days or less. Travelers are entitled to use the VWP after obtaining Electronic System for Travel Authorization approval. See also *Electronic System for Travel Authorization*.

### Visible spectrum

The portion of the electromagnetic spectrum that is visible to (can be detected by) the human eye.

### Visual inspection zone (VIZ)

Part of a machine-readable travel document that contains the document designation, the holder's facial image and personal data, and data concerning issuance and validity.

### Vital event

A live birth, death, fetal death, marriage, divorce, adoption, legitimation, recognition of parenthood, annulment of marriage, or legal separation.

### Vital event record

A legal document entered in a civil register that attests to the occurrence and characteristics of a vital event. See also *vital event*.

### Vital statistical record

A document or record that contains those items of information concerning an individual vital event.

### Vital statistics system

The total process of (a) collecting information by civil registration or enumeration on the frequency of specified and defined vital events, as well as the relevant characteristics of the events themselves and of the person(s) concerned, and (b) compiling, processing, analyzing, evaluating, presenting, and disseminating these data in statistical form. See also *vital event*.

### VIZ

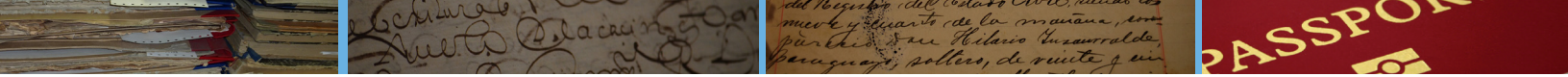
See *visual inspection zone*.

### VLAN

See *virtual local area network*.

### Voice recognition

A biometric modality that uses an individual's speech, a feature influenced by both the physical structure of an individual's vocal tract and the behavioral characteristics of the individual, for recognition purposes.



### Volume

In computing, a physical entity used to store data and instructions. It may be a magnetic tape or a disk.

### Voluntary repatriation

Return of persons to their country of origin on the basis of freely expressed willingness to return. *See also assisted voluntary return, involuntary repatriation, repatriation, return.*

### Voluntary return

The assisted or independent return to the country of origin or transit, or to a third country, based on the free will of the returnee. *See also assisted voluntary return, forced return, involuntary repatriation, repatriation, return, voluntary repatriation.*

### Voter card

*See electoral card.*

### Voter identification card

An identity document that legally enables a person to vote.

### Voter purge

The act of disqualifying a person whose name appears on a voter registration list from voting.

### Voter purge list

A list of people who have been removed from the voter registration list by the appropriate authorities.

### Voter registration list

Files, available to the public, that contain voters' names, residence addresses, mailing addresses if

different, race, sex, registration date, and last voting date, and that enable a person to vote.

### Voter roll

*See voter registration list.*

### Voting registration

The list of people lawfully registered to vote. *See also voter registration list.*

### Voxel

In imaging, the three-dimensional version of a pixel. Voxels are generated by computer-based imaging systems, such as computed tomography and magnetic resonance imaging. With the use of voxels, the simulation of three-dimensional objects can be reconstructed by computer systems.

### VPN

*See virtual private network.*

### Vucetich method

In fingerprinting, the method developed by Juan Vucetich in 1896 for matching prints based on four shapes: arch, outer loop, inner loop, and whorl. *See also loop, whorl.*

### Vulnerability

The risk of the function of a biometric system being compromised by intent (fraudulent activity), design flaw (including usage error), accident, hardware failure, or external environmental condition. *See also threat.*

### VWP

*See Visa Waiver Program.*



### W3C

*See World Wide Web Consortium.*

### WAIS

*See wide area information servers.*



## WAN

See *wide area network*.

## WAP

See *wireless application protocol*.

## Watch list

One of the three tasks performed by biometric systems; sometimes referred to as open-set identification. The task answers the questions, Is this person in the database? If so, who are they? The biometric system determines whether the individual's biometric template matches the biometric template of anyone on the watch list. The individual does not make an identity claim and in some cases does not personally interact with the system. *See also biometric system, closed-set identification, identification, open-set identification, verification.*

## WAV file

In computing, a format used for audio files in Windows (.wav).

## Wavelet scalar quantization (WSQ)

A Federal Bureau of Investigation-specified compression standard algorithm used to exchange fingerprints within the criminal justice community. It is used to reduce the data size of images.

## Wavelets

Wavelet compression is a form of data compression used for images. It enables compression ratios with as little data loss as 10:1 or 20:1, compared with the JPEG format, which allows 3:1 in low-loss techniques. Wavelets are being tested for motion video with compression ratios of 300:1, which is much higher than the ratio of 100:1 for MPEGs.

## Web application

A computer program that is executed on an Internet server and that can be managed through a web browser.

## Web browser

An application, updated for free, used to display and browse the Internet, with full multimedia capabilities. Examples are Internet Explorer, Google Chrome, Firefox, and Safari.

## Web host

A computer where the files of one or more websites are stored so Internet users can visit them.

