UNITED STATES DISTRICT COURT
DISTRICT OF MAINE

SURFCAST, INC.,	)	
	)	
Plaintiff,	)	
	)	
v.	)	2:12-cv-00333-JAW
	)	
MICROSOFT CORPORATION	)	
	)	
Defendant.	)	

MEMORANDUM OPINION, CLAIM CONSTRUCTION ORDER AND ORDER ON MOTION TO STAY

SurfCast, Inc. (SurfCast) has filed a patent infringement lawsuit against Microsoft Corporation (Microsoft), alleging infringement of United States Patent No. 6,724,403 (filed Oct. 30, 2000) (the '403 Patent). The parties dispute a number of claim terms in the '403 Patent, and have called on the Court to construe them. The Court has done so with able assistance from the parties' briefs, exhibits, and oral arguments, and the Court lays out its construction in this Order.

I. LEGAL STANDARD

"Infringement analysis involves a two-step process: the court first determines the meaning of disputed claim terms and then compares the accused device to the claims as construed." *Wavetronix LLC v. EIS Elec. Integrated Sys.*, 573 F.3d 1343, 1454 (Fed. Cir. 2009) (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996)). The construction of language in patent claims must be performed by a judge before any jury trial on the issue of

infringement. *Markman*, 517 U.S. at 391.[1] The purpose of claim construction is to assist the finder of fact in evaluating claims of infringement. *See id.* at 388-91.

The primary source of evidence for claim construction is intrinsic evidence; that is, "the patent itself, including the claims, the specification and, if in evidence, the prosecution history." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The words used in a claim are generally given their ordinary and customary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313-14 (Fed. Cir. 2005) (en banc). However, "the 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321. The correct construction of a claim term is one "that stays true to the claim language and most naturally aligns with the patent's description of the invention." *Id.* at 1316 (quoting *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)).

The patent specification supplies the primary basis for understanding the meaning of claim language. "Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Id.* at 1315. In other words, the claim terms are to be understood in the context of the specification. *Netword, LLC v. Centraal Corp.*, 242 F.3d 1347, 1352 (Fed. Cir. 2001). A claim construction "that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct." *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318, 1326 (Fed. Cir. 2013).

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[1] Whether claim construction is a "matter of law" is a matter of some debate. *See Cybor Corp. v. FAS Techs. Inc.*, 138 F.3d 1448 (Fed. Cir. 1998) (en banc) (holding that claim construction is a matter of pure law). *But see Highmark, Inc. v. Allcare Health Mgmt. Sys., Inc.*, 701 F.3d 1351, 1362 (Fed. Cir. 2012) (Moore, J., dissenting); *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 1350-51 (Fed. Cir. 2010) (suggesting that the pure law standard from *Cybor* conflicts with *Markman*); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1330-35 (Fed. Cir. 2005) (Mayer, J., dissenting).

Nonetheless, details from the specification may not be imported into the claim through the guise of claim interpretation. *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004). "[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms." *Phillips*, 415 F.3d at 1323.

The ordinary meaning of a word to one skilled in the art at the time of the patent issue is not evaluated in isolation, however. "[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess." *Id.* at 1316. This redefinition need not be express, so long as it is apparent from the specification. *Id.* at 1321. Furthermore, "the specification may reveal an intentional disclaimer, or disavowal, of claim scope by the inventor." *Id.* at 1316. In both cases, it is "the inventor's intention, as expressed in the specification," that controls the interpretation of claim terms. *Id.*

The prosecution history can also play a role in claim interpretation. *Id.* at 1317. However, because the prosecution history "represents an ongoing negotiation between the [United States Patent and Trademark Office (PTO)] and the applicant," it can lack the clarity of the specification and be less useful in claim construction. *Id.* A court may also consider extrinsic evidence, such as dictionaries, treatises, and expert testimony to the extent it is consistent with the intrinsic evidence. *Id.* at 1319. However, extrinsic evidence may not contradict the language of the claims or

the teachings of the specification. *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1382 (Fed. Cir. 2008).

