TEXAS DIGITAL SYSTEMS V. TELEGENIX, INC.: TOWARD A MORE FORMALISTIC PATENT CLAIM CONSTRUCTION MODEL

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Dictionaries[1] are many courts' favorite interpretive tools. First, they are readily available. More important, they can provide courts with the prevailing, or ordinary, understanding of a term.[2] This practice of determining a term's ordinary meaning is crucial in legal interpretation of any written instrument.[3] Thus, it is no accident that patents as a particular form of written instruments are construed according to the plain meaning of their claims.[4] To that end, dictionaries invariably play a central role in a patent claim construction proceeding, where courts decide the scope of disputed patent claims.

What is striking, then, is how dictionaries' importance in patent claim construction has differed from that in other interpretative contexts. In interpreting contracts and statutes, courts' reliance on dictionaries has become a routine exercise that seldom requires much doctrinal justification. In contrast, dictionaries' evidentiary weight and significance in patent claim construction had been ambiguous before *Texas Digital Systems v. Telegenix, Inc.,* where the Federal Circuit firmly ratified dictionary use in claim construction, clarified dictionaries' evidentiary categorization, and set forth new procedures for lower courts to follow.[5] Viewed together with a long line of precedents, *Telegenix* evinces the Federal Circuit's increasing preference toward a more formalistic interpretive model for claim construction. This Note evaluates and supports the soundness of this move

1. In this Note, the term "dictionary" is used interchangeably with "dictionary, encyclopedia, or treatise," unless otherwise noted.

2. *See, e.g.*, Bayer AG v. Housey Pharms., Inc., 340 F.3d 1367, 1371 (Fed. Cir. 2003) ("Dictionaries of the English language provide the ordinary meaning of words used in statutes.").

3. *See, e.g.*, Watt v. Alaska, 451 U.S. 259, 266 n.9 (1981) (quoting from Judge Learned Hand that "[o]f course it is true that the words used, even in their literal sense, are the primary, and ordinarily the most reliable source of interpreting the meaning of any writing: be it a statute, a contract or anything else").

4. *See, e.g.*, Johnson Worldwide Assocs., Inc. v. Zebco Corp., 175 F.3d 985, 989 (Fed. Cir. 1999).

5. Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193 (Fed. Cir. 2002).

toward formalism, paying special attention to unique features and prospective and retrospective functions of patent law.

Part I of this Note traces the history of dictionary use in claim construction. Part II summarizes the *Telegenix* case and examines its connection to the Federal Circuit's past teachings, concluding that the ruling is not entirely unprecedented and provides the latest landmark in the move toward formalism. Part III then analyzes and applauds the logic of formalism in claim construction through an institutional lens into patent law, arguing that it is the most sensible model from a variety of interpretive theories in analogous fields of law.

I. BACKGROUND

A. The Interplay Between Dictionary Meanings and Meanings Derived from the Intrinsic Record

The scope of a patent derives from the meaning of its claims. In determining the scope of patent claims, courts have long held that claims are usually given their accustomed, ordinary meanings.[6] The origin of this plain meaning doctrine can be traced back to cases as early as 1877.[7] The most recent standard of its application, the *presumption* of ordinary meaning in claim construction, appeared in *Johnson Worldwide Associates, Inc. v. Zebco Corp.*[8]

Courts have also acknowledged that patents are instruments that convey highly technical and innovative ideas, for which plain meaning may be inadequate: a broad generic dictionary meaning often lacks sufficient precision to describe a highly technical, specialized, or new concept.[9] Therefore, courts developed a second and equally venerable canon of claim construction—patentees can be their own lexicographers.[10] Under

6. The ordinary meaning controls unless otherwise pointed out by patentees. *See Id.* at 1201-02 (internal citation omitted).

7. James R. Barney, *In Search of "Ordinary Meaning"*, 85 J. PAT. & TRADEMARK OFF. SOC'Y 101 (2003) (describing *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274 (1877), as setting forth the requirement that the terms of a patent should be clear and distinct, and therefore construction should follow ordinary or clear meaning).

8. *Id.* (citing *Zebco*).

9. *See* Autogiro Co. of Am. v. United States, 384 F.2d 391, 397 (Ct. Cl. 1967) ("The dictionary does not always keep abreast of the inventor. It cannot. Things are not made for the sake of words, but words for things. To overcome this lag, patent law allows the inventor to be his own lexicographer.").

10. *See, e.g.*, *id.* There are other scenarios where the presumption of ordinary meaning can be rebutted. *See, e.g.*, *Zebco*, 175 F.3d 985, 990 (Fed. Cir. 1999) (pointing out the second rebuttal besides the aforementioned lexicographer exception occurs when a de-

this doctrine, a patentee may define words in the patent to take on different meanings than their ordinary ones. This freedom comes at a cost though, because courts cannot now limit claim construction to the claims alone but have to search the intrinsic record to ascertain whether the patentee made any lexicography.[11]

Together, these two canons demand a holistic treatment of claim construction, requiring examination of both the patent's claims and its intrinsic record. The former demands that courts discern a term's ordinary meaning used by persons ordinarily skilled in the art. This is where dictionaries, especially dictionaries commonly referred to in the relevant field, can be most helpful. The latter canon requires that courts inspect the specification and file history in order to ascertain whether the patentee made any customized definition that is inconsistent with the dictionary meanings.

The interplay between dictionaries and the intrinsic record is also found in two other important and related interpretative canons of patent law: (1) "one may not read a limitation into a claim from the written description"; (2) that "one may look to the written description to define a term already in a claim limitation, [and] a claim must be read in view of the specification."[12] The two canons make necessary a claim construction model that neither favors the written description nor completely ignores it. Just like the plain meaning and lexicographer doctrines, these two canons support the notion that ordinary meaning of claim language should normally control the scope of a patent, unless it is evident from the intrinsic record that the patentee has acted as his or her own lexicographer.

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fault literal reading would so deprive the claim of clarity that the scope of claim could not be ascertained).

11. *Zebco,* 175 F.3d at 990. The *Zebco* court stated that

> [a]llowing the patentee verbal license only augments the difficulty of understanding the claims. The sanction of new words or hybrids from old ones not only leaves one unsure what a rose is, but also unsure whether a rose is a rose. Thus we find that a claim cannot be interpreted without going beyond the claim itself. No matter how clear a claim appears to be, lurking in the background are documents that may completely disrupt initial views on its meaning.

