

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

AMERICAN GNC CORPORATION,

Plaintiff,

v.

ZTE (USA) INC., and  
ZTE (TX) INC.

Defendants.

Civil Action No. 4:17-cv-00620-ALM-  
KPJ

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**AGNC'S REPLY CLAIM CONSTRUCTION BRIEF**

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## I. ZTE Alleges 11 Terms Are Indefinite, But Provides No POSITA Evidence

While indefiniteness is a question of law, it turns on subsidiary factual findings and is an invalidity defense on which the defendant bears the burden of proof by clear and convincing evidence. The *Nautilus* standard depends on the views of those of ordinary skill in the art, and here, only AGNC has presented any views of one of ordinary skill. ZTE cannot meet its burden of indefiniteness for any term. ZTE also nowhere acknowledges the admissions of LG's experts.

### 1-2. “vehicle” (’555 claim 49) and “said vehicle” (’648 claim 4)<sup>1</sup>

| AGNC’s Proposed Construction                                                         | ZTE’s Proposed Construction                                                                       |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| “a carrier: a means of carrying or transporting something”                           | “a self-propelled device or structure for transporting persons or goods, such as a motor vehicle” |
| “said vehicle” refers to the “carrier carrying said micro inertial measurement unit” | “said vehicle” = indefinite                                                                       |

ZTE’s Brief cannot defend the requirement in its proposed construction that a “vehicle” in the ’555 patent must be “self-propelled,” a definition that excludes common vehicles such as bicycles, buggies, rickshaws, and red wagons. There is no intrinsic evidence that supports it. ZTE offers no disagreement with AGNC’s four dictionary definitions, which make clear that a “vehicle” is “a means of *carrying* or transporting something.” Mr. Messenger, a POSITA, opined that a skilled artisan would understand “vehicle” consistent with AGNC’s proposed construction. Ex. 1 ¶¶74-78. ZTE offers no opinion of any skilled artisan.<sup>2</sup> ZTE’s proposed limitation of “vehicle” relies on an undefined and unsupported reference to the “traditional sense” of the word, in conflict with the specification and the only record view of a POSITA.

Notably, in ’648 patent claim 4, “said vehicle” refers back to the very same words

<sup>1</sup> Although ZTE does not contend that “vehicle” is indefinite, the terms present related issues, and, to save space, AGNC addresses “vehicle” and “said vehicle” together.

<sup>2</sup> The best ZTE can do is indiscriminately cite to 10 pages of Mr. Messenger’s deposition discussing whether in other contexts, including those not related to the patents, a “vehicle” might include a number of other objects. But, this is irrelevant to any dispute in this case.

provided by the four dictionaries: a “carrier” that is “carrying. . .” ZTE asks the Court to ignore that common meaning to find claim 4 invalid as indefinite. Consistent with the dictionaries, Mr. Messenger opined that one of ordinary skill would understand that “said vehicle” in claim 4 refers back to the “carrier.” Ex. 1 ¶¶82-83. Despite bearing the burden of proof by clear and convincing evidence, ZTE provides no evidence of indefiniteness. MPEP § 2173.05(e).

Instead of providing evidence, ZTE represents to the Court that AGNC has conceded that the claim contains an error. Not so. *Id.*; see also Ex. 15 118:20-119:1. ZTE also offers lawyer argument that vehicle does not “have a reasonably clear connection to the earlier term” carrier.<sup>3</sup> ZTE’s argument that “carrier” is used only to describe “carrier reference signals” overlooks the disclosures in the ’648 patent that use “carrier” to describe the object whose motion is being measured. See Ex. 11 at Abstract; 1:10-16; 1:19-21, 1:38-44; 2:54-61. The ’555 spec. and claims discuss “measuring vehicle angular rate.” Based on these examples and the patents’ other disclosures, Mr. Messenger opined that a POSITA would understand “carrier” and “vehicle” to mean the same thing in this context of these patents. Ex. 1 ¶76. It is within this context that both the ’648 and ’555 patents disclose “typical applications” that include personal navigators:

(4) Typical applications: automobiles, railway vehicles, miniature land vehicles, robots, unmanned ground vehicles, *personal navigators*, and military land vehicles.

’555 at 12:55-58; ’648 at 3:38-41 (emphasis added). A phone is certainly included within a “personal navigator” and, therefore, is specifically disclosed as one type of carrier/vehicle.