## Weblog

A website that contains a number of items ordered sequentially by date, usually with personal content; more commonly called a “blog.”

## Webmail

Email messages that can be viewed with an Internet browser (e.g., Firefox, Internet Explorer, Chrome, Safari, or Opera). There are two types of webmail: web-based and non-web-based. The first type can be viewed only by accessing a certain website (e.g., Hotmail). The second type uses POP3 or similar protocols.

## Webmaster

A person who creates and manages the content and organization of a website.

## Web page

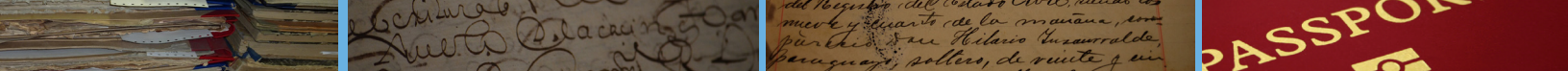
The result of hypertext or hypermedia provided by a web browser after obtaining information requested by a user. The page's content can range from a short text to a large body of texts, static or moving graphics, sound, etc. *See also website.*

## Web quest

An inquiry-oriented lesson format in which most or all of the information that learners work with comes from the web; teachers can post tasks or roles for students to perform targeted searches on the web.

## Website

A collection of web pages related and common to a domain or subdomain on the World Wide Web. Most



often devoted to a certain topic or particular purpose. *See also homepage.*

### Website event tracking

A system that enables analysis of how users interact with the content of a website.

### Wedlock status of mother at time of child's birth

The marital status of the mother, describing the status of a live-born child or dead fetus with respect to its being considered the lawful issue of a couple at the time of delivery.

### Weight at birth

The weight determined immediately after a child's birth, regardless of whether the child was born alive.

### Western Hemisphere Travel Initiative (WHTI)

A program that requires all travelers from areas within the Western Hemisphere to present a passport or other secure WHTI-compliant document that denotes identity and citizenship when entering the United States.

### WFP

*See United Nations World Food Programme.*

### Whitelist system

In ICT, the generic name for a list of e-mail addresses or IP addresses that are considered to be spam free.

### Who invented it first

For patents, the rule that priority is determined by finding out which of multiple inventors was the first to make the invention—not who first filed a patent application. The rule applies in the United States.

### Who registered it first

For patents, the rule that priority is determined by finding out which of multiple inventors was the first to file a patent application—not who first made the invention. The rule applies in almost every country in the world except the United States. For trademark registration, in most countries priority among applicants

is established by earliest application date. In the United States, the ownership of a trademark is determined by finding out who was the first to use it, not who first submitted the application for registration. However, in the new system based on intended use, one may apply for registration before the mark has been used.

### Whorl

In biometrics, a fingerprint pattern in which the ridges are circular or nearly circular. The pattern will contain two or more deltas. *See also arch, delta point, loop, minutia(e) point.*

### WHTI

*See Western Hemisphere Travel Initiative.*

### Wide area information servers (WAIS)

Software tools that index information in textual, graphic, or audio formats. There are specific search algorithms for each data format. The search results are sorted by degree of similarity with the search term.

### Wide area network (WAN)

One or more computer networks that extend beyond a building or campus. Geographically, WANs are wider than local area networks. WANs provide digital communication (e.g., voice, video, data) in an unswitched (fractional T1, T1) or switched network (ISDN, S56).

### Wi-Fi

Set of standards for wireless networking based on the IEEE 802.11 specifications. There are several standards, including IEEE 802.11b (11 Mbps) and 802.11g (54 Mbps). 802.11n (108 Mbps) is in the design stage. Also called Wi-Fi connection.

### Willful omission

An omission to produce harm to another, that produces harm that could have been avoided without personal risk if the omission were not made, or that causes harm that one was obliged to prevent despite it being dangerous.



## Windows

An operating system created by Microsoft. The first version, 3.0, was the graphical user interface for MS-DOS. The Windows 95 version, which introduced the FAT32 file system and the universal serial bus, was followed by versions 98, 98SE, Millennium, 2000, XP, Vista, 7, and 8.

## WIPO

See *World Intellectual Property Organization*.

## Wireless

A communication, control, or monitoring system in which electromagnetic or acoustic waves carry signals to certain parts or an entire path that has been previously established. Wireless communication includes radio frequencies, infrared, and satellite transmissions.

## Wireless application protocol (WAP)

A protocol for mobile phones. It is commonly used to communicate text and small programs. WAP is an open standard, which means that anyone can develop WAP services and that the protocol works in any operating system.

## Wireless local area network (WLAN)

A flexible data communications system widely used as an alternative to wired local area networks. It employs electromagnetic waves as the transmission medium.

## Wireless markup language (WML)

A reduced version of hypertext marking language used to create pages for mobile terminal screens.

