

Exhibit 1009

MCCARTNEY DALLMANN LLP
Andrew S. Dallmann, Bar No. 206771
andrew@mdllplaw.com
23187 La Cadena Dr, Ste 102
Laguna Hills, CA 92653
Tel: +1.951.678.2267
Fax: +1.951.262.8054

PV LAW LLP
Bradford A. Cangro (admitted *pro hac vice*)
bradford.cangro@pvuslaw.com
Roger Taylor (admitted *pro hac vice*)
roger.taylor@pvuslaw.com
5335 Wisconsin Avenue NW, Suite 440
Washington, DC 20015
Tel: +1.202.371.6861
Fax: +1.202.888.3163

*Attorneys for Defendants TCL Communication
Technology Holdings Limited, TCT Mobile
International Limited, TCT Mobile, Inc., TCT
Mobile (US) Inc., and TCT Mobile (US) Holdings
Inc.*

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

MITSUBISHI ELECTRIC
CORPORATION AND SISVEL
INTERNATIONAL S.A.,

Plaintiffs,

vs.

TCL COMMUNICATION
TECHNOLOGY HOLDINGS
LIMITED, TCT MOBILE
INTERNATIONAL LIMITED, TCT
MOBILE, INC., TCT MOBILE (US)
INC., and TCT MOBILE (US)
HOLDINGS INC.,

Defendants.

Case No. 8:22-cv-01073-GW-DFM

**DEFENDANTS' OPENING
CLAIM CONSTRUCTION
BRIEF**

Date: June 22, 2023
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Judge: Hon. George H. Wu

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DEFENDANTS' OPENING CLAIM
CONSTRUCTION BRIEF
8:22-CV-01073-GW-DFM

Ex. 1009 - TCL Comm Tech Holdings Ltd.

TCL Comm Tech Holdings Ltd. v. Mitsubishi Electric Corp. - IPR2023-00997

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TABLE OF EXHIBITS

Exhibit	Description
1	U.S. Patent No. 9,635,656
2	U.S. Patent No. 9,713,068
3	U.S. Patent No. 10,200,976
4	Plaintiffs' Preliminary Infringement Contention
5	Exhibit B to Plaintiffs' Preliminary Infringement Contention
6	Exhibit C to Plaintiffs' Preliminary Infringement Contention
7	Exhibit D to Plaintiffs' Preliminary Infringement Contention
8	Excerpt of Websters Third International Dictionary (1986) [TCL_MELCO00002413-17]
9	Declaration of Mark R. Lanning in Support of Claim Construction for U.S. Patent No. 9,713,068 ("Lanning Decl.")

Pursuant to the Court’s Schedule (Dkt. No. 45), Defendants TCL Communication Technology Holdings Limited, TCT Mobile International Limited, TCT Mobile, Inc., TCT Mobile (US) Inc., and TCT Mobile (US) Holdings Inc. (collectively “TCL”) submit this Opening Claim Construction Brief with respect to disputed terms of U.S. Patent Nos. 9,635,656 (“the ’656 patent”), 9,713,068 (“the ’068 patent”), and 10,200,976 (“the ’976 patent” and collectively “Patents-in-Suit”) asserted by Plaintiffs Mitsubishi Electric Corporation and Sisvel International S.A. (collectively “Plaintiffs”).

I. INTRODUCTION

The purpose of claim construction is to determine the meaning and scope of the asserted patent claims. To aid the Court in doing so, TCL has proposed constructions of the disputed terms that capture the meaning that one of ordinary skill in the art would give to those terms in view of both intrinsic and extrinsic evidence.

By contrast, Plaintiffs have merely proposed, for every single disputed term, the “plain and ordinary meaning” of the term. Plaintiffs do not attempt to actually define what constitutes such “plain and ordinary meaning” but apparently, none of the constructions proposed by TCL is it. Simply put, Plaintiffs seek to have the Court bypass the claim construction process altogether for all disputed terms.

Through this strategy, Plaintiffs seek to have a jury make infringement determinations based on an impermissibly broad interpretation of the claims, divorced from the patent specifications and other relevant evidence. Moreover, this does nothing to help the factfinder understand the meaning and the scope of the disputed terms, which are highly technical.

