What does it mean to be semantic? On the effective use of semantics in the Semantic Web

Enrico Motta

Knowledge Media Institute, The Open University, UK

enrico.motta@open.ac.uk

Twelve years after the publication of the seminal article by Tim Berners-Lee, James Hendler and Ora Lassila, which expounded the vision of a Semantic Web characterised by dynamic and large scale agent interoperability, the Semantic Web still distinctly lacks a wow factor. Many SW applications exist, but too often they are characterised by few data sources put together at compile time to drive some relatively simple user functionality. In many cases it is difficult to identify the competitive advantage that being semantic affords these applications, compared to systems built using conventional technologies. Of course, one could argue that this is not necessarily a problem: the success of an area is measured in terms of its academic vitality and its impact on commerce and society. However, I would argue that there is actually a problem here and in my talk I will analyse these issues by examining how the notion of semantics is used in our community, highlighting the productive and unproductive uses of the term, and in particular describing the different ways in which semantics can be effectively exploited to provide added value to applications. The key message is that while there are many ways to exploit semantics to develop better functionalities, as a community we need to develop a better understanding (both fundamentally and pragmatically) of the value proposition afforded by the use of semantics. Without such understanding there is a risk that we will fail to take full advantage of the technologies that we are developing and the opportunities they create for us.

Short Biography: Prof. Enrico Motta is Professor in Knowledge Technologies at the Knowledge Media Institute (KMi) of the Open University in UK. His research spans a variety of aspects related to knowledge and media technologies, including ontology engineering, semantic web, knowledge-intensive problem solving, human-computer interaction, question answering, intelligent data integration, semantic search, and artificial intelligence. In particular much of his current work focuses on the integration of different types of computing technologies (such as, semantic, web, linguistic, and media technologies) to develop new solutions to the problem of locating and integrating information on the web and supporting users in making sense of complex models. He has authored over 280 refereed publications in international journals, conferences and workshops and his h-index is 48. Over the years he has been in charge of over 20 externally-funded projects, acquiring close to 9M in external fund-

ing from a variety of institutional funding bodies and commercial organizations. In particular he was the Co-ordinator and Scientific Director of the 14M NeOn FP6 Integrated Project, which focused on enabling efficient ontology engineering in a Semantic Web-centric context. Prof. Motta is Editor-in-Chief of the International Journal of Human-Computer Studies, and a member of the Editorial Boards of the Journal of Web Semantics and IEEE Intelligent Systems. He also sits on the steering committees for the International Semantic Web Conference and the European Conference on Knowledge Engineering and Management. In 2003 he founded the ground-breaking International Summer School on Ontology Engineering and the Semantic Web, which will celebrate its 10th edition in 2013. Together with Tom Heath he won the Semantic Web Challenge at the 2007 International Semantic Web Conference and, in collaboration with members of his research group, he won the best paper award at the 2008 and 2009 Asian Semantic Web Conferences. Prof. Motta has acted as advisor to strategic research boards and governments in several countries, including US, UK, The Netherlands, Austria, Finland, and Estonia. He has also collaborated with several major organizations, including Nokia, Rolls-Royce, Fiat, Philips, and the United Nations, to name just a few.