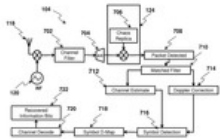
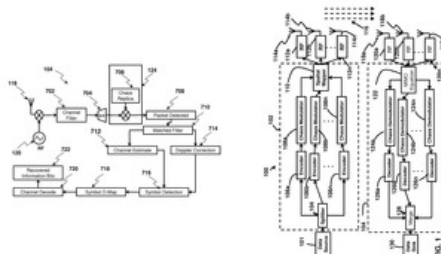
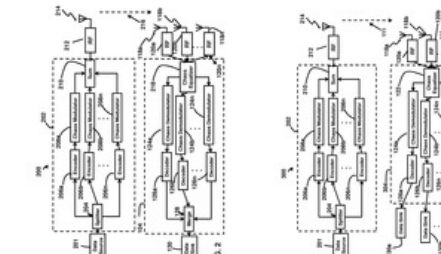
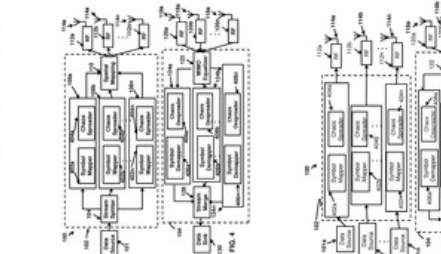
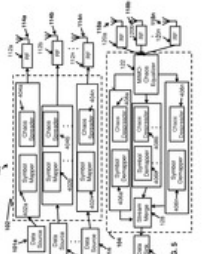
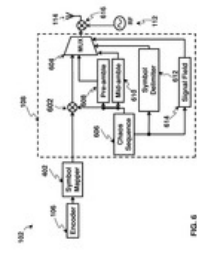
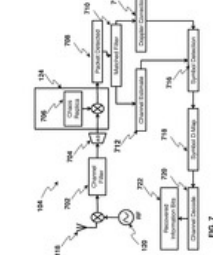
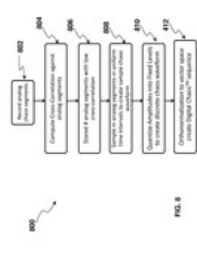
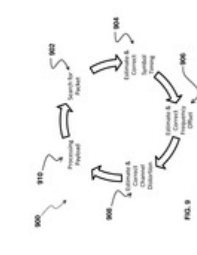
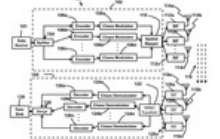