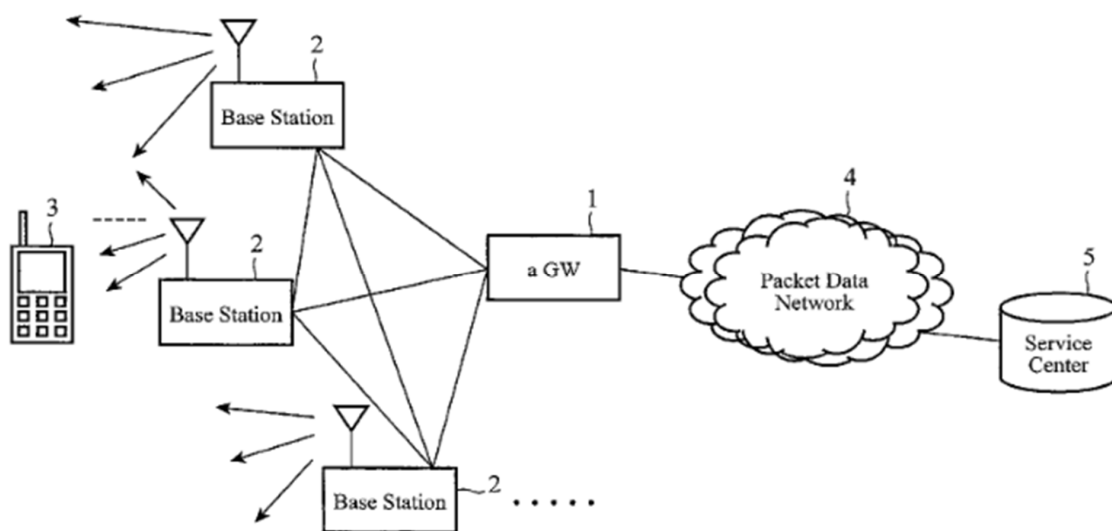
Accordingly, the Court should reject Plaintiffs’ efforts to bypass claim construction and instead adopt the substantive constructions proposed by TCL. TCL’s proposed constructions are in full compliance with the well accepted canons

1 of claim construction and allow the jury to understand the scope and the meaning of
2 the asserted claims.

3 II. BACKGROUND

4 Claim terms are viewed, not in vacuum, but in the context of the claim, the
5 specification, and the prosecution history. *Phillips v. AWH Corp.*, 415 F.3d 1303,
6 1314 (Fed. Cir. 2005) (en banc). Accordingly, TCL provides the following
7 overview of the subject matter of the Patents-in-Suit.

8 The Patents-in-Suit are directed to a communication system using Long Term
9 Evolution (“LTE”) wireless communication. As the ’656 patent explains, in a
10 typical LTE-compliant communication system, a base station communicates with a
11 mobile terminal, while a base station control apparatus (i.e., “Access Gateway”)
12 exchanges “control data and user data with a plurality of base stations.” Ex. 1 at
13 2:4-10;¹ *see also id.* at 12:31-34.



24 Ex. 1 at Fig. 1 (illustrating an Access Gateway (“a GW 1”), a plurality of base
25 stations 2, and a mobile terminal 3).

26 _____
27 ¹ Citations to Ex. [XX] refer to the exhibits attached to the Declaration of Bradford
28 A. Cangro in Support of Defendants’ Opening Claim Construction Brief.

1 The Patents-in-Suit generally refer to communication from a base station to a
 2 mobile terminal as “downlink” communication, *see, e.g.*, Ex. 1 at 2:25-26; Ex. 2 at
 3 3:27-29; Ex. 3 at Abstract, and communication from a mobile terminal to a base
 4 station as “uplink” communication, *see, e.g.*, Ex. 1 at 2:25-30; Ex. 2 at 2:59-61; Ex.
 5 3 at Abstract.

6 **A. The ’656 Patent**

7 The ’656 patent is directed to “uplink” and “downlink” communication. Ex.
 8 1 at Abstract; *see also id.* at claims 1-3. Specifically, when receiving data via
 9 downlink, a mobile terminal transmits the following two signals via uplink: an
 10 Ack/Nack signal to indicate “whether the mobile terminal has received the data
 11 perfectly,” *id.* at 2:26-32 and a Channel Quality Indicator (CQI) signal to indicate
 12 “either the quality of the received data or the quality of the downlink
 13 communication path,” *id.* at 2:27-35. Both signals are transmitted in an “Ack/Nack
 14 exclusive channel.” *Id.* at 3:35-53.

15 To transmit either signal, the mobile terminal must first transmit a request
 16 signal “to make a request for allocation of uplink radio resources.” Ex. 1 at 2:46-
 17 49. The specification refers to this request as “SR,” “scheduling request” or “an
 18 uplink scheduling request signal.” *Id.* at Abstract, 2:49-52. The scheduling request
 19 signal is transmitted in a Synchronous Random Access Channel (S-RACH). *Id.* at
 20 4:47-49, 4:54-55.

21 The purported invention of the ’656 patent is combining the Ack/Nack
 22 exclusive channel and the S-RACH into one physical channel. Ex. 1 at 15:20-28.
 23 According to the specification, this offers certain advantages over using two
 24 physical channels. For example, “increase in the radio resources load on the
 25 communication system due to temporary increase in the physical channels can be
 26 prevented, and transmission with a single carrier method which guarantees a low
 27 PAPR [Peak to Average Power Ratio] can be implemented.” *Id.* at 18:50-54.
 28

1 **B. The '068 Patent**

2 An LTE network typically uses core network cells that, in turn, use towers
3 and antennas. Declaration of Mark R. Lanning in Support of Claim Construction
4 for U.S. Patent No. 9,713,068 (“Lanning Decl.”) (Ex. 9), at ¶ 33; *see also* Ex. 2 at
5 2:52-56. The '068 patent refers to these core network cells as “non-CSG cells.”
6 *See, e.g.*, Ex. 2 at 11:3-4.

