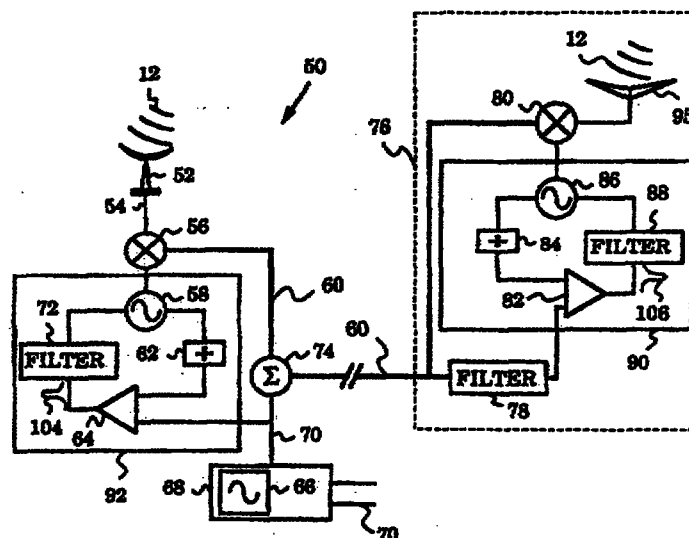




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(71) Applicant: LGC WIRELESS, INC. [US/US]; Suite 302, 2855 Telegraph Avenue, Berkeley, CA 94705 (US). ✓			
(72) Inventors: GEORGES, John, B.; Apartment #5, 2117 Rose Street, Berkeley, CA 94705 (US). CUTRER, David, M.; 2985 Santos Lane #105, Walnut Creek, CA 94596 (US). LAU, Kam, Y.; 3499 Shadow Creek Drive, Danville, CA 94506 (US).			
(74) Agent: ALBOSZTA, Marek; 426 Lowell Avenue, Palo Alto, CA 94301 (US).			

(54) Title: DISTRIBUTION OF RADIO-FREQUENCY SIGNALS THROUGH LOW BANDWIDTH INFRASTRUCTURES



(57) Abstract

A system and method for transmitting a radio frequency (RF) signal in a RF bandwidth over a low bandwidth medium (60), e.g., in-building cabling, which has a transmission bandwidth below the RF bandwidth. The system (50) has a unit (52) for receiving the RF signal and global reference oscillator (66) for distributing a global reference tone of high stability to the entire system (50). Local oscillators (58 and 86) are controlled by adjustment signals derived from this global reference tone to deliver RF reference tones of high stability required for mixing the RF signal to obtain an intermediate frequency (IF) signal which is fed through the low bandwidth medium (60). The global reference tone is preferably delivered through the same low bandwidth medium (60) to desired locations, such as remote coverage sites in a network for cellular communications, cordless telephony, local RF communications, interactive multi-media video, and high bit-rate communications.