Agent: “The agent is seen as an entity situated in an environment, with goals, actions and knowledge within a given domain. It integrates three basic qualities implied by the very agent metaphor. Thus, when clients hire agents (in any domain e.g. banking, real-estate, travel) they expect: a) personalization (agents act considering the specific momentary needs of their clients); b) authorization (agents act on behalf of their clients, within the limits stipulated by the hiring agreement); and c) competence. In short, the agent metaphor suggests that I hire an agent when I do not have enough time or lack competence to handle the problem myself” [6].

Anthropocentric: synonymous with "human-centered" , in current IT it means tool / system for man, man taking aim and taking into account the interests of end user.

Architecture-structure: Architecture is a presentation (program / application / information system, etc.) that can be interpreted. Is the "interface" - in the broadest sense - between the user and system, reflecting how the user perceives it. Structure is how to implement a technology architecture and is determined by technology.

Artificial-natural: artificial refers to credible and accurate reproduction of objects or phenomena existing in nature, through different materials and techniques underlying the originals (Longo, 2000). Can be artificial intelligence, honey, cornea, grass (as exist in nature) but not a car or a radio.

Bounded rationality has its initial Simonian meaning enriched “from Hindrance to Excuse, to Mechanism, to Strategy”⁹.

Captology: from Computer As Persuasive Technologies: recent IT subdomain dealing with interactive technologies that changes person attitudes or behaviors .

Chaoplexity "revealed its value in military operational research: "Chaoplexic warfare draws on the study of nonlinear phenomena of self-organization to propose a radical decentralization of armed forces [...]. Information remains the central concept, and in this sense chaoplexity is an outgrowth of cybernetics; but the focus on change, evolution and positive feedback breaks with the cybernetic pioneers' concern for stability"¹⁰. [...]"
The edge of chaos is the ‘comfort zone’ for complex systems. [...] Networks, information technologies, non-linearity, positive feedback, self-organization, emergence, and decentralization are the main characteristics of the Chaoplexic Warfare. Chaoplexity: portmanteau term, derived from complexity (used in its usual meaning) and “chaos” (used fuzzy, suggesting that chaoplexity is “complexity at the age of chaos” - Bousquet).

**Communication:** the interaction between systems based on a predetermined code. Interpersonal communication: organized behavior in a human group on the basis of a common cultural and semantic code (Kokol others, 2000). Function to bring individuals with common experience (Nadin, 1997). Verbal communication is characterized by the following factors which determine the functions of communication: sender (encoder), receiver (decoder), message (statement), code (language), context (signified) and channel. The term has the connotations familiar when using mobile phone or laptop. However, in the context of the syntagma “communication interface”, there are gradations. In the context of the paradigm “computing as interaction”, “communication” and “interaction” become similar.

**Competitive:** what is in competition, in the context of programming, for concision is allowed in case of language abuse use as an adjective or adverb, thus "concurrent" means "that allow / use / facilitates competition" (eg, "Concurrent Programming").

**Complexity:** a) Structural: acquiring an entity to be formed from several elements or structures, diverse and interconnected. b) Cognitive: acquiring entity (or cases) to be marked by the involvement of many parts, aspects, details, concepts and requiring serious study and examination to understand (or face); hard to understand and manage. Cognitive complexity is in part a consequence of the structural complexity, being highly dependent on the individual and context. The degree of complexity is associated, generally, with the number of shares and scale interactions between them.

**Concept:** mental construct that represents an individual object, composed of common features of individual object classes (these features are also concepts used to structuring and sharing thoughts) (Bousquet and others, 2001)

**Concurrent:** the possibility of several code entities simultaneously active to interact (through communication and synchronization), synonymous with "multitasking" in its meaning plenary (not restricted to parallel execution) and "multithreading" in the sense used by OS in real time.
Data ("data"): numbers, strings, facts, values, statistics, records. Connotation: they are physically stored somewhere (in registers, memory, etc.). Unregistered acts (for example, "I write") are given only after registration in order to use.

E-: original short for "electronic", has become prefix generally after was spread through "e-mail","e-commerce"and "e-business "; from a technical standpoint is abbreviation for "based on WWW".

Emotion: mental state accompanied by intense feelings, that implies physical changes (Koestler, 1967). Intense and short global response to an unexpected situation, accompanied by an pleasant or unpleasant emotional state (Sillamy, 1996)

Enthymemes: reasoning where at least one of the premises or conclusion are tacit (Kleene, 1967)

Epistemology: Critical study of scientific knowledge, training and its context. Epistemic: concerning the knowledge.


Interface. According to modern paradigms, the goal of using ICTs is “obtaining a service from a huge palette of available ones” and the means is “interacting with an entity through an interface” – in the broadest sense of the common term (far from the primitive meaning of “screen and keyboard”). The “entity” is either a human (e.g. when speaking via mobile phones) or a device (e.g. when buying travel documents via computers). Hence, what are the current differences between diverse ways to communicate (or just to interact)? There are three possible ways: “face to face” as “the prototype, the model of social interaction” [13]; “face to (inter)face” in the context of modern computer interfaces; “interface to interface”, in the near future context of semantic web, domain ontologies and so on (totally outside the scope of this paper). However – at least, in the new technological setting shaped by broad-band technology –, despite user frustration, it is necessary to point out that the computer can be (and often is) an interactant in itself. Hence, the need to accept the “face to (inter)face” style.