7 The purported invention of the '068 patent is “closed subscriber group (CSG)
8 cells.” *See, e.g.*, Ex. 2 at 10:67-11:2. Unlike towers and antennas, CSG cells are
9 portable and can be installed in buildings (apartments, schools, companies, etc.) to
10 service specific user equipment (the equivalent of “mobile terminals” in the '656
11 patent). Ex. 2 at 6:36-45; Lanning Decl. at ¶ 33. The '068 patent refers to these
12 specific user equipment as “subscribers.” Ex. 2 at Abstract, 5:21-52. CSG cells are
13 designed to be “open only to specific ones of the user equipments or subscribers.”
14 Ex. 2 at 7:28-31.

15 **C. The '976 Patent**

16 The '976 patent relates to Long Term Evolution Advanced (“LTE-A”)
17 wireless communication. Ex. 3 at 8:3-5. “[T]he LTE-A system supports frequency
18 bandwidths larger than frequency bandwidths of the LTE system, specifically,
19 frequency bandwidths up to 100 MHz for improving a data rate.” *Id.* at 10:22-26.
20 But with the larger frequency bandwidth came a demand for flexible frequency
21 band allocation between uplink and downlink communication. *Id.* at 10:26-36.

22 The '976 patent provides such flexibility with a “communication terminal
23 device” (the equivalent of “mobile terminals” in the '656 patent) that communicates
24 via two cells. Ex. 3 at Abstract. “Cell1” would be allocated a resource for uplink
25 (UL CC1) and a resource for downlink (DL CC1). *Id.* “Cell2,” on the other hand,
26 would only be allocated another resource for downlink (DL CC2). *Id.*

1 III. APPLICABLE LAW

2 Claim construction is the process by which a court determines, as a matter of
 3 law, the meaning of the patent claims at issue. *Markman v. Westview Instruments,*
 4 *Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc); *Netword, LLC v. Centraal Corp.*,
 5 242 F.3d 1347, 1352 (Fed. Cir. 2001) (“The role [of claim construction] is neither
 6 to limit nor to broaden the claims, but to define, as a matter of law, the invention
 7 that has been patented.”). This is imperative because “the claims of a patent define
 8 the invention to which the patentee is entitled the right to exclude.” *Phillips*, 415
 9 F.3d at 1312. The proper construction of a claim term is informed by the “intrinsic
 10 evidence” and the “extrinsic evidence”; however, the Federal Circuit has stated:

11 Ultimately, the interpretation to be given a term can only be
 12 determined and confirmed *with a full understanding of what the*
 13 *inventors actually invented and intended to envelop with the claim.*
 14 The construction that stays true to the claim language and most
 15 naturally aligns with the patent’s description of the invention will be,
 in the end, the correct construction.

16 *Id.* at 1316 (emphasis added).

17 A. The Intrinsic Evidence

18 The collection of the claims, specification, and prosecution history (including
 19 prior art considered during examination) is called the “intrinsic evidence.”
 20 *V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1310-11 (Fed. Cir.
 21 2005). Intrinsic evidence is the most significant evidence in claim construction and
 22 often is dispositive of the issues. *Phillips*, 415 F.3d at 1315; *Vitronics Corp. v.*
 23 *Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

24 In construing the claims, the analysis should focus on the words of the claims
 25 themselves. *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d
 26 1111, 1116 (Fed. Cir. 2004) (“[A] claim construction analysis must begin and
 27 remain centered on the claim language itself.”). A court should generally give
 28

1 claim terms their “ordinary and customary meaning,” which is “the meaning that
 2 the term would have to a person of ordinary skill in the art in question at the time of
 3 the invention.” *Phillips*, 415 F.3d at 1312-13. This “person of ordinary skill in the
 4 art” is a legal construct and is “akin to the ‘reasonable person’ used as a reference
 5 in negligence determinations.” *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

6 The patent specification is critical to understanding the meaning of claim
 7 terms. “Usually it is dispositive; it is the single best guide to the meaning of a
 8 disputed term.” *Vitronics*, 90 F.3d at 1582; *Markman*, 52 F.3d at 979 (“Claims
 9 must be read in view of the specification”). A construction that is not supported by
 10 the specification should be rejected, even if that construction is plausible, if
 11 divorced from the specification. *Decisioning.com, Inc. v. Federated Dep’t. Stores,*
 12 *Inc.*, 527 F.3d 1300, 1308 (Fed. Cir. 2008).

13 A court also must consider a patent’s prosecution history. *Phillips*, 415 F.3d
 14 at 1317. This is the record of the proceedings before the United States Patent and
 15 Trademark Office (“PTO”), and it is evidence of how the patent applicant and the
 16 PTO understood the patent claims. *Id.*

17 **B. The Extrinsic Evidence**

18 Despite the importance of the intrinsic evidence, courts may also turn to
 19 extrinsic evidence such as technical dictionaries, treatises, and expert testimony to
 20 help construe the claims. *Phillips*, 415 F.3d at 1317-18. “[E]xtrinsic evidence in
 21 the form of expert testimony can be useful to a court for a variety of purposes, such
 22 as to provide background on the technology at issue, to explain how an invention
 23 works, to ensure that the court's understanding of the technical aspects of the patent
 24 is consistent with that of a person of skill in the art, or to establish that a particular
 25 term in the patent or the prior art has a particular meaning in the pertinent field.”
 26 *Id.* Technical dictionaries in particular have been recognized as a useful claim

1 construction tool because they “endeavor to collect the accepted meanings of terms
2 used in various fields of science and technology.” *Id.* at 1318.

