Layered Multicast Distribution of Scalable Video over SDN

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Abstract. Content Aware Networking is a recently emerged approach to enhance the distribution of media in the Internet through embedding awareness in the network of the content it is carrying. In this way functions such as Quality of Experience (QoE), content adaptation, content routing and resource allocation can be improved. CAN functions in the network are often introduced by means of a new Media Aware Network Element (MANE) and a variety of deployment approaches such as virtual overlays and middles boxes have been used. Here we consider an approach to CAN implementation based on the Software Defined Network (SDN) paradigm. In particular we investigate how an OpenFlow platform can be used to implement Scalable Video Coding (SVC) adaptation.