Id.

12. Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998).

B. Dictionaries' Uncertain Place in the Claim Construction Evidentiary Hierarchy Prior to *Telegenix*

In the search of the proper scope of a patent claim, two forms of evidence are generally considered: intrinsic evidence and extrinsic evidence. Intrinsic evidence refers to the claims, the specification, and the prosecution history, or the so-called file wrapper or file history.[13] Extrinsic evidence generally refers to evidence external to the patent and file history, such as expert and inventor testimony.[14] The dichotomous division reflects a difference in their evidentiary significance. The intrinsic record is almost always admitted if it is offered into evidence and has significant weight in claim construction.[15] Extrinsic materials, on the other hand, are admitted into evidence at the court's discretion, and receive lesser weight.[16] That is, extrinsic evidence "may be used only to help the court come to the proper understanding of the claims; it may not be used to vary or contradict the claim language."[17] In fact, when intrinsic evidence is unambiguous, reliance on extrinsic evidence is "legally incorrect."[18] In addition, Intrinsic and extrinsic evidence contain many subtypes that enjoy different gradations of evidentiary weight.[19]

Courts have long had difficulties placing dictionaries in this dichotomous categorical scheme. While dictionaries have regularly been used in claim construction,[20] the Federal Circuit, in *Markman v. Westview Instruments, Inc.*, listed dictionaries as part of extrinsic evidence.[21] Shortly after

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13. Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

14. Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

15. *See Autogiro*, 384 F.2d at 397 (Ct. Cl. 1967) ("In deriving the meaning of a claim, we inspect all useful documents and reach what Justice Holmes called the 'felt meaning' of the claim. In seeking this goal, we make use of three parts of the patent: the specification, the drawings, and the file wrapper."); *see also Vitronics*, 90 F.3d at 1582 ("Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term."); *Markman*, 52 F.3d at 980 ("[P]rosecution history can and should be used to understand the language used in the claims.").

16. *See Vitronics*, 90 F.3d at 1584.

17. *Id.*

18. *Id.* at 1585 ("Because the specification clearly and unambiguously defined the disputed term in the claim, reliance on this extrinsic evidence was unnecessary and, hence, legally incorrect.").

19. *See id.* at 1582-84.

20. Extrinsic evidence may "show what was then old, to distinguish what was new, and to aid the court in the construction of the patent." Brown v. Piper, 91 U.S. 37, 41 (1875). Extrinsic evidence includes dictionaries. *Markman*, 52 F.3d at 980.

21. *Markman*, 52 F.3d at 980 ("Extrinsic evidence consists of . . . expert and inventor testimony, dictionaries, and learned treatises.").

Markman, the court in *Vitronics Corp. v. Conceptronic, Inc.* again categorically placed dictionaries in the domain of extrinsic evidence with the caveat that courts may consult dictionaries at any time.[22] This qualified categorization is puzzling: extrinsic evidence is supposed to help courts' understanding of the underlying technologies, whereas dictionaries mainly reveal the ordinary meaning of claim terms. Moreover, extrinsic evidence should be used only after identifying an ambiguity in the intrinsic record.[23] This threshold restriction again conflicts with the caveat, which makes dictionary use temporally unconstrained. Additional confusion emanated from language in *Vitronics* that described the supreme importance of the specification (part of the intrinsic record) and then analogized the specification to a dictionary.[24]

This odd practice of labeling dictionaries extrinsic yet placing them outside the limitations of extrinsic evidence produced a strange creature in *Vitronics*'s structured hierarchy of evidence. A district court aptly summarized the aftermath of *Vitronics*: "Dictionaries are in that strange netherworld between the realms of intrinsic and extrinsic evidence."[25] The uncertainty surrounding dictionaries' role in claim construction has caused much uncertainty in patent litigation, where identifying the weight and admissibility of evidence derived from dictionaries became difficult. Scholars have been critical of this ambiguous placement, especially given that, unlike other extrinsic evidence, dictionaries are publicly available at the time of patent grant.[26]

Compounding the categorical uncertainty, the Federal Circuit also repeatedly admonished against indiscriminate use of dictionaries, further undermining the evidentiary significance of dictionaries. For example, in *Renishaw v. Marposs Socita' Per Azioni,* the court stated that "[i]ndiscriminate reliance on definitions found in dictionaries can often produce absurd results."[27] In *Hoechst v. BP Chemicals Ltd.*, the court

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22. *Vitronics*, 90 F.3d at 1584 n.6 ("[T]echnical treatises and dictionaries fall within the category of extrinsic evidence . . . .").

23. *Id.* at 1583 ("Where the public record unambiguously describes the scope of the patented invention, reliance on extrinsic evidence is improper.").

24. *Id.* at 1582 ("The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication . . . . Usually, [the specification] is dispositive; it is the single best guide to the meaning of a disputed term.").

25. SeaChange Int'l, Inc. v. nCUBE Corp., 115 F. Supp. 2d 473, 480 n.4 (D. Del. 2000).

26. *See, e.g.*, 5A DONALD, CHISUM, CHISUM ON PATENTS, § 18.03[2][b][i][C] (2003).

27. Renishaw PLC v. Marposs Societa' Per Azioni, 158 F.3d 1243, 1250 (Fed. Cir. 1998).

stated that dictionaries sometimes could not give dispositive answers to contested technical meanings.[28] The *Hoechst* court was especially wary of general dictionaries, placing their definitions below meanings "used and understood" by persons in a particular technical field,[29] thereby disapproving of their use for terms described in a technical context.