3 **C. The Court Must Resolve Claim Construction Disputes**

4 The Court alone is charged with construing the patent claims. *Markman*, 517
5 U.S. at 372. District courts are directed to resolve claim construction disputes and
6 not to allow such issues to go to the jury. The Federal Circuit has declared that
7 “[w]hen the parties raise an actual dispute regarding the proper scope of [the]
8 claims, the court, not the jury, must resolve that dispute.” *O2 Micro Int’l Ltd. v.*
9 *Beyond Innovation Tech. Co., Ltd.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008). Thus, it
10 is legal error to allow the parties’ respective experts to testify at trial about the
11 meaning of the claims. *NobelBiz, Inc. v. Global Connect, L.L.C.*, 701 Fed. App’x.
12 994, 997 (Fed. Cir. 2017) (unpublished).

13 Similarly, deciding that a disputed claim term should be afforded its “plain
14 and ordinary meaning” is legal error where reliance on a term’s plain and ordinary
15 meaning does not resolve the parties’ dispute as to the scope of the term. *Eon*
16 *Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1319 (Fed.
17 Cir. 2016). District courts are not relieved of their obligation to construe claim
18 terms even if those terms are familiar to a layperson. *See Clare v. Chrysler Group*
19 *LLC*, 819 F.3d 1323, 1329 (Fed. Cir. 2016) (“Although [the words ‘external’ and
20 ‘appearance’] may be readily apparent to a lay person there existed a fundamental
21 dispute regarding the scope of those limitations.”).

22 Even though a claim term is given its plain and ordinary meaning, “that is no
23 reason why a claim term cannot be given a construction that explains, in language
24 comprehensible to a jury, what the term means to a person of ordinary skill in the
25 art. After all, the factfinder in patent trials is usually a jury of laypersons, and claim
26 terms written in technical language may have to be recast in words that nonexperts
27 will understand.” *Largan Precision Co, Ltd. v. Genius Elec. Optical Co., Ltd.*,

2014 WL 5358426, *3-5 (N.D. Cal. Oct. 20, 2014) (citing *Abbott Laboratories v. Sandoz, Inc.*, 544 F.3d 1341, 1360 (Fed. Cir. 2008)) (rejecting patentee’s contention that because the “plain and ordinary” meaning should apply to the claim terms the court did not, and should not, provide a further construction).

IV. LEVEL OF ORDINARY SKILL AND DATE OF INVENTION

The Patents-in-Suit are in the field of art of wireless communication networks, the LTE and LTE-A wireless communication methods, and associated equipment. Ex. 1 at Abstract; Ex. 2 at Abstract; Ex. 3 at Abstract, 8:3-5. A person having ordinary skill in this art (“POSITA”) would have had at least the equivalent of an undergraduate degree in electrical engineering, computer science, or computer engineering, or a related field, and two years of experience in the design, research, development, operations, and/or testing of wireless communications networks or hardware devices, or equivalent combination of education and experience. Lanning Decl. at ¶ 30. A higher education or skill may make up for less experience, and vice versa. *Id.*

The application of the ’656 patent claims priority to a foreign application filed October 27, 2006. Ex. 1 at [30]. The application of the ’068 patent claims priority to a foreign application filed November 4, 2008. Ex. 2 at [30]. The application of the ’976 patent claims priority to a foreign application filed January 7, 2011. Ex. 3 at [30]. Plaintiffs assert the same priority dates. Ex. 4 at 1.

V. ARGUMENT

TCL respectfully requests (1) the Court construe each of the disputed terms, and (2) the Court construe the terms as TCL proposes. Construction is necessary as the parties dispute the scope of the disputed terms, and such dispute should be resolved by the Court, not the jury. *O2 Micro*, 521 F.3d at 1362. TCL’s proposed constructions accurately capture what a POSITA would understand the inventors to have claimed.

1 **A. “quality notification signal” (the ’656 patent, claim 3)**

2

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
Channel Quality Indication (CQI) signal	No construction necessary.

3

4

5 The parties dispute the scope of a “quality notification signal” as used in
6 claim 3 of the ’656 patent. While opposing TCL’s proposed construction, Plaintiffs
7 again do not specify how this term would have been understood by a POSITA. *See*
8 *Largan Precision Co*, 2014 WL 5358426, at *3-5 (rejecting patentee's contention
9 that because the “plain and ordinary” meaning should apply to the claim terms the
10 court did not, and should not, provide a further construction); *see also Baxter*
11 *Healthcare Corp. v. Mylan Lab ’ys Ltd.*, 346 F. Supp. 3d 643, 653 (D.N.J. 2016)
12 (“[T]he Court rejects ... the notion that the disputed claim terms require no
13 construction, or can be construed simply by reference, without explanation, to the
14 ‘plain and ordinary meaning.’”). In their infringement contentions, however,
15 Plaintiffs appear to assert that this term means either one of “channel quality
16 indication (CQI),” “precoding matrix indicator (PMI),” or “rank indication (RI).”
17 *See, e.g.,* Ex. 5 at 3 (“A UE shall transmit periodic CQI/PMI, or RI reporting”).
18 Such a construction is not supported by the specification and improperly gives the
19 term a broader meaning than how a POSITA would have understood the term at the
20 time of the purported invention.