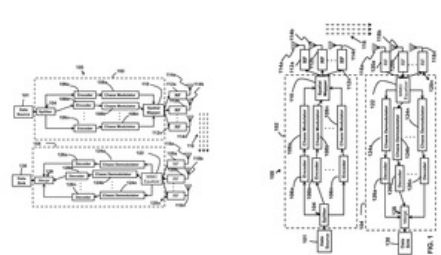
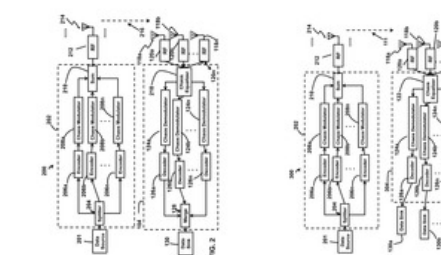
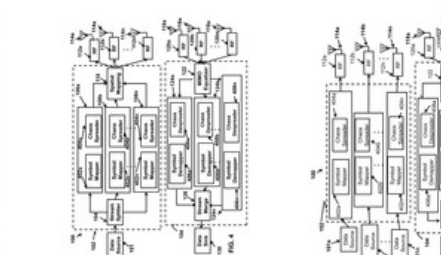
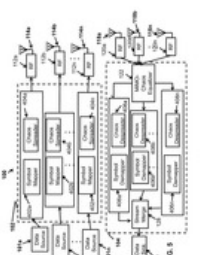
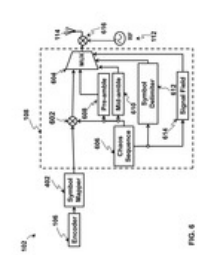
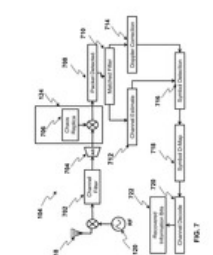
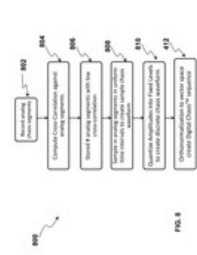
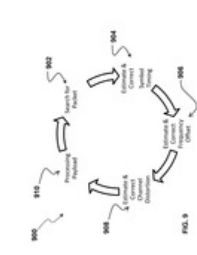
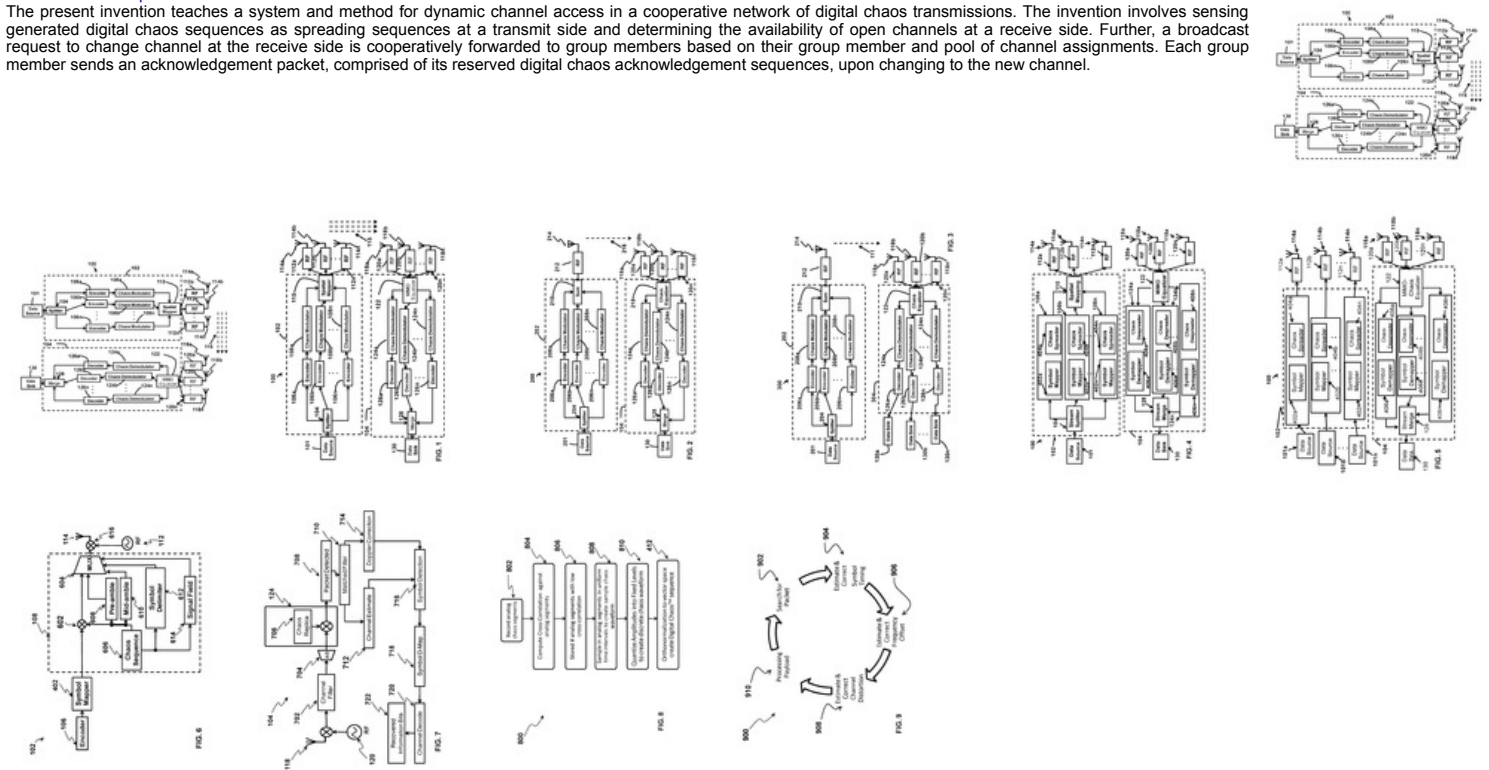