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<sup>3</sup> ZTE relies on an obsolete pre-*Nautilus* legal standard, citing a March 2014 Missouri district court case (*Sudden Valley*). Dkt. No. 119 at 23. ZTE’s citation to *SimpleAir* also does not support its standard. ZTE also incorrectly represents that “*Nautilus* holds ‘that there is an indefiniteness problem if the claim language might mean several different things and no informed and confident choice is available among the contending definitions.’” Dkt. No. 119 at 3. But, the language ZTE cites comes from a 2014 Florida district court case in *Nautilus* footnote 8, which the *Nautilus* Court cited as an example of the fact that prior (now obsolete) formulations of the indefiniteness standard “can breed lower court confusion.” ZTE’s formulation is not the law.

(AGNC agrees that a “person” is not included within the definition of “vehicle.”) AGNC’s proposal does not read “vehicle” out of the claim.

**3-4. “said measured position” (’227 claim 36 and ’353 claim 6) and “said global positioning system receiver” (’227 claim 36)**

ZTE alleges that these two terms are indefinite, but despite the *Nautilus* standard, ZTE provides no view of any POSITA. Mr. Messenger’s opinion about how a skilled artisan would have understood the claim is uncontradicted. That a GPS is one type of “position determination device” disclosed by the specification is irrelevant. There is no evidence of any “error” in the claim; the only evidence is to the contrary. Ex. 1 ¶¶95-100. Implicit antecedent basis is legally permissible. ZTE’s attorneys’ arguments that the claim is “unclear” and that AGNC’s proposed meanings are “not necessarily the case” are not clear and convincing evidence.

**5. “said position, attitude, and heading angle measurements” (’283 claim 1)**

As set forth in the opening brief, the claim term has an implicit antecedent basis: the position, attitude and heading angle measurements computed by a position, attitude and heading processor using three-axis digital angular increments and three-axis velocity increments. ZTE’s Brief identifies no error with this understanding, which is consistent with the claim, the specification, and the view of a POSITA. No “error” needs to be corrected, rather the claim should be interpreted consistent with the only record view of one of ordinary skill in the art.

**6. “consistent and repeatable angular rate signals” (’555 claim 49)**

Mr. Messenger has opined that in the context of the ’555 patent claim 49, a POSITA would have no problem understanding “consistent and repeatable angular rate signals”; the term refers to “angular rate signals that result from processing by (1) angle signal loop circuitry or (2) dither motion control circuitry or (3) an oscillator.” Ex. 1 ¶121. Consistent with ZTE’s caselaw, AGNC’s proposed construction offers an objective standard for determining if the claim

limitation is met. Unable to articulate anything wrong with this construction, or provide any contrary evidence, ZTE resorts to calling it “nonsensical” and meaningless.<sup>4</sup> That the ’555 claim uses the term and the ’122 claim does not, does not render claim 49 indefinite.

**7. “Displaying an accurate position of said user” (’227 claim 3, ’353 claim 3)**

The disclosures of the ’227 and ’353 patents would have allowed a skilled artisan to know the scope of the claimed invention with reasonable certainty. Ex. 1 ¶¶123-127. As part of a further effort to compromise, AGNC proposed that the term should be construed to mean “either (1) the position displayed to the user is within 100 meters of the user’s actual position or (2) the position displayed to the user has an accuracy of better than 1 percent of the distance traveled.” This provides an objective standard for determining if the claim term is met. That the standards refer to shortcomings in the prior art is not a flaw; it is entirely logical.

**8-10. “An enhanced global positioning system and map navigation process” (’227 claims 1, 2, 3, 36); “An enhanced inertial measurement unit/global positioning system and map navigation process” (’353 claims 1, 2, 3, 6, 7); “enhancing data management” (’227 claims 1, 36 and ’353 claims 1, 6)**

ZTE admits that the relevant standard is whether the scope of the claims is reasonably ascertainable to those of skill in the art, but ZTE offers no view from any POSITA. ZTE admits that the ’227 specification teaches that the GPS and map navigation process is enhanced when data beyond GPS data is used and the ’353 patent teaches that the IMU/GPS and map navigation process is “enhanced” when it uses location information provided by an IMU/GPS integrated system. In light of these disclosures, Mr. Messenger opined that a POSITA would understand the scope of the claims. Ex. 1 ¶¶142-143. ZTE’s only response is attorney argument conflating