II. THE TELEGENIX DECISION

Despite, and perhaps in light of, the past confusion over dictionaries' significance and exact role in claim construction, the *Telegenix* panel firmly and enthusiastically approved the use of dictionaries in claim construction.[30] To that end, the court explicitly placed dictionaries outside the domain of extrinsic evidence,[31] and invited lower courts to consult them before the intrinsic record.[32]

A. Procedural History, Facts, and Holdings

In *Telegenix*, plaintiff Texas Digital Systems ("TDS"), the owner of four patents[33] on methods and devices for controlling color in light emitting diode ("LED") display, sued its competitor Telegenix for patent infringement. Following a jury verdict, the district court found TDS's patents at issue valid and ruled in TDS's favor, holding that Telegenix willfully infringed one or more of the asserted patents.[34]

Telegenix appealed the lower court's ruling to the Federal Circuit, asserting *inter alia* that the lower court (1) erroneously construed the claims

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28. Hoechst Celanese Corp. v. BP Chems. Ltd., 78 F.3d 1575, 1580 (Fed. Cir. 1996) ("[G]eneral dictionary definition is secondary to the specific meaning of a technical term as it is used and understood in a particular technical field.").

29. *Id.*

30. Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193,1203 (Fed. Cir. 2002).

31. *Id.* The court stated:

> As resources and references to inform and aid courts and judges in the understanding of technology and terminology, it is entirely proper for both trial and appellate judges to consult these materials at any stage of a litigation, regardless of whether they have been offered by a party in evidence or not. Thus, categorizing them as "extrinsic evidence" or even a "special form of extrinsic evidence" is misplaced and does not inform the analysis.

Id.

32. *Id.* at 1203-05.

33. U.S. Patent No. 4,965,561 (issued Oct. 23, 1990) ("the '561 patent"); U.S. Patent No. 4,845,481 (issued July 4, 1989) ("the '481 patent"); U.S. Patent No. 4,804,890 (Feb. 14, 1989) ("the '890 patent"); U.S. Patent No. 4,734,619 (Mar. 29, 1988) ("the '619 patent").

34. *Telegenix*, 308 F.3d at 1201.

at issue and (2) erroneously instructed the jury based on the incorrect claim interpretation.[35]

The Federal Circuit, reviewing the claim construction issues de novo, reaffirmed the critical importance of construing claims from their ordinary meaning.[36] Citing numerous precedents, the court also ratified dictionaries and technical treatises as proper ways to ascertain the customary and ordinary meaning of disputed terms.[37] The court reasoned that "[d]ictionaries, encyclopedias and treatises, publicly available at the time the patent is issued, are objective resources that serve as reliable sources of information on the established meaning."[38] The court further held that determining ordinary meanings, such as dictionary meanings, should be the first step in claim construction, and ordinary meanings prevail unless they conflict with the intrinsic record.[39] That is, the "presumption in favor of a dictionary definition" can be overcome if "the patentee [acts] as his or her own lexicographer" within the intrinsic record.[40]

After explicating the new claim construction procedure and the new centrality of dictionaries, the court reversed eight constructions and affirmed one.[41] The court further held that the district court's claim construction errors were prejudicial, and therefore vacated the decision below and remanded for a new trial of both liability and damages.[42]

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35. *Id.* Other contentions on appeal included that the lower court abused its discretion in denying certain evidence and admitting certain other evidence; and that the lower court erroneously relied on a precedent in awarding damages. *Id.*

36. *Id.* at 1201-02.

37. *Id.* at 1202.

38. *Id.* at 1202-03.

39. *Id.* at 1204 ("Consulting the written description and prosecution history as a threshold step in the claim construction process, before any effort is made to discern the ordinary and customary meanings attributed to the words themselves, invites a violation of our precedent counseling against importing limitations into the claims.").

40. *Id.*

41. Five of the eight reversed claims were means-plus-function limitations. The court reversed them because the district court misidentified either the function or the corresponding structure. *Id.* at 1207-16 (reversing claims C, F, G, H, and I).

42. *Id.* at 1216. Regarding the two non-claim-construction issues, the court found no error regarding the admissibility of testimonial evidence and the lower court's reliance on contested precedents, and therefore, affirmed the lower court's decisions on these two issues. *Id.* at 1218-20.

B. Reliance on Dictionaries

The *Telegenix* court began its analysis by reiterating the doctrine that a claim term is presumed to carry its ordinary meaning.[43] Citing numerous precedents, the court reaffirmed the notion that dictionaries "are particularly useful resources to assist the court in determining the ordinary and customary meanings of claim terms."[44] The court then removed dictionaries from the category of extrinsic evidence, to which dictionaries had formerly belonged.[45]

Besides removing dictionaries out of the domain of extrinsic evidence, the court endowed dictionaries with a special kind of authority—they are objective sources that are free from individuals' biases and motivations.[46] The court further reasoned that after applying the new rule of claim construction, consultation with dictionaries would increase the accuracy of claim construction; more specifically, it would prevent the improper importation of limitations from the written description.[47]

Following the unequivocal endorsement of the use of dictionaries in claim construction, the *Telegenix* court set forth explicit procedural requirements for lower courts to follow. To begin with, the court stressed that dictionaries ought to be consulted before the intrinsic record, not the other way around, as was often done before.[48] Still, the intrinsic record should always be checked to rebut the presumption of ordinary meanings.[49]While ordinary or dictionary meanings presumptively control the claim scope, the presumption is rebuttable where the intrinsic record does

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43. *See id.* at 1202 ("The terms used in the claims bear a 'heavy presumption' that they mean what they say and have the ordinary meaning that would be attributed to those words by persons skilled in the relevant art.").

44. *Id.*

45. *Id.* at 1204 (holding that "categorizing them as 'extrinsic evidence' or even a 'special form of extrinsic evidence' is misplaced and does not inform the analysis"). Before *Telegenix*, dictionaries had been generally thought to be extrinsic evidence. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

46. *Telegenix*, 308 F.3d at 1203 (stating that dictionaries are "unbiased reflections of common understanding not influenced by expert testimony or events subsequent to the fixing of the intrinsic record by the grant of the patent not colored by the motives of the parties, and not inspired by litigation").

47. *Id.* at 1205 ("The full breadth of the limitations intended by the inventor will be more accurately determined and the improper importation of unintended limitations from the written description into the claims will be more easily avoided.").

48. *See id.* at 1204.