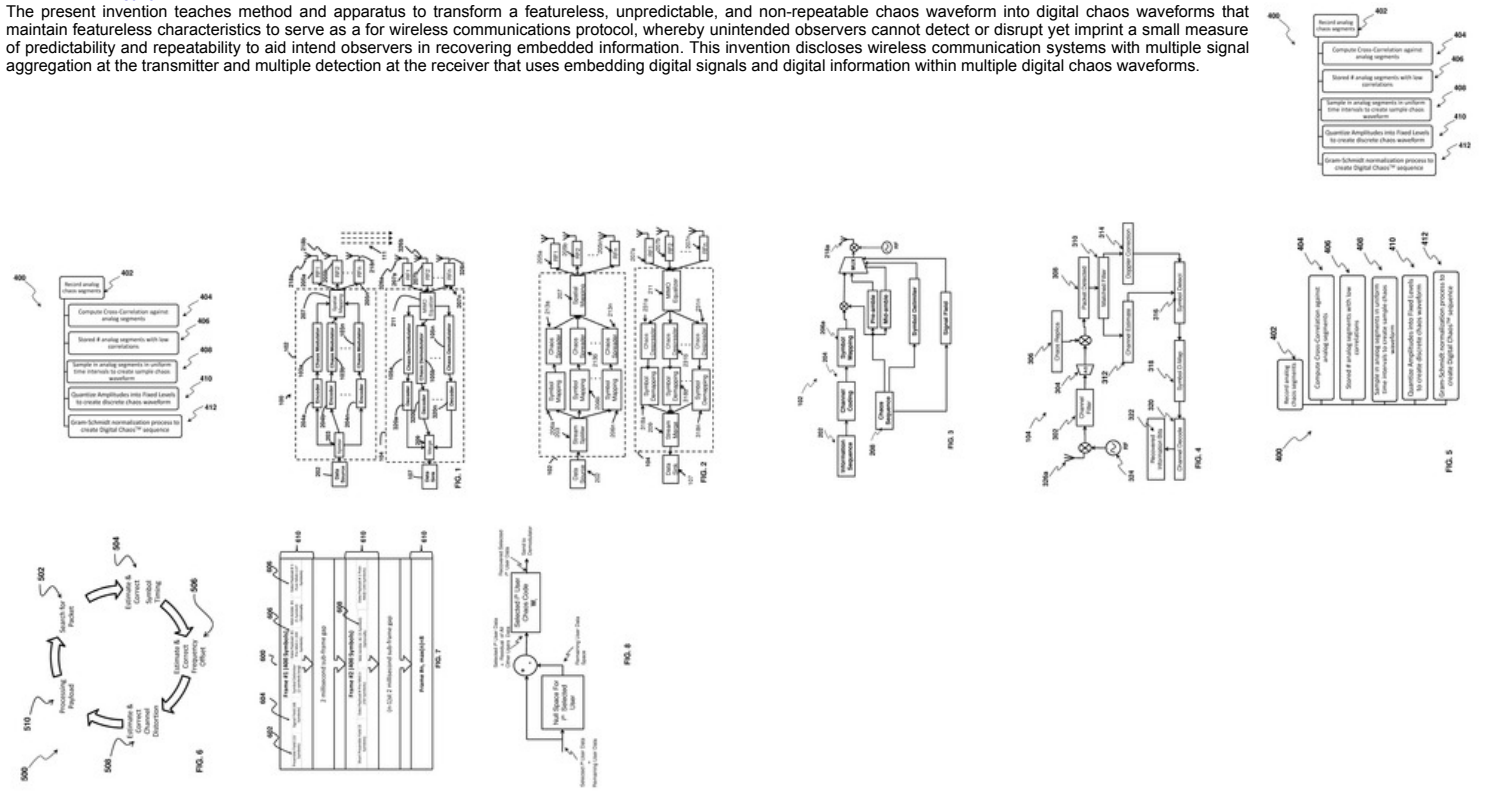
240472 results for Similar patents - Collection: FAMPAT