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<sup>4</sup> ZTE’s reliance on *SimpleAir, Inc. v. Sony Ericsson Mobile Commc'ns AB*, 820 F.3d 419, 431 (Fed. Cir. 2016) is misplaced. There, claim terms among claims in the *same patent* were at issue. Here, the ’122 and ’555 patents are different patents with different claims.

the different term “enhancing data management,” which ZTE admits relates to speeding up database access and query. ZTE’s conflation of two different sets of terms amounts to speculation that a POSITA would also confuse them; this is not clear and convincing evidence.

#### 11. “means for blending measurements” (’353 claims 1, 7)

ZTE asks the Court to impose a heightened subjective standard: that the specification explain *how* the structure performs the claimed function. ZTE cites no case supporting this requirement.<sup>5</sup> The premise of ZTE’s argument is that the ’353 patent “provides no prose description of the required Kalman filter algorithm.” But, the term “Kalman filter” is— itself — a prose description of the algorithm to a skilled artisan; *Typhoon* remains indistinguishable. The only, and uncontradicted, record view of any skilled artisan is that a Kalman filter is a known algorithm (Ex. 1 ¶¶37-67) and that its variables, factors, and computations are known in the art. *Id.* ¶¶66, 69 (“a person of ordinary skill in the art does not need the patent to supply additional mathematical details”). Mr. Messenger’s testimony that using a Kalman filter “takes work” and that an engineer may need a reference book or a computer to actually recall and perform the specific complex calculations does not mean that the patent’s disclosure is insufficient. No evidence supports ZTE’s attorney argument that a skilled artisan would have “no certainty” about how to implement a Kalman filter. *Cf. Typhoon Touch Techs., v. Del*, 659 F.3d 1376, 1385 (Fed. Cir. 2011) (citing “no evidence” that one “of ordinary skill in the field would not understand how to implement this function.”).<sup>6</sup>

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<sup>5</sup> The only case ZTE cites with an insufficient disclosure is *Ibormeith v. Mercedes-Benz*, 732 F.3d 1376 (Fed. Cir. 2013). That specification only disclosed “factors” to be used but “fail[ed] to disclose the steps necessary to actually perform that suggested algorithm.” *Id.* at 1379.

<sup>6</sup> ZTE cites *EON Corp. IP Holdings v. AT&T Mobility*, 785 F.3d 616 (Fed. Cir. 2015) for the proposition that the POSITA’s knowledge is “irrelevant.” Dkt. No. 119 at 3. However, in *EON*, the parties agreed that there was no disclosed structure or algorithm. *Id.* at 621, 623. In that

## II. Terms that ZTE Asks to Limit to Disclosed Embodiments

The “focus” of claim construction is on “what one of ordinary skill in the art at the time of the invention would have understood the term to mean.” *Markman v. Westview Instr.*, 52 F.3d 967, 986 (Fed. Cir. 1995). ZTE provided no evidence on that issue, either. For each of the terms below, the dispute distills down to whether the claims should be limited to the disclosed embodiments. They should not. “That claims are interpreted in light of the specification does not mean that everything expressed in the specification must be read into all the claims.”

*Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957 (Fed.Cir.1983). The focus is on the claims:

If everything in the specification were required to be read into the claims, or if structural claims were to be limited to devices operated precisely as a specification-described embodiment is operated, there would be no need for claims. Nor could an applicant, regardless of the prior art, claim more broadly than that embodiment. Nor would a basis remain for the statutory necessity that an applicant conclude his specification with “claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.” 35 U.S.C. § 112. It is the claims that measure the invention.

*SRI International v. Matsushita Electric Corp.*, 775 F.2d 1107, 1121 (Fed. Cir. 1985) (*en banc*).

