

# realitycheck

YESTERDAY'S HYPE MEETS TODAY'S REALITY



**STATS** SiGe should grow 40% to \$1.6 billion / GaAs should grow 10% to \$3.5 billion

## SiGe gets GaAs



GaAs (gallium arsenide) was the ultimate semiconductor technology for the ultra-high-speed logic elements in supercomputers before silicon reached the gigahertz range. About 20 years ago, designers adapted this niche process technology to analog circuits for mass-market applications in which both power levels and bandwidth are pushing the edge. Today, GaAs is the leading technology in cellular power amplifiers.

However, the days of GaAs in many of these applications may be numbered. Nearly as fast, though less power-capable, SiGe (silicon germanium) uses a cheaper process that is largely compatible with the ubiquitous silicon-design and fab technologies (see "SiGe gets real," *EDN*, June 24, 1999). According to Robert Castellano, PhD, of research source The Information Network ([www.theinformationnet.com](http://www.theinformationnet.com)), whereas SiGe sales are currently just half those of GaAs, SiGe has much higher annual growth. Although GaAs is a better fit for the multiwatt demands of some wireless applications, SiGe is a good match for the less-than-1W needs of WiFi (Wireless Fidelity) and other low-power systems. Further, SiGe lets designers embed logic and power-management functions onto the die.—by Bill Schweber, Executive Editor