

EPISTEMATICA IN F.A.Q.

Q: WHO IS EPISTEMATICA?

A: Epistematica is an Italian SME operating in the software industry. It is specialized in knowledge representation; design, development and management of knowledge-based systems.

Systems implemented by Epistematica rely on a new class of technologies based on logic: languages for knowledge formalisation and reasoning software.

Q: WHO ARE THE CUSTOMERS OF EPISTEMATICA?

A: Professionals, businesses, governments and any organization that sees its knowledge as a strategic asset.

Q: WHAT IS THE EPISTEMATICA'S OBJECTIVE?

A: To help our customers become high-performance organizations to meet the challenges of global markets and declining economies. Epistematica aims at making them protagonists of the next knowledge-based economy and actors in the knowledge society.

Q: HOW DOES EPISTEMATICA BOOST ITS CUSTOMER'S PERFORMANCES?

A: Thanks to the Epistematica's services, any customer can rely on tools and solutions that make it possible to handle knowledge and not mere data and information.

The introduction of this innovative technology implies that the organizations' know-how can be stored and processed by computers rather than being dispersed within documents or remain just in the memory of people. In this way, the future generations will be able to use automatically the entire organizations' knowledge.

Q: WHAT ARE EPISTEMATICA'S PRODUCTS/SOLUTIONS?

A: They are software products and solutions that not imply technologies based on the syntax (RDBMS, SQL, Text Retrieval, etc..) to build applications for the scope of knowledge management (Data / Text Mining, Enterprise Search, Data Warehouse, etc..). They rely on technologies based on logic (Decidable Knowledge Base, Automatic Reasoning, etc...) to build software applications capable of returning "wisdom" and not information.

Epistematica provides software products and services for designing, development and activation of customer-tailored applicative solutions. It also offers its expertise to turn data and information into knowledge, and to identify the context in which its products can offer concrete advantages compared to the traditional ones.

Q: DATA, INFORMATION, KNOWLEDGE, WISDOM. WHAT DO THEY MEAN?

A: Data, information, knowledge and wisdom are words used in Computer Science to represent the information hierarchy. Each layer adds certain attributes to the previous. The "data" are at the most basic level. "Information" adds the context to data. "Knowledge"

means we know how to use information and "wisdom" means we know when to use that knowledge.

With syntactical technologies, it is possible to create software applications that process and aggregate data so that the user can extract the information he wants. With syntactical technologies, the user knows what are the data useful for his purposes. The application will always present the information according to how the analyst organized it within the program. The user can also obtain information that he does not know - because this information comes from processes managed by others - but he will always be able to understand them just because he knows the subject and he understands the semantics of the facts.

If we substitute that user with another one who is not an expert in that matter, the new user will have significant difficulties in understanding the meaning of screen, reports, data and information generated by the program. This happens because the semantics of the facts is stored in people's minds and not inside the computer. To use a program, to perform a search, to understand the semantic value of data and information, it is necessary to be already familiar with the subject.

For Epistemática's customers this problem does not exist.

The analyst who designs the software applications certainly knows the meaning the user gives to the data. But with syntactic technologies, the analyst can't represent knowledge. Therefore, these programs do not exploit it.

This is the knowledge Epistemática deals with. Epistemática knows how to manage it properly.

This knowledge is made of all the meanings that the relationships among data, charts and documents have. It is enriched by the properties of these objects. It is therefore a part of the "wisdom" that the expert user and analyst have on the specific subject to manage which the information system has been created.

Epistemática is able to collect knowledge about data, formalizing it according to the constructs of the logic - thanks to specific semantic technologies - and offering it to inferential systems to be treated through deductive processes.

Software applications created by Epistemática process a type of knowledge that traditional applications ignore completely.

Anyone can use these applications because they fit the skills of the users and not vice versa. With the Epistemática's solutions, part of the expert user's and analysts' "wisdom" is disclosed automatically by computer. The user doesn't need to acquire new knowledge before using the software application.

Q: WHAT DOES EPISTEMÁTICA MEAN?

A: The term "epistemática" - the contraction of episteme (knowledge) and automatica - is based on the idea of contrasting, in an evolutionary perspective, the word "informática" - automatic data processing. The term "epistemática" has the meaning of "automatic knowledge processing".

This term has been coined for our company's brand, but it can be also used as an adjective for logic-based software applications to differentiate them from the traditional ones.

Q: WHY IS EPISTEMÁTICA DIFFERENT FROM THE OTHER ICT COMPANIES?

A: Epistemática doesn't differ from many other SMEs in the ICT sector that develop software applications. It shares with them the same markets offering products and solutions that cover traditional areas of application.

However, Epistemática is specialized in a specific field of the artificial intelligence: automatic reasoning. It focuses its know-how on the practical implementation of a new class of semantic technologies based on logic instead of on traditional technologies based on syntax.

Products and solutions created by Epistematica belong to a new class of software applications that do not use any more traditional technologies that process data to return information, but they use new technologies to process knowledge to return "wisdom". This is the main difference between Epistematica and the majority of the other ICT businesses. This is why Epistematica's products and solutions are certainly innovative.

Q: WHAT IS THE DIFFERENCE BETWEEN EPISTEMATICA'S SEMANTIC SOLUTIONS AND SEMANTIC SOLUTIONS OFFERED BY THE OTHER ICT COMPANIES?

A: "Semantic solution" generally refers to a software application that is able to "understand the meaning of the text." The semantic value given to the word "semantic" is: Meaning of signs or words.

In fact, when the "knowledge" is put into a text (or in a database cell or within a tag), knowledge is described through the grammatical constructs of a natural language. We are in the traditional paradigm of the natural transfer of knowledge from person to person. This is the paradigm of the Information Society.

IT businesses design "semantic applications" using technologies based on the syntax, which produce statistical results.

Epistematica uses the word "semantics" with the meaning given to it by the Computer Science. It indicates not a software application, but a type of technology suitable to deal with the semantics of data and not with the texts.

A semantic technology make it possible to formalize data's relations and properties to perform inferential processes.

Since properties and relations are just a part of knowledge stored in the data, the software applications based on semantic technologies do not process data but knowledge, returning the "wisdom of the author" according to deterministic, not statistical processes.

Products and solutions created by Epistematica aren't semantic software applications that use syntactical technologies, but they are "epistematic" software applications that use semantic technologies based on logic.

"Epistematic" applications implement a new paradigm for knowledge transfer between humans mediated by computer -- man-computer-man -- that is precisely the paradigm of the future Knowledge Society.