

### Glossary and Index

This glossary consists of 432 terms in alphabetical order. The main objective of the glossary is to provide a consistent, well-defined terminology for this book. Many terms are used in several domains with special meanings. In those cases, the definition is given in the prevalent area. For instance, channel is primarily defined in the field of electrical communication although it can be also be used in other areas.

Terms in the glossary cover evenly the terminological map presented in Figure I.1 in the sense that under each of the 16 main concepts (below) there are 27 other concepts. In addition to definitions, the glossary works as an index. The number after the definition refers to one of the pages on which the term is used. Figure G.1 shows the most popular 50 terms used in this book. The font size indicates the frequency of occurrence. Terms that are close each other in the figure occur frequently on the same page with each other. The figure is designed in a similar manner as Figure A.13.

The definitions are from various sources, some of them directly, but majority of the definitions are modified to the specific context of this book. The most used dictionaries are the following:

- Businessdictionary.com, <http://www.businessdictionary.com/>
- MSN Encarta (was used in 2008 - 2009, not anymore available), <http://encarta.msn.com/encnet/features/dictionary/dictionaryhome.aspx>
- Web Dictionary of Cybernetics and Systems, <http://pespmc1.vub.ac.be/ASC/IndexASC.html>
- Wikipedia, <http://www.wikipedia.org/>
- Oxford English Dictionary, <http://www.oed.com/>
- The Oxford Dictionary of Economics, <http://www.enotes.com/econ-encyclopedia/>
- FreeDictionary, <http://www.thefreedictionary.com/>
- Usability First, <http://www.usabilityfirst.com/glossary/>
- Illustrated Oxford Dictionary (DK Publishing 1998)
- Merriam-Webster, <http://www.merriam-webster.com/>
- WordReference.com, <http://www.wordreference.com/>
- Answer.com, <http://www.answers.com/>



<i>Term:</i>	<i>Definition</i>	<i>Page</i>
<b>a priori:</b>	logically independent of experience	173
<b>ability:</b>	the power to perform a mental or physical task, either before or after training	48
<b>acceptance:</b>	a mental attitude that something is believable and should be accepted as true or beneficial	211
<b>access point:</b>	a physical point through which users are able to obtain connections to a network	118
<b>access rate:</b>	the maximum bit rate of the channel between a user site and a network	77
<b>action:</b>	an event in which something is done so as to accomplish a purpose	60
<b>activity:</b>	a purposeful interaction of a subject with the world	60
<b>activity theory:</b>	a conceptual framework to bridge the gap between motivation and action	59
<b>actor:</b>	a person who intentionally does something or participates in something	274
<b>adoption:</b>	a process of accepting with approval	218
<b>advertising:</b>	an activity in which an entity draws attention to or describes favorably a product in public media to promote sales	206
<b>aesthetic:</b>	a guiding principle in matters of artistic beauty and taste	67
<b>agent:</b>	an entity that is able to strive towards its own goals	133
<b>algorithm:</b>	a complete, unambiguous procedure for solving a specified problem in a finite number of steps	281
<b>allocation:</b>	the systematic distribution of a limited quantity of resources over various time periods, products, operations, or investments	240
<b>analogy:</b>	correspondence in some respects, especially in function or position, between things otherwise dissimilar	46
<b>analysis:</b>	the separation of a conceptual or material whole into its constituent parts and the study of the parts and their interrelationships	165
<b>application:</b>	a computer program that provides a user with tools to accomplish a task	59
<b>architecture:</b>	the overall design of a system that unifies its elements into a coherent and functional whole	101
<b>attempt:</b>	a call offered to a telecommunications system, regardless of whether it is completed	113
<b>attention:</b>	the cognitive process of selectively concentrating on one aspect of the environment while ignoring other things	57

<b>attitude:</b>	a feeling, emotion, or mental position with regard to a fact or state	12
<b>automaticity:</b>	a level of skilled performance characterized by high speed, minimal errors, inability to verbally describe the thought process, and low interference with other simultaneous activities	19
<b>autopoiesis:</b>	a process whereby a system, organization, or organism produces and replaces its own components and distinguishes itself from its environment	297
<b>availability:</b>	a measure of the degree of access to a particular resource or set of resources	119
<b>awareness:</b>	the state of being generally concerned and well informed, especially with respect to a particular issue or field	242
<b>average revenue per user (ARPU):</b>	average revenue generated by a single customer or unit, typically on a monthly basis	215
<b>bandwidth:</b>	the difference between the highest and lowest frequencies of a transmission channel	118
<b>bargaining power:</b>	the relative ability of an agent to exert influence over other agents in an economic situation	88
<b>base station:</b>	a station installed at a fixed location receiving and transmitting data over radio channels	152
<b>behavior:</b>	the actions or reactions of a person in response to external or internal stimuli	57
<b>benefit:</b>	an effect of an event which is judged positively with regard to some criterion or objective	10
<b>best effort:</b>	a principle in which the network transmits packets without explicit quality guarantees	103
<b>billing:</b>	the process of generating an invoice to recover the sales price from the customer	108
<b>bit rate:</b>	the number of bits that are conveyed or processed per unit of time	77
<b>blocking:</b>	the inability to establish a network connection due to lack of necessary network resources	114
<b>boredom:</b>	an emotional state characterized by wandering attention, impaired efficiency, and low levels of arousal	23
<b>boundary:</b>	the minimum description required to distinguish a system from its environment	297
<b>brain:</b>	the part of the nervous system confined in the skull	21
<b>brand:</b>	a unique combination of design, signs, and symbols, employed in creating an image that identifies a product and differentiates it from its competitors	101
<b>bubble:</b>	an economic cycle characterized by a rapid expansion followed by a rapid contraction	239
<b>bundling:</b>	a practice of joining related products together for the purpose of selling them as a single unit	139

