The web over the years has evolved rapidly as a medium of documents that are for people rather than information that is designed for machines.

The selected publication discusses the eventual use of the semantic web instead of the conventional World Wide Web. Tim Berners-Lee is the main author of this article and also the creator of the World Wide Web Consortium (W3C), the main body that is responsible for the semantic web activity. The semantic web as its known is the way the web will evolve in the future, the future being today. Berners-Lee’s goal is for the web to have agents, computer programs that have been written to collect web content from sources and communicate with other programs, in order to deliver the requested information to the user.

The article begins with a scenario that emphasizes how the semantic web will make all tasks that are currently undertaken today by most web services a much faster and more accurate process. It goes on to mention how the semantic web will need to be catered for by machines, as it will be designed to be understood and processed by machines, rather than by humans as the world wide web today operates. In simple terms, the semantic web will bring structure to the meaningful content of web pages.

‘Berners-Lee states that ‘the semantic web is designed to smoothly interconnect personal information management, enterprise application integration, and the global sharing of commercial, scientific and cultural data. We are talking about data here, not human documents’. [Berners-Lee 2005]

The semantic web will only work in harmony with users if it is able to reason with information and decide what is and what isn’t relevant to the search query presented by the user. This is referred to as knowledge representation, providing the machine with a set of rules that it must obey in order to complete the set task without encountering a problem. For example, a unanswerable question.
‘The goal of the semantic web is to develop enabling standards and technologies designed to help machines understand more information on the web so that they can support richer discovery, data integration, navigation, and automation of tasks.’ [Berners-Lee 2001]

Two main technologies that are identified are eXtensible Markup Language (XML) and the Resource Description Framework (RDF). XML allows the user to create structures for their documents, but does not explain what or how the structures work. Meaning is taken care by the use of the RDF. A set of triples, for example, subject, verb and object are used in order to give meaning to a document. Finally, the third tool that is used in the development of the semantic web is Ontologies. An ontology is a document or a file that formally defines the relations amongst the terms. The main use for ontologies are to enhance the accuracy of web searches. The writers also define what a URI (Universal Resource Identifier) and a URL (Uniform Resource Locator) are and their functions in the semantic web. URL’s are the most familiar type of a URI.

‘With semantic web we not only receive more exact results when searching for information, but also know when we can integrate information from different sources, know what information to compare, and can provide all kinds of automated services in different domains from future home and digital libraries to electronic business and health services.’ [Berners-Lee 2001]

After reading the article in preparation for my presentation, my views changed after listening to various opinions from fellow students. Although we all shared similar values, those being that the web today is a fairly well organized medium, that caters for users needs justifiably well considering its large size and daily growth. My final opinion to the future of metadata is a positive view. Although the authors of the article do not take a stand on the topic, but simply present the positives and negatives regarding the semantics of the web. I feel that the article has provided enough information to make a well thought out decision. The semantics on the web in the near future will be a beneficially service that will overtake the current world wide web. By providing a faster, more accurate reliable service, web semantics will be able to do everything the World Wide Web currently does, just better.
When you take into consideration that the article was written in 2001, technology has improved but I don’t feel that this improvement has factored on the evolution of the semantic web. Four years on, the semantic web is in its development stages, what was once theory is now being put into practice. One concept that the article did not touch upon, was security. In today’s world, security on the internet is an important factor and is crucial when designing web services and applications. The article failed to disclose any issues regarding security and the semantic web. However, in another article by Berners-Lee, trust is mentioned and is explained according to the semantic web.

Semantics on the web aim to provide a greater level of precise automated searches on the web. This is due to the filtering technique that is used by the user and then expanded on by the machine. We will be seeing more of the semantic web in the near future as it continues to further develop, and hopefully replace what we now know as the World Wide Web.
References:
