2. The ISM band can provide 83.5 MHz of spectrum which can be divided into **79** communication channels equally spaced by 1 MHz. The first and last hop channels can be provided at 2402 MHz and 2480 MHz, respectively, as shown in **FIG. 2**. As a so-called relaxed radio transmitter design choice, the communication device **100** might not use hop channels at the edges of the band to satisfy FCC requirements on out-of-band spurious transmissions. The 79 channels form a set of hop channels, which the communication device **100** may hop among while communicating with other communication devices.

[**0030**] Each such communication device may further include, for example in the processor **130**, a set of hop sequences, a unique address for the communication device, and a clock. The address or other unique identifier may be used to select a hop sequence among the set of hop sequences and the clock may be used to determine the phase in the sequence, that is, which particular hop of the sequence is selected at a particular time. Two or more FH communication devices may form a synchronized communication link by selecting the same hop sequence and phase. Selection of the same hop sequence and phase may be provided by sharing an address code and clock indication (i.e., clock value), respectively, among the communicating communication devices.

[**0031**] The communication devices may switch between a sleep mode, in which the devices do not receive paging messages, and a scanning mode, in which the devices scan for paging messages. In the sleep mode, a portion of the communication device **100**, such as the transceiver **120**, may be powered-down or off to conserve power and no messages may be received or transmitted. Power may be further conserved by remaining predominately in the sleep mode. For example, such communication devices may cycle between the sleep mode and the scanning mode with a duty cycle ratio of a few percent (i.e., scanning-time/sleep-time). Such mode switching can complicate the initial synchronization of two or more FH communication devices. In particular, when a communication device is in the sleep mode for a particularly long time, the time delay associated with establishing a connection can become correspondingly long.

[**0032**] **FIG. 3** illustrates conventional operations that may be performed by two or more communication devices to establish a FH communication link. The communication device that seeks to establish a communication link is referred to as the pager device **300** and the communication device that is being paged is referred to as the scanner device **302**. Although one scanner device **302** is shown, communication links between a pager device and a plurality of scanner devices may be established in the manner described herein.

[**0033**] The scanner device **302** periodically wakes from a sleep mode and selects a hop channel within a hop sequence to scan **310** for a paging message containing the address of the scanner device **302**. The hop sequence may, for example, contain 32 pseudo-random selected hop channels defined by the address of the scanner device **302**. Each time the scanner device **302** switches to the scanning mode, it sequences using an index to the next hop channel in the sequence to listen for a paging message.

[**0034**] The time interval between such scans ("T_SCAN") may, for example, be 1.28 seconds, although the scans **310** can be performed at faster or slower rates. The time duration of each scan **310** to look for a paging message may be much shorter (for example, 11 ms) than the time interval between scans. When a 1.28s interval is provided between scans, the scanner device **302** may take 41 seconds to scan 32 hop channels (i.e., 32×1.28s).

[**0035**] The pager device **300** may determine the hop sequence from the address of the intended scanner device **302** but may not accurately know, or perhaps not have any knowledge of, the present phase of the scanner device **302** in the hop sequence. The pager device **300** consecutively transmits a page message within a paging window **304**, containing the address or another unique identifier of the scanner device **302**, on different hop channels selected from the hop sequence of the scanner device **302**.

[**0036**] For Bluetooth devices, the page message within the window **304** may, for example, comprise a short binary bit sequence, such as a 68 bit length code. In a 10 ms period the pager device **300** may transmit the same page message on 16 different hop channels, which corresponds to half of the sequence of hop channels scanned by the scanner device **302**. The half of the sequence of hop channels may be referred to as "Train A".

[**0037**] Recent FCC regulations for communication in the ISM band require the use of at least 15 channels in a hop sequence. However, when allowed by governmental regulations, smaller subsets of a hop sequence may be used.

[**0038**] The pager device **300** may transmit the page message on the 16 hop channels for the expected duration of the standby period of the scanner device **302** (T_SCAN) which may be 1.28 seconds. If the scanner device **302** switches from the sleep mode to the scanning mode in any of these 16 hop channels, such as shown by the scan **320**, it may receive the page message, shown as a "HIT", and respond with a page response message within a response window **306** to the pager device **300**. However, when the pager device **300** does not receive a page response message to its page messages transmitted in the Train A after a time corresponding to the standby time T_SCAN, the pager device **300** may begin transmitting the page message consecutively on the hop channels in the other 16 channel half of the 32 channel hop sequence (referred to as "Train B").

[**0039**] Upon receiving the page response message, the pager device **300** may abort the paging sequence and begin exchanging messages at a higher hop rate, such as 800 hops/s, with the scanner device **302**. The pager device **300** and scanner device **302** may use timing of the page message to synchronize the phase and provide a synchronized FH communication link connection therebetween. Alternative or additionally, the pager device **300** and scanner device **302** may exchange other information, such as another hop sequence selection value and/or phase, to synchronize the communication link. Once a synchronized communication link is established, the pager device **300** may become a master device and the scanner device **302** may become a slave device. The master device may control communication exchanges with one or more connected slave devices.

[**0040**] When the pager device **300** can estimate the phase of the scanner device **302**, it may establish a connection more quickly by selecting a portion of the sequence of hop channels used by the scanner device **302** (i.e., 16 of the 32