<b>bureaucracy:</b> management or administration marked by hierarchical authority among numerous offices and by fixed procedures	136
<b>business:</b> the activity of providing goods and services involving financial, commercial and industrial aspects	237
<b>business model:</b> the manner by which a company delivers products and services that create human benefits, entices people to pay for the benefits, and converts those payments to profit	241
<b>business plan:</b> a formal statement of a set of business goals, the reasons why they are believed attainable, and the plan for reaching those goals	5
<b>butterfly effect:</b> a condition in which a small change at one place in a nonlinear system can result in large differences in a later state	283
<b>capability:</b> measure of the ability of an entity or system to achieve its objectives, especially in relation to its overall mission	99
<b>capital:</b> a resource or resources that can be used to generate wealth	48
<b>capital expenditure (CAPEX):</b> money spent to acquire or upgrade physical assets such as buildings, machinery and network infrastructure	120
<b>career:</b> a course of professional life or employment, which affords the opportunity for progress or advancement in the world	8
<b>case study:</b> an intensive analysis of a specific example	166
<b>cash flow:</b> the movement of cash into or out of a business, project, or financial product	158
<b>causality:</b> the relationship between an event (the cause) and a second event (the effect), where the second event is a consequence of the first	181
<b>ceteris paribus:</b> other things being equal	182
<b>change agent:</b> a person who influences a client's decision process in a direction deemed desirable by a change agency	286
<b>channel:</b> a path over which signals can pass	68
<b>character:</b> the sum of a person's relatively fixed personality traits and habitual modes of response	303
<b>churn:</b> the turnover of customers of a business or users of a service	214
<b>co-evolution:</b> a change in the inherited characteristics of one species in response to a change of inherited characteristics of another species	301
<b>cognition:</b> the mental process of comprehension, judgment, memory, and reasoning, in contrast to emotional processes	62
<b>cognitive load:</b> the level of effort associated with thinking and reasoning, thus potentially interfering with other thought processes	61

<b>commons:</b>	resources which are not owned, either privately or by the state, but are left open for free use by all comers	249
<b>communication:</b>	a process by which information is exchanged between individuals through a common system of symbols, signs, or behavior	304
<b>communications:</b>	the science and technology of communicating, especially by electronic means	94
<b>communications ecosystem expert (CEE):</b>	a person who has profound knowledge of communications ecosystem and the ability to support various actors in the ecosystem to fulfill their objectives	7
<b>community:</b>	a particularly constituted set of social relationships based on something which the participants have in common	156
<b>compatibility:</b>	property of hardware and software components which permits the exchange of such components among each other or to combine them into a system without the need for adaptation	98
<b>competence:</b>	possession of required skill, knowledge, qualification, or capacity to do something well	42
<b>competition:</b>	an activity existing among two or more elements of a system where each is striving to maximize its use of a finite and/or non-renewable resource	82
<b>competitive advantage:</b>	the strategic advantage one business entity has over its rival entities within its competitive industry	238
<b>concept:</b>	an abstract idea describing a piece of reality	1
<b>conceptual model:</b>	a map of concepts and their relationships related to a phenomenon	69
<b>confirmation:</b>	a process in which a person becomes convinced about the quality of a subject	218
<b>conflict:</b>	a disagreement or clash between ideas, principles, or people	30
<b>congestion:</b>	a situation in which a system does not have enough resources to appropriately handle all tasks	109
<b>congestion control:</b>	a set of mechanisms used to avoid congestion inside a system or network	107
<b>connection:</b>	a possibility to transfer information between two or more end systems	105
<b>connection oriented:</b>	a communication method in which a connection has to be established before information transfer	104
<b>connectionless:</b>	a communication method in which information can be sent without first establishing a connection	104
<b>connector:</b>	a person with an extraordinary skill of making friends and acquaintances	217
<b>consciousness:</b>	the quality or state of being aware especially of something within oneself	21

<b>consultant:</b>	an outside specialist hired by an enterprise to advise on particular technical, commercial, or legal aspects of its activities	184
<b>consumer:</b>	a person who buys and uses commercial goods or services	247
<b>content:</b>	the meaning or message contained in a creative work, as distinct from its appearance, form, or style	77
<b>context:</b>	the circumstances that form the environment within which something exists or takes place	60
<b>context factor:</b>	a factor that describes the effect of context on a defined parameter	47
<b>contract:</b>	voluntary, deliberate, and legally enforceable agreement between two or more parties	111
<b>control:</b>	capability of choosing the inputs to a system so as to make the state or outputs change in a desired way	133
<b>convenience:</b>	the degree to which accessing and using something is comfortable, and possible without excessive effort, mental or physical	69
<b>convention:</b>	a regularly occurring behavior of individuals in a given social system to which nearly everyone conforms	36
<b>cooperation:</b>	a type of activity existing among two or more elements of a system where they are engaged in a mutually beneficial exchange	249
<b>copyright:</b>	the exclusive legal right granted for a period to print, publish, perform, film, or record literary, artistic, or musical material	155
<b>correlation:</b>	an interdependence of two or more variable quantities such that a change in the value of one is associated with a change in the values or the expectations of the others	181
<b>cost:</b>	a price paid to acquire, produce, accomplish, or maintain anything	241
<b>coverage:</b>	an area over which a mobile service is provided with the service probability above a certain threshold	86
<b>creeping featurism:</b>	a tendency for systems to become more complex over time as more features are added than were in the original design or plan	68
<b>criterion:</b>	a test or principle by which something is judged	183
<b>culture:</b>	the arts and other manifestations of human intellectual achievement regarded collectively	286
<b>customer:</b>	a person or organization who pays for goods or services	202
<b>customer experience:</b>	the sum of all experiences a customer has with a supplier of products over the duration of their relationship with that supplier	208
<b>customer satisfaction:</b>	satisfaction perceived by customers related to a product or service	211

