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Abstract – Cellular handsets are the biggest market for RF semiconductors and have been evolving at a breath-taking pace from voice-only devices into all encompassing communications/entertainment consoles. Simultaneously, they have shrunk in size, going from utilitarian functional blocks, which were hidden in briefcases, to stylish devices that people are only too anxious to display. Integration has been the key enabler for this evolution. This article focuses on the changes that have occurred in the RF front-end. The key technology functions in this area are the power amplifier, filtering, switching, and assembly technologies. We discuss how these devices have been evolving by giving several examples, and discuss how the RF front-end is likely to continue to evolve in the future.