## Witness

(a) One who has personal knowledge of certain events or facts by direct experience. In law, a witness is considered qualified to present this knowledge in a court. (b) In law, to observe the execution of a written instrument, such as an agreement or contract.

## Witness known to the notary

A witness whom a notary can identify and who can testify on the identity of the claimant.

## WLAN

See *wireless local area network*.

## WML

See *wireless markup language*.

## Women to children rate

The number of children younger than five years for every 1,000 women of reproductive age during a given year.

## World Intellectual Property Organization (WIPO)

The global forum for intellectual property services, policy, information, and cooperation. Created in 1967, it is one of 16 specialized agencies of the United Nations. WIPO fulfills its mission by encouraging cooperation among the nations in intellectual property matters, administering various unions and other organizations based on multilateral treaties, and creating model laws to be adopted by developing countries.

## World Trade Organization (WTO)

An international body dealing with the rules of trade between nations. Its core consists of agreements negotiated and signed by the bulk of the world's trading countries. The WTO's three main purposes are to facilitate WTO-member trade flow, to provide a forum for trade negotiations, and to facilitate the resolution of disputes.

## World Wide Web (WWW)

A set of resources that can be accessed through the Gopher, FTP, HTTP, Telnet, News, WAIS, and email protocols. Strictly speaking, it encompasses the entirety of servers using the HTTP protocol.

## World Wide Web Consortium (W3C)

An international organization that sets the standards and rules for the Internet.

### Worm

Self-replicating computer program. In contrast to viruses, worms are specially written for networks. See also *virus*.

### WSQ

See *wavelet scalar quantization*.

### WTO

See *World Trade Organization*.

### WWW

See *World Wide Web*.

## X

### Xenophobia

Attitudes, prejudices, and behaviors that reject, exclude, and often vilify persons, things, or institutions based on the perception that they are outsiders or foreigners to the community, society, or national identity.

### Xenophobic

To be fearful of what is foreign and especially of people of foreign origin.

## Y

### Yearly registered deaths attended by a physician

The number of death certificates for deaths due to natural causes (excluding those due to an external cause) issued during a given period and signed by an authorized physician, expressed as a percentage of deaths due to natural causes registered for the same year in a given geographic area.

### Young population

A population with a relatively high proportion of children, adolescents, and young adults, a low median age, and thus high growth potential.

## Z

### Zero population growth

In demographics, the state of a population being in balance (i.e., when births and immigration equal deaths and emigration).

### Zip file

In computing, a format used to compress documents, programs, or images without losing data. Also, the

extension on a compressed file when using a shareware program such as WinZip.

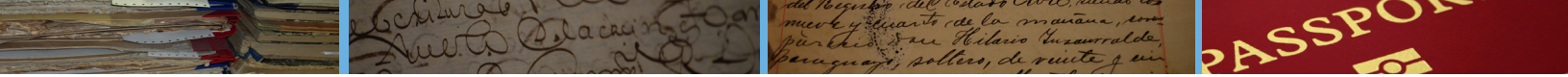
### Zip drive

A computer drive that handles Zip disks. It has a remote command and a high transfer rate. It can be external (interfaces: serial, parallel, SCSI, or USB) or internal (EIDE or SCSI).



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<http://www.pcmag.com/encyclopedia/>  
<http://searchcio.techtarget.com/definition>  
<http://techterms.com/>  
<https://tools.ietf.org/html/rfc3977>  
[unhabitat.org](http://unhabitat.org)  
<http://www.unrwa.org/>  
<http://www.wfp.org/>

### Webpages

<http://www.apheo.ca/index.php?pid=89>  
<http://biometrics.gov/Documents/Glossary.pdf>  
<http://www.iom.int/cms/return-assistance-migrants-governments>  
<http://www.un.org/disabilities/convention/conventionfull.shtml>

The identity infrastructures that enable civil registration are increasingly sophisticated and complex. Building and managing them requires collaboration across various domains of expertise (for example, administrative processes, computing resources, legal requirements, and vital statistics), yet each of these domains has its own specialist language and terminology. Effective collaboration is enabled when there is a shared understanding of key concepts in these domains. This dictionary, with over 4000 entries, is an invaluable resource to support such meaningful interactions.

**Dr. Edgar A. Whitley**

**London School of Economics and Political Science**

A priority of Finnish development policy is the eradication of poverty through social and economic inclusion and sustainable development. A key element to obtain this goal is legal identity, which is a necessary condition to access one's human rights and benefits. This dictionary promotes a common understanding of the terminology that pertains to identification, and will be an important tool for policymakers and practitioners in advocating the right to legal identity across the globe. We also see this as a product of south-south collaboration in an area that is fundamental to strengthen institutional capacity of the State, another key area of Finnish development policy. We greatly appreciate the engagement of the Inter-American Development Bank in this fundamental area for the rights-based approach to development.

**Mr. Pekka Puustinen**

**Director General**

**Ministry for Foreign Affairs**

**Government of Finland**

Institutions for People

