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*GetMobile* is the flagship quarterly publication of ACM SIGMOBILE. *GetMobile* is the premier forum for addressing networks, systems, algorithms, and applications that support the symbiosis of portable computers and wireless networks.

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### An Overview of Emerging Video Coding Standards

**Ticao Zhang, Shiwen Mao**

Today's popular video coding standards, such as H.264/AVC, are widely used to encode video into bit streams for storage and transmission. With the explosive growth of various video applications, H.264/AVC may not fully satisfy their requirements anymore. There is an increasing demand for high compression efficiency and low complexity video coding standards. In this article, we provide an overview of existing and emerging video coding standards. We review the timeline of the development of the popular H.26X family video coding standards, and introduce several emerging video coding standards such as AV1, VP9 and VVC. As for future video coding, considering the success of machine learning in various fields and hardware acceleration, we conclude this article with a discussion of several future trends in video coding.



### Towards Approximate Mobile Computing

**Veljko Pejović**

When Dennard scaling, a law describing the area-proportional growth of integrated circuit power use, broke down sometime in the last decade, we faced a situation where further transistor minimization suddenly required additional energy for operation and cooling. CPU manufacturers responded with multicore processors, as an alternative means to increase the floating-point operations per second (FLOPS) count. However, this too increases the energy consumption and, in addition, requires a larger silicon area. The most threatened by the stalled growth of per-Watt computing performance are pervasive mobile computers, nowadays present in anything from wearables to smartphones. Not only do these devices' small form factor prevent further component packing, but the need for mobility also precludes bundling devices with large batteries.

