

WHAT IS REALLY THE SEMANTIC WEB ALL ABOUT?

A LINGUA FRANCA FOR THE WEB

Up until now, the Web spoke a countless number of different formal languages, manifested in a multitude of technologies, designs and paradigms of data organization. We could communicate, but in order to understand each other, translation was required each time. And, just as in translation of natural language, meaning cannot be conveyed without considering structure, and the structure frequently, if not always, influences the outcome. Some would argue that each act of translation should rather be called interpretation, and this entails at least two unavoidable problems:

- Time and energy are required not only to consider the **meaning** of an utterance, but also its syntactical **structure** and the structure of the target language
- Distortion of original meaning occurs in the process as no two languages are identical in their formal structure

While these are not seen as hindrances in poetry, they generate huge setbacks when our goal is to convey practical data. **We cannot allow ourselves to accept distortion or arbitrary interpretation when what is at stake is a company's offer, scientific research data or communication between financial entities.** We need clarity, transparency and accessibility.

But what if we spoke **the same language**? Translation would no longer be necessary, and we could focus on actual **data** instead of putting effort into proper conveyance of meaning – and however obvious it seems to us today, this very effort requires tremendous amounts of resources that could otherwise be spent on creative work and development.

This is the goal of the Semantic Web. It aims to create a common language easily adaptable by everyone, regardless of location, provenance, goals or preferences - to create a *lingua franca* for the Web.

THE OBSOLESCENCE OF THE WEB OF DOCUMENTS

The Internet contains an immense amount of meaningful information which has to be structured in order to be accessible and comprehensible. Traditional methods of organization of data online applied most commonly from the beginning of the network's inception until today are in principle based on documents or files.

This implies that any structuring of meaning has to be done manually and, considering the exceptional volume of data, it is a process that is difficult, cumbersome and often providing little effect. Many operations, such as responding to even the simplest questions in natural language, although seemingly trivial, are in fact impossible to be conducted by computers. This is because the Internet so far has been for the most part a network of documents.

The Semantic Web is a new approach to organization of data on the Internet, where **meaning** is crucial, not the **form**. It creates frameworks for entities organized in a systematic manner, where each object has a set of properties and relations. Just as in the real world, these objects can then be reasoned upon and analyzed in an automated manner. Not only does this enhance transparency and accessibility, but also enables to make use of the same entities across vastly different systems, regardless of their structure or technologies used.