21 The intrinsic evidence supports TCL’s construction that the term “quality
22 notification signal,” as used in claim 3 of the ’656 patent, only refers to a Channel
23 Quality Indication (CQI) signal. Claim 3 recites that “a quality notification signal”
24 is “for notifying downlink communication quality to a base station.” The
25 specification, in turn, explains that “the quality information indicating the quality of
26 the received data or the quality of the downlink communication path” is referred to
27 as “a CQI (Channel Quality Indicator).” Ex. 1 at 2:32-35. The specification further
28

discloses that “[a] CQI is a signal with which the mobile terminal notifies the downlink channel's state (the communication paths state) which the mobile terminal has measured to the base station, and the base station uses the CQI for downlink scheduling.” *Id.* at 2:42-46. Thus, it is clear that within the context of the specification, “a quality notification signal” is synonymous with a “Channel Quality Indication (CQI) signal” as the latter performs the same goal/function of the former as recited in claim 3.

By contrast, the '656 patent does not disclose or even mention any “precoding matrix indicator (PMI)” or “rank indication (RI)””; nor does it associate any signal other than the CQI with notifying the quality of downlink communication. Thus, to the extent Plaintiffs argue the term “quality notification signal” would encompass any signal other than the CQI signal, such argument must be rejected as unsupported by the specification and as improperly broadening the scope of the term.

B. “when a transmission of said quality notification signal coincides with that of said scheduling request signal in said transmitter” (the '656 patent, claim 3)

TCL's Proposed Construction	Plaintiffs' Proposed Construction
when said [quality notification signal] is transmitted by the transmitter simultaneously with the transmission of the scheduling request signal over the same channel	No construction necessary

The parties dispute the scope of the term “when a transmission of said quality notification signal coincides with that of said scheduling request signal in said transmitter,” as used in claim 3 of the '656 patent. Plaintiffs disagree with TCL's proposed construction and yet do not explain what their definition of the plain and ordinary meaning of this term is. *See Largan Precision Co.*, 2014 WL 5358426, at *3-5; *see also Baxter Healthcare Corp.*, 346 F. Supp. 3d at 653.

1 1. *Transmission of the quality notification signal and the*
 2 *scheduling request signal should occur over the same channel*

3 The specification shows that transmission of the quality notification signal
 4 (construed as the CQI signal) and the scheduling request signal should occur over
 5 the same channel. As discussed in section II.B, the CQI signal is transmitted in an
 6 Ack/Nack exclusive channel, Ex. 1 at 3:35-53, and the scheduling request signal is
 7 transmitted in an S-RACH, *id.* at 4:47-49, 4:54-55.

8 The specification notes that the Ack/Nack channel and the S-RACH may be
 9 two different physical channels, but emphasizes “the mobile terminal does not use a
 10 multicarrier method of simultaneously transmitting data associated with *two*
 11 *physical channels* which are allocated to two types of bands, respectively.” Ex. 1
 12 at 15:20-28 (emphasis added); *see also id.* at 18:46-50, 24:5-12. Indeed, the
 13 purported invention of the ’656 patent is combining the Ack/Nack exclusive
 14 channel and the S-RACH into one physical channel, *id.* at 15:20-28, in order to
 15 prevent increase in the radio resources load on the communication system due to
 16 temporary increase in the physical channels, *id.* at 18:50-54.

17 Therefore, a POSITA would understand this term to mean that the
 18 transmission of the signals occurs in the same channel.

19 2. *The term “coincides with” should be construed as*
 20 *“simultaneously with”*

21 The term “coincides with,” as used in claim 3 of the ’656 patent, should be
 22 construed as “simultaneously with.” The specification of the ’656 patent supports
 23 this construction:

24 After, in ST604, determining the transmission timing of the
 25 uplink scheduling request signal SR, *at the same time* when the
 26 mobile terminal UE1 transmits the uplink scheduling request signal
 27 SR by using the S-RACH, the mobile terminal, in ST605, stops the
 28 transmission of a predetermined Ack/Nack symbol (or LB) of the
 uplink Ack/Nack exclusive channel or a COI symbol (or LB), which

1 the mobile terminal was originally scheduled to transmit *at the same*
 2 *timing*.

3 Ex. 1 at 16:7-18 (emphasis added).

4 In fact, the specification uses the term “simultaneously” to describe the
 5 transmission of the CQI and scheduling request signals: “[T]here can be considered
 6 a case in which the transmission of the CQI using an Ack/Nack exclusive channel
 7 and an uplink scheduling request signal SR occur *simultaneously*.” Ex. 1 at 18:23-
 8 26 (emphasis added).

9 The extrinsic evidence also supports this construction. The Websters Third
 10 International Dictionary defines “coincides” as “to occur at the same time or
 11 occupy the same period of time.” Ex. 8 at p. 441.

