CURLING: Content-Ubiquitous Resolution and Delivery Infrastructure for Next Generation Services (Invited Talk)
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Abstract: The next generation Internet is expected to focus more on large-scale media/content distribution rather than the communication infrastructure. In this article, we present CURLING, a Content-Ubiquitous Resolution and Delivery Infrastructure for Next Generation Services. The proposed architecture will support the realization of a future content-centric Internet that will overcome the current intrinsic constraints by efficiently diffusing media content of massive scale. We propose a holistic approach that natively supports content manipulation capabilities which encompass the entire content lifecycle, from content publication to content resolution and finally, to content delivery at Internet-wide scale. The CURLING infrastructure offers to both content providers and customers high flexibility in expressing their location preferences when publishing and requesting content respectively, thanks to the proposed scoping and filtering functions. Content manipulation operations can be driven by a variety of factors, including business relationships between Internet Service Providers (ISPs), local ISP policies, and specific content provider and customer preferences. Content resolution is also natively coupled with optimized content routing techniques that enable efficient unicast and multicast-based content delivery across the global Internet.

The content of the talk is based on the work listed below:

References: