IN THE

UNITED STATES COURT OF APPEALS

FOR THE FEDERAL CIRCUIT

INTERVAL LICENSING LLC,

Plaintiff-Appellant,

v.

AOL, INC.,

Defendant-Appellee,

and

APPLE, INC.,

Defendant-Appellee,

and

GOOGLE, INC.,

Defendant-Appellee,

and

YAHOO! INC.,

Defendant-Appellee.

Appeal from the United States District Court for the Western District of Washington in consolidated case nos. 13-CV-0263, 13-CV-0264, 13-CV-0265, and 13-CV-0266, Judge Marsha J. Pechman.

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UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

INTERVAL LICENSING, LLC V. AOL, INC.

2013-1282, -1283, -1284, -1285

CERTIFICATE OF INTEREST

Counsel for Appellee AOL Inc. certify the following:

1. The full name of every party or amicus represented by us is:

   AOL Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by us is:

   Not applicable.

3. All parent corporations and any publicly held companies that own 10% or more of the stock of the party or amicus curiae represented by us are:

   AOL has no corporate parent. Filings made with the Securities and Exchange Commission indicate that Dodge & Cox owns ten percent (10%) or more of AOL's stock.

4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

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Form 9

FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Interval Licensing LLC v. Apple, Inc.

No. 2013-1283

CERTIFICATE OF INTEREST

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1. The full name of every party or amicus represented by me is:

Apple, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

N/A

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

N/A

4. ☐ The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

Feinberg Day Alberti & Thompson LLP: Elizabeth Day, David Alberti, Marc Belloli; O'Melveny & Myers LLP: Mark Liang, Brian M. Berliner, David S. Almeling, George A. Riley, Xin-Yi Zhou; Yarmuth Wilsdon PLLC: Scott T. Wilsdon and Jeremy E. Roller

September 12, 2013
Date

/s/ David L. Alberti
Signature of counsel

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Please Note: All questions must be answered
cc: _____

Form 9

FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Interval Licensing LLC v. Google, Inc.

No. 2013-1284

CERTIFICATE OF INTEREST

Counsel for the (petitioner) (appellant) (respondent) (appellee) (amicus) (name of party) Appellee certifies the following (use "None" if applicable; use extra sheets if necessary):

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Google, Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

Google, Inc.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

Google, Inc. does not have a parent corporation and is unaware of any publicly held corporation owning 10% or more of Google Inc.'s stock.

4. ☑ The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

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September 13, 2013
Date

/s/ Kevin X. McGann
Signature of counsel

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Please Note: All questions must be answered
cc: _____

FORM 9. Certificate of Interest

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Interval Licensing LLC v. AOL, Inc. et al.

No. 13-1282, -1283, -1284, -1285

CERTIFICATE OF INTEREST

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1. The full name of every party or amicus represented by me is:

Yahoo! Inc.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

None.

3. All parent corporations and any publicly held companies that own 10 percent or more of the stock of the party or amicus curiae represented by me are:

None.

4. ☑ The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this court are:

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9/13/2013
Date

/s/ Deanne E. Maynard
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Please Note: All questions must be answered
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TABLE OF CONTENTS

CERTIFICATES OF INTEREST i

TABLE OF AUTHORITIES ix

STATEMENT OF RELATED CASES xii

I. COUNTERSTATEMENT OF THE ISSUES 1

II. COUNTERSTATEMENT OF THE CASE 2

A. Preliminary Statement 2

B. Nature of the Case and Disposition Below 6

III. STATEMENT OF FACTS 7

A. Interval's Patents 7

1. Background 7

2. The First Approach: Displaying in an "Unobtrusive Manner that Does Not Distract a User" 9

3. The Second Approach: "Attention Manager" 11

4. "Instructions" Specifying Functions to Be Performed 12

5. Prosecution History 13

6. The Asserted Claims 16

B. District Court Proceedings 18

1. Interval's Infringement Contentions 18

2. Claim-Construction Proceedings 21

3. Interval's Stipulation of Invalidity and Noninfringement 25

IV. SUMMARY OF ARGUMENT 26

V. ARGUMENT 28

A. The Phrase "In an Unobtrusive Manner that Does Not Distract a User of the Apparatus from a Primary Interaction" Is Indefinite 30

1. The Intrinsic Record Does Not Provide an Objective Anchor.....30

2. The Cases Interval Relies on Do Not Support Its Argument that the Claim Language Is Sufficiently Definite.....34

3. The Intrinsic Record Does Not Equate These Limitations to the Wallpaper Embodiment 36

4. Interval's Construction Reads Out the Claim Limitations and Does Not Cure the Indefiniteness 41

5. Interval's "Insubstantial Overlap" Language Is Unsupported and Only Adds Further Ambiguity 42

6. Interval's Effort to Recast Its Construction as Displaying "so as to Not Interfere" with a User's Application Also Fails.....46

7. Interval Waived Its Alternative "Narrow" Construction.....46

B. "Means for Selectively Displaying in an Unobtrusive Manner that Does Not Distract a User from a Primary Interaction" Is Indefinite 49

1. The Specification Fails to Disclose an Algorithm Corresponding to the Recited Function 49

2. Interval's Proposed Structure Simply Repeats the Functional Language of the Claim.....50

C. The District Court Correctly Construed "Attention Manager".....53

1. The Specification Supports the District Court's Construction.....53

2. The Prosecution History Confirms the District Court's Construction.....57

3. Interval Only Half-Heartedly Defends the Construction It Advocated Below 58

4. Interval Waived Its New Construction, Which Is Unsupported and Indefinite in Any Event 60

D. The District Court Correctly Construed "Instructions" 62

1. This Court Need Not Consider the Term "Instructions" Because It Is Irrelevant to the Judgment on Appeal 62

2. Interval's Request for "Clarification" of the District Court's Construction Is Itself Unclear 63

3. The District Court Correctly Held that "Instructions" Cannot Be Data Alone 64

4. The District Court's Construction Correctly Reflects that "Instructions" Are a Statement in a Programming Language 67

VI. CONCLUSION AND STATEMENT OF RELIEF SOUGHT 68

CERTIFICATE OF SERVICE 70

CERTIFICATE OF COMPLIANCE 71

TABLE OF AUTHORITIES

Page(s)

Federal Cases

3M Innovative Props. Co. v. Avery Dennison Corp.,
350 F.3d 1365 (Fed. Cir. 2003) 66

AllVoice Computing PLC v. Nuance Commc'ns, Inc.,
504 F.3d 1236 (Fed. Cir. 2007) 52

Amgen, Inc. v. Chugai Pharm. Co.,
927 F.2d 1200 (Fed. Cir. 1991) 45

Amkor Tech., Inc. v. Int'l Trade Comm'n,
692 F.3d 1250 (Fed. Cir. 2012) 47, 60, 63

Aristocrat Techs. Austl. PTY Ltd. v. Int'l Game Tech.,
521 F.3d 1328 (Fed. Cir. 2008) 49, 51, 53

Bicon, Inc. v. Straumann Co.,
441 F.3d 945 (Fed. Cir. 2006) 30

Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.,
334 F.3d 1294 (Fed. Cir. 2003) 59

Commonwealth Scientific & Indus. Research Organisation v. Buffalo Tech. (USA), Inc.,
542 F.3d 1363 (Fed. Cir. 2008) .....passim

Conoco, Inc. v. Energy & Envtl. Int'l, L.C.,
460 F.3d 1349 (Fed. Cir. 2006) 47

CVI/Beta Ventures, Inc. v. Tura LP,
112 F.3d 1146 (Fed. Cir. 1997) 57, 61

Datamize, LLC v. Plumtree Software, Inc.,
417 F.3d 1342 (Fed. Cir. 2005) .....passim

Deere & Co. v. Bush Hog, LLC,
703 F.3d 1349 (Fed. Cir. 2012) 35

Ergo Licensing, LLC v. CareFusion 303, Inc.,
673 F.3d 1361, 1365 (Fed. Cir. 2012) 52

Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.,
93 F.3d 1572 (Fed. Cir. 1996) 66

Finnigan Corp. v. Int'l Trade Comm'n,
180 F.3d 1354 (Fed. Cir. 1999) 60, 61

Geneva Pharm., Inc. v. GlaxoSmithKline PLC,
349 F.3d 1373 (Fed. Cir. 2003) .....passim

Halliburton Energy Servs., Inc. v. M-I LLC,
514 F.3d 1244 (Fed. Cir. 2008) .....passim

Hearing Components, Inc. v. Shure Inc.,
600 F.3d 1357 (Fed. Cir. 2010) 35

Hewlett-Packard Co. v. Bausch & Lomb Inc.,
909 F.2d 1464 (Fed. Cir. 1990) 58

Honeywell Int'l, Inc. v. Int'l Trade Comm'n,
341 F.3d 1332 (Fed. Cir. 2003) 47

Int'l Rectifier Corp. v. IXYS Corp.,
361 F.3d 1363 (Fed. Cir. 2004) 63

Kinetic Concepts, Inc. v. Blue Sky Medical Group, Inc.,
554 F.3d 1010 (Fed. Cir. 2009) 47, 48

Mass. Inst. of Tech. v. Abacus Software,
462 F.3d 1344 (Fed. Cir. 2006) 62

N. Telecom, Inc. v. Datapoint Corp.,
908 F.2d 931 (Fed. Cir. 1990) 36, 37

Noah Sys., Inc. v. Intuit Inc.,
675 F.3d 1302 (Fed. Cir. 2012) 52, 53

Salazar v. Procter & Gamble Co.,
414 F.3d 1342 (Fed. Cir. 2005) 66

Schwing GmbH v. Putzmeister Aktiengesellschaft,
305 F.3d 1318 (Fed. Cir. 2002) 58

SRAM Corp. v. AD-II Eng'g, Inc.,
465 F.3d 1351 (Fed. Cir. 2006) 40, 41

Typhoon Touch, Inc. v. Dell, Inc.,
659 F.3d 1376 (Fed. Cir. 2011) 52

United Carbon Co. v. Binney & Smith Co.,
317 U.S. 228 (1942).....29

WMS Gaming, Inc. v. Int'l Game Tech.,
184 F.3d 1339 (Fed. Cir. 1999) 49

Federal Statutes

35 U.S.C. § 112 ¶ 2 28

35 U.S.C. § 112 ¶ 6 .....49, 50

Rules

Fed. R. Civ. P. 42(a).....passim

Other Authorities

IEEE Standard Dictionary 65

IEEE Standard Dictionary of Electrical and Electronics Terms 65, 67

Oxford Dictionary of Computing 65

STATEMENT OF RELATED CASES

Four appeals were consolidated into the present appeal: *Interval Licensing LLC v. AOL, Inc.* (No. 13-1282), *Interval Licensing LLC v. Apple, Inc.* (No. 13-1283), *Interval Licensing LLC v. Google, Inc.* (No. 13-1284), and *Interval Licensing LLC v. Yahoo! Inc.* (No. 13-1285). There have been no other appeals in or from the same proceedings at the district court.

Interval Licensing LLC ("Interval") filed one case in the Western District of Washington (Case No. 2:10-cv-1385) in which it asserted four patents—U.S. Patent Nos. 6,034,652 and 6,788,314 (which are at issue in this appeal) and the unrelated U.S. Patent Nos. 6,263,507 and 6,757,682 (which are not). The complaint named as defendants, inter alios, the four Defendants-Appellees here: AOL Inc., Apple Inc., Google Inc., and Yahoo! Inc. (collectively "Defendants" or "Defendants-Appellees"), as well as several other defendants that were not sued on the patents at issue in this appeal.

The district court (Pechman, J.) found that Interval had improperly joined the defendants and severed the original case into separate docket numbers for each defendant. The cases against Defendants are AOL Inc. (Lead Case, No. 2:10-cv-1385), Apple Inc. (Case No. 2:11-cv-708), Google Inc. (Case No. 2:11-cv-711), and Yahoo! Inc. (Case No. 2:11-cv-716). The court then consolidated the cases

pursuant to Federal Rule of Civil Procedure 42(a). *See* Case No. 2:10-cv-1385-MJP, Dkt. No. 229 (W.D. Wash. Apr. 29, 2011).

Early in the litigation, reexamination requests were filed and granted at the United States Patent and Trademark Office ("PTO") for each of the four asserted patents. The district court stayed the four cases against Defendants pending the outcome of the reexaminations. *See* Case No. 2:10-cv-1385-MJP, Dkt. No. 253 (W.D. Wash. June 16, 2011). After the examiner confirmed the patentability of the asserted claims in the reexaminations of the '652 (ex parte) and '314 patents (inter partes, currently on appeal to the Board), the district court lifted the stay with respect to those two patents. *See* Case No. 2:10-cv-1385-MJP, Dkt. No. 269 (W.D. Wash. June 25, 2012). Litigation on the other two patents—the '507 and '682 patents—remains stayed.

The '652/'314 track proceeded to claim construction in the consolidated cases against Defendants-Appellees. On December 28, 2012, the district court issued the claim-construction order that addressed the issues presented in this appeal. *See* Case No. 2:10-cv-1385-MJP, Dkt. No. 341 (W.D. Wash. Dec. 28, 2012) (A1-31). As explained in detail below, the court held that certain claim terms were indefinite and adopted a construction that led to a stipulation of no infringement of the remaining asserted claims.

Because the cases against Defendants formally included both Interval's claims for infringement of the '652 and '314 patents (at issue in this appeal) as well as Interval's claims for infringement of the '507 and '682 patents (still stayed pending reexamination and not at issue in this appeal), the court severed all of the claims and counterclaims relating to the '652 and '314 patents into four new cases: Nos. 2:13-cv-263 (v. AOL, Inc.), 2:13-cv-264 (v. Apple, Inc.), 2:13-cv-265 (v. Google, Inc.), and 2:13-cv-266 (v. Yahoo! Inc.). *See* Case No. 2:10-cv-1385-MJP, Dkt. No. 345 (W.D. Wash. Feb. 2, 2013). For each severed case, the court issued a Final Judgment Order that: (1) granted final judgment of invalidity of certain claims of the '652 and '314 patents based on the indefiniteness finding; (2) granted final judgment of noninfringement for the remaining asserted claims of the '652 patent based on the construction of one term at issue in this appeal and a stipulation among the parties; and (3) dismissed all counterclaims without prejudice. *See* Dkt. No. 7 in Case Nos. 2:13-cv-263, -264, -265, -266 (W.D. Wash. Feb. 28, 2013) (A188-89; A221-22; A254-55; A287-88). These four Final Judgment Orders are the basis of the present appeal.

I. COUNTERSTATEMENT OF THE ISSUES

1. Whether the district court correctly held indefinite the claim phrase that requires displaying an image "in an unobtrusive manner that does not distract a user of the display device or an apparatus associated with the display device from a primary interaction with the display device or apparatus."

2. Whether the district court correctly held that the claim term "means for selectively displaying on the display device, in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus," is also indefinite because the specification fails to disclose structure corresponding to the recited function.

3. Whether the district court correctly construed the claim term "attention manager" with the only interpretation consistent with the intrinsic record that gives objective meaning to the term.

4. Whether this Court should reverse the district court's construction of "instructions," which is irrelevant to Interval's appeal since it was not a basis for Interval's stipulation of noninfringement and invalidity, and was correctly construed in an event.

II. COUNTERSTATEMENT OF THE CASE

A. Preliminary Statement

This appeal involves two patents that Interval asserts against Defendants-Appellees, U.S. Patent Nos. 6,034,652 and 6,788,314. Interval's patents disclose ways for Internet sites, such as a news site, to display information a user is interested in, but might not expend energy to obtain, on the user's computer. Interval's patents purport to accomplish this goal in two ways.

The first approach is to display an image "in an unobtrusive manner that does not distract a user" from the user's primary interaction. According to the patents, the user's primary interaction can be any application the user is working in (e.g., a Microsoft Word document), or even simply the computer operating system. The asserted claims of the '314 patent include this language, and claim 4 of the '652 patent includes this language in means-plus-function form.

Interval's patents provide no guidelines for displaying an image in an unobtrusive manner. Nor do they explain how to display an image so that it will not distract a user, much less explain what constitutes distraction or how to measure it. Interval's expert testified that whether an image was "unobtrusive" would depend on an "infinite number of contexts." He similarly testified that whether an image would "not distract a user" would depend on many factors,

including the user's personal attributes (such as proclivity to distraction) and the nature of the user's interaction with the computer.

The specification and prosecution history of Interval's patents say it is possible to display images in an unobtrusive manner that does not distract a user utilizing a "screen saver embodiment" or a "wallpaper embodiment" (i.e., the background of the computer display). However, nothing in the intrinsic record limits the scope of the phrase to these two embodiments—or even that a screensaver or wallpaper will always be unobtrusive or nondistracting. And the specification gives no guidelines or algorithm explaining how to display an image "in an unobtrusive manner that does not distract a user" in a screensaver, wallpaper, or other type of display.

Lacking any objective boundaries in the intrinsic record, whether a particular image is considered unobtrusive or nondistracting will vary depending on changing circumstances, which this Court has characterized as the "epitome of indefiniteness." Furthermore, these limitations depend entirely on the subjective opinion of the particular user. What distracts one user may not distract another user. Accordingly, the district court correctly found the phrase "unobtrusive manner that does not distract a user" indefinite.

While Interval contended that the specification defined this phrase as "during a user's primary interaction with the apparatus and the information is

presented in an area of the display screen not substantially used by displayed information associated with the primary interaction of the user," the court recognized that the intrinsic record soundly defeats Interval's argument. Not only is Interval's purported "definition" unsupported (the fudge word "substantially" does not appear in the specification), the court correctly held it would improperly exclude Interval's screensaver embodiment, in conflict with the specification and Interval's repeated representations in prosecution that the screensaver embodiment could implement this functionality. Interval's construction also reads out the "does not distract a user" limitation entirely. The court further noted that Interval's argument that the specification defined this phrase was undermined given that Interval proposed a new "definition" just a week before the *Markman* hearing.

The district court also correctly found that the means-plus-function version of this limitation is indefinite for the additional reason that the specification fails to disclose structure corresponding to the recited function. Interval's purported structure simply parroted the functional language of the claim, which would improperly allow Interval to use means-plus-function claiming to encompass any general-purpose computer programmed to perform the function.

The second approach disclosed in Interval's patents is an "attention manager." Claims 15-18 of the '652 patent recite an attention manager. The patents disclose that the attention manager makes use of "unused capacity" of a

display device. The patents disclose only two ways to implement this term Interval coined: (1) displaying an image when the user is not actively engaged in a primary interaction (i.e., a screensaver); and (2) displaying an image in the background of the computer display screen (i.e., computer wallpaper).

During prosecution, Interval told the PTO examiner that its screensaver and wallpaper embodiments made use of "unused capacity," relying on this to distinguish prior art that displayed an image in an Internet browser during "downtime" while a requested webpage was loading. Interval acknowledged that the prior art's display could also be termed "unused capacity," but stated that its invention used "different unused capacity."

The district court construed the term "attention manager" to mean "during operation of a system that displays images to a user either when the program detects that the user is not engaged in a primary interaction or as a background of the computer screen." As the court recognized, this construction is the only one consistent with the intrinsic record that also gives the term objective boundaries.

The district court correctly found that Interval's proposed construction of "attention manager"—"a system for engaging at least part of the user's attention that is not occupied by the user's primary interaction"—fails to provide any objective boundaries. Instead, it improperly relies on an intended function, and would require the impossibility of deciding whether an image engaged a user's

peripheral attention—which the patents offer no standard for determining. Interval's construction also conflicts with the specification (and even its own description of the attention manager) by placing no limits on where the attention manager displays an image. In a final attempt to salvage its case, Interval offers an alternative construction in its appeal brief, but waived this construction by failing to present it below and this new construction is equally flawed.

Interval also asks this Court to review the district court's construction of "instructions," but admits this term is irrelevant to the issues on appeal. This Court therefore need not address this term. Regardless, the court correctly construed "instructions." Interval argued that "instructions" could be data alone, a meaning contradicted by the specification and ordinary meaning alike. While Interval accuses the court of adopting a dictionary definition, the court did not rely on a dictionary, but instead based its construction on the intrinsic record.

B. Nature of the Case and Disposition Below

This case arose when Interval sued Defendants, alleging, inter alia, infringement of the '652 and '314 patents. The district court issued a claim-construction order that, inter alia:

(1) held indefinite the claim phrase that required displaying an image "in an unobtrusive manner that does not distract a user of the display device or an apparatus associated with the display device from a primary interaction with the

display device or apparatus," including a means-plus-function limitation containing similar language; and

(2) adopted Defendants' construction of "attention manager."

A10; A16; A18.

Interval stipulated to invalidity or noninfringement of all asserted claims based on the court's construction of these terms. A1609-10. The district court issued a Final Judgment Order in each case on appeal in accordance with the parties' stipulations. A188-89; A221-22; A254-55; A287-88.

III. STATEMENT OF FACTS

A. Interval's Patents

1. Background

Interval asserts two patents involved in this appeal, U.S. Patent Nos. 6,034,652 ("the '652 patent") and 6,788,314 ("the '314 patent"). The '314 patent claims priority to the '652 patent, and the two patents share a common specification.[1]

Interval's patents disclose techniques for allowing Internet sites to display information to users who are interested in the information, but might not expend adequate energy to obtain it. A41 at 1:28-35; A32 at Abstract. The disclosed system allows users to identify information of interest (e.g., by clicking a button on

[1] For brevity, Defendants-Appellees cite herein to the '652 patent only.

a website), which the system can then send to the user, with automatic updates at routine periods. A48 at 16:1-16; A49 at 17:58-A50 at 19:21. The patents disclose that the information could include things like news summaries, MTV music segments, or video from traffic cameras. A44 at 7:27-35.

Interval's patents profess to address a failure in the art to use existing screensaver and computer wallpaper applications (i.e., applications that display an image in the background of the computer screen) to present a user with information retrieved over the Internet. A41 at 1:55-67. The patents state that displaying information to a user "directly in response to a request from the user or indirectly (i.e., without a user request) . . . can be effective, [but these methods] do not exhaust the possibilities." *Id.* at 1:32-38. The patents then observe that screensavers and wallpaper are popular ways to display imagery during a period of inactivity (screensaver) or in "the background portions on a computer display screen" (wallpaper). *Id.* at 1:39-55.

Interval's patents purport to overcome this alleged deficiency in two ways:

(1) by displaying an image "in an unobtrusive manner that does not distract a user from a primary interaction with the apparatus" (A42 at 3:11-18); and

(2) by disclosing a system termed an "attention manager" (A41 at 2:3-9).

2. The First Approach: Displaying in an "Unobtrusive Manner that Does Not Distract a User"

Interval's patents describe the invention using functional language, disclosing that images can be displayed "in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus." A42 at 3:11-18. The patents state that "primary interaction" is to be "construed broadly" (A44 at 8:14-18), and the district court adopted the parties' agreed construction for this term: "any operation of the computer that occurs to enable or to support the performance of the function or functions that provide the basis for the user's use of the computer" (A14). Examples of primary interactions include Web browsers, online services (e.g., streaming radio), word-processing programs, or "simply the operation of a conventional computer operating system, such as the Windows . . . or the MacIntosh operating system produced by Apple Computer." A44 at 8:23-34. Consequently, displaying an image in accordance with this functional language cannot distract a user from any such application the user may be using, including the basic computer operating system.

The specification does not provide any criteria or guidelines to one of ordinary skill in the art for determining whether an image is displayed in an unobtrusive manner, or whether an image will distract a user. And while the asserted claims refer to displaying "images," the specification states that "image" is broadly defined to include both visual imagery and "audio imagery (i.e.,

sounds)." A43 at 6:60-64. The specification provides no guidance on how to determine whether any type of visual or "audio imagery" would be unobtrusive or would not distract a user.

The specification discloses that it is possible to display images in an unobtrusive manner that does not distract a user using a "screen saver embodiment" or a "wallpaper embodiment." A42 at 3:11-31. However, the specification does not limit the "unobtrusive manner that does not distract" language to these two examples. *Id*. Nor does the specification say that every screensaver or wallpaper is displayed in an unobtrusive manner. The patents do not disclose any algorithm identifying steps for displaying an image in a screensaver or wallpaper (or by any other display technique) in a way that is unobtrusive and that does not distract a user.