<b>cybernetics:</b> the science of communication and control in animal and machine	166
<b>data:</b> information in numerical form	97
<b>decision:</b> a choice made between alternative courses of action in a situation of uncertainty	60
<b>deep craft:</b> knowledge related to a technology about useful methods, principles, instruments, and parameter values	96
<b>deep packet inspection (DPI):</b> a process in which the data part of a packet is analyzed in order to prioritize traffic or filter out unwanted data	142
<b>delay:</b> the time required to move a packet from source to destination over a given path	97
<b>delight:</b> a feeling of extreme pleasure or satisfaction	56
<b>demand:</b> willingness and ability to purchase a good or service	243
<b>design:</b> realization of a concept or idea into a configuration, drawing, model, pattern, plan or specification	68
<b>desire:</b> a wish, craving, or longing for something	277
<b>deterministic:</b> an attribute of systems whose behavior is totally predictable without uncertainty once the relevant conditions are known	280
<b>development:</b> the process of a systematic unfolding of a system's structure	275
<b>device:</b> a tool invented and developed for a particular purpose	66
<b>differentiated services:</b> a service paradigm in which quality differentiation is based on the classification and marking of packets rather than explicit resource reservations for individual flows	104
<b>diffusion:</b> the spread of an idea, product, or process beyond first use	212
<b>digital:</b> representing information by distinct states or discrete values	206
<b>discipline:</b> a branch of knowledge or teaching	1
<b>discomfort:</b> the psychological cost of an unpleasant experience	47
<b>dissemination:</b> a process during which something, especially information, is distributed or spread widely	91
<b>diversity:</b> the condition of being composed of differing elements	290
<b>domain:</b> a limited region or field marked by some specific property	304
<b>dominant strategy:</b> a strategy for one party in a game which gives it results at least as good as any other, whatsoever strategy the opponent adopts	255
<b>early adopter:</b> a person who chooses to purchase or use an innovation before it is fully embraced by the mass market	216

<b>early majority:</b>	a group of people who adopt a new idea just before the average member of a social system	216
<b>economics:</b>	the study of the production, distribution, and consumption of goods and services	235
<b>economy:</b>	the production and consumption of goods and services of a community regarded as a whole	252
<b>ecosystem:</b>	a community of organisms together with their environment, viewed as a system of interacting and interdependent relationships	1
<b>efficiency:</b>	the extent to which a resource is used for the intended purpose	99
<b>effort:</b>	the use of physical or mental energy to do something	61
<b>elasticity of demand:</b>	responsiveness of the demand for a good or service to the increase or decrease in its price	42
<b>emergence:</b>	the way complex systems and patterns arise out of a multiplicity of relatively simple interactions	288
<b>emotion:</b>	a mental and physical reaction marked by strong feeling that often prepares the body for action	22
<b>endowment effect:</b>	hypothesis that people value a good or service more once their property right to it has been established	246
<b>end-to-end principle:</b>	the principle that, whenever possible, communications protocol operations should be defined to occur at the end-points of a communications system	108
<b>engineering:</b>	the use of science in the design, planning, construction, and maintenance of buildings, machines, and other manufactured things	95
<b>entity:</b>	something that has a separate and distinct existence	276
<b>entrepreneur:</b>	a person with the capacity and willingness to undertake conception, organization, and management of a productive venture with attendant risks, while seeking profit as a reward	239
<b>environment:</b>	the aggregate of surrounding things, conditions, or influences	278
<b>equilibrium:</b>	a condition characterized by a balance of forces	284
<b>equipment:</b>	tangible tools and items needed for a particular activity or purpose	103
<b>Erlang:</b>	a unit of telephone traffic	113
<b>escalation:</b>	a situation in which one party's actions are perceived by another party to be a threat, and the second party responds in a similar manner, further increasing the threat	142
<b>esteem:</b>	a judgment that something or somebody has a particular high quality	46
<b>eudemony:</b>	a measure of the more preferred state of affairs	38