#	 Title	Publication number	1st app. date	Applicant/Assignee	1st publ. date	Publ. date
1.	 Method and apparatus for communicating data in a digital chaos cooperative network	US9479217	2015-07-28	JOHN DAVID TERRY* TERRY JOHN	2016-10-25	2016-10-25
The present invention teaches a system and method for cooperatively networking digital chaos transmissions. The invention involves using generated digital chaos sequences as spreading sequences at a transmit side, receiving the spreaded signals at a receive side and despreading the signal, recovering signals at the receive side, comparing a stored replica of the digital chaos spreading codes to the digital chaos spreading codes used at the transmit side to, determining if the signals belong to predefined groups based on a predetermined criteria, and forward the signals to a group member based on its group member assignment.						
						
						
						
						
						
						
						
						
						
						
						
						
2.	 Method and apparatus for range and coverage extension in a heterogeneous digital chaos cooperative network	US20170163296	2017-02-20	REID ANTHONY;TERRY JOHN DAVID	2017-06-08	2017-06-08
The present invention teaches a system and method for improved signal recovery for range and coverage extension in a heterogeneous cooperative network of digital chaos transmissions with OFDM component signal transmission. The invention improves upon the state of art in side channel information from the transmit side containing information on the clipped amplitude. In-band transmission of the side information is achieved by exploiting the sparsity of the resulting clip amplitude position with improved levels of compression over the prior art using Gabor Transform Multiple Symbol Encoding transmitter. The information rate of the clipped amplitude is sub-Nyquist relative to the original OFDM component signal transmission, which allows very low power spreading by a cooperative digital chaos sequences at a transmit side and recovery of the clipped amplitude at a receive side. Further, an improved noise resistance side channel performance is achieved by decoding Gabor Transform symbols for symbol recovery.						
						
						
						
						
						
						
						
						
						
						
						
						

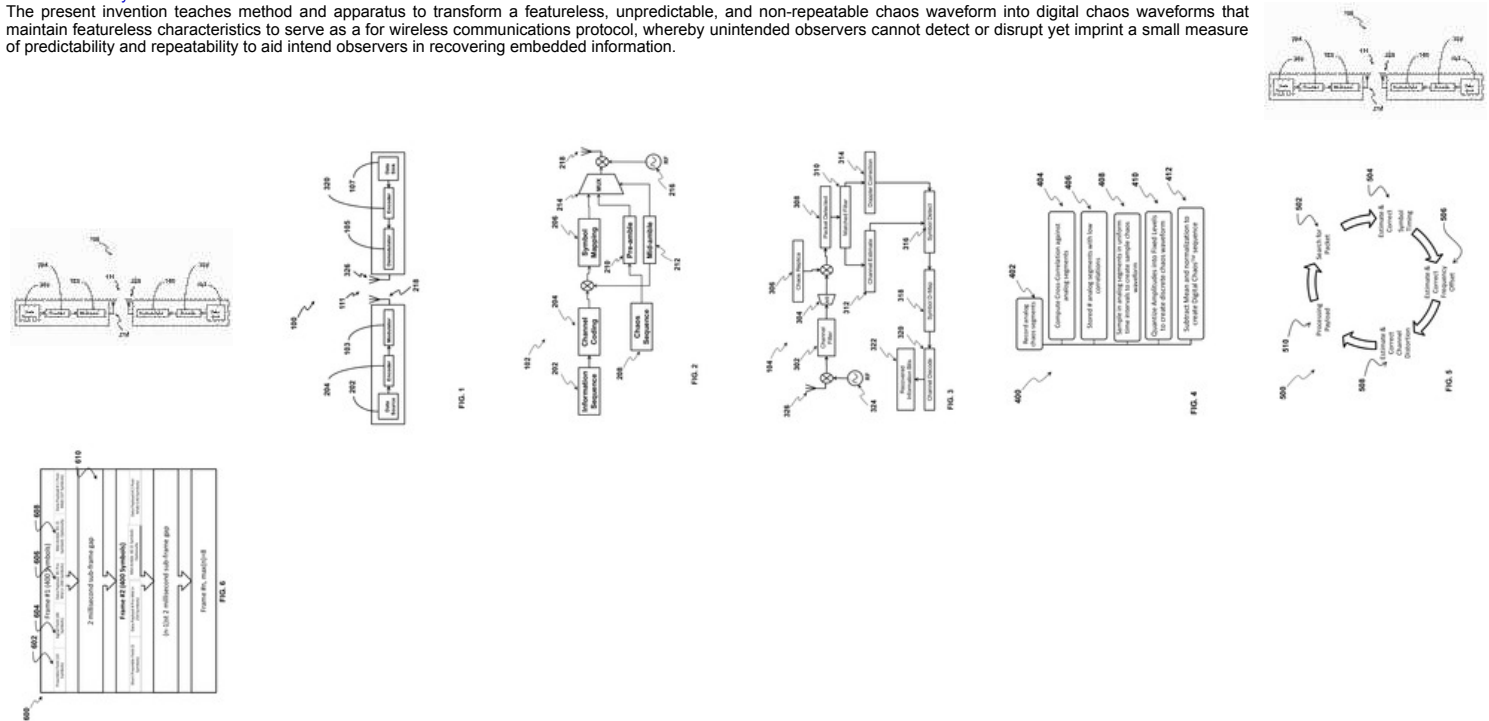
The present invention teaches a system and method for dynamic channel access in a cooperative network of digital chaos transmissions. The invention involves sensing generated digital chaos sequences as spreading sequences at a transmit side and determining the availability of open channels at a receive side. Further, a broadcast request to change channel at the receive side is cooperatively forwarded to group members based on their group member and pool of channel assignments. Each group member sends an acknowledgement packet, comprised of its reserved digital chaos acknowledgement sequences, upon changing to the new channel.