Although Interval contends that the specification teaches that only the wallpaper embodiment can be used to display images in an unobtrusive manner that does not distract a user (thereby excluding the screensaver embodiment), the screensaver is the first technique the specification says can be used to display images in an unobtrusive manner that does not distract a user. *Id.* at 3:11-22. The wallpaper embodiment comes second. *Id.* at 3:25-31.

3. The Second Approach: "Attention Manager"

The attention manager is a system "for providing information to users of the attention manager." A43 at 5:11-12. The "user" could be any sentient being, including dogs, cats, or birds. A55 at 29:32-40. The specification teaches that the attention manager "makes use of 'unused capacity' of the display device and the person's attention." A32 at Abstract; *see also* A43 at 6:45-47.

The unused capacity may be "temporal," meaning that information can be presented "during inactive periods (i.e., when the user is not engaged in an intensive interaction with the apparatus)." A43 at 6:34-38; *see also id.* at 6:45-50; Interval Br. 10. The patent refers to the temporal unused capacity as the "screen saver embodiment." A42 at 3:19-22; Interval Br. 10-11. The specification teaches that the display may be triggered by detection of an idle period, or the user may indicate through a user interface that he is not actively engaged in a primary interaction. A45 at 9:23-37.

The patents also describe that the unused capacity may be "spatial." A43 at 6:45-51. Unused spatial capacity refers to displaying information "while the user is actively using the device but in an area of the display that is not used by the primary interaction." A333 (citing A43 at 6:23-51). As Interval acknowledged, the "specification defines 'the wallpaper embodiment' as short-hand nomenclature referring to the spatial embodiment." Interval Br. 51-52 (citing A42 at 3:25-31).

The patents define wallpaper in accordance with its normal usage as "a pattern generated in the background portions on a computer display screen." A41 at 1:50-55. In keeping with ordinary computer wallpaper, in the wallpaper embodiment, the user's primary interaction with the device (e.g., a Microsoft Word document or Internet browser) may display images in addition to the wallpaper. A42 at 3:25-31.

The wallpaper embodiment is the only way the specification discloses for displaying an image in an area of the display screen that is not used by the primary interaction. The patents do not explain any way to make use of "unused spatial capacity"—a term of Interval's creation—except by displaying an image as wallpaper. The patents do not disclose that an image is displayed in "unused capacity" when the image pops up on top of whatever happens to be displayed on the user's screen. Nor do the patents disclose that displaying an image overlapping a primary interaction makes use of unused capacity.

4. "Instructions" Specifying Functions to Be Performed

Interval requests that this Court address the district court's construction of the term "instructions" (including its contention that "instructions" can be data alone), though Interval acknowledges the construction is unrelated to the issues on appeal. The specification discloses several different "functional components" related to the disclosed invention, each of which can be represented by "a set of

instructions and/or data." A47 at 14:49-54. While the specification states that instructions "may include, if appropriate, data related to accomplishment of the functions associated with the set of instructions," the specification does not state that data alone can be instructions. *Id.* at 14:54-57. In fact, the specification discloses the opposite. Moreover, when the functional components are represented by data, the specification states that they are "configured for use by a set or sets of instructions (e.g., computer program) that *must* interact with the set of data in order to implement the attention manager." *Id.* at 14:59-65 (emphasis added).

5. Prosecution History

Although Interval argues that the "unobtrusive manner that does not distract" language is limited to the wallpaper embodiment, it represented to the PTO that the screensaver embodiment can implement this functionality on several occasions.

Interval's application as originally filed included claims directed to the functional requirement of displaying in an unobtrusive manner that does not distract a user (e.g., A961 at claim 19) and claims directed to an "attention manager" (A967 at claim 49).

The original application included an "unobtrusive manner" claim specifically directed to the screensaver embodiment. Original claim 20 depended from claim 19, which recited "means for selectively displaying on the display

device, in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction." A961. Claim 20 was directed to the screensaver embodiment, reciting a "means for detecting an idle period of predetermined duration, and wherein the means for selectively displaying displays the image or images automatically after detection of the idle period." *Id*.

During prosecution, Interval asserted that its screensaver embodiment displayed images in an "unobtrusive manner that does not distract a user" in attempting to swear behind prior art relied on by the examiner. Interval pointed to a declaration by inventor Philippe Piernot describing his development of the screensaver embodiment as establishing reduction to practice of displaying in an "unobtrusive manner that does not distract." A1012; A1039; A1050 at 2:5-32.

The '314 patent is a continuation of the application that issued as the '652 patent. During prosecution, the examiner rejected certain claims containing the "unobtrusive manner" language, asserting that a prior art reference taught these limitations with its "screen saver mode." A1217. Interval did not disagree with the examiner's assertion that a screensaver could satisfy this limitation; instead, Interval traversed the rejection on other grounds. A1229-30.

In March 2010, less than six months before filing suit against Defendants, Interval again presented a claim that required displaying in an "unobtrusive manner" through the screensaver embodiment in a reissue application of a related

patent. A1360; A1387; A1392; A1403. New claim 33 was directed to the screensaver embodiment, reciting "wherein the displaying the image or images in an unobtrusive manner comprises displaying the image or images during an inactive period in the primary interaction." A1404.

During prosecution, Interval also distinguished its invention's use of "unused capacity"—which the specification says the attention manager uses—from prior art that displayed information in a browser window during "downtime" while the requested webpage was loading. A984-85. In responding to the examiner's rejection over this art, Interval noted that the rejected claims required displaying an image "in an unobtrusive manner that does not distract a user of [an] apparatus from a primary interaction with the apparatus." A985. Interval stated that the specification's screensaver and wallpaper embodiments could display images in accordance with these limitations. A985-86.

Interval then explained that "[t]his aspect of the invention makes use of 'unused capacity' of a display device . . . and of the attention of a person in the vicinity of the display device." A986. Interval conceded that the prior art could also be considered to display information in "unused capacity" by displaying images in a browser window during "downtime," but stated that its invention made use of "different unused capacity." *Id.* Interval did not explain what its

invention's "different unused capacity" could mean other than the screensaver or wallpaper embodiments.

6. The Asserted Claims

Interval claimed the disclosed invention using the functional language in the '314 patent, with each independent claim reciting displaying "in an unobtrusive manner that does not distract a user of the display device or an apparatus associated with the display device from a primary interaction." A88 at 29:60-66, 30:29-36; A89 at 31:33-39, 32:10-15, 32:53-59. Representative claim 1 recites:

> 1. A method for engaging the peripheral attention of a person in the vicinity of a display device, comprising the steps of:
>
> providing one or more sets of content data to a content display system associated with the display device and located entirely in the same physical location as the display device;
>
> providing to the content display system a set of instructions for enabling the content display system to *selectively display, in an unobtrusive manner that does not distract a user of the display device or an apparatus associated with the display device from a primary interaction with the display device or apparatus, an image or images generated from a set of content data*; and
>
> auditing the display of sets of content data by the content display system;
>
> wherein the one or more sets of content data are selected from a plurality of sets of content data, each set being provided by an associated content provider, wherein each associated content provider is located in a different physical location than at least one other content provider and each content provider provides its content data to the content display system independently of each other content provider and without the content data being aggregated at a common physical location remote from the content display system prior to

> being provided to the content display system, and wherein for each set the respective content provider may provide scheduling instructions tailored to the set of content data to control at least one of the duration, sequencing, and timing of the display of said image or images generated from the set of content data.

A88 at 29:53-30:17 (emphasis added).

Independent claim 4 of the '652 patent also recites this language in a means-plus-function limitation: "means for selectively displaying on the display device, in an unobtrusive manner that does not distract a user." A55 at 30:29-33.

Asserted claims 15-18 do not include the functional "unobtrusive manner" limitations, but are instead directed to an "attention manager." A56 at 32:37-A57 at 34:24. Representative claim 15 recites:

> 15. A computer readable medium encoded with one or more computer programs for enabling acquisition of a set of content data and display of an image or images generated from the set of content data on a display device *during operation of an attention manager*, comprising:
>
> acquisition instructions for enabling acquisition of a set of content data from a specified information source;
>
> user interface installation instructions for enabling provision of a user interface that allows a person to request the set of content data from the specified information source;
>
> content data scheduling instructions for providing temporal constraints on the display of the image or images generated from the set of content data, wherein the content data scheduling instructions further comprise sequencing instructions that specify an order in which the images generated from a set of content data are displayed; and

display instructions for enabling display of the image or images generated from the set of content data.

A56 at 32:37-58 (emphasis added).

B. District Court Proceedings

1. Interval's Infringement Contentions

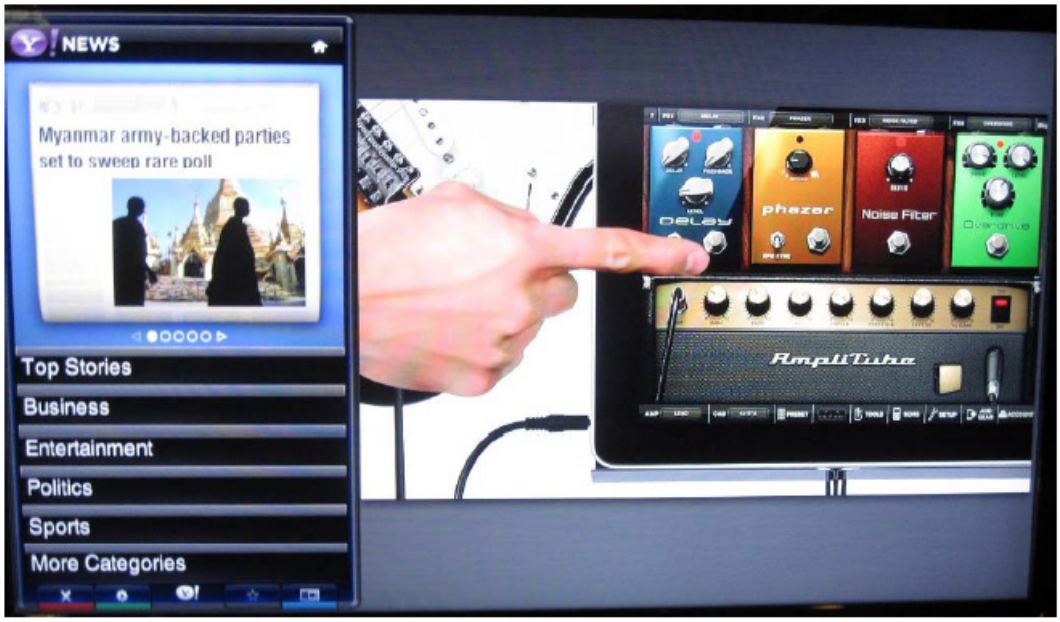
Defendants' accused products do not display information in a screensaver or wallpaper. Rather, Defendants' products are accused of infringement because they display pop-up notifications of new emails, text messages, voice mails, calendar reminders, and social network status updates. Interval Br. 13-14. Interval asserts that the accused products present these "'pop-up' notifications in peripheral areas of the screen so as to avoid interfering with the user's on-going activities." *Id.* at 13.

Interval's brief included screenshots of Apple's iPhone and Google's Android devices, showing a notification of a new email popping up over a browser window. *Id.* at 14. Below are additional screenshots from Interval's infringement contentions showing other pop-up notifications and displays by Defendants' products that Interval accuses of infringing the '652 and '314 patents.

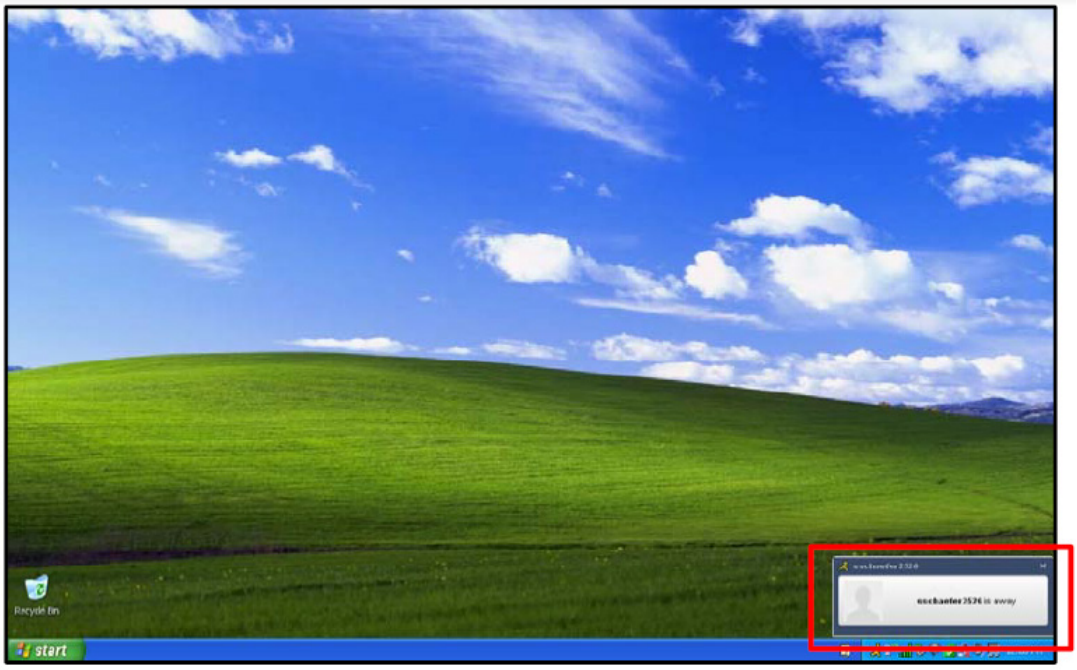
Google: Google Desktop



Yahoo!: Yahoo Connected TV Widgets (Yahoo! News)



AOL: AOL Instant Messenger



Apple: Apple Dashboard



Interval's infringement contentions do not explain what guidelines Interval used to determine that these pop-up notifications and images, which can either

appear over a user's primary interaction (which Interval has chosen not to show) or may themselves be part of the user's primary interaction, are unobtrusive or would not distract a user from the primary interaction.

2. Claim-Construction Proceedings

a) Interval's Expert Testimony

During claim construction, Interval submitted an expert declaration regarding the phrase "means for selectively displaying on the display device, in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus." Interval's expert, Dr. William Mangione-Smith, opined on both the recited function and the specification's purported disclosure of structure corresponding to the function. A500-01.

Defendants deposed Interval's expert regarding his opinion. Dr. Mangione-Smith testified that he understood "display in an unobtrusive manner" to mean "to display an image to a user in a manner that didn't intrude upon them to a significant degree" or that "is not obtrusive to the person to which it is being displayed." A437:3-14; A436:6-12. He elaborated that "to a significant degree" meant "[t]o a degree that the user would find it to be obtrusive." A443:6-11.

Interval's expert testified that he could not determine whether an image was displayed in an unobtrusive manner without knowing what the user was doing when the image was displayed, as well as "environmental issues" and "personal

factors related to the person." A449:1-A450:15. He testified that there are "an infinite number of contexts" that could factor into whether a displayed image would be unobtrusive, including factors such as (1) the application the user was using; (2) the nature of the image (e.g., color, size, animations); and (3) the quality of the display (e.g., brightness, glare). A438:8-A441:11.

Interval's expert was likewise unable to identify whether a particular image would not distract a user. He testified that this would depend on various factors, including (1) attributes of the user (e.g., propensity for distraction); (2) the nature of the image intended to be nondistracting (including location); (3) the nature of other displayed images; (4) the technology used for composing those images; and (5) environmental context. A444:4-A447:7.

b) Claim-Construction Order

While acknowledging Defendants' burden to prove indefiniteness by clear and convincing evidence, the district court found that the "unobtrusive manner" and "does not distract" limitations, whether viewed together or separately, are insolubly ambiguous. A6. The court stated that these limitations are indefinite "because the determination of whether an accused product would meet the claim limitations depends on its usage in changing circumstances." A9-10.

The district court analyzed the intrinsic record and determined it does not "show one of ordinary skill in the art how to distinguish between displays of

content that are obtrusive/unobtrusive and distracting/non-distracting." A7; A9. The court found that the specification's exemplary embodiments do not define boundaries for the claim. A8-9.

The district court rejected Interval's argument that the specification provided a definition for this claim language, noting that Interval relied on a passage beginning with an "e.g.," which one of ordinary skill would not consider a definition. A8. The court also noted that Interval's argument that the specification defined this claim phrase was undermined by Interval proposing a new construction a week before the *Markman* hearing. A14. The court also rejected Interval's argument that these limitations excluded the specification's screensaver embodiment, finding it contradicted the specification. A13. Further, the court rejected Interval's revised construction, finding it would read "does not distract" out of the claim and because "areas 'not substantially used' is still indefinite." Order 13-14.

The district court also held indefinite the means-plus-function limitation containing the "unobtrusive manner that does not distract" limitations, recited in claim 4 of the '652 patent, because (1) the recited function is indefinite; and (2) the specification fails to disclose sufficient structure corresponding to the recited function. A15-16. The court observed that Interval's purported structure "merely parrots the indefinite functional language in the claims and fails to identify any

algorithm that is actually capable of accomplishing the function." A16. The court found that Interval's construction would improperly capture any general-purpose computer programmed to perform the recited function. *Id*.

The district court construed the phrase "during operation of an attention manager," recited in claims 15-18 of the '652 patent, to mean "during operation of a system that displays images to a user either when the program detects that the user is not engaged in a primary interaction or as a background of the computer screen." A18. The court stated that its construction was in accordance with "the only description in the specification that gives objective boundaries" for this term, in contrast with Interval's construction, which the court held provided no meaningful boundaries. A18-19. The court also found that Interval's statements during prosecution supported its construction because Interval, in distinguishing prior art, "explained that [its] invention made use of the 'unused capacity' of a display device . . . through two implementations, the screensaver and the wallpaper embodiments." A19.

The district court construed the term "instructions" as "a statement in a programming language that specifies a function to be performed by a system." A27. The court rejected Interval's construction, under which instructions could be data alone, because it conflicted with the intrinsic record and the term's ordinary

meaning. A27-28. The court found that the specification taught that instructions and data are different things. A27.

3. Interval's Stipulation of Invalidity and Noninfringement

Based on the district court's holding that the claim phrase displaying "in an unobtrusive manner in a manner that does not distract" is indefinite, Interval stipulated to invalidity of the asserted claims of the '314 patent, as well as claims 4-8, 11, 34, and 35 of the '652 patent. A1705-06. Interval also stipulated to noninfringement of claims 15-18 of the '652 patent based on the court's construction of "attention manager." A1706.

Interval's stipulation of invalidity and noninfringement was not based on the district court's construction of "instructions." A1705-06.

IV. SUMMARY OF ARGUMENT

The district court correctly held that the phrase "in an unobtrusive manner that does not distract a user" is indefinite. The specification does not provide any objective boundary for this language. The intrinsic record gives no criteria for weighing the infinite number of contexts that would affect whether a particular image was "unobtrusive" or would "not distract a user." Thus, whether an image meets these limitations would depend on the subjective opinion of the particular user and the infinite contexts that could vary moment to moment.

While the specification discloses two embodiments, screensavers and wallpaper, that it says can display an image in this manner, the specification does not say that the "unobtrusive manner that does not distract" language is limited to these two examples. Nor does it say that all screensavers or wallpaper will be unobtrusive and nondistracting. Interval's purported "definition" arbitrarily narrows the limitation to exclude a preferred embodiment, and is itself indefinite because the intrinsic record provides no standard to measure whether an image "insubstantially overlaps" a user's primary interaction.

The district court also correctly held that the means-plus-function limitation containing this phrase is indefinite for the additional reason that the specification fails to disclose sufficient structure corresponding to the recited function.

Interval's purported "structure" violates the prohibition on purely functional claiming by merely parroting the recited function.

The district court also correctly gave "attention manager" the only construction consistent with the intrinsic record that provides objective boundaries. Interval's construction fails to provide meaningful boundaries by requiring the public to do the impossible—determine, without guidance, whether a system "engag[es] at least part of the user's attention that is not occupied by the user's primary interaction." Interval's construction is also broader than its own characterization of the "attention manager." Specifically, Interval acknowledges that the specification places limits on where the attention manager can display an image, yet its construction includes no such limitation. Interval also proposes a new alternative construction on appeal, but waived that construction by failing to present it below.

This Court need not review the term "instructions" because Interval acknowledges it is irrelevant to this appeal. Regardless, the district court's construction agrees with the specification and ordinary meaning. The district court correctly rejected Interval's argument that "instructions" can be data alone because it conflicts with the specification, which expressly identifies "instructions" and "data" as two different things.

V. ARGUMENT

Claim construction is reviewed de novo. *See Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005). Likewise, the district court's finding of indefiniteness under 35 U.S.C. § 112, ¶ 2, is reviewed de novo. *Id*.

A patent specification must conclude with one or more claims particularly pointing out and distinctly claiming the subject matter that the applicant regards as his invention. 35 U.S.C. § 112, ¶ 2. While claims are not indefinite merely because discerning the meaning is a formidable task, claim language is indefinite, and the claim is therefore invalid, "where an accused infringer shows by clear and convincing evidence that a skilled artisan could not discern the boundaries of the claim based on the claim language, the specification, and the prosecution history, as well as her knowledge of the relevant art area." *Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1249-50 (Fed. Cir. 2008). "Otherwise, competitors cannot avoid infringement, defeating the public notice function of patent claims." *Id.* at 1249.

A term is indefinite if one skilled in the art would not know from one use to the next whether the accused product was within the scope of the claims due to outside factors affecting whether the limitation is met. *Id.* at 1254-55. This problem is particularly acute with functional limitations like those the district court held indefinite here, a problem the patent drafter is best positioned to avoid. *Id.* at

1255-56. To construe a claim term such that a product "might infringe or not depending on its usage in changing circumstances" is the "epitome of indefiniteness." *Geneva Pharm., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1384 (Fed. Cir. 2003).

Claim language is also indefinite where it "depend[s] solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention." *Datamize*, 417 F.3d at 1350. Thus, a claim term cannot be given a subjective construction that "would depend on the unpredictable vagaries of any one person's opinion . . . ." *Id*.

Interval warns that affirming the district court's indefiniteness finding would result in great confusion. The risk of confusion comes not from the court's holding, which follows *Datamize* and *Halliburton*, but from allowing Interval to use ambiguous, subjective language to impermissibly manipulate the scope of its patent rights. Such fuzzy language results in "[a] zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims . . . ." *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942). This "would discourage invention only a little less than unequivocal foreclosure of the field." *Id.*

A. The Phrase "In an Unobtrusive Manner that Does Not Distract a User of the Apparatus from a Primary Interaction" Is Indefinite

The district court properly found indefinite the requirement to display an image "in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus."

The claim language requires that an image be displayed in an unobtrusive manner that does not distract a user from a primary interaction.[2] The claim gives no context for determining whether an image is displayed unobtrusively, nor whether an image will distract a user from the user's primary interaction (e.g., a Microsoft Word document). This determination is highly dependent on a wide variety of factors that would affect whether a user found images to be unobtrusive or distracting. A438:8-A441:11; A444:4-A447:7. And on its face, the plain language of the claim violates the definiteness requirement by depending on the "unrestrained, subjective opinion" of the user. *Datamize*, 417 F.3d at 1350.

1. The Intrinsic Record Does Not Provide an Objective Anchor

The intrinsic record does not cure the inherent ambiguity of the claim. The specification simply repeats the claim language, stating that "according to one

[2] Interval contends the district court incorrectly viewed this language as including two distinct requirements. But claims are interpreted to give effect to all terms. *See Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). Regardless, the court correctly found that this language is indefinite whether the limitations are viewed separately or together.

aspect of the invention, an attention manager engages the peripheral attention of a person . . . [by] selectively displaying on the display device, in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus, an image or images generated from the set of content data." A42 at 3:11-18; *see also id.* at 4:60-67. While the specification identifies the screensaver and wallpaper embodiments as two examples that can display an image in this manner, nothing in the specification limits the claim to these examples, or says that using a screensaver or wallpaper will necessarily provide a display that is unobtrusive and does not distract a user. Nor does the specification provide any other way to draw a fence around the scope of these limitations, as the district court noted in stating that the specification fails to "translate [the examples] . . . into meaningfully precise claim scope." A9 (citing *Halliburton*, 514 F.3d at 1251).

Thus, the specification provides no guidance to one of ordinary skill on how to weigh the numerous variables that would differ from user to user and situation to situation in order to determine whether an image is displayed in an "unobtrusive manner." As the district court observed, "the same image may or may not be considered unobtrusive depending on a variety of factors, such as color, size, and information displayed." A6-7. The intrinsic record does not explain "[w]hat color, shape, or size makes an image more or less 'unobtrusive'" or "[w]hich unused

areas of the display screen are unobtrusive." A12. This parallels the *Datamize* patent's fatal failure to "explain what selection of [the disclosed examples of aesthetic features] would be 'aesthetically pleasing.'" *Datamize*, 417 F.3d at 1352; *see also Halliburton*, 514 F.3d at 1254 (observing that the patent "does not answer the fundamental question: what quantity, weight, size and/or volume of cuttings must be suspended" to meet the "fragile gel" limitation).

Even Interval's expert conceded that whether an image is displayed in an unobtrusive manner would depend on an "infinite number of contexts," including the nature of the displayed image (including location) and what computer application the user was using at the time.[3] A440:20-A441:11. This ambiguity is the "epitome of indefiniteness." *Geneva Pharm.*, 349 F.3d at 1384. One user may find an image obtrusive, while another user may not, depending, inter alia, on "personal factors related to the person." A450:5-15.

The specification likewise fails to provide an objective anchor for the limitation that a displayed image "does not distract a user from a primary interaction." First, the specification contains no standard for determining what

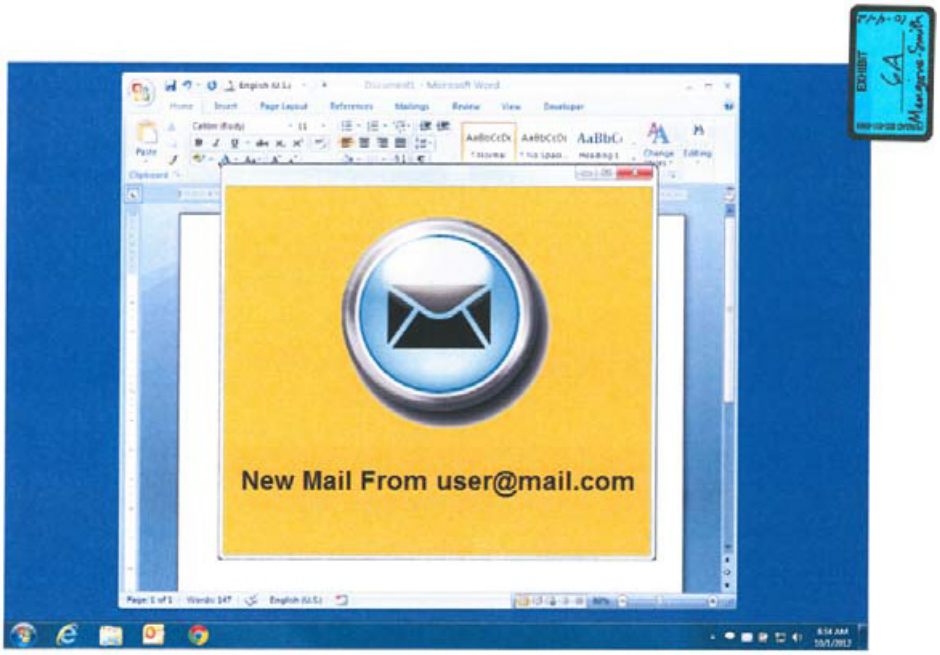
[3] While Interval tries to disavow its expert's testimony, this is unavailing given that he opined on the means-plus-function term containing the "unobtrusive manner that does not distract" language at issue in this appeal. Interval's expert opined both on the meaning of the claim language (A500 ¶ 30) and the corresponding structure purportedly disclosed in the specification (A500-01).

constitutes "distraction" in the context of the patents. Is the user distracted if his eyes are drawn to the image? Is the user distracted only if he switches his engagement from the primary interaction to the displayed image? For how long? Is the user distracted by an image when her primary interaction is listening to music? How does the image's size in relation to the primary interaction affect distraction? Interval's patents do not say, so any standard the public applies would merely be guesswork.

Further, the intrinsic record does not provide any objective boundaries on how to display an image that will not distract a user from the primary interaction. As the district court recognized, "whether something distracts a user from his primary interaction depends on the preferences of the particular user and the circumstances under which any single user interacts with the display." A7. "[O]ne user with a higher ability to focus may not be distracted by an image, while another user with a lesser ability to concentrate may be easily pulled away by the same image." *Id.* Any number of factors (such as the "images in general, and size, and color and location") affect whether a user would find something distracting. A444:4-A446:23. Additionally, "two users may have different propensity to distraction." A446:24-A447:7. And the same user's opinion could change moment to moment. Therefore, whether a particular image was not distracting

would subjectively "depend on the unpredictable vagaries of any one person's opinion . . . ." *Datamize*, 417 F.3d at 1350.

The indefiniteness of this limitation is confirmed by the inability of Interval's expert to say whether even the email notification in the image below would distract a user from the underlying Microsoft Word document. A591 at 170:7-17. *See Datamize*, 417 F.3d at 1354 ("The inability of the expert to use the parameters he himself identified to determine whether an interface screen is 'aesthetically pleasing' militates against the reasonableness of those parameters as delineating the metes and bounds of the invention.").



2. The Cases Interval Relies on Do Not Support Its Argument that the Claim Language Is Sufficiently Definite

Interval tries to analogize the "unobtrusive manner" and "does not distract" limitations to claim terms this Court has found sufficiently definite in other cases,

but these cases are inapposite. Interval Br. 30-33. For example, Interval relies on *Deere & Co. v. Bush Hog, LLC*, 703 F.3d 1349 (Fed. Cir. 2012), in which this Court found the phrase "easily washed off" sufficiently definite. Interval argues that because the Court in *Deere* did not question whether a deck might be difficult to wash off under certain circumstances, the district court in this case was wrong to consider that whether an image was unobtrusive or nondistracting would vary depending on the particular user and circumstances. But such an analysis was unnecessary in *Deere* because the intrinsic record described structural features providing an objective boundary for the limitation, "explain[ing] that a deck with a smooth, generally convex upper surface is 'easily' washed off." *Id.* at 1360. In contrast, Interval's patents contain no objective guidelines for determining the boundaries of displaying "in an unobtrusive manner that does not distract a user."

Interval also relies on *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357 (Fed. Cir. 2010), but this case is similarly inapposite. *Hearing Components* held that a claim requiring that a wax guard be "readily installed and replaced" in the ear by a user was not indefinite because the specification tied the "readily installed" limitation to the capability to be installed without tools. *Id.* at 1367-68. The specification indicated that this objective anchor applied "irrespective of the age or level of disability in the user." *Id.* In contrast, Interval's specification draws no objective boundaries around "unobtrusive" or "does not distract" that

apply regardless of outside factors such as the nature of the image (including audio imagery), what the user is doing, what else is displayed, and where the image is displayed.

3. The Intrinsic Record Does Not Equate These Limitations to the Wallpaper Embodiment

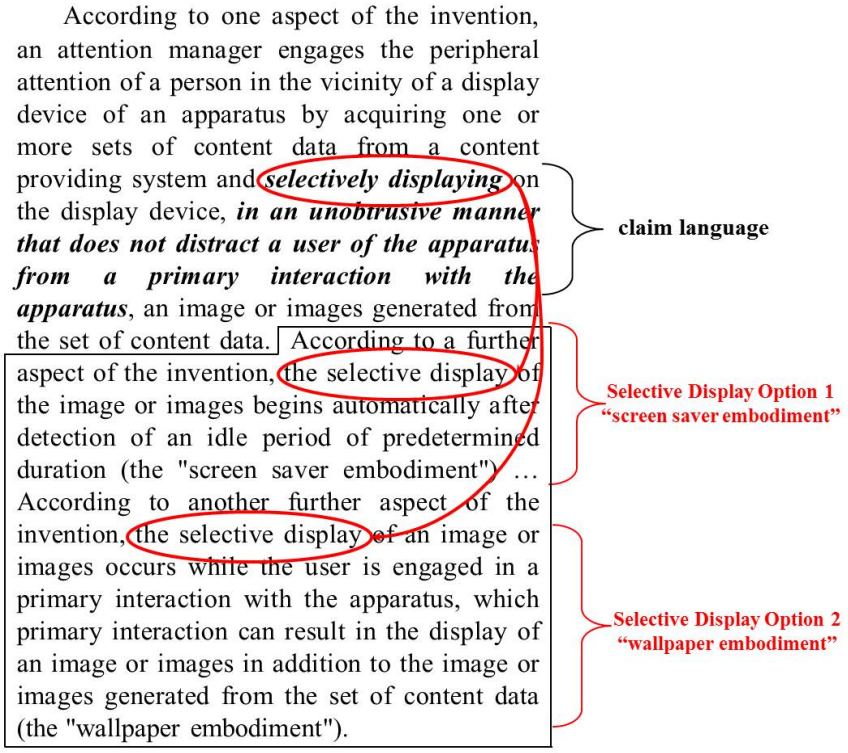
The core of Interval's argument against the district court's indefiniteness conclusion is its contention that the specification defines this phrase as being limited to the wallpaper embodiment. But the original claims, specification, and prosecution history conclusively establish that Interval did not restrict this phrase to the wallpaper embodiment.

a) The Specification Expressly Says that the "Unobtrusive Manner" Limitation Is Broader Than Wallpaper

Interval's argument that this phrase is limited to the wallpaper embodiment fails at the outset in view of original claim 20, which forms part of the specification. *See N. Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 938 (Fed. Cir. 1990) ("The original claims as filed are part of the patent specification."). Original claim 20 was directed to the screensaver embodiment and required displaying "in an unobtrusive manner that does not distract a user from a primary interaction" based on its dependence from claim 19. A961.

The specification's Summary of the Invention provides further confirmation that this phrase is not limited to wallpaper. The specification states that,

"[a]ccording to one aspect of the invention, an attention manager engages the peripheral attention of a person . . . [by] selectively displaying . . . in an unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus, an image or images generated from the set of content data." A42 at 3:11-18. The next sentence says that, in "a further aspect of the invention, *the* selective display," referring to the previous sentence's description of selectively displaying in an unobtrusive manner that does not distract a user, "begins automatically after detection of an idle period of predetermined duration (the 'screen saver' embodiment)." *Id.* at 3:19-22 (emphasis added). Only afterward does the specification state that the wallpaper embodiment can also satisfy these limitations, as illustrated below. *Id.* at 3:25-31.



By first generally disclosing the concept of displaying "in an unobtrusive manner that does not distract a user" before explaining that displaying an image in a screensaver or wallpaper are "further aspect[s]" of the invention," Interval confirmed that the claim language is not limited to these two embodiments.

In support of its argument, Interval points to a pair of passages in the specification disclosing that the wallpaper embodiment can display images "during active periods . . . but in an unobtrusive manner that does not distract the user from the primary interaction." A41 at 2:3-19; *see also* A43 at 6:34-51. These passages simply note that this embodiment can satisfy the "unobtrusive manner" and "does not distract" limitations even though it displays the image while the user is engaged in a primary interaction. Neither passage contradicts the specification's teachings that these limitations can also be implemented using the screensaver embodiment. And nothing in these passages suggests that the wallpaper embodiment is the only way to display an image in an unobtrusive manner that does not distract a user.

b) The Prosecution History Confirms These Limitations Are Not Limited to the Wallpaper Embodiment

The prosecution history also shows that displaying "in an unobtrusive manner that does not distract a user" is not limited to the wallpaper embodiment. Interval told the PTO on multiple occasions over fifteen years that these limitations encompass the screensaver embodiment.

Interval expressly stated during prosecution in 1998 that "[t]he display of images in an unobtrusive manner . . . can be implemented by, for example, displaying images during an inactive period . . . (the 'screensaver embodiment')." A985. Next, in 1999, Interval relied on inventor Philippe Piernot's declaration describing his development of the screensaver embodiment as evidence that the inventors had reduced the "unobtrusive manner that does not distract" limitation to practice. A1012; A1039. Interval may not rely on the screensaver embodiment to swear behind prior art during prosecution and then disown the screensaver embodiment years later in litigation.

Interval then filed a reissue application in 2010, months before filing suit against Defendants, presenting a claim (claim 33) that recited "wherein the displaying the image or images in an unobtrusive manner comprises displaying the image or images during an *inactive period* in the primary interaction." A1404 (emphasis added). This series of representations leaves no doubt that displaying "in an unobtrusive manner that does not distract a user" is not restricted to the wallpaper embodiment.

Interval's appeal brief addresses its statements during original prosecution only in a footnote. Interval argues that its "confusing" statements cannot override the teaching of the specification. But Interval's statements, from 1998 to 2010, were fully consistent with the original specification, which even claimed the

screensaver embodiment as one possible way to display an image in an unobtrusive manner that does not distract a user. A961.

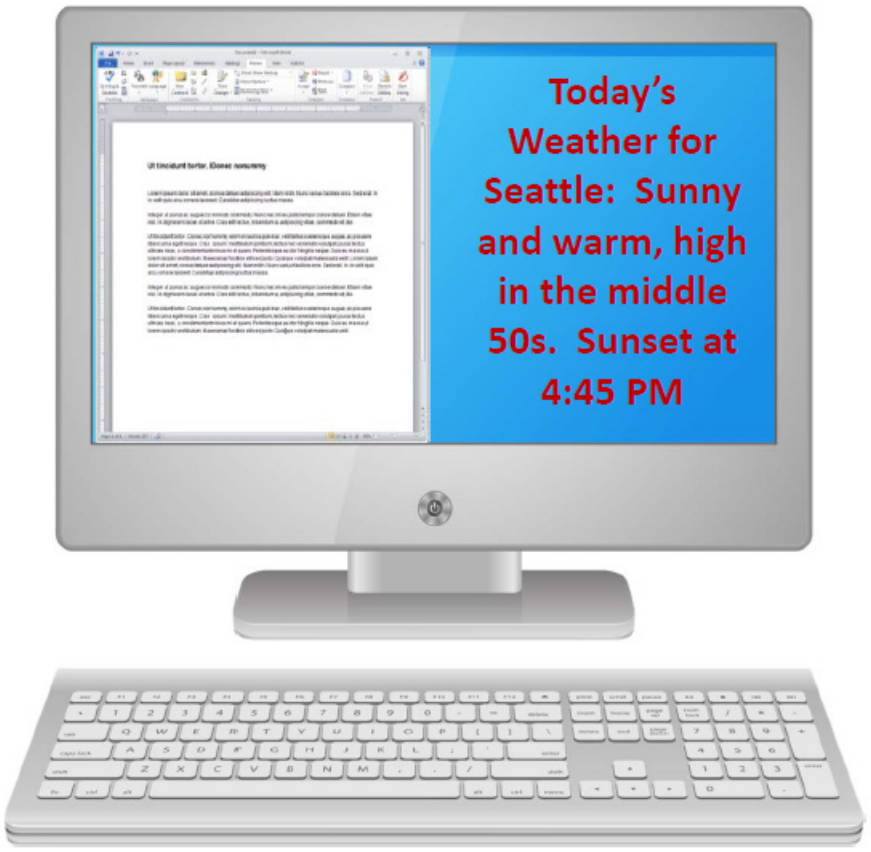
Interval also argues that its statements that this phrase is not restricted to wallpaper should be ignored in favor of a statement by the examiner of the '652 patent referring to the screensaver embodiment as distinct from an embodiment displaying content in an unobtrusive manner. A1073. First, the examiner's view cannot override the original specification and Interval's statements in prosecution. *See SRAM Corp. v. AD-II Eng'g, Inc.*, 465 F.3d 1351, 1359 (Fed. Cir. 2006) (finding patentee's reliance on examiner's narrow interpretation unpersuasive because it improperly read in a limitation). But regardless, the examiner did not construe "unobtrusive manner" or "does not distract" in the passage Interval cites; instead, he merely referenced Interval's effort to establish reduction to practice (which included asserting that the screensaver met these limitations). A1073. The examiner recognized that these limitations were broader than the wallpaper embodiment. During the later prosecution of the '314 patent, the same examiner pointed to a prior art reference's "screen saver mode" as teaching the "unobtrusive manner" limitations. A1217.

Equally unavailing is Interval's contention that its statements during reexamination require that the phrase "unobtrusive manner that does not distract" be limited to the wallpaper embodiment. Interval Br. 44. Interval did not give up

claim scope during reexamination; it argued that these limitations have always excluded the screensaver embodiment. A1308-09. The acceptance of Interval's flawed claim interpretation by the examiner who conducted the reexaminations deserves no weight because it contradicts the prelitigation intrinsic record. *See SRAM*, 465 F.3d at 1359 (rejecting examiner's construction after three reexaminations as not supported by the claim language or specification).

4. Interval's Construction Reads Out the Claim Limitations and Does Not Cure the Indefiniteness

Interval's construction is also improper because it effectively reads out the claim limitations. Under Interval's construction, any image would be unobtrusive and would not distract the user so long as it was displayed in an area of a display screen "that is not substantially used by the user's primary activity." Interval Br. 23. But an image could be displayed in unused space and still be obtrusive and/or distracting. For example, a heavy-metal music video could be displayed in an area not used by the primary interaction (e.g., a Microsoft Word document), but that alone would not mean it would be nondistracting or unobtrusive. Likewise, the weather information in the illustration below would not be obtrusive or distracting from the Word document, despite its large, red type. Nothing in the specification dictates that the claim language be stripped of its meaning in this way.



A766:17-A767:6.

5. Interval's "Insubstantial Overlap" Language Is Unsupported and Only Adds Further Ambiguity

After arguing that the specification narrowly defines displaying "in an unobtrusive manner that does not distract a user" as limited to the wallpaper embodiment, Interval incongruously tries to stretch the wallpaper embodiment to encompass displayed images that "insubstantially overlap" with the primary interaction. Interval Br. 28. The words "substantial," "insubstantial," and "overlap" do not appear in the specification, and the specification provides no guidance for what would constitute "insubstantial overlap." *See Halliburton*,

514 F.3d at 1252 (patentee's construction was inadequate because patent provided no standard for "how much more quickly the [claimed] gels broke down").[4] Moreover, interpreting wallpaper to encompass displaying an image over a primary interaction conflicts with the fundamental meaning of wallpaper as an image "generated in the background portions on a computer display screen." A41 at 1:50-52.

Interval argues that its "insubstantial overlap" construction finds support in the specification's disclosure that the user's "primary interaction can result in the display of an image or images in addition to the [unobtrusively displayed] image." Interval Br. 29 (citing A42 at 3:25-31). First, this passage does not discuss how the unobtrusive display works; it explains what the primary interaction can do. Second, this passage concludes with the parenthetical "(the 'wallpaper embodiment')," showing that it simply refers to displaying an image as wallpaper—an image displayed in the background of the display screen. A42 at 3:25-31. Moreover, this passage mentions nothing about displaying an image

[4] Interval argues that *Halliburton* is inapplicable because the "unobtrusive manner that does not distract" limitations are not the claims' only distinguishing characteristic over the prior art. Even if true, each limitation must be definite "to notify the public of the patentee's right to exclude . . . ." *Datamize*, 417 F.3d at 1350.

overlapping with a primary interaction, and provides no guidance on when the overlap would be considered "unobtrusive" or would "not distract a user."

Similarly unavailing is Interval's argument that its construction is consistent with the specification because the specification "uses exemplary language ('e.g.') when referencing an embodiment that displays without any overlap." Interval Br. 28 (citing A41 at 2:15-19; A43 at 6:43-45). This is arguing disclosure by omission; nothing in this passage says that the "unobtrusive manner" and "does not distract" limitations encompass displays that overlap the primary interaction, much less give criteria for when such overlap would satisfy the claims.

Interval also argues that the specification "contemplates that the display may take the place of 'extraneous information.'" *Id.* at 29 (citing A44 at 7:45-48). But this passage does not mean that the displayed image can take the place of the primary interaction. It simply explains that the invention benefits users because it displays interesting information in an area (i.e., screensaver or wallpaper) that may otherwise be filled by extraneous information (e.g., the early Microsoft Windows screensavers that spun geometric patterns around the screen).

Interval tries to find cover for the ambiguity introduced by reading "insubstantial overlap" into the claim by citing case law holding that terms of degree can be sufficiently definite. *Id.* at 33. But these cases address terms actually recited in the claims or constructions for which adequate guidance is

provided in the specification. These cases do not endorse wedging unsupported terms into a proposed construction to give wiggle room for the patentee's infringement case. *See Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1218 (Fed. Cir. 1991) (finding term "about," which was added during prosecution, indefinite because the intrinsic record provided no "indication as to what range of specific activity is covered by the term 'about'").

Interval's infringement contentions demonstrate the problem with inserting this vague and unsupported language. Interval provided screenshots that show the accused images on top of only the screen's background. But if a Microsoft Word document was open, these images could display right over that document. The specification provides no guidance in determining whether the space taken up by these images is "not substantially used" by the Word document. And that answer could change depending on where the image overlaps the Word document, whether the document was maximized, the margins of the document, and other unknowable variables. Again, this makes Interval's construction indefinite. *See Geneva Pharm.*, 349 F.3d at 1384.[5]

[5] While Interval contends that whether the accused products satisfy its unsupported construction should be resolved by the jury, indefiniteness is a question of law to be resolved by the court.

6. Interval's Effort to Recast Its Construction as Displaying "so as to Not Interfere" with a User's Application Also Fails

Tacitly acknowledging the ambiguity of its "insubstantial overlap" construction, Interval offers that its construction "refers to a type of display that uses the otherwise unused areas of the screen so as to not interfere with an ongoing application." Interval Br. 28. But again, this reads out the actual limitations. A displayed image could be obtrusive, or could distract a user, even if it does not prevent a user from continuing with an ongoing application.

Furthermore, Interval's new spin on its construction fails to cure indefiniteness. The term "interfere" does not appear in the specification, and the specification gives no guidelines to apply this equally subjective phrasing. Interval's expert advocated essentially this same standard, testifying that an image is displayed unobtrusively if it does not "intrude upon [a user] to a significant degree." A437:3-14. But he then testified that "to a significant degree" means to "a degree that the user would find it to be obtrusive." A443:6-11. This explanation simply circles back to the indefinite claim language, confirming that it has no objective boundary.

7. Interval Waived Its Alternative "Narrow" Construction

As a final effort to avoid indefiniteness, Interval asks the Court to adopt an alternative version of its proposed construction that omits the word "substantially." Interval Br. 38-40. Interval did not present this alternative below, and therefore

waived it. *See Amkor Tech., Inc. v. Int'l Trade Comm'n*, 692 F.3d 1250, 1259 (Fed. Cir. 2012) (party "waived its new claim construction argument by failing to raise it below" because "a party may not introduce new claim construction arguments on appeal or alter the scope of the claim construction positions it took below" (citing *Conoco, Inc. v. Energy & Envtl. Int'l, L.C.*, 460 F.3d 1349, 1358-59 (Fed. Cir. 2006))); *Commonwealth Scientific & Indus. Research Organisation v. Buffalo Tech. (USA), Inc.*, 542 F.3d 1363, 1371 (Fed. Cir. 2008) (party waived claim-construction argument raised for first time on appeal, noting that it could have been raised as alternative argument at district court).

Interval's request that this Court artificially craft a narrowing construction to save the claims from indefiniteness is also wrong as a matter of law. *See Honeywell Int'l, Inc. v. Int'l Trade Comm'n*, 341 F.3d 1332, 1338-39 (Fed. Cir. 2003) (rejecting patentee's argument for a "narrowing, validity-saving [claim-construction] choice" because "[t]he intrinsic record does not compel a narrowing of the claim language to any one of the possible definitions"). Interval relies on *Kinetic Concepts, Inc. v. Blue Sky Medical Group, Inc.*, 554 F.3d 1010 (Fed. Cir. 2009), but this case does not support arbitrarily limiting an indefinite claim to one example found in the specification to the exclusion of another disclosed embodiment. *Kinetic Concepts* found the phrase "reduction in bacterial density" sufficiently definite because, while there were several known methods for

measuring bacterial density that could give different results, "the specification disclose[d] one particular method." *Id.* at 1022. In contrast, Interval's specification does not indicate that the only way to display an image "in an unobtrusive manner that does not distract a user" is by displaying it in unused areas of a computer screen. *See Halliburton*, 514 F.3d at 1250 (rejecting patentee's effort to read in features of a preferred embodiment to avoid indefiniteness).

Furthermore, Interval's "narrow" alternative is improper because it (1) still reads out the requirements that the image be unobtrusive and nondistracting; and (2) remains insolubly ambiguous because it purports to cover more than displaying an image as a background (i.e., wallpaper), the only way the specification discloses to determine whether space is unused. Under Interval's construction, whether a particular display would infringe would vary case by case, depending on whether or not the space where the image was displayed happened to cover a primary interaction. This is classic indefiniteness. *Id.* at 1255.

To the extent this Court adopts a narrowing construction, this phrase should be construed to require that the images are displayed either when the system detects that the user is not engaged in a primary interaction or as a background of the computer screen. The Court should not adopt even this construction, however, since the specification does not teach that an image will necessarily be unobtrusive or nondistracting merely because it is displayed in a screensaver or wallpaper.

B. "Means for Selectively Displaying in an Unobtrusive Manner that Does Not Distract a User from a Primary Interaction" Is Indefinite

Claim 4 of the '652 patent recites "means for selectively displaying on the display device, in an unobtrusive manner that does not distract a user." A55 at 30:29-33. The recited function is indefinite for the reasons discussed above. A15. The court also correctly concluded that this means-plus-function phrase is indefinite because the specification fails to identify sufficient structure for accomplishing the recited function. A16.

1. The Specification Fails to Disclose an Algorithm Corresponding to the Recited Function

"[T]he corresponding structure for a § 112 ¶ 6 claim for a computer-implemented function is the algorithm disclosed in the specification." *Aristocrat Techs. Austl. PTY Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) (alteration in original) (citation omitted). "Thus, in a means-plus-function claim 'in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.'" *Id.* (quoting *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)). Failure to disclose an algorithm for performing the claimed function renders the claim indefinite. *See Aristocrat*, 521 F.3d at 1333.

Interval's specification does not identify an algorithm for displaying an image in an unobtrusive manner that does not distract a user from a primary interaction. While the specification discloses that a screensaver or wallpaper may satisfy these limitations, the specification does not describe any steps for displaying an image using either a screensaver or wallpaper "in an unobtrusive manner that does not distract a user." A purported algorithm that "describes an outcome, not a means for achieving that outcome," is insufficient to satisfy the requirements of § 112, ¶ 6. *Id.* at 1334. Thus, the mere disclosure that an image displayed during an idle period or as wallpaper may be unobtrusive and may not distract a user does not constitute an algorithm.

2. Interval's Proposed Structure Simply Repeats the Functional Language of the Claim

Interval's purported structure, "one or more digital computers programmed to . . . display the next set of content data in the schedule in an 'unobtrusive manner that does not distract a user of the apparatus from a primary interaction with the apparatus,'" does not identify an algorithm corresponding to the recited function. A14. As the district court observed, Interval's purported structure "merely parrots the indefinite functional language in the claims and fails to identify any algorithm that is actually capable of accomplishing the function." A16. Interval does not solve this problem by plugging in the construction it proposes for

the "unobtrusive manner" limitations because it "is only another way of describing the claimed function." *Aristocrat*, 521 F.3d at 1334.

While Interval argues its proposed structure is sufficient because it recites a special-purpose computer programmed to perform the function, it identifies no description of the steps for accomplishing this function. This is no different than the proposed structure rejected in *Aristocrat*, which identified a general-purpose computer with "appropriate programming" for performing the recited function. *Id.* Indeed, the specification passages Interval cites refer to an "appropriately programmed digital computer" (A49 at 18:41-45; A47 at 14:12-14) or a computer "programmed to perform the functions" of the method (A44 at 8:2-6; A52 at 24:61-66). Interval's construction would therefore capture any computer programmed to perform the recited function, violating established law: "This [C]ourt's cases flatly reject [the] position" that a means-plus-function term can cover "pure functional claiming as long as the function is performed by a general purpose computer." *Aristocrat*, 521 F.3d at 1336.

Interval points to nothing in the specification disclosing an algorithm to implement the "unobtrusive manner that does not distract" functionality. Interval relies on Figure 5A as providing an algorithm to accomplish the function of "selectively displaying." But, as Interval's expert admitted, Figure 5A does not identify how to display an image in an unobtrusive manner that does not distract a

user (A725:1-10; A726:11-A727:15; A37), and therefore is not an algorithm corresponding to this function. *See Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1318-19 (Fed. Cir. 2012) ("[W]here a disclosed algorithm supports some, but not all, of the functions associated with a means-plus-function limitation, we treat the specification as if no algorithm has been disclosed at all.").

Interval cites *Typhoon Touch, Inc. v. Dell, Inc.*, 659 F.3d 1376, 1386 (Fed. Cir. 2011), for the uncontroversial point that an algorithm can be described in words. But as this Court noted in *Ergo Licensing, LLC v. CareFusion 303, Inc.*, *Typhoon Touch* does not change the requirement that the specification must disclose an algorithm comprising "a step-by-step procedure for accomplishing a given result." 673 F.3d 1361, 1365 (Fed. Cir. 2012) (citation omitted). In *Typhoon Touch*, the patent described "a four-step algorithm" for performing the recited function. *Typhoon Touch*, 659 F.3d at 1385-86.

Interval contends that its proposed structure is adequate because "[i]n software cases . . . algorithms in the specification need only disclose adequate defining structure to render the bounds of the claim understandable to one of ordinary skill in the art," citing *AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1245 (Fed. Cir. 2007). But this principle is inapplicable since the specification identifies no algorithm. *Noah*, 675 F.3d at 1313 (holding that "in a situation in which the specification discloses no algorithm, '[t]hat principle [that

the sufficiency of the algorithm is judged by what one of ordinary skill would understand] has no application . . .'" (quoting *Aristocrat*, 521 F.3d at 1337)). Thus, the district court correctly held this means-plus-function limitation indefinite for the additional reason that the specification fails to disclose an algorithm corresponding to the recited function.

C. The District Court Correctly Construed "Attention Manager"

The district court correctly adopted Defendants' construction of attention manager: "During operation of a system that displays images to a user either when the program detects that the user is not engaged in a primary interaction or as a background of the computer screen." A18.

1. The Specification Supports the District Court's Construction

According to Interval, the specification uses the term "attention manager" to refer to a system that "displays information using the 'unused capacity' of the display device, in either the temporal or spatial dimension." Interval Br. 49. Interval concedes that "temporal" unused capacity refers to "display[ing] information at a time when the user is not actively using the device." *Id.* at 49-50. This is consistent with the district court's construction that the "attention manager" can display images "when the program detects that the user is not engaged in a primary interaction." A18.

Interval also concedes that the specification refers to spatial unused capacity as "the 'wallpaper embodiment.'" Interval Br. 51-52. The district court's construction that the "attention manager" can display images "as a background of the computer screen" is consistent with the specification's definition of wallpaper as "a pattern generated in the background portions of a computer display screen." A41 at 1:50-52.

Interval argues for the first time on appeal that this construction improperly excludes the specification's teaching that the attention manager could be activated by user action. Interval Br. 50. But the district court's construction merely says that the system "detects that the user is *not engaged in a primary interaction* or as a *background of the computer screen*"—it does not require detection of an *idle period*. A18 (emphases added). The court's construction therefore does not exclude embodiments in which the user chooses to activate a wallpaper or a screensaver.

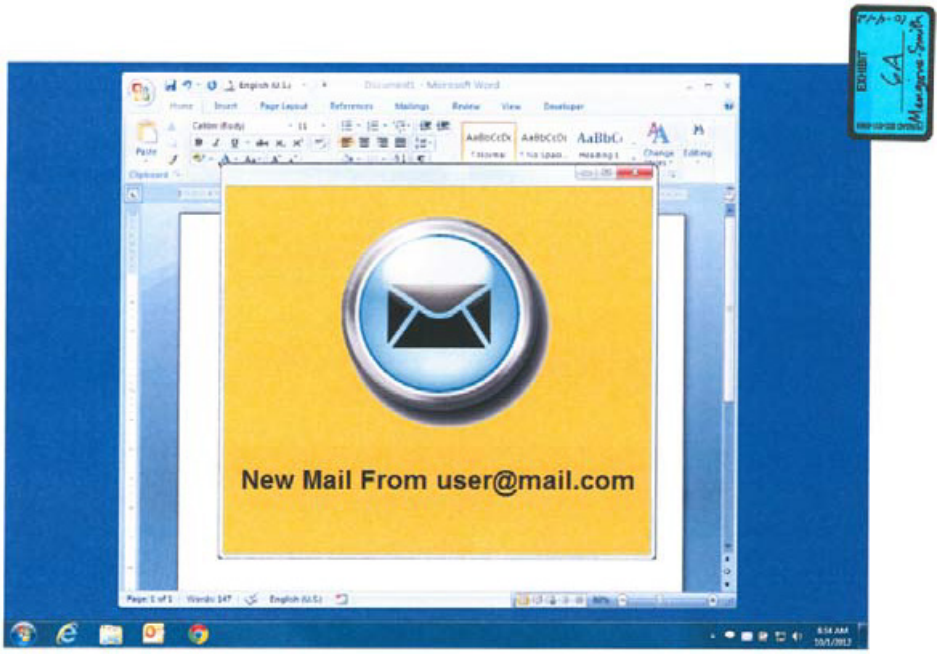
Interval next argues that the district court's construction too narrowly refers to displaying images "as a background of the computer screen," despite acknowledging that the specification used the term "'wallpaper embodiment' as short-hand nomenclature referring to the spatial embodiment." Interval Br. 51-52. Interval argues that "wallpaper embodiment" means more than displaying an image as wallpaper. But as Interval itself notes, the specification defines

"wallpaper" as "a pattern generated in the background portions on a computer display screen." A41 at 1:50-52; Interval Br. 51.

While Interval argues that the specification, two columns later, redefines "the wallpaper embodiment" as something broader than wallpaper, this passage merely describes that by displaying an image in wallpaper, the primary interaction (e.g., a Microsoft Word document) can display images in addition to the attention manager's image:

> According to another further aspect of the invention, the selective display of an image or images occurs while the user is engaged in a primary interaction with the apparatus, which primary interaction can result in the display of an image or images in addition to the image or images generated from the set of content data (the "wallpaper embodiment").

A42 at 3:25-31. This passage says nothing to depart from the definition of "wallpaper" the inventors provided earlier in the specification. Under Interval's interpretation (Interval Br. 52), wallpaper could include any image displayed "in addition to" a user's primary interaction, leading to the illogical result that the new mail notification below would be "wallpaper" despite displaying directly over the user's Microsoft Word document.



A399.

While Interval argues that the district court's construction excludes embodiments that display images "in a small window at the periphery of the screen" (Interval Br. 51), the specification does not support such embodiments. Indeed, this so-called embodiment would be contrary to the specification's concept of "unused spatial capacity," as nothing would prevent an image displayed "in a small window at the periphery of the screen" from being displayed in space used by a primary interaction. The law does not require a court to rewrite the specification or claims to more closely resemble the accused products, which Interval effectively asks the Court to do here.

2. The Prosecution History Confirms the District Court's Construction

The prosecution history confirms the district court's construction. During prosecution of the '652 patent, the examiner rejected certain claims over prior art that displayed an image in an Internet browser during "downtime" while the browser loaded a requested webpage. A984. Interval distinguished its invention from this art.

In doing so, Interval referenced the specification's screensaver and wallpaper embodiments, stating that "[t]his aspect of the invention makes use of 'unused capacity' of a display device . . . and of the attention of a person in the vicinity of the display device." A985-86. Interval acknowledged that the prior art also could be said to make use of unused capacity, but asserted that its "invention uses different unused capacity." A986. Interval said nothing to indicate that its invention's "different unused capacity" is anything other than a screensaver or wallpaper. Having relied on this characterization to distinguish the prior art, Interval cannot obtain a broader construction in litigation. *See CVI/Beta Ventures, Inc. v. Tura LP*, 112 F.3d 1146, 1158 (Fed. Cir. 1997). As the district court recognized, its construction "is the only one that gives objective meaning to the term 'attention manager' and is consistent with the specification and the prosecution history." A19-20.