Two further rules of construction aid the Court. First, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips*, 415 F.3d at 1315 (citing *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004)). This is sometimes called the doctrine of "claim differentiation." *E.g.*, *Seachange Int'l, Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005). The presumption may be rebutted by "a contrary construction dictated by the written description or prosecution history." *Id.* Second, if after applying these rules of construction a claim term remains susceptible to more than one reasonable interpretation, the term is to be construed in a way that preserves the validity of the patent. *Phillips*, 415 F.3d at 1327. This will usually be a narrower construction. *Id.*

II. BACKGROUND

In 1998, Ovid Santoro and Klaus Lagermann[2] invented a "System and Method for Simultaneous Display of Multiple Information Sources," for which they obtained a patent in 2000. '403 Patent at 1, *Pl. Surfcast, Inc.'s Claim Construction Br.* at 1 (ECF No. 60) (*Pl.'s Br.*). The patent describes

> [a] computerized method of presenting information from a variety of sources on a display device. Specifically the . . . invention describes a graphical user interface for organizing the simultaneous display of information from a multitude of information sources. In particular, the

[2] The Court refers to Messrs. Santoro and Lagermann collectively as "patentee."

> . . . invention comprises a graphical user interface which organizes content from a variety of information sources into a grid of tiles, each of which can refresh its content independently of the others. The grid functionality manages the refresh rates of the multiple information sources.

'403 Patent, at [57]. The '403 Patent has three independent claims—claims 1, 22, and 46—and forty-nine dependent claims.

SurfCast commenced this patent infringement suit against Microsoft on October 30, 2012. *Compl.* (ECF No. 1). The parties submitted a joint claim construction statement on May 7, 2013. *Joint Claim Construction Statement* (ECF No. 57). With the statement came a claim construction chart showing the disputed terms and the parties' proposed constructions. *Joint Claim Construction Statement* Attach. 1 *Joint Claim Construction Chart* (ECF No. 57). SurfCast submitted a brief in support of its constructions on May 17, 2013, along with an expert affidavit and exhibits. *Pl.'s Br.* Microsoft filed its opposition brief on June 7, 2013, *Def. Microsoft Corporation's Responsive Claim Construction Br.* at 7 (ECF No. 64) (*Def.'s Br.*), and SurfCast replied to the opposition on June 21, 2013. *Pl. SurfCast, Inc.'s Claim Construction Reply Br.* (ECF No. 68) (*Pl.'s Reply*).

The Court originally scheduled a claim construction hearing on June 28, 2013 (ECF No. 75), but rescheduled for August 30, 2013 to accommodate the schedules of the parties' counsel. *Notice Cancelling Claim Construction Hearing* (ECF No. 76), *Minute Entry* (ECF No. 113). At the claim construction hearing, counsel for both sides indicated there might be some terms on which they might compromise and reach an agreement on construction. Consequently, the Court ordered the parties to attempt to negotiate on these terms and report back by September 6, 2013.

*Minute Entry (*ECF No. 113). On September 6, 2013, both parties reported back that no compromise had been reached, but both parties also submitted revised claim constructions. *Def. Microsoft Corporation's Notice of Proposed Compromise Claim Constructions* (ECF No. 115); *Def. Microsoft Corporation's Notice of Proposed Compromise Claim Constructions* Attach. 1 *Microsoft's Proposed Compromise Constructions* (*Def.'s Revised Constructions*); *Pl. SurfCast's Notice of Revised Claim Construction* (ECF No. 116) (*Pl.'s Revised Constructions*).

On November 19, 2013, while claim construction was under advisement before the Court, the Patent Trial and Appeal Board of the PTO granted *inter partes* review of the '403 Patent under 37 C.F.R. § 42.108. *Microsoft Corp. v. SurfCast, Inc.*, No. IPR2013-00292 (P.T.A.B. Nov. 19, 2013) (*PTO Op.*). *Inter partes* review is an administrative proceeding in which the PTO reviews an issued patent to determine if some claims should be canceled because they are unpatentable in light of the prior art. 35 U.S.C § 311(b); 37 C.F.R. § 42.108(a), (b). For the purpose of granting *inter partes* review, the PTO construed some of the claim terms in the '403 Patent currently before the Court. *PTO Op.* at 8-23. The PTO's construction is persuasive but not binding on this Court. *See Def. Microsoft Corporation's Notice of Institution of* Inter Partes *Review of the Patent-In-Suit* at 2 (ECF No. 146) (Nov. 21, 2013).

On December 20, 2013, SurfCast moved to stay proceedings pending the *inter partes* review. *Pl.'s Mot. to Stay Pending* Inter Partes *Review* (ECF No. 150) (*Pl.'s Mot. to Stay*). Microsoft opposed this motion on January 13, 2014. *Def. Microsoft*

Corporation's Resp. to Pl.'s Mot. to Stay Pending Inter Partes *Review* (ECF No. 153) (*Def.'s Opp'n to Stay).* SurfCast replied to Microsoft's opposition on January 27, 2014. *Pl.'s Reply in Support of Its Mot. to Stay Pending* Inter Partes *Review* (ECF No. 154) (*Pl.'s Reply to Stay*).

III. THE MOTION TO STAY

SurfCast argues that the Court should stay proceedings in this matter because Microsoft will not suffer any undue prejudice from a stay, granting a stay during the *inter partes* review (IPR) will simplify the issues for trial, a stay will conserve judicial resources, and proceeding without a stay may result in inconsistent decisions. *Pl.'s Mot. to Stay*. Microsoft replies that a stay will not simplify any issues because there is an appellate process that will follow IPR, and, in any event, Microsoft will continue to pursue its inequitable conduct and unclean hands counterclaims, the claim construction process is already under way, and Microsoft's litigation posture would be prejudiced by a stay. *Def.'s Opp'n to Stay*. Microsoft is also eager to prevail in the litigation so as to clear an accusation of wilful infringement from its public reputation. *Id.* at 8-9.

The Court accepts SurfCast's formulation of the factors it should consider in deciding whether to grant a stay:

> Courts consider three factors in determining whether a stay is appropriate in patent cases: (1) whether a stay would unduly prejudice or present a clear tactical disadvantage to the non-moving party; (2) whether a stay will simplify the issues in question and trial of the case; and (3) whether discovery is complete and a trial date has been set.

Pl.'s Mot. to Stay at 5 (citing *Pi-Net Int'l, Inc. v. The Hertz Corp.*, No. CV 12-10012 PSG, 2013 U.S. Dist. LEXIS 81570, at *3 (C.D. Cal. Jun 5, 2013)).

On the first factor, the Court accepts Micosoft's assertions that it "expects that important testimony will be provided by long-time employees who were intimately involved in Microsoft's prior software development. But the technology industry often evolves at a staggering pace, and valued technology employees frequently move on." *Def.'s Opp'n to Stay* at 6-7. Microsoft is also concerned that, absent the Court's claim construction decision, it might not be able to modify its allegedly-infringing products to cut off potential ongoing damages. *Id.* at 7-8.

The Court also does not conclude that a stay will simplify the issues for trial. The outcome of the IPR process is too uncertain to predict with confidence that it will result in a different patent underlying the suit; indeed, waiting for the entire process to proceed through the PTO channels (including the likely appeals to the Federal Circuit) will likely add confusion and complexity. Furthermore, SurfCast has asked the Court to impose a stay only "pending the Board's final written determination of the IPR," *Pl.'s Mot. to Stay* at 10; it would have the Court lift the stay after the Board rules, but before the Federal Circuit resolves any appeals. Given that the Court disagrees with the PTO's construction of many of the disputed claim terms, *see infra*, it would make little sense to proceed to trial on whatever patent emerges from the IPR process. If the parties proceed briskly to dispositive motions and trial, the Federal Circuit will have the advantage of the outcome in this Court when considering the result of the IPR process.

Finally, on the third factor, the case has been underway for over a year and fact discovery is complete. A trial date has not yet been set, but a scheduling order will issue shortly after this claim construction opinion.

The Court concludes that the three factors weigh in favor of denying a stay at this time.

IV. CLAIM CONSTRUCTION

A. "tile(s)"

The words "tile" or "tiles" appear in every independent claim and many of the dependent claims. *E.g.*, '403 Patent at claims 1, 22, 46. They are also elements of several other disputed terms. "Tiles" are fundamental to the entire patent, and so the meaning of this word merits careful and exacting analysis.

SurfCast proposes that "tile(s)" be construed as a "graphical representation of an associated information source capable of displaying refreshed content, the graphical representation being persistent and selectable to provide access to underlying information of the associated information source." *Joint Claim Construction Chart* at 1. Microsoft initially proposed that "tile(s)" be construed as "[a]n area of a display which presents content from an information source." *Id.* In its compromise offer, Microsoft suggested that "an area of" become "a graphic image on." *Def.'s Revised Constructions* at 1. The PTO construed "tile(s)" to mean "a graphical user interface element whose content may be refreshed and that, when selected, provides access to an information source." *PTO Op.* at 9.

