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Sommario/riassunto	This brief focuses on the use of full-duplex radio in cognitive radio networks, presenting a novel spectrum sharing protocol that allows the secondary users to simultaneously sense and access the vacant spectrum. This protocol, called “Listen-and-talk” (LAT), is evaluated by both mathematical analysis and computer simulations in comparison with other existing protocols, including the listen-before-talk protocol. In addition to LAT-based signal processing and resource allocation, the brief discusses techniques such as spectrum sensing and dynamic spectrum access. The brief proposes LAT as a suitable access scheme for cognitive radio networks, which can support the quality-of-service requirements of these high priority applications. Fundamental theories and key techniques of cognitive radio networks are also covered. Listen and Talk: Full-duplex Cognitive Radio Networks is designed for researchers, developers, and professionals involved in cognitive radio networks. Advanced-level students studying signal processing or simulations will also find the content helpful since it moves beyond traditional cognitive radio networks into future applications for the

technology.