49. *Id.* ("The intrinsic record also must be examined in every case to determine whether the presumption of ordinary and customary meaning is rebutted.").

not agree with the ordinary meanings of a claim term,[50] where a patentee "clearly set forth an explicit definition of the term different from its ordinary meaning,"[51] and where an inventor has used words or expressions "representing a clear disavowal of claim scope."[52] These rebuttal situations are consistent with the canons that "patentee can be his or her own lexicographer" and that "claims should be read in light of the specification." Furthermore, when there are multiple dictionary definitions, a court may construe the relevant claims to encompass all dictionary meanings that are consistent with the intrinsic record.[53]

C. Application of the New Claim Construction Procedure

The *Telegenix* court then applied this new method of claim construction to four of the nine disputed claims on appeal.[54] For example, the district court construed the phrase "repeatedly substantially simultaneously activating" to require that the lights be *on* simultaneously.[55] The Federal Circuit held that the district court had ignored the meaning of the term "activating." The court relied on the *Modern Dictionary of Electronics* and found "activate" defined as "to start an operation, usually by application of an appropriate enabling signal."[56] Therefore, the court narrowed the ordinary meaning of "activating" to *turning on* the lights simultaneously, rather than the broader meaning of both "turning on" and "being on," as argued by TDS.[57] Following the ordinary meaning determination, the court examined the intrinsic record and found no contradiction to the narrower interpretation.[58]

In construing the limitation "display areas and background areas," the court consulted the *Illustrated Dictionary of Electronics* for the meaning

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50. *Id.* (holding that "[i]n such a case, the inconsistent dictionary definition must be rejected").

51. *Id.*

52. *Id.* (citing Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d at 1324 (Fed. Cir. 2002)).

53. *Id.* at 1203 ("If more than one dictionary definition is consistent with the use of the words in the intrinsic record, the claim terms may be construed to encompass all such consistent meanings.").

54. The other five claims were means-plus-function limitations. *See supra* text accompanying note 41.

55. *Telegenix*, 308 F.3d at 1205.

56. *Id.* at 1206 (citing from the MODERN DICTIONARY OF ELECTRONICS 20 (6th ed. 1984)).

57. *Id.*

58. *Id.* ("Here, the intrinsic evidence is entirely consistent with the dictionary definition, and there is nothing in the record to suggest that 'activating' means other than what its dictionary definition would suggest.").

of "background" and identified its definition as "[the] context or supporting area of a picture."[59] From that definition, the court determined that the display and background areas are not interchangeable. Citing evidence in the prosecution history that suggested that the author disavowed the interchangeability, the court ruled for the ordinary meanings that "display" and "background" are mutually exclusive spatial areas.[60] This application demonstrates that the intrinsic record can sometimes be used to support dictionary meanings.

In construing "selectively controlling the durations of time intervals of activation," the court, without citing any dictionary source, stated that "[t]he plain meaning of 'controlling the durations' indicates that the claimed invention requires variation of the duration of individual time intervals, or controlling the width of pulses, during which the LEDs are activated."[61] Consulting the intrinsic record, the court then concluded that the phrase is limited to changing light intensity by varying the width of the pulses alone and rejected the lower court's construction that covered an alteration in both pulse width and the number of pulses.[62] This application suggests that a court may arrive at ordinary meanings entirely on its own.

Finally, regarding the limitation "display areas arranged in a pattern," the Federal Circuit agreed with the district court's construction of the meaning of "pattern," as "having a systematic arrangement."[63] The panel refused to limit the word "pattern" to the seven-segment display disclosed in the description, as Telegenix proposed, because there was no intrinsic evidence to suggest the limitation of the seven-segment display.

III. DISCUSSION

A. *Telegenix* as Part of the Move toward Formalism

1. Telegenix*'s Doctrinal Expansion is Limited*

Telegenix's contribution to the court's claim construction jurisprudence lies mainly in its clarification of claim construction procedures; on the doctrinal side, *Telegenix* is a mere extension of the court's long march towards the emphasis on text and the reliance on dictionaries. In several passages, the court in fact referred to precedent cases, including *Vitronics*,

59. *Id.* at 1209 (citing ILLUSTRATED DICTIONARY OF ELECTRONICS 147 (3d ed. 1985)).

60. *Id.* at 1210.

61. *Id.* at 1207.

62. *Id.*

63. *Id.* at 1211.

to justify the centrality of dictionaries in claim construction. *Telegenix*, therefore, does not overrule or abandon its precedents but only clarifies and expands the existing treatment of dictionaries.[64] One illustration of the limited doctrinal expansion comes from the words of Judge Schall, who joined the *Telegenix* opinion and has since written that *Telegenix* simply held that "a court may consult a dictionary, encyclopedia, or treatise to help inform the court of the ordinary meaning of a word."[65]

Telegenix can be best viewed as a critical response to its own precedents. The case explicitly removed dictionaries from the category of extrinsic evidence, a classification that started in *Markman* and had continued until *Telegenix*.[66] The case also clarified *Vitronics*'s vague guidance on how district courts should use dictionaries. Whereas *Vitronics* created an impression that dictionaries are on the same level of evidentiary significance as other extrinsic evidence,[67] *Telegenix* explicitly labeled dictionaries as "the most meaningful sources of information" to aid judges' understanding of the technology.[68]

Telegenix's treatment of the intrinsic record also shows its harmony with precedent. In *Vitronics*, the Federal Circuit already warned against the exclusive reliance on dictionaries—dictionary-controlled construction is valid only when the dictionary definition "does not contradict any definition found in or ascertained by a reading of the patent documents."[69] In *Telegenix*, the message is the same: the examination of the intrinsic record is mandatory in every case to check for rebuttals of the presumption of ordinary meanings.[70]

2. *Dictionaries to be Consulted Before the Intrinsic Record*

The most significant change in the new claim construction procedure that *Telegenix* outlines is the priority of dictionaries over the intrinsic record. The court formulated this temporal hierarchy out of the concern that

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64. *See, e.g.*, *Telegenix*, 308 F.3d at 1202 (citing Victronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1584 n.6 that "Dictionaries are always available to the court . . . .").

65. Alloc, Inc. v. Int'l Trade Comm'n, 342 F.3d 1361, 1376-77 (Fed. Cir. 2003) (Schall, J., dissenting).

66. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996).

67. *Vitronics*, 90 F.3d at 1585 (stating that "prior art documents and dictionaries, although to a lesser extent, are more objective and reliable guides").

68. *Telegenix*, 308 F.3d at 1203.

69. *Vitronics*, 90 F.3d at 1584.