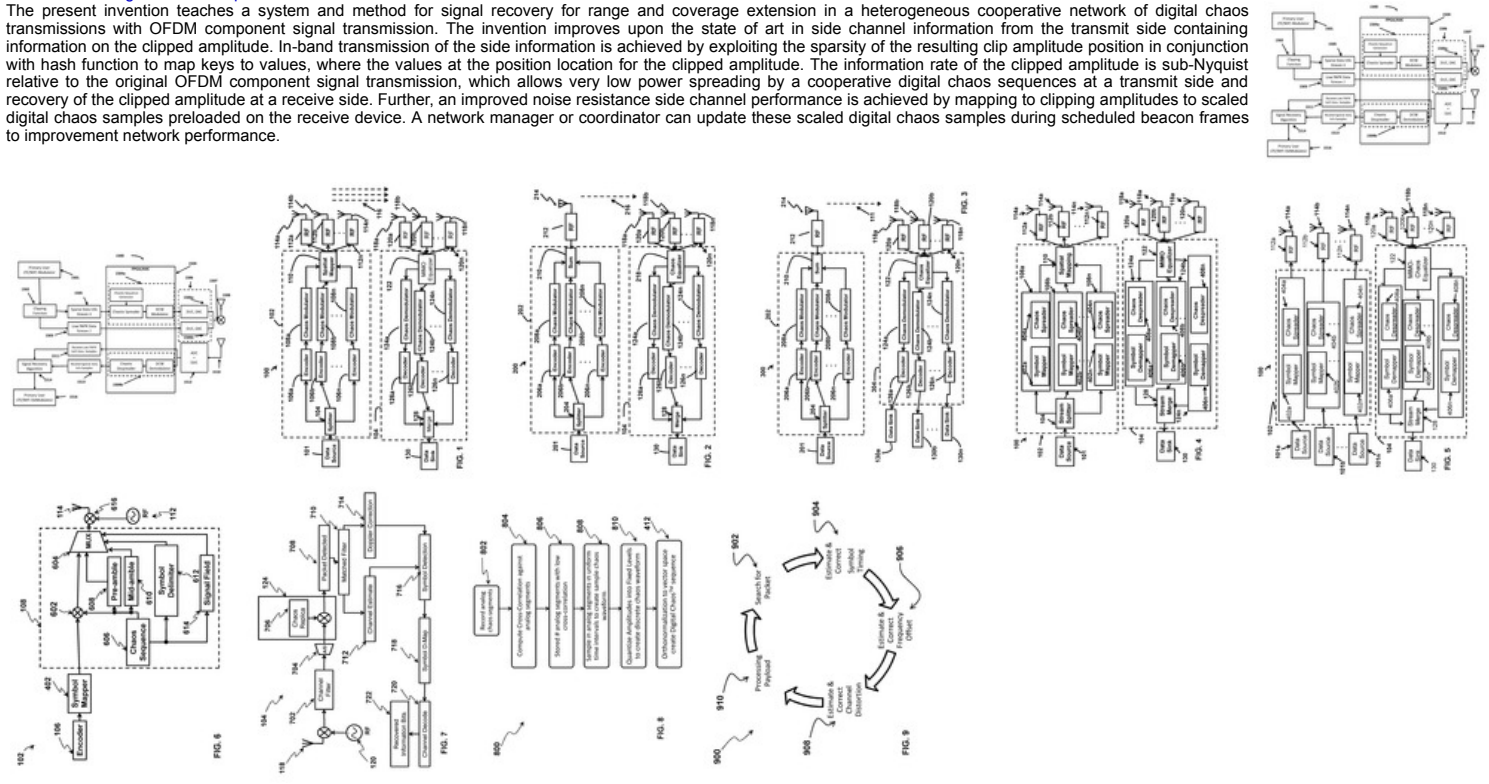
The present invention teaches method and apparatus to transform a featureless, unpredictable, and non-repeatable chaos waveform into digital chaos waveforms that maintain featureless characteristics to serve as a for a wireless communications protocol, whereby unintended observers cannot detect or disrupt yet imprint a small measure of predictability and repeatability to aid intend observers in recovering embedded information. This invention discloses wireless communication systems with multiple signal aggregation at the transmitter and multiple detection at the receiver that uses embedding digital signals and digital information within multiple digital chaos waveforms.



