

ABSTRACT

WIRELESS NETWORK AND METHODS FOR COMMUNICATING IN A WIRELESS NETWORK

Wireless network [30] and method for communicating in same. More specifically, techniques for improving over-the-air transmissions in networks [30] implementing wired-equivalent privacy (WEP) security protocols. In one embodiment, during transmission of an encrypted data packet [22], the standard initialization vector field in the header [24] of an encrypted data packet [22] does not include the corresponding initialization vector used to encrypt [20] the data packet [22]. Further, the initialization vector is composed as a function of other data packets which are transmitted before the encrypted data packet [22] that implemented the corresponding initialization vector. A receiving node [14] reconstructs the initialization vector using the previously transmitted data packets [22]. Accordingly, the receiving node [14] is able to decrypt [26] data packets [22] without receiving an initialization vector along with the corresponding data packet [22] that was encrypted [20] with the initialization vector.

(FIG. 1)