1. Position of the Parties

a. SurfCast

SurfCast argues that the word "tile" should mean "graphical representation of an associated information source capable of displaying refreshed content, the graphical representation being persistent and selectable to provide access to underlying information of the associated information source." *Pl.'s Br.* at 10. SurfCast starts with the premise, based on its expert's affidavit, that the term "tile" had no plain and ordinary meaning in the art at the time of the '403 Patent. *Id.* at 11. It also notes that the specification indicates that it is defining the word: "In the present invention, a third graphical representation of programs and files [distinct from windows and icons], herein called a tile, is introduced." '403 Patent at 8:29-30.

SurfCast observes that the specification states that "a tile presents content from any information source," while the claim language specifies that "each tile . . . is associated with an information source." *Pl.'s Br.* at 11 (quoting '403 Patent at 7:64-65; '403 Patent at claim 1, 24:20-21). Furthermore, each independent claim associates a "refresh rate" or a "retrieval rate"—also disputed terms—with each "tile." *Id.* at 11 (quoting '403 Patent at claim 1, 24:23-28). SurfCast concludes that a person of ordinary skill in the art, reading the patent, would understand that a tile is "a graphical representation of an associated information source capable of display refreshed content." *Id.*

SurfCast also finds support for the phrase "the graphical representation being persistent" in the specification. *Id.* at 12. It points to the specification's description of one embodiment of the invention in which "[t]iles . . . are created,

saved, and restored via the metabase."[3] Additionally, "[i]tems in the metabase are 'persistent,' that is they are not saved explicitly but are preserved from session to session." *Id.* (quoting '403 Patent at 15:54-64). SurfCast also points to language in the Summary of the Invention: "The present invention comprises a grid of tiles that resides on a user's [computer][4] desktop." *Id.* (quoting '403 Patent at 4:37-38). SurfCast suggests that the word "reside" also implies persistence, and that that persistence should be imputed to "tiles." *Id.*

Next, SurfCast offers more language from the specification for the proposition that tiles are "'selectable' so as to 'instantly provide[] the user with access to the underlying information' when the tile is selected." *Id.* (quoting '403 Patent at 9:25-27). SurfCast asserts that a person of ordinary skill in the art would appreciate that the "selectable" feature of the "tile" distinguishes it from a conventional window." *Id.* at 13.

Finally, SurfCast disputes Microsoft's proposed construction, because it fails to reflect the attributes of the "tile" that, in the specification, distinguish a "tile" from a "window." *Id.* at 13. Specifically, SurfCast claims that a "tile" is persistent and selectable, while a "window" is not. *Id.* SurfCast views Microsoft's proposed construction as an effort to "read the patentee's chosen definition for 'tile' out of the claim." *Id.*

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[3] "Metabase" is not a disputed term. The Court takes from the parties' oral presentations and from the '403 Patent itself that a "metabase" refers, in an abstract way, to a persistent data store. The Court understands that a "database," as that term is commonly used today, is one example of a metabase.

[4] The bracketed word "computer" appears in the '403 Patent but not in SurfCast's quotation of the Patent.

b. Microsoft

Microsoft's preferred construction of "tile" was originally "[a]n area of a display which presents content from an information source."[5] *Def.'s Br.* at 7. Microsoft later offered to revise this construction to "a graphic image on a display which presents content from an information source." *Def.'s Revised Constructions* at 1. In support of this shorter construction, Microsoft cites the first independent claim, which describes "partitioning a visual display of the device into an array of tiles," *Def.'s Br.* at 7 (quoting '403 Patent at 24:19-22), and also requires that, in Microsoft's own words, "content from an information source be presented to the tiles." *Id.* (paraphrasing '403 Patent at 24:26-33). Microsoft also quotes the first substantive paragraph of the specification, which states: "'The present invention relates to methods of presenting information from a variety of sources on a display device.'" *Id.* (quoting '403 Patent at 1:11-15). Likewise, it offers a phrase from the specification's introduction of "tiles" stating that "[a] tile presents content from any information source." *Id.* (quoting '403 Patent at 7:64-65). From these pieces of the first independent claim and the specification, Microsoft concludes that a "tile" is "an area of a display which presents content from an information source."

Microsoft disputes SurfCast's construction, first on the grounds that "[t]he patent specification does not provide any special definition for 'tile.'" *Id.* In Microsoft's view, the '403 Patent's use of "tile" throughout is consistent with the

[5] Microsoft also offered "a graphic image on a display which presents content from an information source," but the Court does not perceive any material difference between this proposal and Microsoft's original.

usage of the term in prior art, and particularly in United States Patent No. 5,321,750. Microsoft contends that SurfCast's construction improperly reads limitations from the specification into the claim language.