<b>event:</b>	an occurrence, especially one that is particularly significant	59
<b>evolution:</b>	a gradual process in which the properties of a group of similar entities change because of interaction between the entities and their environment	275
<b>excitement:</b>	a feeling of great enthusiasm and eagerness	25
<b>existence:</b>	the ability of a phenomenon to evoke emotions	277
<b>expectation:</b>	an outcome that is believed to be probable	25
<b>expense:</b>	the amount of money spent in order to buy or do something, specifically to generate revenue	152
<b>experience:</b>	the content of direct observation or participation in an event	23
<b>experiment:</b>	an empirical study designed to relate cause and effect by ruling out as many alternative causes as possible and by actually manipulating the cause to obtain the effect	49
<b>expert:</b>	a person having special knowledge or skill in a subject with the capability to think about the subject in a variety of ways	7
<b>externality:</b>	a positive or negative consequence of an activity that is experienced by unrelated third parties	7
<b>fact:</b>	something that can be shown to be true, to exist, or to have happened	165
<b>factor:</b>	a quantity by which a stated quantity is multiplied or divided	36
<b>fairness:</b>	the condition of being just or impartial according to most people's ideas of justice	240
<b>feature:</b>	a distinctive characteristic of a good or service that sets it apart from similar items	218
<b>feedback:</b>	a causal process whereby some proportion of a system's output is returned to the input	284
<b>feeling:</b>	a perceived physical or mental sensation	25
<b>firm:</b>	the basic unit of decision-taking in a decentralized economy	240
<b>fitness:</b>	the ability of an entity to both survive and reproduce	278
<b>fixed mindset:</b>	a mindset in which a person believes that his or her basic qualities are predefined and cannot be significantly developed	9
<b>flat rate:</b>	a fixed price that does not depend on the number of units or amount that is bought	296
<b>flow:</b>	a steady unbroken stream of actions, entities, or information	61
<b>framework:</b>	a basic conceptual structure used to solve or address complex issues	163

<b>free market:</b>	a market in which people buy and sell voluntarily, without legal compulsion	239
<b>free rider:</b>	a person who takes advantage of a public good, or other collectively funded benefit, while avoiding any personal cost, or evading personal contributions to collective funding	301
<b>frustration:</b>	the experience of nonfulfillment of some wish or need	22
<b>fulfillment:</b>	the act of doing what is necessary to bring about or achieve something expected, desired, or promised	205
<b>functionality:</b>	a set of capabilities associated with computer software or hardware	213
<b>game:</b>	a contest with rules to determine a winner	253
<b>game theory:</b>	a branch of mathematical analysis developed to study decision making in conflict situations	249
<b>good:</b>	a physical, tangible item that satisfies some human want or need	205
<b>government:</b>	the body of persons that constitutes the governing authority of a political unit or organization	158
<b>gross:</b>	an indication that something which could have been subtracted has not been	42
<b>gross benefit:</b>	the total benefit obtainable from an action in an ideal situation when no alternative action is available	44
<b>gross domestic product (GDP):</b>	the monetary value of all the finished goods and services produced within a country's borders in a specific time period	32
<b>growth mindset:</b>	a mindset in which a person believes that he or she can cultivate his or her basic qualities through effort	9
<b>guaranteed service:</b>	a service model in which a network attempts to meet specific bit rate and quality requirements with very high probability	111
<b>happiness:</b>	a state of well-being characterized by positive emotions ranging from contentment to intense joy	32
<b>hierarchy:</b>	a series of ordered groupings of people or things within a system	46
<b>holistic:</b>	characterized by the tendency to perceive or produce wholes	2
<b>homo economicus:</b>	the concept in economic theories of humans as rational and narrowly self-interested actors who have the ability to make judgments toward their subjectively defined ends	238
<b>hope:</b>	a wish or desire accompanied by confident expectation of its fulfillment	26
<b>horizontal integration:</b>	integration at the same stage of production in the same or different industries	243
<b>human:</b>	relating to, involving, or characteristic of human beings	16

<b>human capital:</b> the stock of competences, knowledge and personality attributes of a person	48
<b>human computer interaction (HCI):</b> a discipline concerned with the study, design, construction and implementation of human-centric interactive computer systems	66
<b>hypothesis:</b> a tentative explanation for an observation, phenomenon, or scientific problem that can be tested by further investigation	186
<b>implementation:</b> the act of providing a practical means for accomplishing something	218
<b>incentive:</b> rewards or penalties designed to induce one set of people to act in such as way as to produce results that another set of people want	253
<b>indifference curve:</b> a graph showing different bundles of goods or properties, each measured as to quantity, between which a consumer is indifferent	247
<b>information:</b> a difference that makes a difference	97
<b>information technology (IT):</b> technology dealing with information processing, storage, and transmission	220
<b>infrastructure:</b> the basic physical systems of a business or nation	115
<b>innovation:</b> an idea, practice, or object that is perceived as new by an individual or other unit of adoption	205
<b>innovator:</b> a person that is actively seeking information about new ideas	216
<b>institution:</b> the laws, informal rules, and conventions that give durable structure to social interactions among the members of a population	151
<b>integration:</b> process of attaining close and seamless coordination between several groups, organizations, or systems	242
<b>intellectual property:</b> knowledge, creative ideas, or expressions of human mind that have commercial value and are protectable from imitation, infringement, and dilution	155
<b>intellectual property right (IPR):</b> the privileges for the owner of patents, trademarks, copyrights, and trade secrets	155
<b>intelligence:</b> the ability to learn facts and skills and apply them, especially when this ability is highly developed	8
<b>intention:</b> the goal or purpose behind a specific action or set of actions carried out by a human being	288
<b>interaction:</b> the reciprocal influence of two or more things that have an effect on each other	301
<b>interface:</b> a boundary shared by two devices, or by a person and a device, across which information flows	66
<b>International Telecommunication Union (ITU):</b> an organization established by the United Nations to set international telecommunications standards and to allocate frequencies for specific uses	73

