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(54) **COMPUTER IMPLEMENTED METHODS AND COMPUTER PROGRAM PRODUCTS FOR EVALUATING RADIO COMMUNICATIONS SYSTEMS**

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(57) **ABSTRACT**

A computer implemented method is disclosed, for modeling a frequency assignment for a radio communications system, comprising a plurality of radio transmitters. The method comprises assigning a frequency to one of said plurality of radio transmitters based on a probability of said radio transmitter being assigned a predetermined frequency. Also disclosed are computer implemented methods and computer program products for determining frequency usage probabilities, frequency reuse, expected signal strengths, quality-of-service and station relationships in connection with cell, capacity and frequency planning procedures.

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