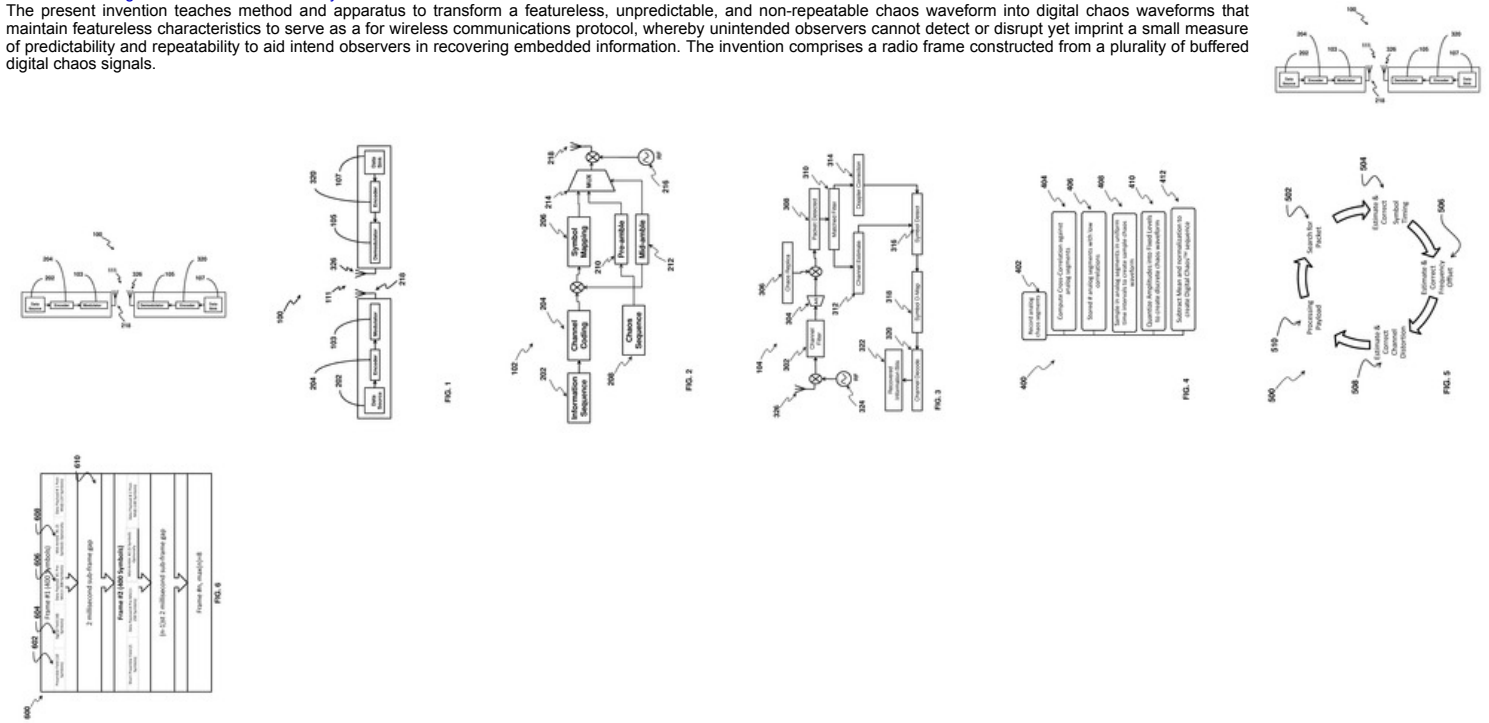
The present invention teaches method and apparatus to transform a featureless, unpredictable, and non-repeatable chaos waveform into digital chaos waveforms that maintain featureless characteristics to serve as a for wireless communications protocol, whereby unintended observers cannot detect or disrupt yet imprint a small measure of predictability and repeatability to aid intend observers in recovering embedded information.