12 **C. “stopping transmitting said quality notification signal during a**
 13 **time interval during which said transmitter transmits said**
scheduling request signal” (the ’656 patent, claim 3)

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
stopping the transmission of said [quality notification signal] during a time interval when the transmitter is also transmitting said scheduling request signal on the same channel	No construction necessary

19 As explained in sections V.B.1 and V.B.2, the transmission of the quality
 20 notification signal and the scheduling request signal are simultaneous and on the
 21 same channel. TCL’s proposed construction incorporates those concepts while
 22 clarifying the language for the factfinder.

23 **D. “cells for specific subscribers” (the ’068 patent, claim 3)**

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
Home-eNB (HeNB) cells that support wireless communication only for user equipments allowed to use the HeNB cells	No construction necessary

1 The parties dispute the scope of the term “cells for specific subscribers” as
 2 used in claim 3 of the ’068 patent. While opposing TCL’s proposed construction,
 3 Plaintiffs do not specify anything about how this term would have been understood
 4 by a POSITA. *See Largan Precision Co*, 2014 WL 5358426, at *3-5; *see also*
 5 *Baxter Healthcare Corp.*, 346 F. Supp. 3d at 653.

6 TCL’s proposed construction is consistent with the specification.

7 The invention of the ’068 Patent is for a HeNB and determining the specific
 8 subscribers in a Closed Subscriber Group (CSG) that are allowed to communicate
 9 with it. *See* Lanning Decl. at ¶ 43.

10 The patent defines “subscriber” by its allowed use of a specific CSG cell.
 11 CSG cells, in turn, are defined as “Home-eNodeBs (Home-eNB and HeNB)” or
 12 “Home-NB (HNB)”. Ex. 2 at 10:67-11:2; *see also id.* at 11:18-21 (“The base
 13 station 72 is classified into the eNB (non-CSG cell) 72-1 and the Home-eNBs (CSG
 14 cells) 72-2.”). The difference between Home-eNB and Home-NB is that the former
 15 term is used in LTE systems and the latter term is used with reference to
 16 generations prior to LTE. Because the relevant technology of the Patents-in-Suit is
 17 LTE, *id.* at 56:55-57; Lanning Decl. at ¶¶ 32, 39, it is logical that the construction
 18 should be limited to “Home-eNB (HeNB) cells.”

19 The specification also notes that only the subscriber is allowed to use the
 20 HeNB cells. For example, the Abstract states “[a] closed subscriber group (CSG)
 21 cell is a cell that ***allows use*** of subscribers.” Ex 2 at Abstract (emphasis added).
 22 The specification also discloses “the user equipments access the cells for specific
 23 subscribers using access allowance information issued upon ***use*** of the cells for
 24 specific subscribers ***being allowed.***” Ex. 2 at 7:37-40 (emphasis added).
 25 Accordingly, “cells for specific subscribers” should be construed as “Home-eNB
 26 (HeNB) cells that support wireless communication only for user equipments
 27 allowed to use the HeNB cells.”
 28

1 E. “said base stations manually selected by user equipment” (the ‘068
2 patent, claim 3)

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
manual selection of a base station by a user of user equipment	No construction necessary

3 The parties dispute the scope of the term “said base stations manually
4 selected by user equipment,” as used in claim 3 of the ‘068 patent. While opposing
5 TCL’s proposed construction, Plaintiffs again do not specify how this term would
6 have been understood by a POSITA. *See Largan Precision Co*, 2014 WL 5358426,
7 at *3-5; *see also Baxter Healthcare Corp.*, 346 F. Supp. 3d at 653. In their
8 infringement contentions, however, Plaintiffs appear to believe that the manual
9 selection can be performed by user equipment (“UE”) instead of a “user.” *See, e.g.*,
10 Ex. 6 at 6 (“UE manually selects a CSG cell whose CSG ID and associated
11 PLMN”). Such a construction is nonsensical.

12 By definition, a user equipment cannot “manually” select anything. Only a
13 user can. Thus, construing this term to mean that the manual selection is performed
14 by a user equipment effectively reads out the express claim limitation of
15 “manually.” This is improper. *Aspex Eyewear, Inc. v. Marchon Eyewear, Inc.*, 672
16 F.3d 1335, 1348 (Fed. Cir. 2012) (holding that district court erred in construing
17 “rearwardly directed free end” to just be a rearwardly directed portion since that
18 read out the “free” requirement).

19 Such a construction is also contradicted by the specification of the ‘068
20 patent, which explicitly states that manual selection must be performed by a user:

21 As the manual search method, not only activated before cell
22 search and cell selection but also in the cell search, the cell
23 identification numbers of one or a plurality of cells suitable for cell
24 search selection criteria, TAC, CSG-ID or the like may be indicated
25 by the UE, so that *a desired cell* among the one or the plurality of
26 cells is *manually selected by a user of the UE* to establish the RRC
27 connection and transmit the TAU request to the desired cell. Through
28 manual selection of the CSG cell with which the UE has performed

1 user access registration as a desired cell, the UE is not required to
 2 perform transmission/reception for RRC connection establishment
 3 to/from the CSG cell with which user access registration has not been
 4 performed and transmission of a TAU request message to the CSG
 cell.

