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| <b>(21) International Application Number:</b> PCT/GB96/02380 ✓<br><b>(22) International Filing Date:</b> 27 September 1996 (27.09.96) ✓<br><b>(30) Priority Data:</b><br>9520010.1 30 September 1995 (30.09.95) GB ✓<br><b>(71) Applicant (for all designated States except US):</b> RURAL RADIO SYSTEMS LIMITED [GB/GB]; 9 North Road, St. Denys, Southampton SO17 2LZ (GB). ✓<br><b>(72) Inventors; and</b><br><b>(75) Inventors/Applicants (for US only):</b> CHANDLER, Stephen, Anthony, Gerard [GB/GB]; 94 Cannon Park Road, Coventry CV4 7AY (GB). BRAITHWAITE, Stephen, John [GB/GB]; 5 Shaftesbury Avenue, Highfield, Southampton SO17 1SB (GB).<br><b>(74) Agent:</b> A.R. DAVIES & CO.; 27 Imperial Square, Cheltenham GL50 1RQ (GB). | <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).<br><br><b>Published</b><br><i>Without international search report and to be republished upon receipt of that report.</i> |                                                                                                                                          |

**(54) Title:** DISTRIBUTED CIRCUIT SWITCHED RADIOCOMMUNICATIONS NETWORK**(57) Abstract**

A plurality of transmitting and receiving stations are provided at randomly distributed locations within a telecommunication network, and switching circuitry is provided within the stations themselves for routing of calls between stations in the network utilizing other stations in the network for relaying of such calls where necessary. To this end each station (20) incorporates a call routing control unit acting to select a further station (21) to which a call from a source S to a destination D is to be transmitted for the purpose of relaying the call. The call routing control unit transmits an interrogation signal to be received by other stations in the network within range of the transmitting station (20), and the call routing control unit of each of the other stations (21) transmits an acknowledgement signal when the station (21) is available for relaying a call in response to the interrogation signal received

from the station (20), the acknowledgement signal being transmitted after a delay which is indicative of the suitability of the station (21) for relaying the call towards its intended destination. The call routing control unit of the station (20) then selects a station (21) for relaying the call on the basis of receipt of an acknowledgement signal from the station after the least delay.

