

# **Silicon-Based Technologies for Wireless**

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Within five years, mobile communication and internet will be submerged into a technology offering location- and context-aware, person-specific information and services, “on the fly” to the mobile individual, “untethered” to the desk-bound. The “global village”, defined by today’s wired internet, will blossom into local wireless worlds, each offering the information and services available (and appropriate) at that location. At the Louvre, your “Chameleon Access Device” will download its personality from the “local ether” to purchase you a ticket as you enter, guide you to the Rubens or the da Vinci sections, and inform you about the Mona Lisa as you stroll past it. It will show you the location of the nearest Crêperie (or hamburger joint) as you leave, help you find a taxi, and, should you wish, inform your spouse of your whereabouts.

To make this possible, a \$99 device is needed, whose primary value resides in a single, or at most very few silicon chips, with broadband wireless and advanced information processing capabilities. I will present an overview some of the technical challenges associated with this ambitious goal.