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Title: Method for Transmission of Voice over Wireless Packet-Switched Networks

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IN BRIEF:

This invention relates to telecommunications systems, specifically to the transmission of voice over packet-switched systems. It aims to improve bandwidth efficiency over the air interface (Mobile station to NodeB/RNC) while delivering voice over packet in UMTS networks.

The invention proposes a new UMTS hybrid mode of attach whereby the speech bearer path from the mobile user is transported to NodeB/RNC in circuit mode and from there onwards in packet mode under a UMTS packet switch attach. The control signalling from the mobile user is sent over IP all the way to the core network. This is achieved by using a novel architecture, three protocol planes at generic level and basic signalling. No new compression technique is required over the air-interface and IP is used only where it is efficient to do so. Implementation of the invention can yield near optimal VoP performance.

The invention can provide a hybrid mode of (circuit/packet) speech service over UMTS. Conventional air-interface bearers are used but with IP multimedia based signalling. The invention also can provide an optimised speech transmission path for UMTS using the best parts of both the existing packet switched and circuit switched domains in a novel way. It also provides an optimised air-interface for speech but can be extended to cover other real-time services, for example video.

The complete eleven-page patent document (in PDF) is available on request from Dr. Sajjad Shami via email sajjad.shami@unn.ac.uk.

It is also available in full at the World Intellectual Property Organisation's website at the link: http://www.wipo.int/pctdb/en/wo.jsp?wo=2002028014