

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

TQ DELTA, LLC, Plaintiff, v. COMCAST CABLE COMMUNICATIONS LLC, Defendant.
TQ DELTA, LLC, Plaintiff, v. COXCOM LLC and COX COMMUNICATIONS INC., Defendants.
TQ DELTA, LLC, Plaintiff, v. DIRECTV, LLC, Defendant.
TQ DELTA, LLC, Plaintiff, v. DISH NETWORK CORPORATION, DISH NETWORK L.L.C., DISH DBS CORPORATION, ECHOSTAR CORPORATION, AND ECHOSTAR TECHNOLOGIES L.L.C., Defendants.

C.A. No. 15-cv-611-RGA

C.A. No. 15-cv-612-RGA

C.A. No. 15-cv-613-RGA

C.A. No. 15-cv-614-RGA

<p>TQ DELTA, LLC,</p> <p style="text-align: center;">Plaintiff,</p> <p style="text-align: center;">v.</p> <p>TIME WARNER CABLE INC. and TIME WARNER CABLE ENTERPRISES LLC,</p> <p style="text-align: center;">Defendants.</p>	<p>C.A. No. 15-cv-615-RGA</p>
<p>TQ DELTA, LLC,</p> <p style="text-align: center;">Plaintiff,</p> <p style="text-align: center;">v.</p> <p>VERIZON SERVICES CORP.,</p> <p style="text-align: center;">Defendant.</p>	<p>C.A. No. 15-cv-616-RGA</p>

CLAIM CONSTRUCTION ORDER

The Court has determined that the terms below shall be given the following meaning for the claims of each identified patent:

U.S. Patent Nos. 8,718,158 and 9,014,243:

1. “**carrier signal**” and “**carrier**” – “signal that can be modulated to carry data”
2. “**determin[e/ing] a phase shift for the carrier signal**” – “comput[e/ing] an amount by which the phase of the carrier signal will be shifted”
3. “**phase scrambler**” – “component operable to adjust the phases of the carrier signals, by pseudo-randomly varying amounts”
4. “**scrambling the phase characteristics of the carrier signals**” – “adjusting the phase characteristics of the carrier signals by pseudo-randomly varying amounts”

5. **“transceiver”** – “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry”
6. **“multicarrier”** – “having multiple carrier signals that are combined to produce a transmission signal”
7. **“bit scrambler”** – “component that pseudo-randomly changes the value of a bit”

U.S. Patent Nos. 8,611,404 and 9,094,268:

8. **“transceiver”** – “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry”
9. **“multicarrier”** – “having multiple carrier signals that are combined to produce a transmission signal”
10. **“low power mode”** – “state of operation in which power is consumed, but the amount of power consumed is less than when operating in a state with full data transmission capabilities”
11. **“stor[e/ing], in [a/the] low power mode, at least one parameter”** – “maintain[ing] in memory, while in low power mode, at least one parameter”
12. **“wherein the at least one parameter comprises at least one of a fine gain parameter and a bit allocation parameter”** – “wherein the at least one parameter includes a fine gain parameter and/or a bit allocation parameter”
13. **“fine gain parameter”** – “parameter used to determine power level on a per subcarrier basis”

14. **“bit allocation parameter”** – “parameter used to determine a number of bits to be carried by a subcarrier on a per subcarrier basis”
15. **“synchronization frame”** – “frame that indicates a superframe boundary”
16. **“synchronization signal”** – “signal used to establish or maintain a timing relationship between transceivers”
17. **“apparatus comprising a transceiver operable to”** – “plain meaning with ‘transceiver’ as previously construed”
18. **“data”** – “content”

U.S. Patent Nos. 7,835,430 and 8,238,412:

1. **“transceiver”** – “communications device capable of transmitting and receiving data wherein the transmitter portion and receiver portion share at least some common circuitry”
2. **“multicarrier”** – “having multiple carrier signals that are combined to produce a transmission signal”
3. **“[transmitting/receiving] test information over a communication channel”** – “plain meaning”
4. **“test information”** – “information relating to a characteristic of a communication channel or the communications equipment operating on that channel”
5. **“array representing frequency domain received idle channel noise information”** – “ordered set of values representative of noise in the frequency domain that was received by a transceiver on respective subchannels in the absence of a transmission signal”
6. **“array representing power level per subchannel information”** – “ordered set of values representative of power levels of respective subchannels”

7. **“Reverb signal”** – “signal generated by modulating carriers in a multi carrier system with a known pseudo-random sequence to generate a wideband modulated signal”

IT IS SO ORDERED this 6 day of December, 2016.


The Honorable Richard G. Andrews