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Using Coding to Reduce Delay in Content Access.

Codes are primarily designed to provide reliability against channel noise, or disk failures and errors. In this talk I will discuss how redundancy in coded content can also be exploited to speed-up content access. One example is content download from an (n,k) coded distributed storage system. Requesting all n coded chunks and waiting for any k to be downloaded can significantly reduce access latency. Another example is streaming communication, which places delay constraints on the packets of the content by requiring them to be delivered fast and in order. Coding can help ensure smooth playback of the stream with minimum interruptions. I will conclude by presenting some open questions about code design for such delay-sensitive applications. (Received September 09, 2016)