5 Ex. 2 at 32:47-60 (emphasis added).

6 TCL's expert Mark Lanning agrees:

7 [T]his term requires the person ["the user of user equipment"] using
 8 the "user equipment" device to view a list of possible options on a
 9 display and select the desired option by pressing on a specific part of
 10 the touch screen or making a selection on another type of screen with
 11 a mouse device. This is similar to the way users typically select a
 12 specific Wi-Fi network for their devices to use when they enter a hotel
 or other area with multiple Wi-Fi network options and the device
 needs the person's input to determine the correct network to use.

13 Lanning Decl. at ¶ 49.

14 Thus, the Court should adopt TCL's proposed construction that clarifies that
 15 manual selection of a base station is done by a user of user equipment, consistent
 16 with the intrinsic evidence.

17 **F. "an associated cell configured by the base station to include a**
 18 **resource for uplink and a resource for downlink" (the '976 patent,**
claim 2)

TCL's Proposed Construction	Plaintiffs' Proposed Construction
a first type of cell that is configured by the base station, where the first type of cell is configured with a resource for uplink and a resource for downlink, both assigned to a specific communication terminal device	No construction necessary

25 The parties dispute the scope of the term as used in claim 2 of the '976
 26 patent. While opposing TCL's proposed construction, Plaintiffs once again do not
 27 specify how this term would have been understood by a POSITA. *See Largan*

1 *Precision Co*, 2014 WL 5358426, at *3-5; *see also Baxter Healthcare Corp.*, 346 F.
 2 Supp. 3d at 653. In their infringement contentions, however, Plaintiffs appear to
 3 give this term a much broader meaning that is not supported by the intrinsic
 4 evidence. *See, e.g.*, Ex. 7 at 5-6, 22 (asserting a “primary cell (PCell),” an “SCell
 5 Secondary Cell,” or “one or more SCells, aggregated with the PCell”). TCL’s
 6 proposed construction elucidates the claim language for the fact finder.

7 The claim refers to an “associated” cell but there is no context for what is
 8 associated. Rather than use “associated” (and “unassociated” as discussed below),
 9 the specification refers to two types of cells: cell1 and cell2. The specification
 10 explicitly associates cell1 with an “associated cell.” Ex. 3 at 33:20-21 (“[t]he cell1
 11 corresponds to an associated cell”). In other words, a first type of cell.

12 The characteristics of cell1 are also consistent with the “associated cell” of
 13 claim 2. For example, like stated in the claim, the associated cell is configured by
 14 the base station to have a resource for uplink and a resource for download. Ex. 3 at
 15 54:36-38 (Claim 2) (“an associated cell configured...to include a resource for
 16 uplink and a resource for downlink”). The specification contrasts cell1 with cell2
 17 which does not include a resource for uplink. Ex. 3 at Abstract (“The cell2 does not
 18 include a resource for uplink... A DL CC1 and a UL CC1 constitute a cell1.”); *see*
 19 *also id.* at 33:17-19 (“A cell1 is configured by a DL CC1 and a UL CC1.... A cell2
 20 is configured by only a DL CC2, where a UL CC is not configured.”).

21 Accordingly, there are at least two types of cells described in the specification, one
 22 with both uplink and downlink resources and another with just downlink resources.
 23 The “associated cell” is a first type, which is later contrasted with an unassociated
 24 cell, which is the second type.

25 TCL’s proposed construction also provides additional context for this claim
 26 term by specifying that the uplink and downlink resources are assigned to the same
 27
 28

1 communication terminal. This is consistent with how the specification describes
2 the allocation of uplink and downlink resources:

3 [T]he base station device configures an asymmetrical cell including a
4 resource for downlink and a resource for uplink, the resource for
5 downlink being allocated to downlink communication to the
6 communication terminal device, the resource for uplink being
7 included in a frequency band different from that of the resource for
8 downlink and being allocated to uplink communication from the
9 communication terminal device.

9 Ex. 3 at 11:5-17.

10 As described in the above quote, there is a single base station device that
11 configures resources for downlink and resources for uplink, and those resources are
12 both allocated to “the communication terminal device.” In other words, the term
13 “the communication terminal device” appears twice, both times referring to a single
14 communication terminal device. Thus, clarifying the claim term with the phrase
15 “both assigned to a specific communication terminal device” is not only consistent
16 with the intrinsic evidence, but also helpful in understanding the meaning of the
17 claim term.

18 TCL’s proposed construction is also consistent with the structure of the
19 claim. The preamble of claim 2 recites “[a] communication terminal device
20 performing radio communication with a base station device.” In other words, the
21 claim is describing the communication between a single base station and a single
22 communication terminal device.