Because an applicant is entitled to claim the full scope of the invention supported by the specification, it is improper to limit claims to the details of a disclosed embodiment.<sup>7</sup> In the absence of an “express

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context, the POSITA plays no role in the legal question of “determining whether an algorithm must be disclosed.” *Id.* at 624. *EON* also rejected the standard of whether a person of skill in the art could *devise* a means to carry out the function, where none was disclosed. *Id.* *EON* affirmed the opposite of what ZTE argues: that “Where the specification discloses an algorithm that the accused infringer contends is inadequate, we judge the disclosure’s sufficiency based on the skilled artisan’s perspective.” *Id.* at 624. *Aristocrat Techs. v. Int’l Game Tech.*, 521 F.3d 1328 (Fed. Cir. 2008) also does not support ZTE’s position. There, the specification only disclosed “examples of the results of the operation of an unspecified algorithm” but not the algorithm itself. *Intellectual Ventures II v. AT&T*, 2015 WL 4138590, at \*16 (W.D. Tex. July 8, 2015) is also inapposite. There, there was no evidence that the term was “a ‘term of art’ or would be readily understood by a person of ordinary skill in the art.” *Id.*

<sup>7</sup> ZTE relies on *Laitram v. Morehouse*, 143 F.3d 1456 (Fed. Cir. 1998) to argue that claims should be limited to the specification where all disclosed embodiments contain certain features.

intent to impart a novel meaning to claim terms,” an inventor’s claim terms take on their ordinary meaning. *Teleflex, Inc. v. Ficos N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002).

**12-13. “digital angular [velocity] increments” (claim 1 of ’648, ’758, ’283)**

Contrary to ZTE’s representations, the parties agree that the changes in velocity (or angular increments) are understood in the context of a reference time interval. AGNC disagrees that the time interval must be “predetermined;” “predetermined” introduces ambiguity where there is none. AGNC also disagrees that the changes must be “accumulated.” ZTE’s proposal is an improper request to limit the claims to the features of certain disclosed embodiments. Even if the specification only disclosed one embodiment, the claim terms are not limited to that embodiment. *E.g. Teleflex v. Ficos*, 299 F.3d 1313, 1327-28 (Fed. Cir. 2002). ’283 claim 21 already contains the additional limits that ZTE proposes; they should not be added to claim 1.

**14-16. converting/converted terms (claim 1 of ’648, ’758, ’283)**

ZTE’s Brief suggests that there is a dispute about whether converting includes both integrating and digitizing, but there is none. ZTE’s real request is to limit the claims to a specific order of steps, proposing to require integrating *before* digitizing by including the phrase “and then.” ZTE’s Brief ignores Federal Circuit law that a “claim is not limited to performance of the steps in the order recited.” *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, 512 F.3d 1338, 1345 (Fed. Cir. 2008). *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369 (Fed. Cir. 2003) addressed facts indistinguishable from those here, holding that: “the district court ran afoul of our prohibition against importing a limitation from the specification into the claims—here the order of steps used

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But, *Laitram* does not support this. In that case, unlike here, the applicant disclaimed scope to try to overcome prior art during examination, consistent with the specification. *Bell Atl. Network Servs., Inc. v. Covad Commc'ns*, 262 F.3d 1258, 1271 (Fed. Cir. 2001) also does not support ZTE’s request. The issue in *Bell* was that the specification used the terms “mode” and “rate” to refer to two separate and distinct concepts. This is inapplicable to any issue in this case.

by the sole, preferred embodiment.” In that case, the specification “only discusses a single ‘preferred’ embodiment” but there was not “any statement that this order is important, any disclaimer of any other order of steps, or any prosecution history indicating a surrender of any other order of steps.” *Id.* at 1371. Here, the same is true. Also, Mr. Messenger explained that a POSITA would understand that the integrating and digitizing steps can be done in any of several different orders. Ex. 1 ¶¶90-92. This evidence remains uncontradicted.

**17-19. “time-space filtering” (’227 claims 1, 36 and ’353 claims 1, 6); “displaying position” (’227 claims 1, 36; ’353 claims 1, 6) “true position” (’227 claims 1, 36; ’353 claims 1, 6)**

The claims make clear what these terms mean. ZTE has not demonstrated that there is any ambiguity. ZTE derides AGNC’s proposed constructions because they are consistent with the definitions in the claims, but claim construction “begins and ends in all cases with the actual words of the claim.” *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1248 (Fed. Cir. 1998) *citing Abtox, Inc. v. Exitron Corp.*, 122 F.3d 1019 (Fed.Cir.1997) (“[T]he language of the claim frames and ultimately resolves all issues of claim interpretation.”). That the definitions repeat the claim language is one reason why unambiguous terms are not construed.