<b>Internet:</b>	a global information network that consists of a large number of smaller internets	94
<b>internet:</b>	a set of packet networks interconnected by routers that enable them to function as one unified network	94
<b>Internet Engineering Task Force (IETF):</b>	an organization that provides the coordination of standard and specification development for the Internet	107
<b>Internet protocol (IP):</b>	a protocol that provides a connectionless delivery of packets in the Internet	94
<b>Internet service provider (ISP):</b>	a large-scale provider of internet connections	117
<b>inter-operability:</b>	the ability of the component parts of a system to operate successfully together	86
<b>intervention:</b>	the action of intervening or interfering in any affair, so as to affect its course	138
<b>intuition:</b>	the immediate knowing or learning of something without the conscious use of reasoning	18
<b>invention:</b>	the idea of a new product, or a new method of producing an existing product	95
<b>investment:</b>	money committed or property acquired for future income	152
<b>invisible hand:</b>	an economic principle holding that the greatest benefit to a society is brought about by individuals acting freely in a competitive market in the pursuit of their own self-interest	262
<b>irrational:</b>	marked by a lack of accord with reason or sound judgment	171
<b>judgment:</b>	an opinion formed or given after consideration	18
<b>key performance indicators (KPI):</b>	a limited set of quantifiable measurements, agreed to beforehand, that reflect the critical success factors of a system	238
<b>knowledge:</b>	theoretical or practical understanding about a subject	163
<b>laggard:</b>	a person that adopts an innovation later than a great majority of people in a social system	216
<b>language:</b>	a systematic way of arranging symbols to express meaning	30
<b>late majority:</b>	a group of people who adopt a new idea just after the average member of a social system	216
<b>leadership:</b>	the art of motivating a group of people to act towards achieving a common goal	142
<b>life:</b>	animate existence regarded in terms of its continuance or prolongation	39
<b>Likert scale:</b>	a type of survey question where respondents are asked to rate the level at which they agree or disagree with a given statement	76
<b>link:</b>	a physical connection between two network nodes	97
<b>logic:</b>	the science or art of exact reasoning	164

<b>logistics:</b>	the management of the flow of goods between the point of origin and the point of use in order to meet the requirements of customers or corporations	146
<b>long tail:</b>	a distribution of items in significance order in which a considerable amount of significance is created by the tail of the distribution	222
<b>love:</b>	unselfish, loyal, and benevolent concern for the good of another	23
<b>loyalty:</b>	an attitude of being faithful to somebody or something	213
<b>management:</b>	control and coordination of the activities of an organization in accordance with certain policies to achieve clearly defined objectives	136
<b>market:</b>	an observation horizon where consumers can efficiently observe other consumers and suppliers can efficiently observe many other suppliers using prices	250
<b>market share:</b>	percentage of total sales volume in a market captured by a brand, product, or firm	279
<b>marketing:</b>	the business activity of presenting products or services in such a way as to make them desirable	206
<b>mass media:</b>	all of the communications media that reach a large audience, especially television, radio, and newspapers	301
<b>maven:</b>	a person that accumulates knowledge	217
<b>mean opinion score (MOS):</b>	a subjective judgment of the quality of an event	73
<b>measurement:</b>	the process of assigning numbers to phenomena according to a rule	116
<b>mental:</b>	relating to or occurring in the mind	20
<b>message:</b>	a usually short communication transmitted by words, signals, or other means from one entity to another	61
<b>metalanguage:</b>	a language used to make statements about statements in another language	168
<b>metaphor:</b>	a figure of speech in which an expression is used to refer to something that it does not literally denote in order to suggest a similarity	1
<b>metasystem:</b>	a system that is used to understand the properties of some other systems and their interrelations often to control their behavior	168
<b>method:</b>	a regular and systematic way of accomplishing something	166
<b>metric:</b>	a standard of measurement by which the most essential result of an action can be assessed	10
<b>microeconomics:</b>	the branch of economics that analyzes the behavior of individual customers and firms in an attempt to understand their decision-making processes	198

<b>mind:</b>	the human consciousness that originates in the brain and is manifested in thought, perception, emotion, will, memory, and imagination	19
<b>mindfulness:</b>	a state of mind in which the person is completely in touch with and aware of the present moment	23
<b>mindset:</b>	a permanent mental attitude that predetermines a person's responses to and interpretations of situations	97
<b>mission:</b>	the core purpose of a person, group, or organization	135
<b>mission-critical system:</b>	a system whose reliable performance is crucial to the successful performance of the organization in which it is used	152
<b>mixed strategy:</b>	a method of playing a game in which the player attaches a weight to each option and then chooses among the options with probabilities proportional to the corresponding weights	266
<b>model:</b>	a system of assumptions, data, and conclusions presented as a mathematical description of an entity or state of affairs	178
<b>mood:</b>	a predominant feeling or state of mind	31
<b>motive:</b>	a drive, force, or tension state within the organism that impels it to act	59
<b>multimodal interaction:</b>	interaction with a computer using more than one input or output channel at a time	68
<b>multiprotocol label switching (MPLS):</b>	a mechanism in data networks that directs data from one network node to the next based on short path labels rather than long network addresses	111
<b>mutation:</b>	a relatively permanent change in the hereditary material of an entity	278
<b>Nash equilibrium:</b>	a situation in which two or more agents have selected strategies where no agent can gain by any change in their strategy given the strategies currently being pursued by the others	255
<b>need:</b>	a physiological or psychological requirement for the well-being of an organism	24
<b>net:</b>	an indication that something has been subtracted	43
<b>net benefit:</b>	the gross benefit of an instance of an activity subtracted by the sacrifices of the instance of the activity	44
<b>net present value (NPV):</b>	difference between the present value of the future cash flows from an investment and the amount of investment	238
<b>network:</b>	a collection of nodes and links that provide connections between access points	103
<b>network effect:</b>	the effect that one user of a product has on the value of the product to other users	81

