

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
AUSTIN DIVISION**

STC.UNM,

Plaintiff,

vs.

Apple Inc.,

Defendant.

No. 1:20-CV-351-ADA

Jury Trial Demanded

**CLAIM CONSTRUCTION ORDER**

The Court held a telephonic Markman hearing on April 3, 2020 and a telephonic supplemental Markman hearing on April 8, 2020. During the hearings, the Court provided the below constructions. The Court will enter a Memorandum in Support of this Order shortly.

**'204 Patent**

Agreed Constructions:

<b>Term</b>	<b>Agreed Construction</b>
“a plurality of channel taps”	“at least two samples of a channel response at different time delays”
“channel responses”	“communication channels’ responses in the time domain to transmitted signals”

Claim Construction Rulings:

<b>Term</b>	<b>Court’s Construction</b>
Whether the preambles for all asserted claims are limiting	Each preamble is limiting

**'096 Patent**

Agreed Constructions:

Term	Agreed Construction
“at least one of [...] and [...]”	“[...] and/or [...]”
“symbol period”	“the time it takes to transmit one symbol”

Claim Construction Rulings:

Term	Court's Construction
Whether the preambles for all asserted claims are limiting	Each preamble is limiting
“frame structure”	“a single structure comprising one or more frames, wherein each frame may have one or more subframes”
“symbol”	Plain-and-ordinary meaning, wherein the plain-and-ordinary meaning means “a transmissible unit of information”
“pilot symbols that are denser than”	“more pilot symbols per unit time than, wherein a unit time is the symbol period of the first communication system”
“[first & second] communication system”	<b>Construction for communication system:</b> Plain-and-ordinary meaning, where the plain-and-ordinary meaning is “a combination of hardware and software that transmits and receives data according to one or more communications standards”
“wherein the first communication system's symbols and the second communication system's symbols co-exist in one transmission scheme”	Plain-and-ordinary meaning where the plain-and-ordinary meaning is “wherein symbols of the first communication system and symbols of the second communication system exist together in one transmission scheme”
“data” / “non-data”	<b>Data:</b> Plain-and-ordinary meaning <b>Non-data:</b> Plain-and-ordinary meaning
“support higher mobility than”	Not indefinite. “support higher relative velocity between a transmitter and a receiver than”

**'326 Patent**

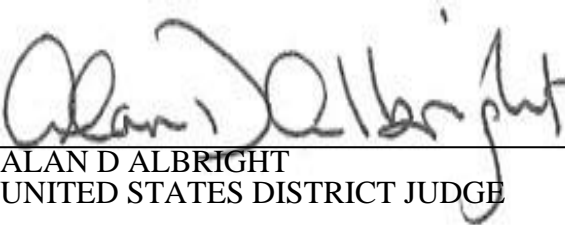
Agreed Constructions:

Term	Agreed Construction
“with a variable length related to a modulation order and a number of transmissions”	“with a variable length that is related to both modulation order and a number of transmissions”

Claim Construction Rulings:

Term	Court's Construction
Whether the preambles for all asserted claims are limiting	Each preamble is limiting
“circular shift”	“an operation that moves a sequence of bits from one end of an ordered group of bits to the other end”

SIGNED this 9th day of April, 2020.




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 ALAN D ALBRIGHT  
 UNITED STATES DISTRICT JUDGE