ZTE again asks this Court to re-write the claim to improperly impose examples from the specification as requirements of the claims, but ZTE cannot deny that the ’227 and ’353 patents disclose other embodiments. The dependent claims already recite ZTE’s proposed additional limitations; they should not be read into claims where they are not already present.

**20-21. “dither driver signals” (’122 claim 1); “dither drive signal” (’555 claim 49)**

ZTE proposes several additional limitations to these terms from the ’555 specification: “continuous or periodical electrical signal, such as voltage” “with predetermined frequency and amplitude” and “inertial elements oscillating with a constant momentum.” ZTE does not

acknowledge that '555 patent claim 49 expressly recites “constant momentum” but '122 claim 1 does not; despite the claims, ZTE proposes to treat them the same. Further, contrary to ZTE’s representations, the '555 patent does not “expressly define” a “dither drive signal.” Dkt. No. 119 at 6. ZTE points to '555 patent 2:40-43, but this portion of the specification refers to an “objective” of the inventions and teaches: “a digital processing system for outputting dither drive energy which is a kind of continuous or periodical electrical signal, such as voltage, with predetermined frequency and amplitude. . .” At most, it defines “dither drive energy” not the terms at issue. Nor is it correct that the specifications use the terms interchangeably in all instances. In fact, when asked about this statement at deposition, Mr. Messenger explained that “energy” and “signal” are not the same thing and that to impose such a definition would be nonsensical. E.g., Ex. 15 at 221:8-226:2. At most, the patent’s explanation of an objective is not a disclaimer limiting the definition in '555 claim 49, much less '122 claim 1. ZTE’s purported concern that AGNC’s proposed construction would also improperly encompass “noise signals” is not correct because it ignores the rest of the claim; '122 patent claim 1 already recites that a digital signal processing system analyzes digital low frequency inertial element displacement signals and feeds back dither driver signals to the angular rate sensor unit. The dither driver signals are not noise, but, rather, are based on the displacement of the inertial elements.

## **22. “capacitive pickoff excitation signals” ('122 claim 1)**

ZTE represents to the Court that the “'122 Patent defines ‘capacitive pickoff excitation signals’ as ‘phase reference signals from an oscillator.’” Dkt. No. 119 at 8 (citing Fig. 6, 8:19-26 and 8:55-60). But, by their plain language, the cited portions of the specification do not “define” the term, they provide examples of the sources of the signal for a different context. There is no dispute that the '122 patent discloses examples where the signals are also “phase reference

signals” and come from an “oscillator.” Limiting the claims to the preferred embodiments violates blackletter law. Mr. Messenger has opined that a POSITA would understand that there are other approaches that do not require an oscillator. Ex. 1 ¶35. Claim 5 already includes ZTE’s proposed limitations; they should not be added to claim 1.

**23. “displacement restoring signal” (’122 claim 1)**

ZTE seeks to improperly read in several additional requirements not present in the claims: that the “displacement restoring signal” is (1) formed by integrating an angular rate signal output and (2) amplified to form a driving signal fed back to the angular rate sensor unit. There is no dispute that Figure 6 discloses an example embodiment that includes ZTE’s additional proposed limitations. Still, it remains improper to import elements from the preferred embodiment into the claims. Dependent claim 7 already recites ZTE’s proposed limitations.

**III. Other Term - 24. “tile index file” (’227 claims 1, 36 and ’353 claims 1, 6)**

“Tile index file” is readily understandable and means simply “a file that contains an index of tiles.” What is required is already explained by the claims. The parties agree that the tile index file must contain the organizational scheme for correlating the geographic area with the corresponding tile. ZTE seeks to limit the term to require one specific way that the tile index file references the tiles, i.e. that the index file itself must identify the “subdivided map area for each tile within the database.”<sup>8</sup> There is no evidence that supports this specific requirement.

**IV. Conclusion**

This Court adopt AGNC’s proposed claim constructions as set forth above.

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<sup>8</sup> ZTE changed its proposed construction. *Compare* Dkt. No. 119 at 30 *with* Dkt. No. 102-1 at 8.

Respectfully submitted,

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**CERTIFICATE OF SERVICE**

The undersigned certifies that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system on March 14, 2018.

/s/ Alison Aubry Richards