What happened to post-CMOS?

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It is now 2015. We should be witnessing the last throes of CMOS as the premier IT logic technology, with new "beyond CMOS" nano-technologies waiting in the wings. However, CMOS is surging ahead, with noteworthy modifications, while its putative rivals have not materialized. The rivals with self-described revolutionary impact have barely progressed to the single device level, rarely to the level of simple circuits, and never to CMOS-competitive switching speeds. Here we will examine what went wrong and whether there is any path to a true post-CMOS technology.