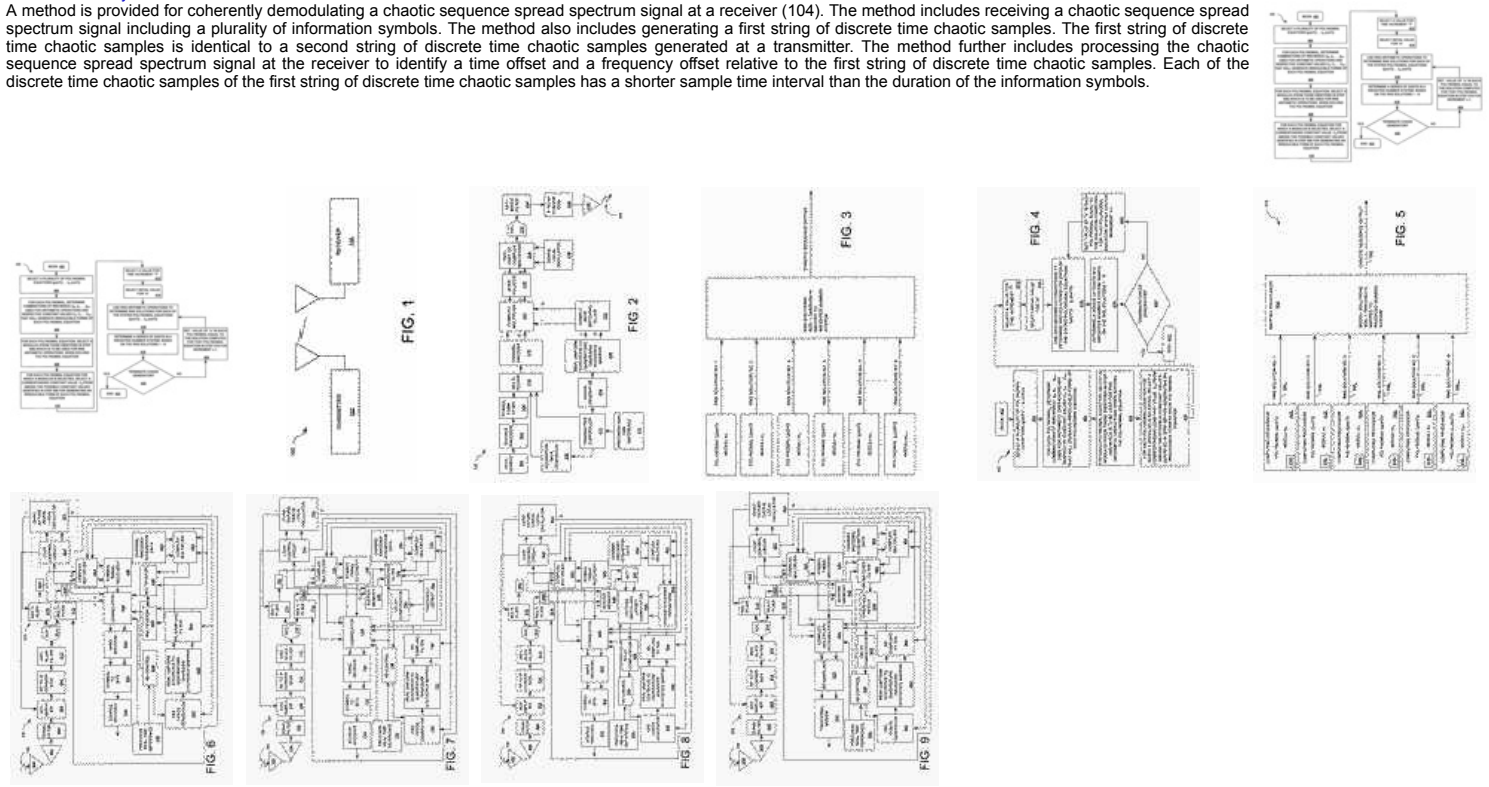
The present invention teaches a system and method for signal recovery for range and coverage extension in a heterogeneous cooperative network of digital chaos transmissions with OFDM component signal transmission. The invention improves upon the state of art in side channel information from the transmit side containing information on the clipped amplitude. In-band transmission of the side information is achieved by exploiting the sparsity of the resulting clip amplitude position in conjunction with hash function to map keys to values, where the values at the position location for the clipped amplitude. The information rate of the clipped amplitude is sub-Nyquist relative to the original OFDM component signal transmission, which allows very low power spreading by a cooperative digital chaos sequences at a transmit side and recovery of the clipped amplitude at a receive side. Further, an improved noise resistance side channel performance is achieved by mapping to clipping amplitudes to scaled digital chaos samples preloaded on the receive device. A network manager or coordinator can update these scaled digital chaos samples during scheduled beacon frames to improvement network performance.