70. *Telegenix*, 308 F.3d at 1204 ("The intrinsic record also must be examined in every case to determine whether the presumption of ordinary and customary meaning is rebutted.").

if the written specification were read first, judges could inappropriately limit claim scope by reading in embodiments disclosed in the specification.[71] The danger is that once a particular embodiment registers first with a claim interpreter, he or she is likely to be influenced by it, thereby filtering out an otherwise valid and broader ordinary meaning.[72]

This approach of examining dictionaries before the specification and file history is thus an attempt to reconcile a purely literal reading of the claim text with a contextual reading from the intrinsic record. This approach also addresses the tension between the canons that "claims must be read in light of the specification of which they are a part," and that "it is improper to read limitations from the written description into a claim."[73] Courts had never clearly harmonized the two canons, and *Telegenix* only took a small step here—the *Telegenix* approach heeds the latter canon by ascertaining dictionary or ordinary meaning before checking the intrinsic record, and upholds the former canon by requiring an intrinsic record check in every case.[74] Navigating between ordinary meaning and intrinsic record is, however, not an easy task, and often produces disputed interpretations. For example, in a post-*Telegenix* case, Judge Linn, the author of *Telegenix*, dissented from the majority's narrower construction of the term "chromosomally integrated," stating that the majority improperly limited an otherwise broad meaning which contemporary treatises endorse.[75]

The reach of *Telegenix* should not be overstated. Dictionaries are nothing more than a source for ordinary meaning; they need not be used in all claim interpretations. Indeed, when the *Telegenix* court construed the term "pattern,"[76] and the term "controlling the duration," it provided the ordinary meanings without citing any dictionary.[77]

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71. *Id.* at 1204-05 (citing various cases to advocate that claims should not be limited to embodiments described in the specification alone).

72. *See id.* at 1204. The court stated:

> If an invention is disclosed in the written description in only one exemplary form or in only one embodiment, the risk of starting with the intrinsic record is that the single form or embodiment so disclosed will be read to require that the claim terms be limited to that single form or embodiment.

Id.

73. Tate Access Floors, Inc. v. Maxcess Techs., Inc., 222 F.3d 958, 966 (Fed. Cir. 2000).

74. *Telegenix*, 308 F.3d at 1204.

75. Genzyme Corp. v. Transkaryotic Therapies, Inc., 346 F.3d 1094, 1107 (Fed. Cir. 2003) (Linn, J., concurring in part and dissenting in part).

76. The court agreed with the district court's construction "having a systematic arrangement" without consulting to any dictionary. *Telegenix*, 308 F.3d at 1210-11.

77. *See supra* notes 61 and 63.

This Note so far has not explored the distinctions between dictionaries, encyclopedias, and treatises. It is an unanswered question what sources constitute treatises. Would a white paper by an industry standard body be considered a treatise? To what extent do we allow a publication by an interest group into the ranks of dictionaries, encyclopedias, and treatises so as to encompass all the contemporary de facto understandings in a technical field? What about situations where dictionaries do not adopt terms at the rate of the vernacular evolution in a field of technology? In this last instance, a new edition of a dictionary providing true contemporary meanings may come so late (after the time of patent filing) that it would be forever barred from being admitted in claim construction. These questions will have to be resolved in future cases.

B. The Case for Formalism in Claim Construction

Viewed together with its precedents, *Telegenix*'s advocacy of dictionary use is an indication of the Federal Circuit's increasing preference toward a more formalistic claim construction model, where fidelity to the ordinary meaning of the terms is heavily favored, while the intrinsic record, though never ignored, recedes to second place.[78] The next question then is whether such a formalistic or textualist interpretive direction is sensible for the domain of patent claim construction.

1. A Brief Catalogue of Competing Interpretive Models

Before the question is answered, a brief catalogue of competing interpretive models is in order. Here, an analogy to other fields of law such as contracts and statutes is drawn because they supply a rich set of interpretive theories and bear close relationship with patent law. On a general level, patents, contracts, and statutes are all instances of written legal documents. Indeed, patent scholars have often couched patent doctrines, such as enablement, in contractual terms.[79] In fact, *Telegenix* already used

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78. In this sense, the word formalism is used interchangeably with textualism in this Note, since textualism also advocates adherence to the plain meaning of the text. For a discussion of textualism as a major school of interpretation, see WILLIAM N. ESKRIDGE, JR. ET AL., CASES AND MATERIALS ON LEGISLATION STATUES AND THE CREATION OF PUBLIC POLICY 670-71 (3d ed. 2001). The interchange does not hide the fact that certain variations of textualism, such as the "new textualism" advocated by Justice Scalia, which disapproves of any reference to legislative history. This is quite different from the formalism advocated here, which does refer to "history." *See* ESKRIDGE ET AL., *supra*, at 742-43.

79. *See* ROBERT L. HARMON, PATENTS AND THE FEDERAL CIRCUIT § 5.2 at 195 (5th ed. 2001) (arguing that the public gave the patentee a privilege of exclusivity; therefore, the patentee should uphold the other end of the bargain by enabling the public to practice the invention).

contract law as an analogy to advance dictionaries' role in patent claim construction.[80] Still, patents share perhaps more similarities with statues. Both have the public as the audience; both contain a "history" in public record. In both cases, the subjective intents of Congress and patentees are not determinative in their interpretation. More importantly, the *Markman* court pointed out that both patents and statutes may create liabilities in third persons who did not participate in the genesis of the instruments.[81]

In general, modern interpretive theories navigate between formalism and realism.[82] In contract law, for example, the formalists emphasize the text within the four corners of the contract. A concrete example is a view of contracts that denies the propriety of filling in missing terms and concentrates the interpretation on the expressed terms.[83] This theory advocates that a court should limit its interpretative enforcement role to the unambiguous and verifiable terms in a contract.[84] In contrast, realist approaches to contract law, exemplified in neoclassical and relational contract theories, focus on the entire factual and social context surrounding contract formation to discern the intent of the parties and the fairness of the ultimate judgment.[85]

In the field of statutory interpretation, various models can be grouped into three general categories: intentionalism, which tries to identify the original intent of the drafters;[86] purposivism, which chooses the interpreta-

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80. Tex. Digital Sys. v. Telegenix, Inc., 308 F.3d 1193, 1203 (Fed. Cir. 2002) (citing Bowers v. Baystate Techs., 302 F.3d 1334 (Fed. Cir. 2002), for its use of non-technical dictionaries in construing contracts, and Buchanan v. Dep't of Energy, 247 F.3d 1333, 1339 (Fed. Cir. 2001), for its reliance on dictionaries in construing settlement agreements).