For instance, Microsoft asserts that nothing in the patent requires that "tiles" be "persistent." *Id.* at 8. The claims do not use the word "persistence," Microsoft points out, and several dependent claims speak of downloading tiles from a second computer onto the user's computer. *Id.* (citing '403 Patent at claims 15, 16). It also points to an embodiment in which the tiles are downloaded to the user's system when the user logs onto a separate server computer, '403 Patent at 22:1-15, which suggests to Microsoft that the user's computer does not have the tiles when the user's computer is started. This, Microsoft maintains, is inconsistent with the notion of "persistence" put forth by SurfCast.

Microsoft also argues that the only embodiment that uses the word "persistent" does so in the context of describing "items" stored in the "metabase." *Def.'s Br.* at 8 (quoting '403 Patent at 14:27-28). Even this storage is optional; "[a]ctual tiles that a user visualizes *can be* spawned from the metabase." *Id.* (quoting '403 Patent at 14:42-43) (emphasis added by Microsoft). Microsoft reads the phrase "can be" to indicate that even in the metabase embodiment, persistence of the tiles is optional. Microsoft further points out that the "metabase" is not mentioned in any claim.

As to "selectability," Microsoft relies primarily on the doctrine of claim differentiation to argue that "tiles" are not "selectable." *Id.* at 9. It points out that

dependent claims 5 and 32 of the '403 Patent, require that "tiles" be "selectable." *Id.* From this, Microsoft concludes that the "tiles" of independent claims 1 and 22 must not be selectable; construing "tiles" to be "selectable" would improperly import limitations from the specification into the claims. *Id.*

Microsoft also disputes that a "tile" must be a "graphical representation of an associated information source," as advanced by SurfCast. *Id.* at 9-10. Even the specification, Microsoft points out, only states that the content of a tile "is *typically* a miniaturized representation of a graphic or still-frame from a datastream." *Id.* at 9 (quoting '403 Patent at 9:3-5). Microsoft concludes that some tiles do not represent data in this way. *Id.* at 10.

As to "capable of displaying refreshed content," Microsoft objects because only independent claim 1 and its descendants—not independent claims 22 and 46—have a reference to "refresh."[6] *Id.* Microsoft contends that reading "capable of displaying refreshed content" into "tiles" would improperly rewrite the claims. *Id.*

Finally, Microsoft vigorously disputes SurfCast's claim that Microsoft's preferred construction ignores the specification's distinctions between a "tile" and a "window." *Id.* at 10-11. Microsoft claims that prior art "windows" were both "persistent" and "selectable." *Id.* at 10 (citing *id.* at Ex. 1, *Decl. of David R. Karger on Claim Construction for U.S. Patent No. 6,724,403* at ¶ 23 (ECF No. 64-1) (*Karger Declaration*)). Furthermore, Microsoft claims that SurfCast never argued to the

[6] This argument goes to two other disputed terms: "retrieval rate" and "refresh rate." Independent claims 22 and 46 mention a "retrieval rate," '403 Patent claims 22, 46, but in Microsoft's view these two phrases have substantially different meanings. SurfCast, by contrast, claims that they are effectively the same thing.

patent examiner that its "tiles" were distinct from "windows" because of persistence or selectability; rather, SurfCast made other arguments distinguishing "windows" from "tiles." *Id.* at 11 (citing *id.* at Ex. 4, *Amendment and Resp. Under 37 C.F.R. § 1.111* at 12 (ECF Nos. 60-4, 60-5)[7] ('403 File History)).

2. Analysis

a. The Patentee as Lexicographer

As a preliminary matter, the Court must determine whether the patentee intended to "act as its own lexicographer." *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The patentee seeking to redefine the plain and ordinary meaning of a term must "'clearly express an intent' to redefine the term." *Id.* (quoting *Helmsdefer*, 527 F.3d at 1381). If the patentee in this case intended to redefine "tile," the Court must give much heavier weight to the specification than to any extrinsic evidence of the plain and ordinary meaning of the word. On the other hand, if it appears that the patentee was using "tile" without any special definition local to the patent, the Court can look to extrinsic evidence of the plain and ordinary meaning at the time.

