

PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : H04Q 7/30, G10L 3/00		A1	(11) International Publication Number: WO 96/32823
			(43) International Publication Date: 17 October 1996 (17.10.96)
(21) International Application Number: PCT/FI96/00192		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, 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).	
(22) International Filing Date: 11 April 1996 (11.04.96)			
(30) Priority Data: 951807 13 April 1995 (13.04.95) FI			
(71) Applicant (for all designated States except US): NOKIA TELECOMMUNICATIONS OY [FI/FI]; Mäkkylän puistotie 1, FIN-02600 Espoo (FI).			
(72) Inventor; and			
(75) Inventor/Applicant (for US only): LEHTIMÄKI, Matti [FI/FI]; Jämerintäival 11 G 149, FIN-02150 Espoo (FI).			
(74) Agent: OY KOLSTER AB; Iso Roobertinkatu 23, P.O. Box 148, FIN-00121 Helsinki (FI).			
		Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: **TRANSCODER WITH PREVENTION OF TANDEM CODING OF SPEECH**

(57) Abstract

The invention relates to a transcoder (TRCU1, TRCU2) having means for preventing tandem coding of speech in a mobile to mobile (MS1, MS2) call within a mobile communication system which employs a speech coding method for reducing transmission rate on the radio path. The transcoder (TRCU1, TRCU2) comprises a speech coder (52, 73) which encodes the speech signal into speech parameters for transmission to a mobile station, and decodes the speech parameters received from the mobile station into a speech signal according to said speech coding method, as well as a PCM coder (54, 72) for transmitting an uplink speech signal to and for receiving a downlink speech signal from a PCM interface in the form of PCM speech samples. In addition to the normal operation, the transcoder transmits and receives speech parameters through a PCM interface in a subchannel formed by least significant bits of the PCM speech samples. Thus, it is possible to prevent tandem coding but at the same time maintain the standard PCM interface and the signalings and services associated thereto.