81. Markman v. Westview Instruments, Inc., 52 F.3d 967, 987 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996) (concluding that the statutory interpretation model is suitable for patent law at least because "both of these public instruments may create liability in third persons who were not participants in the legislative process or the PTO proceedings").

82. Cass R. Sunstein & Adrian Vermeule, *Interpretation and Institutions*, 101 MICH. L. REV. 885, 897 (2003).

83. Robert E. Scott, *Relational Contract Theory: Unanswered Questions A Symposium in Honor of Ian R. MacNeil: The Case For Formalism In Relational Contract*, 94 NW. U. L. REV. 847, 859 (2000).

84. *See id.* at 859-61.

85. *See* Jay M. Feinman, *The Significance Of Contract Theory*, 58 U. CIN. L. REV. 1283, 1299 (1990) (stating that relational contract theory, largely developed by Ian Macneil, is "even more multi-dimensional than is neoclassical contract").

86. Intentionalism is perhaps already preempted for patent claim construction by 35 U.S.C. § 112, which requires that patents "contain a written description . . . in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same." 35 U.S.C. § 112 (2000). Thus, a court's objective in

tion best suited for the purpose of the statute; and textualism (synonymous to formalism in this Note), which follows the plain meaning of the text.[87] Professor William Eskridge has also proposed a dynamic statutory interpretation model that deals with changed political and social circumstances.[88] The model tries to save judges from wrestling with antiquated language to fit evolving or changed societal norms by placing greater weight on current political and social conditions.[89]

The interpretive models sketched above do not represent a complete picture of available interpretive theories; they provide only a vocabulary and a conceptual framework, from which a sensible model for patent claim construction can be identified and defended.

2. *Formalism Addresses Courts' Institutional Limitations*

The sensibility of formalism, out of all the above interpretive models, cannot be fully appreciated without first understanding the institutional features and constraints of patent law. Patents as public legal instruments necessarily affect the course of conduct of a variety of institutional players. Business entities evaluate, use, strategize around them. Inventors study and produce them. Patent agents and prosecutors draft and obtain them from the Patent and Trademark Office (PTO). Patent litigators are their defenders and challengers. And federal judges, who shape the jurisprudence of patent claim construction, drive how all other players perceive and act upon the next patent. A consideration of courts' institutional limitations, therefore, is central to the discussion of choices of interpretive models for patent law.

To begin with, federal district court judges tend to be generalists, and patent issues are resolved almost exclusively in their courts.[90] And because patents are invariably technologically complex and specialized, gen-

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claim construction is to discern not the subjective intent of the parties but the meanings that one ordinarily skilled in the art would have understood at the time of application.

87. ESKRIDGE ET AL., *supra* note 78, at 670-71.

88. *See* William N. Eskridge, Jr., *Dynamic Statutory Interpretation*, 135 U. PA. L. REV. 1479 (1987).

89. *Id.* But the dynamism has some difficulties for claim construction: patents enjoy a relatively short life span (twenty years from the date of issuance) compared to statutes, where antiquity is more prevalent; and judges in patent cases are less versed in technology than in making social and political assessment.

90. Exceptions to federal exclusivity exist when patent issues are not raised in original well-pleaded claims but in a counterclaim. *See* Holmes Group, Inc. v. Vornado Air Circulation Sys. Inc., 535 U.S. 826, 831 (2002) ("Respondent argues that the well-pleaded-complaint rule, properly understood, allows a counterclaim to serve as the basis for a district court's 'arising under' jurisdiction. We disagree.").

eralist judges often are not technically proficient to assess the true scope of the lengthy, acronym-laden, drawing-intensive file-wrapper materials in support of patent claims. In light of this technological mismatch, it is thus sensible for district judges to adhere to the common meaning of claim terms under formalism, especially when the meanings can be and often are determined through dictionaries, which are judges' familiar tools. In this regard, purposivism and dynamism are much more difficult for judges to navigate. These models are more result-oriented, requiring judges to perform policy and value judgments in order to advance the spirit instead of the letters of a statute.[91] This judicial awkwardness is more acute in the patent context, where technical intricacy is difficult to navigate through to determine the "purpose" of a particular device or method.

An objection to formalism could be that formalism cannot avoid the above technical deficiency problem because *Telegenix* and its precedents do require a check into the intrinsic record. But the *Telegenix* approach, which consults dictionaries before the intrinsic record, delays the problem and allows judges to use familiar tools to obtain a more systematically uniform determination of claim scope. The familiarity benefit is further amplified by the busy calendars of federal district courts and the judges' need to keep the calendars moving. In addition, the *Telegenix* approach alleviates the technical deficiency problem as judges only need to look in the intrinsic record for inconsistencies with ordinary meaning or new lexicography, rather than attempting the formidable task of gaining a complete technical understanding of an invention.

The judicial limitation in the context of patent law finds an analogy in statutory interpretation. There, due to time and information constraints, a generalist court may want to ignore legislative history, "whose large volume and unfamiliar components could often provoke judicial error."[92] Even though *Telegenix* does not "ignore" but mandates an intrinsic record check, the same concern of judicial unfamiliarity in resolving intent or purpose applies, thereby making intentionalism and purposivism less fit for claim construction.