3. Interval Only Half-Heartedly Defends the Construction It Advocated Below

Interval expends little effort defending the construction it advocated before the district court: "During the operation of a system for engaging at least part of the user's attention that is not occupied by the user's primary interaction with the apparatus." Interval itself points out a fundamental flaw in its construction. Interval states that "an attention manager displays information using the 'unused capacity' of the display device, in either the temporal or spatial dimension" (Interval Br. 49), yet Interval's construction includes no limitation on where the image is displayed.

While Interval contends that its construction reflects the specification's definition of "attention manager," the passage Interval cites merely explains that an intended function or aspiration of the "attention manager" is to "engage[] at least the peripheral attention of the person." A32. A structural term like "attention manager" (both parties agree it is a system) should not be construed based on an intended function: "Where a claim uses clear structural language, it is generally improper to interpret it as having functional requirements." *Schwing GmbH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1324 (Fed. Cir. 2002); *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990) (observing that "apparatus claims cover what a device *is*, not what a device *does*"). Interval's inclusion of this intended function in other claims establishes that

Interval could have included it in the "attention manager" claims if it so desired. A55 at 29:42-44; A88 at 29:53-55.

Interval's construction is also incorrect because the specification states that the attention manager can be used to occupy the attention of any sentient being, without requiring that it occupy their peripheral attention. A55 at 29:35-36. *See Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1301 (Fed. Cir. 2003) ("Advantages described in the body of the specification, if not included in the claims, are not per se limitations to the claimed invention." (citation omitted)). Thus, the district court correctly determined that the specification does not define "attention manager" in accordance with Interval's construction. A19.

The district court also correctly observed that Interval's construction "provides no meaningful boundaries for the term." A18-19. Even Interval's expert agreed it is impossible to objectively determine whether a user's attention can be divided into one portion that is engaged with a primary interaction, and another that is not engaged with a primary interaction, due to the many different factors and contexts involved. A452:16-24. The hopelessness in gauging whether an image has "engag[ed] at least part of the user's attention that is not occupied by the user's primary interaction" becomes particularly acute given that the specification teaches that the attention manager's "user" may be a "'talking' bird

such as a parrot" or other domesticated animal. A55 at 29:36-40. Thus, Interval's construction would only lead to insoluble ambiguity.

4. Interval Waived Its New Construction, Which Is Unsupported and Indefinite in Any Event

Interval also proposes a new construction for attention manager: "During operation of a system that displays images to a user either when the user is not engaged in a primary interaction or in an area of the display screen that is not substantially used by the user's primary activity." Interval Br. 53-54. Interval waived this new construction because it presents new issues of claim scope. *Amkor Tech.*, 692 F.3d at 1259; *Commonwealth Scientific*, 542 F.3d at 1371. For example, the construction Interval argued below had no limit on where the image is displayed, but its new construction contains such limitations (albeit indefinite ones).

Interval attempts to excuse its new construction by relying on this Court's de novo review of claim construction. Interval Br. 54 n.10. But this "does not help [Interval]. That this [C]ourt may review a lower tribunal's claim construction de novo under *Cybor* does not require us to consider claim construction arguments that were not raised before [the lower tribunal]." *Finnigan Corp. v. Int'l Trade Comm'n*, 180 F.3d 1354, 1364 (Fed. Cir. 1999) (rejecting patentee's request that Federal Circuit consider a construction not raised below). "A party's argument should not be a moving target. The argument at the trial and appellate level should

be consistent, thereby ensuring . . . a record reviewable by the appellate court that is properly crystallized around and responsive to the asserted argument." *Id.*

If the Court entertains Interval's new construction, it should reject it. The specification does not support Interval's attempt to encompass images that "insubstantially overlap" with the primary interaction. In claim-construction proceedings below, Interval characterized "spatial unused capacity" as "while the user is actively using the device but in an area of the display that is not used by the primary interaction," with no mention of "substantial." A333:14-16. Yet Interval now tries to define "unused capacity" as something broader. Having relied on the screensaver and wallpaper's use of "different unused capacity" than the prior art in obtaining its patent, Interval cannot try to broaden it now. *CVI/Beta Ventures*, 112 F.3d at 1158.

In any event, Interval's alternative construction is indefinite. The specification does not disclose displaying an image in an area "not substantially used" by the user's primary activity, much less contain guidelines for what constitutes "an area not substantially used by the primary activity." And whether an image is displayed in an area not used (or not substantially used) by a primary interaction will vary, depending on the nature of the primary interaction. For example, a pop-up notification may or may not be displayed overlapping with a user's web browser or its contents depending on whether the user has the screen

maximized, the content inside the browser, and other factors. "When a proposed construction requires that an artisan make a separate infringement determination for every set of circumstances in which the composition may be used, and when such determinations are likely to result in differing outcomes (sometimes infringement and sometimes not), that construction is likely to be indefinite." *Halliburton*, 514 F.3d at 1255; *Geneva Pharm.*, 349 F.3d at 1384.

D. The District Court Correctly Construed "Instructions"

1. This Court Need Not Consider the Term "Instructions" Because It Is Irrelevant to the Judgment on Appeal

The Court need not consider the district court's construction of "instructions" because Interval concedes that it was not the basis for the stipulated judgment of noninfringement and invalidity (Interval Br. 54), and this issue will not affect the judgment on appeal. *See Mass. Inst. of Tech. v. Abacus Software*, 462 F.3d 1344, 1350 (Fed. Cir. 2006) (declining to consider claim-construction issues irrelevant to stipulated judgment on appeal). Interval's stipulation acknowledged that terms irrelevant to the judgment on appeal could be challenged in a subsequent appeal, if necessary. A1706 n.1.

In attempting to justify its request, Interval raises only a hypothetical concern that, if this case is remanded, Defendants may argue that some data (which Interval does not identify) that "directs a computer to perform a specific function" is not an "instruction." Interval Br. 55-56. Interval's vague concern that

Defendants will unfairly apply the district court's construction is misplaced in this appeal since application of the construed claims to the accused product is a question of fact, not of claim construction. *See Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1369 (Fed. Cir. 2004). To the extent Interval disagreed with Defendants' application of the construction in a remand, it would have the opportunity to present its own view.

2. Interval's Request for "Clarification" of the District Court's Construction Is Itself Unclear

Should the Court consider the term "instructions," it is unclear what relief Interval requests. Interval does not ask this Court to adopt the construction it proposed below, under which "instructions" could be data alone if the data "related to the accomplishment of a function." Instead, Interval vaguely asks the Court to clarify that "'instructions' in the context of the Asserted Patents may encompass certain 'data'" without specifying what this means. Interval Br. 63. Interval does not explain how its requested "clarification" changes the court's construction, under which the court noted that "instructions" could include data related to the accomplishment of the function associated with the instructions. A27. To the extent Interval is arguing for a construction different than the one it proposed below, it waived that argument. *Amkor Tech.*, 692 F.3d at 1259; *Commonwealth Scientific*, 542 F.3d at 1371.

3. The District Court Correctly Held that "Instructions" Cannot Be Data Alone

The district court reached the correct construction for "instructions": "a statement in a programming language that specifies a function to be performed by a system." A27. Interval advocated that "instructions" could be data alone. *Id.* This conflicts with the specification, which as the court observed, distinguishes between "instructions" and "data" by stating that the invention's functional components could be represented by one or the other: "Each of the functional components are represented by a set of instructions and/or data." *Id.* (citing A47 at 14:53-54). Interval tries to equate functional components and instructions in arguing that instructions can be data alone. But while *functional components* can be data alone, the specification explains that instructions and data are different. As the court noted, "[i]f 'data' is a type of 'instructions,' then the phrase 'instructions and/or data' would not make sense." *Id.* The specification goes on to state that "instructions may include, if appropriate, data related to accomplishment of the functions associated with the set of instructions." A47 at 14:54-57. This confirms that, while instructions may include data, instructions and data are two different things.

The specification further confirms that data alone is not an "instruction" by stating that data is "configured for use by a set or sets of instructions (e.g., computer program) that must interact with the set of data in order to implement the

attention manager." *Id.* at 14:62-65. If data alone could be instructions, the data would not have to be configured for use by instructions.

While the district court relied on the intrinsic record in reaching its construction, the specification's distinction between "instructions" and "data" is also consistent with the ordinary meaning of the term. The *IEEE Standard Dictionary of Electrical and Electronics Terms* defines "instructions" as "a statement in a programming language, specifying an operation to be performed by a computer and the address or value of the associated operands." A482-84. The *Oxford Dictionary of Computing* states that "[t]he distinction between program (instructions) and data is a fundamental one in computing." A845:3-9.

Interval is not helped by its argument that the *IEEE Standard Dictionary* states that "data" can be "a representation of facts, concepts, or instructions in a manner suitable for communication, interpretation, or processing by humans or by automatic means." Interval Br. 61. Under this definition, for "data" to be "instructions," the data must include instructions in a manner suitable for processing by automatic means. This is similar to the district court's construction of "instructions," and does not indicate that "instructions" can be data alone.

Interval also incorrectly argues that the examiner of the '652 patent said "instructions" could be data alone. The examiner said that the prior art specified a function ("display new information now or soon") corresponding to the recited

"scheduling" instructions. A1214-15. This is consistent with the district court's construction that "instructions" must specify a function to be performed by a system. Regardless, even had the examiner asserted that data alone could be "instructions," the examiner's interpretation cannot override the specification's clear teaching that instructions and data are different. *See Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1578 (Fed. Cir. 1996) (rejecting the argument that examiner viewed claim term in accordance with patentee's broad construction because it conflicted with the specification). This is particularly true given that Interval did not acquiesce to the examiner's characterization, but instead obtained allowance of the claims by distinguishing the art on another basis without addressing "instructions" (A1229-34). *See Salazar v. Procter & Gamble Co.*, 414 F.3d 1342 (Fed. Cir. 2005) ("An applicant's silence in response to an examiner's characterization of a claim does not reflect the applicant's clear and unmistakable acquiescence to that characterization if the claim is eventually allowed on grounds unrelated to the examiner's unrebutted characterization." (quoting *3M Innovative Props. Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1373-74 (Fed. Cir. 2003))).

4. The District Court's Construction Correctly Reflects that "Instructions" Are a Statement in a Programming Language

Interval also asks the Court to "clarify" the district court's construction of "instructions" so that they "need not be written 'in a programming language.'" Interval Br. 63. Again, Interval fails to advocate for a construction, but simply identifies the construction it does not want. Regardless, "instructions," in the context of the intrinsic record, are statements in a programming language. "Instructions . . . implement the attention manager," a software application. A47 at 14:59-65; A1635:16-18. The "instructions" must therefore be in a programming language to be understood by a computer.

The district court's construction that "instructions" are statements in a programming language is also consistent with the ordinary meaning of computer "instructions." *IEEE Standard Dictionary of Electrical and Electronics Terms* (Computer Instruction: "A statement in a programming language, specifying an operation to be performed by a computer and the address or value of the associated operands"). A482-84.

Interval's concern that Defendants "may also take the position that compiled object code . . . is not a 'programming language'" is also unavailing. Interval Br. 55 n.1. Interval told the district court that "object code" is a programming language. A359:11. Thus, Interval's speculation regarding Defendants' position

does not justify departing from the specification's use of "instructions" consistent with its ordinary meaning.

VI. CONCLUSION AND STATEMENT OF RELIEF SOUGHT

For the reasons discussed, the Court should deny each of Interval's requests for relief.

Respectfully submitted,

Dated: September 13, 2013

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CERTIFICATE OF SERVICE

I hereby certify that on September 13, 2013 the foregoing BRIEF OF DEFENDANTS-APPELLEES was filed and served via the Court's CM/ECF system on counsel for Plaintiff-Appellant:

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All parties or their counsel who are registered users of the CM/ECF system will receive a notice of this filing from the system. Parties may access this filing through the Court's system.

/s/ J. Michael Jakes

CERTIFICATE OF COMPLIANCE

I certify that the foregoing BRIEF OF DEFENDANTS-APPELLEES contains 13,960 words as measured by the word processing software used to prepare this brief.

Respectfully submitted,

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