

# Service Oriented Internet <sup>★</sup>

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**Abstract.** Effective service delivery capabilities are critical to the transformation of the Internet into a viable commercial infrastructure. At the present time, the architecture of the Internet is inadequately equipped to provide these capabilities. Traditionally, overlay networks have been proposed as a means of providing rich functionality at the upper layers. However, they suffer from their own drawbacks and do not constitute a perfect solution. In this paper, we propose a novel, overlay based *Service Oriented Internet* architecture that is meant to serve as a *flexible, unifying and scalable* platform for delivering services over the Internet. As part of this architecture, we introduce a new two-level addressing scheme and an associated *service layer*. We also describe the functionality of the new network elements that are introduced, namely *service gateway* and *service point-of-presence*, and subsequently discuss algorithms that are responsible for distributing *service reachability* across the overlay framework. We also present a few examples of application services that benefit significantly when deployed on our architecture.