In *Thorner*, the Federal Circuit held that a district court wrongly redefined the word "attached" to mean "affixed to an exterior surface." 669 F.3d at 1367-68. The patent had used the word "attached" without explicitly redefining it, but all the examples of "attached" in the specification had attachments to the exterior surface of a human interface device. *Id.* at 1367. However, the Federal Circuit reasoned

[7] Exhibit 4 to SurfCast's claim construction brief is split between attachments 4 and 5 of ECF No. 60. Pages 1-10 of Exhibit 4 are in attachment 4, while pages 11-19 are in attachment 5.

that mere usage was not enough to show intent to redefine or disavow the ordinary meaning of the term. *Id.* "If the applicant had redefined the term 'attached' to mean only 'attached to an outer surface,' then it would have been unnecessary to specify that the attachment was 'to [an] outer surface' in the specification." *Id.* at 1368. Consequently, it was error to limit "attached" beyond its plain and ordinary meaning. *Id.*

Here, by contrast, the Court concludes that the patentee intended to redefine the term. This intent is naked on the face of the patent. The specification devotes an entire section to "Tile Objects," which begins with this language: "In the ensuing discussion, tile objects are introduced and described and contrasted with existing elements of graphical user interfaces." '403 Patent at 7:62-64. The patentee clearly states that he is not using "tile" in any sense other than that which he is preparing to "introduce" and "describe." After criticizing the current art, consisting (in his view) of icons and windows, the patentee states: "In the present invention, a third graphical representation of programs and files, herein called a tile, is introduced." *Id.* at 8:29-30. Again, the patentee is "introduc[ing]" something called a "tile," which is different than the prior art. *Id.*

No clearer statement of intent to redefine is needed. This is not a case in which the Court must imply intent by analyzing the usage of the term in the specification, as the district court wrongly did in *Thorner*. The '403 Patent, expressly intends to redefine the word "tile." That the intent to redefine occurs in the specification is no barrier. *See 3M Innovative Props. Co. v. Avery Dennison*

Corp., 350 F.3d 1365, 1369, 1371 (Fed. Cir. 2003) (permitting the patent specification to redefine a term).

Consequently, the Court rejects Microsoft's contention that the patent uses "tile" in a manner to be understood by reference to the prior art. Its meaning must be found in the patent itself. The Court now turns to the parties' proposed constructions.

b. Construction of "tile(s)"

i. Microsoft's Proposed Construction Is Too Broad

First, the Court does not accept Microsoft's proposed construction: "An area of a display which presents content from an information source." This is a much broader definition of "tile" than appears in the patent. The whole point of a "tile" in the invention is to combine features of "windows" and "icons" in a way that balances the advantages of each while discarding some features not desirable in the new "tile" interface paradigm.

The patent defines "tile" largely by reference to "window" and "icon"; that is, it explains what a "tile" is by adopting some elements of "window" and "icon" while discarding others, and also adding what it claims are some new features not present in either. To this end, it provides its own specific definitions of "window" and "icon," along with the requisite intent to define these terms locally. '403 Patent at 7:66-8:14. The patent makes quite clear what the patentee considers to be the defining characteristics of both "windows" and "tiles," and which of those characteristics are adopted by "tiles."

For instance, the patent states that a "tile" contains a "view[] of a single information source," *Id.* at 8:32, and that an icon does not. *See id.* at 8:2-14 (describing icons as the method by which one accesses information from a data source, distinct from the "window" in which one actually views the information). Likewise, the patent describes a "tile" as fulfilling many of the functions of an icon that a window does not fulfill. By the patent's terms, a "tile" provides a simplified, rather than detailed, representation of the current state of the data source, *id.* at 8:49-53; it prevents overlapping with other tiles, reducing visual clutter, *id.* at 8:45-49; and it enforces a uniformity of appearance. *Id.* at 8:52-56. The patent distinguishes a "window" from a "tile" in each of these respects.

Microsoft's proposed construction disregards this specificity in the patentee's description of a tile. Instead, Microsoft's definition would apply equally to both a "window" and an "icon" as the patentee presents both those terms. "An area of a display which presents content from an information source" describes virtually every visual element of the interface between a computer and a human being, a construction too broad to be correct.

ii. "graphical representation of an associated information source"

SurfCast's proposed construction of "tile" begins with "graphical representation of an associated information source," *Pl.'s Br.* at 10, and adds specificity. Each independent claim speaks of "partitioning" or "arranging" a "display." *Id.* claim 1, 24:19-20; *id.* at claim 22, 25:28-29; *id.* at claim 46, 26:58. This language addresses the human interface purpose of the invention, making

"graphical representation" an appropriate abstraction. The specification supports this interpretation when it refers to a tile as a "graphical representation of programs and files." *Id.* at 8:29-30. As for "an associated information source," the specification states that "a tile presents content from any information source," '403 Patent at 7:64-65, and the language of the first independent claim instructs that "each tile . . . is associated with an information source." *Id.* claim 1, 24:19-21. Likewise, independent claim 22 speaks of "associat[ing] a first information source . . . to a first tile and a second information source . . . to a second tile," *id.* at claim 22, 25:30-34, while independent claim 46 uses similar language. *Id.* claim 46, 26:59-63.