Interface Agent. This term reasserts the stance from [8] that agent technology, as both stage and trends, is in line with user information and communication requirements and expresses one of the dominant ways to exploit the broad-band potential. Moreover, the emphasis is on the interface, entailing that the agent remains hidden (i.e., the users perceive just a “smarter functionality”, no “pseudoavatars” intervening in a human-to-human dialogue).
iff: "if and only if" (by analogy with "IFF" or "SSI").

Heuristics: universal instrument to counteract uncertainty; set of specific methods of treatment a) ways to search in solutions space and b) the uncertain rules, "heuristic" (Pearl, 1984).

“Just-in-Time” is in essence the concept defined by Toyota for its inventory system. Though, within the Eu2020 theses the concept is regarded as main current connotation of “real time”, reflecting the shift from products to services, crucial for the theses settings. It means both response time (as necessary condition, e.g., in intensive therapy) and lever to exploit bounded rationality (as sufficient condition, e.g., in the toy implementation here). The concepts above have a rich preterminological existence and were dealt with before starting the EU2020 theses. For instance: bounded rationality as “user-driven heuristics”, chaoplexity within the framework of “large-scale complex systems”, “Just in Time” in devising “Silicon Time” as close as possible to “Carbon Time”.

Knowledge: partially synonymous with "data", but with three connotations (default): a) increased complexity, b) are intended for a potentially intelligent receiver, c) establish a structure over data (those having the role of constituent bricks).

Operating system (OS): broadly, any software, comprehensive and coherent, that s for user, manages resources, implements computing systems and realizes interface with it.

Response time: the interval between the moment when a user/program requests a service and the moment when OS performed the service.

Non-algorithmic software. In short, it is the IT mirroring of the paradigmatic shift towards recognizing the non-algorithmic nature of high-level information processing by humans. Since the unusual concept is extended here from continuing education to decision making as a whole, it has to be explained within the very approach it shapes.

Stigmergy: creating a certain agent behavior, as a result of the environmental effects of previous behavior. Inspired by the interaction of insects that allow appear complex social behavior from simple activities of individuals, stigmergy coordination is applying in reactive architectures like: optimization, network routing, exploratory data analysis, graph theory, control production, etc.
Symbol (subsimbol): symbols are signs (in current computing systems, implemented by electromagnetic field configurations) that refers physical objects, the general concepts (existing or not in the real world), total abstract concepts or relationships from a field of interpretation. It is considered that the symbols match the content of conscious thought.

In general, the symbols and symbol structures (made up of symbols using a set of relations) are called "symbols". Subsimbols are numeric values that cannot be interpreted as having individual meaning. They can assign a meaning only if there are many models and up ("patterns") (Hoffmann, 2000).

Synchronization: timing of entities by establishing temporal relationships between the predicted their deployments.

Synergy has two meanings:
- A) preterminologic sense, includes all of the previous meanings specified in synergetic, i.e.: the effect of entities cooperation (autonomous) organized in a unitary system; when the participating entities are the same type, occurs from quantitative accumulation, massive and homogeneous; when the entities are heterogeneous, synergy is approaching symbiosis.
- B) the basic concept studied by synergetic.

Synergetics: (meta)science placed in the general theory of science, that deals with integrality of systems, stability, disaster (junction) and the fluctuations that lead to (self)organization and the threshold at which manifests.

System: is understood commonly in computing, used in expressions such as "information system" or "expert system" that is sufficiently large developments so not to be called applications. The system theory, it is represented by: a lot of elements, E, a lot of relationships / interactions (internal, Ri, between elements of E and external Re, between elements of E and environmental elements) and its finality (laws of nature, application goals, enterprise objectives).

Transcultural suggests that humans belonging to different cultures can communicate effectively and user-friendly (at least within the EU) preserving their cultural identity [8]. (The prefix “trans” insinuates, if not an opposition to “cross”, “multi”, etc., some nuances similar to those implied in “transdisciplinarity”. It highlights the trend towards osmotic-like confluences.)

Transcultural interfaces. In short, in human-to-human communication, they mean progressing from textual (semantically correct) conversions to multimodal (culturally adequate) ones [2], based on the concept of “Computer-Aided Semiosis” (CAS).
Thus, from the user point of view an interface should be perceived as transcultural if it is able to merge the two complementary premises of a communication between humans belonging to different cultures (at least within the EU): preserve cultural identity; create a common denominator between national identity and the European one (“Unity through Diversity”).

**Usability** (in IT). For the purposes of cognitive ergonomics, a computer system is usable when it is simultaneously: functional, easy to use, stimulating and easy to learn (Dix and others. a., 1998).

**Virtual**: As you can see something (for example, a resource to OS) from a process, (opposed to "physical") (Finkel, 1986).