

## ***The End of the Computing Era: Hephaestus meets The Olympians***

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### **Abstract**

Our Digital World is becoming increasingly real (and *vice versa*), is being extended to include the physical world, and is growing in size, scope, and significance apparently on its own trajectory. The elimination of the ancient boundaries of time, space, location, and organizational structure appear to be unleashing social and other forces that threaten to disrupt real and automated systems replacing them with organically evolving digital ecosystems. Yet at the threshold of these amazing changes do we have the tools to understand, design, or harness these changes for safety, improvement, innovation, and economic growth?

In ancient times, Hephaestus, the Greek god of technology, devised cunning machines with which to right transgressions only to find that his machines aggravated problems that were beyond his understanding.

This talk will briefly review the amazing growth of the Web and of our increasingly digital world as indicators of two fundamental shifts. We will first look at the End of the Computing Era and the Emergence of the Problem Solving Era in which the problem owners attempt to solve problems with increasing realism and complexity aided by technology – not *vice versa*. Second, we will examine the emergence of a fundamentally more flexible, adaptive, and dynamic computing, Computer Science 2.0, and how it might serve the next generation of problem solving with its pillars of semantic technologies, service-oriented computing, and the semantic web.