Microsoft's objections to this clause of SurfCast's proposed construction do not address the claim language itself, nor do they speak to the plain language of the specification cited above. *Def.'s Br.* at 9-10. The Court concludes that the construction of "tile" should begin with "graphical representation of an associated information source."

iii. "persistent"

SurfCast next proposes to add the phrase "the graphical representation being persistent." Microsoft objects in substance only to the word "persistent." As a starting point, the Court notes that both parties apparently agree on what "persistent" means: "tiles are not lost when a computer is restarted." *Pl.'s Br.* at 12; *Def.'s Br.* at 8. The PTO concluded, after considering material from columns 4 and 15 of the '403 Patent, that construing a "tile" to be "persistent" would improperly import a limitation from the specification into the claims. *PTO Op.* at 11. The Court respectfully disagrees.

In support of its construction, SurfCast offers the phrase "preserved from session to session," found in reference to one preferred embodiment of the invention. '403 Patent at 15:54-64. This embodiment makes use of the "metabase" data store concept to cause tiles to persist across user sessions. *Id.* SurfCast also points to another embodiment that "replaces the functionality of the computer 'desktop'" and "understands the interests of the user and acts as a repository for password and identifiers." *Id.* at 11:32-33, 46-47. But these are two phrases selected from two embodiments; the text does not mandate that they are inherent features of a tile. The presence of these specific features in two embodiments instead suggests, not that they are fundamental characteristics of a tile, but that they are particular uses to which a tile may be put in the overall invention. Put another way, the fact that in one embodiment a metabase can cause tiles to be persistent does not by itself mean that all tiles are persistent. The invention is not a tile; the invention is a human interface that incorporates tiles.

From the Court's perspective, the Summary of the Invention presents a more compelling case for persistence than Microsoft or the PTO credits. SurfCast points to this phrase to show that tiles are persistent: "The present invention comprises a grid of tiles that resides on the user's computer desktop." *Id.* at 4:37-38. The most relevant definition of "reside" is "to abide, lie, or be present habitually," THE RANDOM HOUSE DICTIONARY OF THE ENGLISH LANGUAGE 1638 (Stuart Berg Flexner & Leonore Crary Hauck eds., 2d ed. unabridged 1987), and this does strongly suggest persistence. At the same time, the sentence is ambiguous as to what,

exactly, resides. Clearly something "resides" on the desktop, but the sentence could either mean that the *grid* resides there or that the *tiles* do. Nonetheless, a "grid" is a grid "of tiles"; if the grid abides, so must the tiles within. '403 Patent at 4:37-38.

The language of the independent claims provides no clear indication that tiles are persistent. Granted, the independent claims speak repeatedly of "assigning" refresh rates or information sources to tiles. But persistence is more than merely the ability to be assigned a value and hold it for some measurable period of time; according to SurfCast, "persistence" means that those assignments are necessarily stored and restored when the user terminates one session and starts another. *See Pl.'s Br.* at 12 ("the concept of permanence . . . mean[s] that tiles are not lost when a computer is restarted"). It is true that some of the dependent claims speak of "storing" the array of tiles on a "device"—which might implicate persistence. But the fact that some dependent claims make use of a particular method to implement persistence does not prove that the independent claims from which they descend necessarily have persistence. Just the opposite presumption applies under the doctrine of claim differentiation, and this presumption prevents the dependent claims from definitively imputing persistence to tiles.