<b>network neutrality:</b>	a network design paradigm that argues for network operators to be completely detached from what information is sent over their networks	152
<b>node:</b>	a device attached to a network with the capability to make connections to other devices	120
<b>null hypothesis:</b>	a hypothesis used in statistics that proposes that no statistical significance exists in a set of given observations	186
<b>object:</b>	a person or thing to which activity, action or feeling is directed	25
<b>observer:</b>	someone who pays attention to something in order to gain insight into a phenomenon	176
<b>operating expense (OPEX):</b>	an on-going expense for running a product, business, or system	120
<b>operation:</b>	a routine process providing an adjustment of an action to the ongoing situation	59
<b>opportunity:</b>	convenience or fitness of a time or location to initiate or conclude an action	82
<b>opportunity cost:</b>	the cost of a commercial decision regarded as the value of the alternative that is forgone	48
<b>optimization:</b>	an activity that aims at finding the best or optimal solution to a problem	25
<b>organization:</b>	a purposefully arranged system consisting of knowledge, data, people, things, or other elements	134
<b>outcome:</b>	a visible effect	244
<b>oxymoron:</b>	a figure of speech in which apparently contradictory terms appear in conjunction	206
<b>packet:</b>	an information unit that contains enough information to transmit it through a network	104
<b>paradigm:</b>	a conceptual or methodological model underlying the theories and practices of a science or discipline at a particular time	163
<b>paradox:</b>	an apparently absurd or self-contradictory statement, or a strongly counter-intuitive one, which analysis or explanation may nevertheless prove to be well-founded or true	168
<b>parameter:</b>	a quantity which is fixed in the particular case considered, but which may vary in different cases	174
<b>Pareto-optimality:</b>	a situation in which it is not possible to improve the economic outcome of some people without making others worse off	250
<b>patent:</b>	a grant made by a government that confers upon the creator of an invention the sole right to make, use, and sell that invention for a set period of time	155
<b>pattern:</b>	a type or theme of recurring events or objects that repeat in a predictable manner	280

<b>peer to peer:</b> an ideology in which peers interact with each other by offering their own resources for other peers to achieve common goals	105
<b>penetration:</b> the extent to which a product or service is bought and used in a particular market	83
<b>perception:</b> the mental interpretation of physical sensations produced by stimuli from the external world	18
<b>performance:</b> a set of quantitative attributes of a system that describes how well the system is able to fulfill its predefined purpose	99
<b>persuasion:</b> a process in which someone tries to convince a person about the benefits of a decision	218
<b>phenomenon:</b> an occurrence, or circumstance that can be observed	300
<b>pleasure:</b> a feeling of happiness, delight, or satisfaction	23
<b>policy:</b> a set of principles and associated guidelines, formulated and enforced by the governing body of an organization, to direct and limit its actions in pursuit of long-term goals	151
<b>popularity:</b> the state of being esteemed by, or of being in favor with, the people at large	222
<b>positivity:</b> the quality of being encouraging or promising of a successful outcome	12
<b>power:</b> the probability that one actor within a social relationship will be in position to carry out his own desires despite resistance	28
<b>prediction:</b> a conclusion concerning future events drawn from the premise of available data using theories and models	177
<b>preference:</b> an ordering of alternatives according to likes and dislikes, generally without requiring explanations as to why	108
<b>priming:</b> an effect in which exposure to a stimulus influences a response to a later stimulus	218
<b>prisoner's dilemma:</b> a game-theoretical situation in which the highest combined payoff to two players occurs if they both behave cooperatively, but in which each player has an individual motive to behave non-cooperatively	255
<b>probability:</b> a number between and inclusive of zero and one indicating the likelihood of an event within a mathematical framework	172
<b>process:</b> a series of deliberate actions or natural occurrences that produce a change in a system	275
<b>product:</b> any good or service that is a result of a process and that is intended for delivery to a customer or a user	202
<b>production:</b> processes and methods employed in transformation of tangible and intangible inputs into goods or services	101
<b>profit:</b> the revenue obtained from goods or services subtracted by the cost of producing and marketing goods or services	259

