CES should thank "analog"--and vice versa

By Bill Schweber, Site Editor
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The just-concluded Consumer Electronics Show in Las Vegas is a major industry event, and with good reason. Since consumer-focused electronics have become the driving force of our industry, it's the place to see what's hot as well as what's hoped for. I read a lot of the coverage, from the mainstream media as well as publications such as EE Times, and it's clear that consumer electronics has become all-digital, networked, sophisticated, and almost independent of time, place, physical embodiment, and content. Users expect their tailored audio and video content when, where, and how they want it, to their own schedule and convenience.

To all this digital multimedia we should add, "thank you, analog." If not for the multitude of analog and mixed-signal components that vendors have developed in the past decades, the digital media river would slow to a trickle. It takes countless A/D and D/A converters—audio, video, RF—to make it possible. It also takes basic small-signal amplifiers, audio through RF power amplifiers, disk-drive read/write circuitry, motor controls, line drivers and receivers, power-supply components, touch-screen interfaces, display drivers, thermal sensors and fan controls, and much more, to make the digital world possible. As one industry leader said (sorry, I am not certain who it was), "there's more analog content in today's latest-generation, 'digital' cell phone than there was in the all-analog, first-generation cell phone."

Of course, these enabling functions are part of the continuous back-and-forth in product development that makes the industry go forward. As the digital demands have increased, they have increased the demands on analog as well, which is good for R&D and production investment. And in turn, the increased analog capability has enabled more the desired digital functionality and performance, as well. So we have one of the few cases where a positive feedback loop is a good thing—as long as it does not become unstable to too hard to control!