CLAIMS

1 – A miniaturized system of detection and location of illicit radio transmitters (10) operating in a confined closed environment, zone Z, characterized in that it comprises at least the following elements:

- one or more miniaturized detectors (2), provided with an antenna (2A), adapted to detect a signal emitted by the illicit radio transmitter (10),
- a detection sensitivity of the one or more miniaturized detectors (2) is adjusted to limit a detection range of the one or more miniaturized detectors (2) to only the confined closed environment in which the antenna of the one or more miniaturized detectors (2) is located,
- said miniaturized detector(s) (2) being linked to one or more bidirectional radio relay transmitters (3) outfitted with a transmission antenna (3A), being adapted to transmit the signaling of the signals detected to at least one receiver (6) of a radio messaging network connected to a signal processing module (9),
- a bidirectional radio relay transmitter (3) is adapted to label the signals detected by the receiver/detector with the date, the time, the location of the antenna of the detector of an illicit radio transmitter, and/or the location of an illicit radio transmitter and/or the nature of an illicit radio transmitter and/or the level of signal reception of an illicit radio transmitter,
- the radio relay transmitters and receivers (3, 6) operating on a frequency different from the frequency of operation of the illicit radio transmitters.

2 – The miniaturized system as claimed in claim 1, characterized in that a transmitter/relay is outfitted with a command and transmission module (11) adapted to activate procedures for auto-testing, booting, and shutoff of the receivers/detectors (2).

3 - The miniaturized system as claimed in claim 1 or 2, characterized in that the system utilizes relay transmissions of very low transmission speed, adapted to signal and characterize the detections of emissions emitted by the illicit radio transmitters.

4 – The miniaturized system as claimed in one of the preceding claims, characterized in that zone Z is a room and the antenna (2A) is installed on the ceiling (4a) of the room, with the antenna (2A) oriented toward the floor (4b) of the room and the transmission antenna (3A) being oriented toward one of the sides (4c) of the room or upward.

5 – The miniaturized system as claimed in one of the preceding claims, characterized in that the miniaturized detectors (2) and the bidirectional radio relay transmitters (3) are disposed in ceiling fixtures.

6 – The miniaturized system as claimed in claim 5 characterized in that the miniaturized detectors (2) and the bidirectional radio relay transmitters (3) are disposed in volumes of limited size, whose partly metallized surface serves as an antenna for the detection.

7 – The miniaturized system as claimed in one of the preceding claims, characterized in that the signal processing module (9) is adapted to analyze communication streams and provide statistics and a local mapping of calls.

8 – The miniaturized system as claimed in one of the preceding claims, characterized in that the signal processing module (9) is adapted to identify one or several telecommunications subscriber devices attempting to communicate with illicit radio transmitters.

9 – The miniaturized system as claimed in one of the preceding claims, characterized in that it uses a wireless Pager M2M network at 800 MHz for radio relay.