

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

APEX BEAM TECHNOLOGIES LLC,

Plaintiff,

v.

ZTE CORPORATION,

Defendants.

Case No. 2:22-cv-00031-JRG-RSP
(LEAD CASE)

APEX BEAM TECHNOLOGIES LLC,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD,
AND SAMSUNG ELECTRONICS
AMERICA, INC.,

Defendants.

Case No. 2:22-cv-00188-JRG-RSP
(MEMBER CASE—CONSOLIDATED
FOR ALL PRETRIAL ISSUES)

JURY TRIAL DEMANDED

**DEFENDANTS' PATENT LOCAL RULE 4-2 DISCLOSURE OF
PRELIMINARY CLAIM CONSTRUCTIONS AND EXTRINSIC EVIDENCE**

Pursuant to Rule 4-2 of the Rules of Practice for Patent Cases before the Eastern District of Texas, and the Court's Docket Control Order (Dkt. 37), Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively, "Samsung") and ZTE Corporation (collectively, "Defendants") hereby provide the following preliminary proposed constructions of the claim terms, phrases, or clauses identified for claim construction purposes, including a preliminary identification of extrinsic evidence that support the preliminary claim constructions or indefiniteness positions.

The constructions set forth in the below claim construction charts are preliminary only and are based on Defendants' present knowledge and understanding of the patents-in-suit, respective file histories, and the parties' discovery to date. Defendants' investigation, discovery, and analysis relating to this action are ongoing, and Defendants reserve the right, consistent with the Federal Rules of Civil Procedure and the Local Rules of this Court, as well as any other applicable rule, to supplement, modify or withdraw their proposed claim terms for construction, or to revise their proposed constructions (including identifying and relying on additional extrinsic evidence) in view of Plaintiff's forthcoming proposed constructions, the parties' anticipated meet-and-confer process, or Defendants' attempt to reach compromise concerning proposed constructions. Defendants also reserve the right to supplement and/or modify their proposed constructions or identification of extrinsic evidence as new information, through discovery or otherwise, becomes available, or upon review of Plaintiff's Patent Rule 4-2 disclosures.

Defendants are producing copies of the extrinsic references cited in the claim construction chart to the extent that they have not been previously produced.

I. U.S. Patent No. 10,462,767

Claim Term	Claim(s)	Proposed Construction	Extrinsic Evidence
“X time intervals . . . wherein X is a positive integer”	Claims 1 and 11	“plural, positive integer number of time intervals”	
“first subband” ¹	Claims 1, 2, 4, 5, 11, 12, 14, and 15	“one of a plurality of subsets of a frequency band determined using a feature ID of a monitor of the first signaling” [This proposed construction is based on the statements Apex made in its Paper Owner Preliminary Response in the corresponding IPR, so the construction is only applicable here and not in the IPR. IPR2023-00598, Patent Owner’s Preliminary Response at 4; <i>see, e.g., CUPP Computing AS v. Tend Micro Inc.</i>, 53 F.4th 1376, 1383 (Fed. Cir. 2022).]	
“the first time window is divided into Y time intervals”	Claims 2 and 12	“the first time window consists of Y number of time intervals”	
“used for”	Claims 11, 12, 13, and 15	Indefinite	

¹ The term “first subband” encompasses the term “subband” identified by Plaintiff in its P.R. 4-1 Disclosures.

II. U.S. Patent No. 10,568,113

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
“time window”	Claims 1, 5, 11, 15	Plain and Ordinary Meaning; no construction necessary	
“used for”	Claims 11, 12, and 15	Indefinite	

III. U.S. Patent No. 10,912,081

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
“time unit”	Claims 1 and 9	“a determinate quantity of time adopted as a standard of measurement”	unit - “a determinate quantity (as of length, time, heat, or value) adopted as a standard of measurement” <i>Merriam-Webster’s Collegiate Dictionary</i>, Eleventh Edition (2008) (SAM-ABT_00043776–00043779). unit - “a precise quantity in terms of which the magnitudes of other quantities of the same kind can be stated.” <i>The American Heritage College Dictionary</i> (2002) (SAM-ABT_00043780–43782). “One Frame = 10 ms (10 sub-frames)” “One Sub-frame = 1 ms (10 slots)” “One Slot (TTI) = 100 us (24 symbols)”

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
			“One Symbol = 3.33 us (4096 FFT)” WO 2017/083489 A1 (Lee) (PA-ABT_00004110–4207), e.g., at FIG. 2, [0095]. “Each radio frame is $T_f = 307200 \cdot T_s = 10 \text{ ms}$ long and consists of 10 subframes of length $30720 \cdot T_s = 1 \text{ ms}$, numbered from 0 to 9.” “For subframes using $\Delta f = 7.5 \text{ kHz}$ or $\Delta f = 15 \text{ kHz}$, subframe i is defined as two slots, $2i$ and $2i+1$, of length $T_{\text{slot}} = 15360 \cdot T_s = 0.5 \text{ ms}$ each. For subframes using $\Delta f = 1.25 \text{ kHz}$, subframe i is defined as one slot, $2i$, of length $T_{\text{slot}} = 30720 \cdot T_s = 1 \text{ ms}$.” 3GPP TS 36.211 V14.2.0 (PA-ABT_00015637–15832), e.g., at pp. 14-18.
“used for”	Claims 9 and 10	Indefinite	

IV. U.S. Patent No. 10,944,527

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
“at least one of a first antenna virtualization	Claims 1 and 11	“at least one of a first antenna virtualization vector is associated with	

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
vector and a second antenna virtualization vector is associated with the first antenna port group”		the first antenna port group and at least one of a second antenna virtualization vector is associated with the first antenna port group”	
“used to”	Claim 11	Indefinite	

V. U.S. Patent No. 10,951,271

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
“target threshold”	Claims 1 and 11	“a value for comparing to a ratio between two channel qualities (such as RSRP and SINR) for the UE to restrict the difference between the largest and smallest channel qualities in a UE report”	“threshold 3b: a level, point, or value above which something is true or will take place and below which it is not or will not.” <i>Merriam-Webster’s Collegiate Dictionary</i>, Eleventh Edition (2008) (SAM-ABT_00043776–00043778). “threshold <i>NOUN</i> 2 the point at which something begins to happen or to become significant.” <i>Oxford Student’s Dictionary</i>, Fourth Edition (2016) (SAM-ABT_00043767–43769). “threshold

Claim Term, Clause, or Phrase	Claim(s)	Proposed Construction	Extrinsic Evidence
			5a a level or point at which something would happen, would cease to happen, or would take effect, become true, etc 6a the minimum intensity or value of a signal, etc, that will produce a response or specified effect” <i>Collins English Dictionary</i>, Twelfth Edition (2014) (SAM-ABT_00043773–43775). “threshold 4. The point that must be exceeded to begin producing a given effect or result or to elicit a response.” <i>The American Heritage Dictionary of the English Language</i>, Fifth Edition (2016) (SAM-ABT_00043770– 43772).
“used to”	Claims 11, 13, 14, 15	Indefinite	

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Respectfully submitted,

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CERTIFICATE OF SERVICE

This is to certify that on September 1, 2023, all counsel of record were served with the foregoing document *via* electronic mail.

/s/ Juliana I. Joaquin

Juliana I. Joaquin
Litigation Clerk