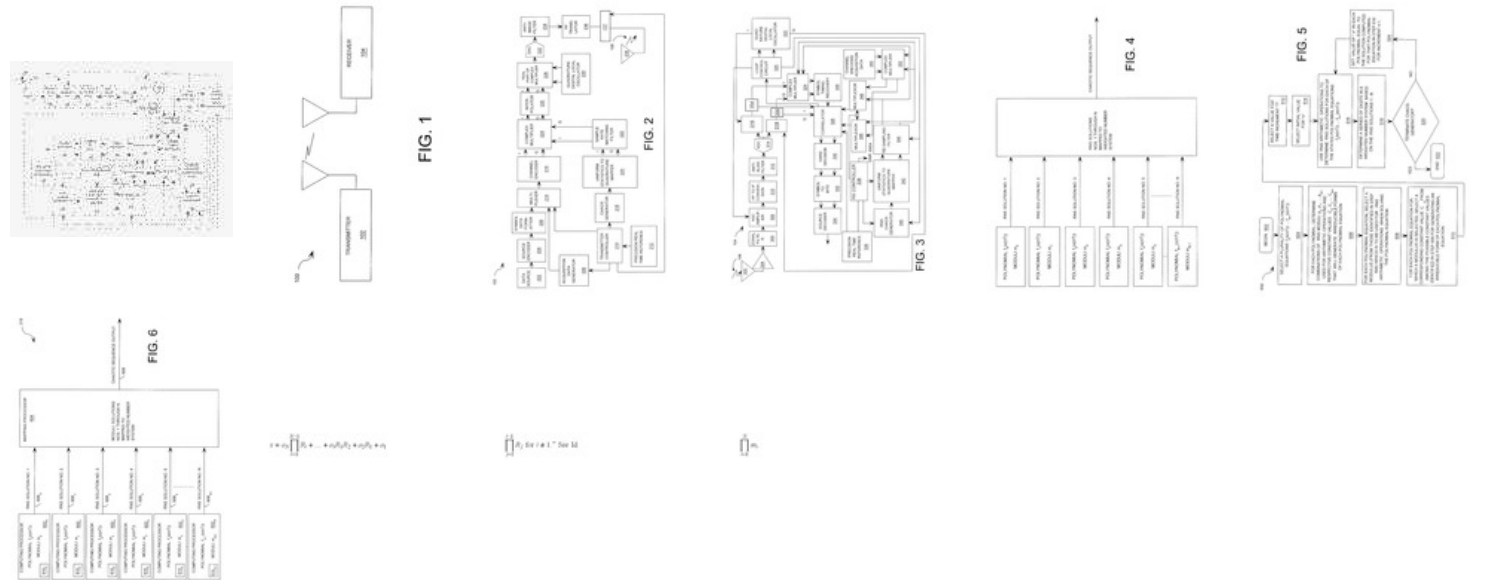
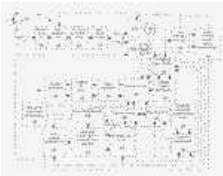
The present invention teaches method and apparatus to transform a featureless, unpredictable, and non-repeatable chaos waveform into digital chaos waveforms that maintain featureless characteristics to serve as a for wireless communications protocol, whereby unintended observers cannot detect or disrupt yet imprint a small measure of predictability and repeatability to aid intend observers in recovering embedded information. The invention comprises a radio frame constructed from a plurality of buffered digital chaos signals.



A method is provided for coherently demodulating a chaotic sequence spread spectrum signal at a receiver (104). The method includes receiving a chaotic sequence spread spectrum signal including a plurality of information symbols. The method also includes generating a first string of discrete time chaotic samples. The first string of discrete time chaotic samples is identical to a second string of discrete time chaotic samples generated at a transmitter. The method further includes processing the chaotic sequence spread spectrum signal at the receiver to identify a time offset and a frequency offset relative to the first string of discrete time chaotic samples. Each of the discrete time chaotic samples of the first string of discrete time chaotic samples has a shorter sample time interval than the duration of the information symbols.



A spread spectrum communication system includes a channel encoder configured for modulating a carrier signal with data to form an information signal. A spreading sequence generator is configured for generating a spreading sequence having a phase angle dependent upon a chaotic sequence and contiguously distributed over a predetermined range. The chaotic sequence also has a magnitude which is selectively dependent upon the pseudo-random number or chaotic sequence. The invention also includes a multiplier configured for forming a spread spectrum signal by multiplying the information signal by the spreading sequence. The spreading sequence generator is responsive to a magnitude control signal for controlling the selective dependency of said magnitude. The magnitude can be constant to form a constant amplitude zero autocorrelation signal. Alternatively, the magnitude can be allowed to vary in selectively controlled chaotic or pseudo-random manner to vary a peak to average power ratio.



Provided are a receiving device which improves communication performances by separating signals in CDMA communications using a chaos code, etc. In the receiving device (101), a receiving unit (102) receives a signal directly spread by a chaos code and transmitted from a transmitting device, a component analyzing unit (103) applies component analysis to the received signal to separate it into a plurality of components, a despreading unit (104) obtains a plurality of signals by despreading the plurality of separated components by the chaos code respectively, and a selective output unit (105) selects a signal having a large intensity from the plurality of despread signals, and outputs it.