<b>project:</b>	an undertaking requiring collaborative effort	95
<b>proof:</b>	the stages in the resolution of a mathematical or logical problem	166
<b>prospect theory:</b>	a model that describes real-life decisions between alternatives that involve risk where the probabilities are known	244
<b>protocol:</b>	a formal description of messages and rules to be used by two or more systems to exchange information	108
<b>provider:</b>	an organization or company that provides access to a service or system	81
<b>psychology:</b>	the scientific study of the nature, functioning, and development of the human mind	290
<b>quality:</b>	the inherent nature of an entity perceived by a human mind	101
<b>quality of experience (QoE):</b>	a subjective measure of a user's experiences with a service	48
<b>quality of service (QoS):</b>	the collective effect of service's performance which determines the degree of satisfaction of a user of the service	96
<b>quantity:</b>	extent, size, or sum of countable or measurable events, objects, or phenomena, expressed as a numerical value	98
<b>questionnaire:</b>	a form that people fill out, used to obtain demographic information and views and interests of those questioned	74
<b>rationality:</b>	the quality of thinking and acting in accordance with reason and logic instead of emotion and instinct	267
<b>rationalization:</b>	the act of causing something to be or seem reasonable	20
<b>reaction:</b>	an action taken in response to something	143
<b>reasoning:</b>	the process by which one judgment is deduced from another or others which are given	18
<b>reductionism:</b>	a doctrine that maintains that all objects and events, their properties, and our experience and knowledge of them are made up of ultimate elements, indivisible parts	166
<b>regulation:</b>	controlling human or societal behavior by rules or restrictions	206
<b>regulator:</b>	a system which determines and enforces or maintains the operating parameters of another system	157
<b>reliability:</b>	the probability that a component, product or system will perform as required for a specified period of time	101
<b>reputation:</b>	a general attitude towards an entity	207
<b>request for comment (RFC):</b>	a document published by a standardization body to describe the specifications of a recommended technology	109
<b>requirement:</b>	a statement which specifies a verifiable constraint that shall be met	98

<b>research:</b>	a systematic investigation employed to increase or revise current knowledge or theory by discovering new facts	167
<b>resource:</b>	a reserve supply of something such as money, personnel, or equipment	152
<b>return on investment (ROI):</b>	profit from an investment as a percentage of the amount invested	238
<b>revenue:</b>	total amount of money received by a company for goods sold or services	241
<b>risk:</b>	a possibility of incurring loss or misfortune	236
<b>role:</b>	the characteristic behavior pattern of a person in a particular context, social setting, or environment	204
<b>router:</b>	a network node that performs routing functions and forwards packets to other nodes based on the routing information	93
<b>rule:</b>	a statement specifying what is permissible under given circumstances	10
<b>sacrifice:</b>	something that a person gives up to obtain something else considered being more beneficial	44
<b>safety:</b>	the condition of being protected from or not exposed to danger	46
<b>salesman:</b>	a person with a special ability to persuade other people	217
<b>satisfaction:</b>	a condition of peacefulness and tranquility of mind resulting from compliance with its desires or needs	202
<b>scalability:</b>	property of a system which indicates its ability to handle growing amounts of work in a graceful manner or to be readily enlarged	98
<b>scenario:</b>	an account of a projected course of actions, events or situations	166
<b>science:</b>	a system of acquiring knowledge based on scientific method	162
<b>scientific method:</b>	principles for systematic pursuit of knowledge involving recognition and formulation of problems, collection of data, and formulation and testing of hypotheses	163
<b>segment:</b>	a part of a group consisting of distinct but closely linked or related elements or members	213
<b>selfishness:</b>	exclusive regard for one's own interest or happiness	302
<b>self-reference:</b>	a statement that refers to itself or its own referent	168
<b>sense of coping (SoC):</b>	the degree of confidence of a person regarding his or her ability to cope with the challenges of everyday life	40
<b>sense of significance (SoS):</b>	the degree of belief of a person that his or her life is meaningful and worth living	40
<b>service:</b>	an event in which an entity takes the responsibility that something desirable happens on the behalf of another entity	205

<b>service level agreement (SLA):</b> a part of a service contract where the main service attributes are formally defined	126
<b>session:</b> a period of continuous activity	59
<b>shifting the burden:</b> an action in which an intervention is aimed at problem symptoms without addressing the underlying problem	141
<b>signal:</b> an observable quantity whose modulation represents coded information	97
<b>signaling:</b> a process that allows end systems and network nodes to exchange information	152
<b>signifier:</b> a signal in a physical or social world that can be interpreted meaningfully	67
<b>simulation:</b> a process of mimicking an actual or probable real life condition to find a cause of a past occurrence or to forecast future effects of assumed circumstances	166
<b>social:</b> relating to the way in which people in groups behave and interact	274
<b>social capital:</b> the stock of shared norms among a group of people that promote social cooperation, instantiated in actual social relationships	46
<b>social group:</b> a number of individuals who stand in more or less definite interdependent status and role relations	83
<b>social media:</b> a set of online tools that people use to share content, opinions, and experiences to facilitate interaction between groups of people	301
<b>social status:</b> the position that a person occupies in the social structure	48
<b>society:</b> a group of people who share a common culture, occupy a particular territorial area, and feel themselves to constitute a unified and distinct entity	273
<b>software:</b> intangible part of a computer system including computer programs, procedures and documentation	96
<b>solution:</b> the act or a means of solving a problem or difficulty	141
<b>stakeholder:</b> a person, company or another entity with a concern or (especially financial) interest in ensuring the success of an organization, business, or system	158
<b>standard:</b> a universally or widely accepted or agreed upon set of requirements	95
<b>statistics:</b> the science that collects, classifies, analyzes, and interprets data by means of theories of probability	173
<b>stimulus:</b> something that has an impact or an effect on an organism so that its behavior is modified in a detectable way	27
<b>strategy:</b> art and science of planning and marshalling resources for their most efficient and effective use	135

