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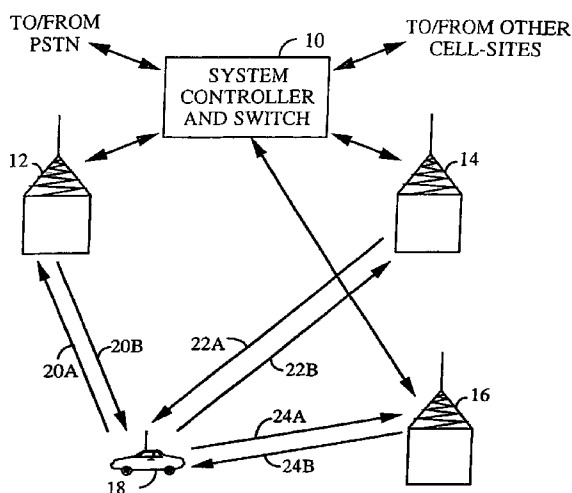
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(54) Title: AUTHENTICATION IN A HYBRID COMMUNICATIONS NETWORK



(57) Abstract: A method of authenticating a mobile station (18) from a first base station (12) in a first cellular communications system controlled by a first mobile switching control station (10) to a second base station (14) in a second, different cellular system controlled by a second mobile switching control station is described. The method comprises generating at the second cellular communication system an authentication code as the result of applying an algorithm to a private key assigned to the mobile station for the second cellular communications system and a random number generated by the second cellular communications system. An authentication code is also generated at the first cellular communication system as the result of applying an algorithm to the private key and the random number. The authentication code generated at the first cellular communication system is then transmitted to a mobile station in a data packet, and, from there, the authentication code is transmitted to the second cellular communication system. The authentication code generated at the first cellular communications system is then compared with the authentication code generated at the second cellular communications system.



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