CLAIMS

1. A method comprising:

measuring a first time for a first signal to propagate between a point in a first end data input transmit system and a point in a first end transmit air frame detector;

measuring a second time for the first signal to propagate between a point in a second end receive air frame detector and a point in a second end data receive system;

measuring a third time for the first signal to propagate between the point in the second end data receive system and a point in a second end data input transmit system;

measuring a fourth time for the first signal to be received by the point in the second end data transmit system and a second signal to be received at a point in a second end transmit air frame detector;

measuring a fifth time for the second signal to propagate between a point in a first end receive air frame detector and a point in a first end data receive system;

measuring a sixth time based on when the second signal is by the point in the first end data receive system to when the first signal is received by the point in the first end data input transmit system; ~~and~~

determining a seventh time for the first data to propagate between the point in the first end transmit airframe detector and the point in the second end receive air frame detector based on the first, second, third, fourth, fifth and sixth time; and

determining a phase of a third signal including the first data, the determining the phase being based at least in part on the seventh time.

2. The method of claim 1, wherein the determining the seventh time comprises subtracting the first, second, third, fourth, fifth, and sixth time from the seventh time to determine a link time.

3. The method of claim 2, wherein the seventh time is determined based on dividing the link time by two.

4. The method of claim 1, wherein the seventh time is a time for the first signal to propagate across a wireless link between two transceivers.

5. The method of claim 4, further comprising determining an eighth time subtracting the first, second, third, fourth, fifth, and sixth time from the seventh time to determine a link time

and dividing the link time by two, the eighth time being a time for the second signal to propagate across the wireless link between the point in the second end transmit air frame detector to the first point in the first end receive air frame detector.

6. The method of claim 4, wherein the wireless link is microwave link.

7. The method of claim 4 wherein the wireless link is an RF link.

8. The method of claim 1, wherein the first signal is the second signal.

~~9. The method of claim 1, further comprising determining phase based on the seventh time.~~

9~~10~~. The method of claim ~~9~~ 1, wherein frequency is locked between a first end transceiver and a second end transceiver, wherein the first end transceiver comprises the first end data input transmit system, the first end transmit air frame detector, the first end receive air frame detector, and the first end data receive system, further wherein the second end transceiver comprises the second end data input transmit system, the second end transmit air frame detector, the second end receive air frame detector, and the second end data receive system.

10~~11~~. The method of claim ~~9~~ 1, wherein the determined phase is provided from a first end transceiver across a network to a second end transceiver.

11~~12~~. The method of claim ~~11~~ 10, wherein the determined phase is provided from the first end transceiver to the second end transceiver within overhead of third data transmitted from the first end transceiver to the second end transceiver.

12~~13~~. The method of claim ~~11~~ 10, wherein the determined phase is provided from the first end transceiver to the second end transceiver over a dedicated channel.

13~~14~~. The method of claim ~~9~~ 1, wherein a second end transceiver utilizes the determined phase as a backup to GPS functions.

14~~15~~. The method of claim 1, further comprising determining when third data is to be received at a predetermined point in a second end transceiver and providing a time, based on the ~~determination~~ determining when the third data is to be received at the predetermined point, to the second end transceiver to transfer a clock value.

15~~16~~. A system comprising:

a first end transceiver comprising a controller configured to measure a first time for first signal to propagate between a point in a first end data input transmit system and a point in a first end transmit air frame detector, measure a fifth time for second signal to propagate between a point in a first end receive air frame detector and a point in a first end data receive system, and a sixth time for the second signal to propagate between the point in the first end data receive system and the point in the first end data input transmit system;

a second end transceiver comprising a controller configured to measure a second time for the first signal to propagate between a point in a second end receive air frame detector and a point in a second end data receive system, a third time for the second signal to propagate between the point in the second end data receive system and a point in a second end data input transmit system, and a fourth time for the second signal to propagate between the point in the second end data transmit system and a point in a second end transmit air frame detector;

a phase determination module configured to determine a seventh time for the first signal to propagate between the point in the first end transmit airframe detector and the point in the second end receive air frame detector based on the first, second, third, fourth, fifth, and sixth time and determine a phase of ~~a~~ the first signal at a predetermined point in the second end transceiver based on the seventh time; and

a communication module configured to provide the information regarding the determined phase from the first end transceiver to the second end transceiver.

16~~17~~. The system of claim ~~1~~ 15, wherein the second end transceiver is configured to recover phase based on the information regarding the determined phase.

17~~18~~. The system of claim ~~1~~ 15, wherein the second end transceiver is configured to recover a clock signal based on the information regarding the determined phase.

18~~19~~. The system of claim ~~1~~ 15, wherein a frequency is locked between the first end transceiver and the second end transceiver.

19~~20~~. A system comprising:

memory;

a processor; and

a controller utilized by the processor to generate measurements of a first signal propagation along a transmit path of a first transceiver, generate measurements of a second signal propagation along a receive path of the first transceiver, determine total time based on a final measurement of a second signal propagation to initiation of initial measurement of first signal propagation, receive measurements of signal propagation from second transceiver in communication with a first transceiver, determine time of signal propagation over wireless link between the first and second transceivers, determine phase information of the first signal based on the time of signal propagation, and provide phase information to second transceiver.