<b>structural coupling:</b>	a state in which two systems shape the environment of the other in a way that both depend on each other for continuing their autopoiesis and increasing their structural complexity	300
<b>structural portability:</b>	the possibility to use a structure observed in a field of knowledge to understand phenomena in other fields of knowledge	100
<b>subconscious:</b>	concerning the part of mind which is not fully conscious but influences actions	59
<b>subscriber:</b>	someone who contracts to receive and pay for a service or a certain number of issues of a publication	112
<b>substitution:</b>	an act of replacing something by something else with the aim of obtaining the same benefits or results	215
<b>success:</b>	the achievement of something desired, planned, or attempted	238
<b>survey:</b>	a technique for gathering information from a large number of users or customers	67
<b>SWOT:</b>	an analysis in which internal strengths and weaknesses, and external opportunities and threats are closely examined	166
<b>symbol:</b>	something that stands for, represents, or denotes something else, but not by exact resemblance	167
<b>symptom:</b>	a sign that a problem exists	141
<b>synthesis:</b>	the process of combining different ideas, influences, or objects into a new whole	2
<b>system:</b>	an organized structure regarded as a whole consisting of interrelated and interdependent elements	273
<b>system archetype:</b>	a pattern of behavior of a system	140
<b>systems intelligence:</b>	intelligent behavior in the context of complex systems involving interaction and feedback	65
<b>task:</b>	a piece of work that has to be done	61
<b>technology:</b>	the entire collection of devices and engineering practices available to a culture	93
<b>technology push:</b>	technology development that is driven by the ideas or capabilities of the developing organization in the absence of any specific need that customers may have	96
<b>telecommunication:</b>	science and technology associated with communications at a distance	102
<b>theorem:</b>	a theoretical proposition, statement, or formula embodying something to be proved from other propositions or formulas	166
<b>theory:</b>	a coherent group of general propositions used as principles of explanation for a class of phenomena	169
<b>thinking:</b>	the action of using one's mind to produce thoughts	18

<b>throughput:</b>	the amount of data transmitted or processed over a given period	97
<b>tit-for-tat strategy:</b>	a strategy in which a player cooperates in the first round and in all subsequent rounds does what the other player did in the previous round	256
<b>topology:</b>	the physical arrangement of network nodes and links within an organization's networking structure	121
<b>traffic:</b>	the volume or flow of messages carried by a communications system	97
<b>tragedy of commons:</b>	a situation in which multiple individuals, acting independently and rationally consulting their own self-interest, will ultimately deplete a shared limited resource even when it is clear that it is not in anyone's long-term interest	302
<b>transmission:</b>	the process of transmitting something, especially radio signals	105
<b>transmission control protocol (TCP):</b>	a protocol that provides reliable connections in the Internet	108
<b>trial:</b>	an experimental action in order to ascertain results	176
<b>trust:</b>	confidence in and reliance on good qualities, especially fairness, truth, honor, or ability	273
<b>truth:</b>	a statement that corresponds to fact or reality	167
<b>usability:</b>	an attribute of a product or service that describes how easily users can perform tasks required to achieve the expected benefits	66
<b>usage:</b>	the amount of using something	59
<b>usefulness:</b>	the quality of being of practical use	81
<b>user:</b>	a person who makes use of a thing	56
<b>user experience:</b>	the perceived interactions that a person has with a product	72
<b>user satisfaction:</b>	satisfaction perceived by users related to the usage of a product or service	99
<b>utility:</b>	a quantitative attribute of a product to describe the usefulness of the product	250
<b>utilization:</b>	the percentage of the total use of a resource on a measurement period	106
<b>value:</b>	the worth, importance, or usefulness of something to somebody	17
<b>value chain:</b>	a chain of activities during which value is created when producing, distributing, and servicing a product	238
<b>value of time:</b>	the average benefit above the zero-benefit level obtained by a person during everyday life	43
<b>value proposition:</b>	an aggregation of benefits that a company offers customers	241

<b>variable:</b>	a measurable quantity which at every instant has a definite numerical value	190
<b>vertical integration:</b>	integration in which a firm owns or controls its upstream suppliers and/or its downstream buyers	238
<b>voice over IP (VoIP):</b>	a group of technologies that use the Internet Protocol (IP) to transmit voice as packets over an IP network	102
<b>walled garden:</b>	an attractive environment designed to keep a captive reasonably satisfied, and requiring some cost in escaping from it	142
<b>want:</b>	lack of something desirable or necessary	27
<b>wealth:</b>	the total value of a person's net assets	251
<b>well-being:</b>	an individual's perception of his or her position in life in the context of the culture and value systems and in relation to their goals, expectations, standards and concerns	39
<b>winner's curse:</b>	the danger that the winner of a game or contract will eventually lose more than gain	264
<b>wisdom of crowds:</b>	a situation in which the average opinion of a large group of people is better than the opinion of an individual or a small group of experts	189
<b>word of mouth:</b>	a process in which customers voluntarily tell other people how much they like a product or service	215
<b>world wide web (WWW or web):</b>	a system of interlinked hypertext documents accessed via the Internet	58
<b>worth:</b>	the level at which someone or something deserves to be valued when all relevant aspects are taken into account	99
<b>zero-benefit level:</b>	a situation in which a person cannot do anything meaningful and feels that he is totally wasting his time	46
<b>zero-sum game:</b>	a game in which the participants are determining the distribution of a fixed total of costs or benefits between them	262