It could also be argued that the Federal Circuit is better suited to adopt nonmechanical or nonformalistic interpretive models; the court was created by Congress in 1982 to centralize handling of patent cases[93] and is therefore not a generalist court. But because cases start from a generalist court, and because district courts follow the appellate court's interpretive

91. *See* ESKRIDGE ET AL., *supra* note 78, at 671.
92. *See* Sunstein & Vermeule, *supra* note 82, at 922.
93. The Federal Circuit also handles appeals from the U.S. Court of Claims.

methods, a nonformalistic model from the Federal Circuit would likely create more systematic interpretive errors.[94]

The institutional limitation of judges in patent cases has an empirical support as well. Seven years ago, the Supreme Court decided *Markman v. Westview Instruments, Inc.*[95] with the hope that judges, arguably better than jurors at interpreting patent claims, would provide consistency and predictability in claim construction results. The stark reality today is that district judges are facing a reversal rate above thirty percent.[96] High reversal rate wastes valuable resources, as litigants have to wait until the end of trial to appeal a claim construction ruling.[97] The adoption of a formalist model, which *Telegenix* continued to shape, should help create a more uniform standard of claim construction and, in turn, help reduce the reversal rate seen today.

3. *Formalism Promotes Predictability and Ex Ante Planning*

Another important characteristic of patent law is that patents serve a public notice function—the public should be able to discern the boundaries of the exclusionary rights from the patent itself. The function directly impacts public life. For example, the perceived boundaries of the exclusive rights may alter competitors' business strategies; competitors frequently must choose between licenses and design-arounds. Because of this notice function, any interpretive model for claim construction should promote predictability for the public and lend greater certainty in ex ante planning.

In this regard, purposivism could undermine the public notice function of a patent and decrease the predictability for the public to anticipate the scope of the next patent. Formalism, on the other hand, advances the pub-

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94. The similar risk argument is seen in a critique of dynamism in statutory interpretation—dynamism creates "the risk that the judges' relative social insulation, and the resulting informational deficits, might cause them to err in the other direction, updating statutes that aren't obsolete." Sunstein & Vermeule *supra* note 82, at 906.

95. 517 U.S. 370 (1996).

96. *See* Christian A. Chu, *Empirical Analysis of the Federal Circuit's Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1104 (2001) (finding a 44% reversal rate in express reviews of claim construction from 179 cases, further resulting in a 29.6% case reversal, and a 36.6 % reversal rate with summary affirmance decisions added); *see also* Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 11 (2001) (finding a 33% reversal rate for the five-year period after *Markman* where district judges had at least one claim construction reversed).

97. The Federal Circuit's rejection of all interlocutory appeals of claim construction orders significantly contributes to the resource waste. The problem is further exacerbated by the fact that parties cannot easily obtain a speedy summary judgment when a case is factually complex, as most patent cases are.

lic notice function more because it predictably emphasizes the meanings of claims within the four corners of a patent. Purposivism's real place in patent cases perhaps lies in the doctrine of equivalents ("DOE") in the infringement analysis stage of a case. With DOE, courts expand claim boundaries to bring in subjects matters that match the "function, way, and result of the claimed element."[98] This practice, in a way, serves to examine the "purpose" of the invention. Unlike DOE and infringement analysis, the goal of claim construction is to resolve disputed claim scopes and to provide a common framework of reference for later stages of a trial. This difference amplifies purposivism's difficulty in claim construction.

Realism also has similar problems. This context-centered approach requires courts to examine the relationships among parties and social conditions to maximize fairness in judgment. Already, the public notice function is disserved since realism necessitates a case-specific, fact-dependent treatment. Furthermore, patents are not formed by extensive, long-term relationships characteristic of relational contracts.[99] A patentee is often involved in the formation process only vicariously through a prosecution agent or attorney. An infringer is even less involved or entirely removed from the formation process. Regarding past dealings, even when the prosecuting agent or attorney is a repeated player, his or her past experience with PTO often informs little about the technology at issue.[100] For these reasons, the parties' relational interdependency, which is highly valued in realism,[101] is less probative in patent claim construction. In comparison, *Telegenix*'s adoption of a formalistic model aligns with patent law better because patent claim construction needs to treat patents as discrete, rather than extended transactions, because for purposes of claim construction patents are integrated documents, and because factors supplying external context, such as inventor's testimony, should be treated with much suspicion.

The hallmark of formalism is its predictability in process and results, which also opens it to the criticism of being wooden and mechanical. Formalism promotes patentees' ability to plan and, in general, to gravitate toward a more uniform dictionary-oriented set of draft language. This positive feedback mechanism is perhaps the best attribute of formalism: it gradually reduces courts' interpretive burdens and mistakes, increases in-

98. Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co., 520 U.S. 17, 40 (1997).

99. *See* Jay M. Fienman, *Relational Contract Theory in Context*, 94 NW. U. L. REV. 737, 739-40 (2000).

100. Exceptions probably exist in rare instances. On example is when one attorney prosecutes numerous patents regarding the same technology in the same field of art.

101. Fienman, *supra* note 99, at 748.

terpretive accuracy and predictability, and encourages a norm formation for patent drafting.

4. Formalism Promotes Ex Post Efficiency and Fairness

Predictability in process and outcome breeds efficiency, which is another positive side effect of formalism in claim construction. This occurs both for patent prosecutors and judges. On the prosecution side, efficiency is achieved when patentees gravitate toward a standard set of claim terms that closely follow dictionary definitions used in the field of art, and when the PTO in turn can devote less energy to deciphering the meaning of claims, and more to determining patentability. Insights of contract scholars suggest that high transaction costs are the first reason why parties might not write detailed and complete contracts for fear of misinterpretation.[102] Therefore, the increased efficiency and reduced costs from an adoption of formalism would encourage inventors to patent in the first instance and to describe the underlying technology and the claims more fully.

On the judicial side, judges can theoretically proceed through a formalistic claim construction more speedily and accurately. An objection could be advanced that, compared to a specification-driven search, a dictionary search without help of the intrinsic record is inefficient and often produces many more irrelevant results.[103] It may be true that dictionary shopping (the practice of litigants selecting "best" dictionaries out of many competing ones) likely exerts an initial cost to the efficiency of litigation, when judges are forced to select the most appropriate dictionaries and the best definitions. It is likely, however, that few dictionaries will give contradictory meanings, and that a selected dictionary will have few overlapping meanings relating to the particular technology at issue. In addition, litigants' submission of their own choices of dictionaries reduces the time that the court spends in finding dictionaries on its own. This initial cost, if any, is likely insignificant or can be eventually recouped by a more standardized and less frequently reversed construction methodology. It is also worth noting that, under the *Telegenix* paradigm, courts do not sacrifice any efficiency for words that are not disputed, or words that have clear ordinary meanings without the need of dictionary support.

