

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

TQ DELTA, LLC, v. 2WIRE, INC.	Plaintiff, Defendant.	Civil Action No. 13-cv-1835-RGA
TQ DELTA, LLC, v. ZYXEL COMMUNICATIONS, INC. and ZYXEL CORPORATION,	Plaintiff, Defendants.	Civil Action No. 13-cv-2013-RGA
TQ DELTA, LLC, v. ADTRAN, INC.	Plaintiff, Defendant.	Civil Action No. 14-cv-954-RGA
ADTRAN, INC., v. TQ DELTA, LLC.	Plaintiff, Defendant.	Civil Action No. 15-cv-121-RGA

~~PROPOSED~~ **CLAIM CONSTRUCTION ORDER FOR
FAMILY 4 PATENTS**

The Court has determined that the terms below shall be given the following meaning for U.S. Patent Nos. 7,292,627 (“the ‘627 patent”), 8,073,041 (“the ‘041 patent”), 8,090,008 (“the ‘008 patent”), 8,218,610 (“the ‘610 patent”), and 8,355,427 (“the ‘427 patent”):

1. **“transceiver”** – “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry”
2. **“scramble the phase characteristics of the plurality of carrier signals”** – “adjust the phase characteristics of the carrier signals by varying amounts”
3. **“substantially scramble the phase characteristics of the plurality of carrier signals”** – “adjust the phase characteristics of the carrier signals by varying amounts to produce a transmission signal with a reduced peak to-average power ratio (PAR)”
4. **“multiple carrier signals corresponding to the plurality of phase shifted and scrambled carrier signals are used by the first [multicarrier] transceiver to demodulate a same [input] bit value of the received bit stream”** – “a first carrier signal is used by the first multicarrier transceiver to demodulate the value of a bit of the received bit stream and at least one more carrier signal is used by the first multicarrier transceiver to demodulate the value of the same bit of the received bit stream, wherein the carrier signals correspond to the plurality of phase-shifted and scrambled carrier signals”
5. **“multiple carrier signals corresponding to the scrambled carrier signals are used by the first multicarrier transceiver to modulate the same bit value”** – “a first carrier signal is used by the first multicarrier transceiver to modulate the value of a bit and at least one more carrier signal is used by the first multicarrier transceiver to modulate the value of the same bit, wherein the carrier signals correspond to the scrambled carrier signals”

6. **“carrier signals for modulating an [input] bit stream”** – “carrier signals that are used to modulate an input bit stream”
7. **“phase shift”** – “the amount by which a phase is adjusted”
8. **“a phase shift for each carrier is based on: . . . (the) combining of a phase for each carrier signal with the phase characteristic of that respective carrier signal”** – “a phase shift at the receiver for each carrier is based on . . . the previous combination, by a transmitting transceiver, of a phase shift for each carrier signal with the phase characteristic of that respective carrier signal”
9. **“computing a phase shift for each carrier signal”** – “computing the amount by which a phase is adjusted for each carrier signal”
10. **“a phase shift for each carrier signal is [at least] based on”** – “a phase shift for each carrier signal is computed [at least] based on”
11. **“multicarrier”** – “having multiple carrier signals that are combined to produce a transmission signal”
12. **“carrier” / “carrier signal” / “carrier signals”** – “signal[s] that can be modulated to carry data”
13. **“combining the phase shift computed for each respective carrier signal with the phase characteristic of that carrier signal” / “combining of a phase shift for each carrier signal with the phase characteristic of that respective carrier signal”** – “adjusting the phase of each carrier signal by an amount computed for that carrier signal”

IT IS SO ORDERED this 6 day of February, 2018.


The Honorable Richard G. Andrews