23 **G. “a non-associated cell configured by the base station to include**
24 **only another resource for downlink” (the ’976 patent, claim 2)**

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
a second type of cell that is controlled by the same base station that also controls the associated cell, where the second type of cell is configured to	No construction necessary

communicate only by another resource for downlink	
--	--

The parties dispute the scope of the term “a non-associated cell configured by the base station to include only another resource for downlink,” as used in claim 2 of the ’976 patent. While opposing TCL’s proposed construction, Plaintiffs again do not specify how this term would have been understood by a POSITA. *See Largan Precision Co*, 2014 WL 5358426, at *3-5; *see also Baxter Healthcare Corp.*, 346 F. Supp. 3d at 653. TCL’s proposed construction elucidates the claim language to make the claim language clear to the fact finder.

As discussed in section V.F, the ’976 patent consistently references two types of cells (cell1 and cell2) and cell1 corresponds with an “associated cell” or a “first type of cell.” The specification explicitly links “non-associated cell” to “cell2.” Ex. 3 at 33:23-24 (“[t]he cell2 corresponds to a non-associated cell”). In other words, a second type of cell.

The characteristics of “cell2” (*i.e.*, the second type of cell) are consistent with the claimed “non-associated cell:” both only have downlink resources. For example, the Abstract provides “[a] cell2 configured by only a DL CC2 being a resource for downlink is configured. The cell2 does not include a resource for uplink, that is, a UL CC to be associated with the DL CC2 by a DL/UL link.” *See also* Ex. 3 at 33:17-19 (“A cell2 is configured by only a DL CC2, where a UL CC is not configured.”). In other words, “cell2” involves a resource for downlink only. This is consistent with the claim element reciting a non-associated cell “configured by the base station to include only another resource for downlink.” Thus, construing “a non-associated cell” as “a second type of cell” is consistent with the ’976 patent’s reference to a “cell2.”

Moreover, TCL’s proposed construction makes clear that it is the same base station that is controlling the associated cell (*i.e.*, cell1 or first type of cell) that is

controlling the non-associated cell (*i.e.*, cell2 or second type of cell). For example, the specification states that “the eNB or cell1 determines to perform CA on the cell2 for the UE.” Ex. 3 at 33:37-38. The “eNB” is the base station of cell1, and it performs CA or “carrier aggregation,” which is combining of the downlink resources of cell1 and cell2 for the UE or user equipment. This is also consistent with the claim language itself that refers to “*the* base station”. See *X One, Inc. v. Uber Techs., Inc.*, 440 F. Supp. 3d 1019, 1034 (N.D. Cal. 2020) (construing three instances of the term “map” as all referring to the same map where the claim limitation introduced the term with the indefinite article “a” as the antecedent basis and then used the definite article “the” for the two subsequent references to the map showing the same map was being referred to in the limitation).

H. “the other resource for downlink being allocated to the downlink communication from the base station device” (the ’976 patent, claim 2)

TCL’s Proposed Construction	Plaintiffs’ Proposed Construction
the another resource for downlink being allocated to the downlink communication from the base station device	No construction necessary

The term “the other resource. . .” must be construed to mean “the another resource. . .” because otherwise, this term would be indefinite and invalid for lack of antecedent basis. Claim 2 recites “a resource for uplink and a resource for downlink” with respect to “the communication terminal device” performing uplink communication and “only another resource for downlink” and “the other resource for downlink” with respect to the “communication terminal device” performing down link communication. Ex. 3, claim 2. It is unclear what “the other resource for downlink” refers to as the claim mentions “only another resource” and does not provide whether there are any other remaining resources for downlink. Therefore, adopting TCL’s construction would be helpful here to clarify this apparent

1 antecedent issue. *See Intelligent Water Sols., LLC v. Kohler Co.*, No. 2:16-CV-689,
2 2017 WL 2444723, at *24 (E.D. Tex. June 5, 2017) (rejecting plaintiff's proposed
3 construction of plain and ordinary meaning and construing the disputed term to
4 resolve the issue of lack of antecedent basis).

5 **VI. CONCLUSION**

6 For the foregoing reasons, Defendants respectfully request the Court construe
7 the disputed claim terms as Defendants propose.

8
9 Dated: May 4, 2023

PV LAW LLP

10
11 By /s/ Bradford A. Cangro
12 Bradford A. Cangro

13 *Attorneys for Defendants TCL*
14 *Communication Technology Holdings*
15 *Limited, TCT Mobile International*
16 *Limited, TCT Mobile, Inc., TCT Mobile*
17 *(US) Inc., and TCT Mobile (US) Holdings*
18 *Inc.*

CERTIFICATE OF COMPLIANCE

Pursuant to L.R. 11-6.2, the undersigned, counsel of record for Defendants, certifies that this Defendants' Opening Claim Construction Brief, exclusive of the caption, the table of contents, the table of authorities, the signature block, the certification required by L.R. 11-6.2, and list of exhibits, contains 5,816 words, which complies with the word limit of L.R. 11-6.1.

Further pursuant to L.R. 11-6.2, the undersigned has relied on the word count feature of the word-processing system used to prepare this document.

Dated: May 4, 2023

PV LAW LLP

By /s/ Bradford A. Cangro
Bradford A. Cangro

*Attorneys for Defendants TCL
Communication Technology Holdings
Limited, TCT Mobile International
Limited, TCT Mobile, Inc., TCT Mobile
(US) Inc., and TCT Mobile (US) Holdings
Inc.*