In terms of fairness, it could be argued that *Telegenix*'s heavy reliance on dictionaries would yield more pro-patentee results, especially considering that dictionary definitions are often broad and generic. Yet it was the

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102. *Id.* at 862.

103. *See generally* Ben Hattenbach, *Chickens, Eggs and Other Impediments to Escalating Reliance on Dictionaries in Patent Claim Construction*, 85 J. PAT. & TRADEMARK OFF. SOC'Y 181 (2003).

alleged infringer in *Telegenix* that benefited from the dictionary-based claim construction.[104] Of course, one case can hardly refute the argument;[105] more empirical data is needed to analyze this bias concern. Theoretically, however, any initial pro-plaintiff bias should eventually disappear when patent drafters start to gravitate toward adopting more standard dictionary meanings.

Another safeguard against unfairness is *Telegenix*'s required examination of the intrinsic record.[106] Commentators and courts alike have pointed out that dictionaries, even technical ones in the relevant field, are not always the best objective sources.[107] Dictionary definitions tend to be general and simplified.[108] The neutrality of dictionaries is likely destroyed for a highly specialized term when both sides submit self-serving dictionary evidence, and the court lacks the technical knowledge to identify the most appropriate dictionary or dictionary definition.[109] Moreover, patent language has a larger vernacular variance due to the broad span of technologies.[110] These reasons perhaps underlie the canon "patentees as their own lexicographers." *Telegenix* heeds this canon by requiring a check with the intrinsic record, thereby mollifying concerns about pure literalism.[111] Lastly, the incorporation of intrinsic record also comports with the precedents' teaching against an indiscriminate use of dictionaries.[112]

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104. Tex. Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1216 (Fed. Cir. 2002) (reversing the infringement decision in favor of Telegenix, the defendant and the alleged infringer).

105. The *Telegenix* court only invoked dictionaries on two disputed limitations and narrowed the scopes of both limitations.

106. 308 F.3d at 1204.

107. *See, e.g.*, Anderson v. Int'l Eng'g & Mfg., Inc., 160 F.3d 1345, 1348 (Fed. Cir. 1998) ("[D]ictionary definitions of ordinary words are rarely dispositive of their meaning in a technological context.").

108. *See, e.g.*, Toro Co. v. White Consol. Indus., Inc., 199 F.3d 1295, 1300 (Fed. Cir. 1999) ("However, dictionaries provide general definitions, rarely in sufficient detail to resolve close questions in particular contexts.").

109. *See* Barney, *supra* note 7, at 126 (arguing that the ability of judges' pulling dictionaries off their *own* shelves is the neutrality that makes dictionaries a particularly trustworthy source of extrinsic evidence).

110. It is also because "a verbal portrayal is usually an afterthought written to satisfy the requirements of patent law." *Id.*

111. *Cf.* K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1370 (Fed. Cir. 1999) (Rader, J., dissenting) ("Divorced from context, words lose their ordinary and accustomed meanings. . . . When judges intuit an ordinary and accustomed meaning divorced from context, they are (usually unwittingly) imposing their own subjective linguistic values on a public decision.").

112. *See, e.g.*, Watt v. Alaska, 451 U.S. 259, 266 n.9 (1981) ("But it is one of the surest indexes of a mature and developed jurisprudence not to make a fortress out of the

A further support for fairness lies in the fact that *Telegenix* does not preclude the use of all contextual information in a claim construction proceeding.[113] Instead, it subordinated extrinsic and intrinsic evidence to ordinary meanings, which are determined through dictionaries or from claims themselves. Some scholars, in the context of statutory interpretation, advise litigators to avoid directly citing legislative history, to formulate more arguments for intra-statute consistency, to increase dictionary shopping, and to still prepare for the court's interrogation of background policies.[114] The same strategy can be transplanted to claim construction. In addition, *Telegenix* does not expressly rule out any judicial canons of claim construction.[115] The canons provide forceful arguments, especially when combined with the intrinsic record in instances of ambiguous literal meanings. Many of the canons can stand their own ground without the intrinsic record, and therefore, can be used in ordinary meaning arguments, complimenting dictionary-based arguments.

IV. CONCLUSION

Stripped to its essence, patent claim construction revolves around the interpretation of one or more disputed words.[116] Thus, constructing a sensible interpretative model is perhaps the single most influential aspect of claim construction jurisprudence. Against the backdrop of the unique nature of patents, the *Telegenix* court engaged in a more formalist approach, reaffirming the presumption of ordinary meaning of a claim and explicitly elevating dictionaries' role in claim construction. This Note argues that the formalistic model toward which *Telegenix* is moving is a sensible compromise of the goals and constraints of today's patent law.

Telegenix, however, is neither the beginning nor the end of the court's claim construction modeling. On this road to formalism, *Telegenix* is only

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dictionary; but to remember that statutes always have some purpose or object to accomplish, whose sympathetic and imaginative discovery is the surest guide to their meaning.").

113. 308 F.3d 1193, 1212 (Fed. Cir. 2002) (citing Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1583 (Fed. Cir. 1996), for the proposition that "[e]xtrinsic evidence in general, and expert testimony in particular, may be used only to help the court come to the proper understanding of the claims").

114. *See* ESKRIDGE ET AL., *supra* note 78, at 770-71.

115. The choices are plenty, including claim differentiation, patentees as lexicographers, commensuration between the specification and the claim scope, construction favoring validity, and many others.

116. *See, e.g.*, Digital Biometrics, Inc. v. Identix, Inc., 149 F.3d 1335, 1345 (Fed. Cir. 1998) ("As with many patent cases, at issue is the meaning of only a few words in the claims.").

the latest landmark, and it must be read together with a long line of precedents for one to appreciate the full scope of claim construction's evidentiary hierarchy. *Telegenix* is also not pure literalism. The *Telegenix* court, while emphasizing the ordinary meaning of claim terms, never ignored the intrinsic record and mandated an examination of the intrinsic record in every case to ensure interpretive accuracy. At the current stage, the model still has gaps and open questions, such as the undefined scope of treatises and the unaddressed scenario where dictionaries lag contemporary vernaculars. Hopefully the Federal Circuit will resolve these issues before inconsistent rulings start to develop in lower courts.