In *Thorner*, the Federal Circuit faulted a district court for implying the limitation that "attached" meant "externally attached" from the fact that the embodiments only used "attached" to speak of external attachments. *Thorner*, 669 F.3d at 1368. But here the patent gives the reader more than mere consistent usage; at least arguably it introduces the idea of persistence as a feature of "tile" in

the Summary of the Invention. The doctrine of claim differentiation creates a presumption that the persistence feature suggested in the dependent claims is not present in the independent claims, but that presumption can be rebutted by "a contrary construction dictated by the written description or prosecution history." *Seachange*, 413 F.3d at 1369. In this case, neither of these legal tools resolves the dispute; there is strong tension between the Summary and the claims. This leaves the Court at the fine "line between construing terms and importing limitations," which the Federal Circuit instructs "can be discerned with reasonable certainty and predictability if the court's focus remains on understanding how a person of ordinary skill in the art would understand the claim terms." *Phillips*, 415 F.3d at 1323.

The Court agrees with the PTO that, considering only columns 4 and 15, the specification displays insufficient evidence of persistence to construe "tile(s)" to be persistent. But one of skill in the art would read the patent not only for the trees but also for the forest, and it is on this broad reading that the Court parts ways with the PTO. This invention is, at its heart, a human interface concept that is meant to replace the icon-based paradigm with a tile-based paradigm. In order to accomplish this function, the invention must preserve critical functionality of the old paradigm while also introducing something new and useful. Icons are indisputably "persistent" in the old paradigm, and this functionality is essential to human beings who must interface with computers. If icons were not persistent, a computer user would have to recreate his desktop—his "home base"—every time he

started his computer. This would be an enormous aggregate waste of time, and would greatly impede the usefulness of the human interface. It follows that tiles could not replace icons without also being persistent, or providing some wholly new way of interfacing that did not make persistence a necessary feature. If Microsoft were correct in its objection, the '403 Patent would purport to replace the icon paradigm without providing any alternative to persistence. This would be futile. One of skill in the art, after reading and digesting the patent as a whole, would understand that a "tile," as a human interface concept, would be of little use were it not to persist between sessions.[8]

Turning to a "big picture" conceptualization of the patent is not appropriate for every claim term. In some cases this would run afoul of the Federal Circuit's commandment not to import limitations of the specification into the claims. *See, e.g.*, Section IV.L.2, *infra* (construing "grid"). If the rules of claim construction lead to a clear legal result, no further conceptualization is needed. Here, though, where the minutiae of the words do not lead to an impregnable legal answer in either direction, the big picture reveals what one skilled in the art would understand after reading the patent.

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[8] At oral argument, Microsoft suggested that reading "tile" to include persistence would be like reading a power cord into claims describing a computer; the computer would be of little use without the power cord, but that does not mean that a patent describing a computer grants a legal right to the power cord. *Tr. of Proceedings*, *Markman Hr'g* at 54-55 (ECF No. 120). But here, persistence in the tiles is less like the power cord and more like the electric power itself. It is necessary at a conceptual level, not just a practical level. One of skill in the art would not read a patent describing a computer and conclude that it did not grant rights to a computer that was powered by electrical energy—unless the patent supplied a reasonable alternative.

The Court will include "the graphical representation being persistent" in its construction of "tile(s)."

iv. "selectable"

The specification, in the section defining a "tile," states that "[t]iles are selectable" so as to "instantly provide[] the user with access to the underlying information." '403 Patent at 9:25-27. This text occurs before any description of specific embodiments, and so gives rise to a strong inference that it applies to all tiles.

Against this inference, Microsoft raises the doctrine of claim differentiation, pointing out that some of the dependent claims mention selectability. *Def.'s Br.* at 9 (citing '403 Patent at claims 5, 32). As a preliminary matter, claims 5 and 32 do not actually describe selectability. Instead, they speak of "attributing a selected state or an unselected state to said first tile and said second tile" and "selectively assign[ing] a selected or unselected state to specified tiles." '403 Patent at claims 5, 32. Assigning a selected or unselected state is different than being selectable; a thing may be selectable without inherently bearing a selected or unselected state. The fact that dependent claims 5 and 32 mention that the tile can have a selected or unselected state does not mean that other tiles (which lack this state feature) must also not be selectable.

However, even assuming that the language in some dependent claims does speak to the concept of "selectability," this would only give rise to a presumption that the "tiles" of the independent claims are not selectable. In this case the plain language of the specification, defining "tile," rebuts that presumption because it is a

"contrary construction dictated by the written description." *Seachange*, 413 F.3d at 1369; *see also Marine Polymer Techs., Inc. v. HemCon, Inc.*, 672 F.3d 1350, 1358-59 (Fed. Cir. 2012) (rebutting the presumption of claim differentiation using descriptive material from the specification). In other words, where the patentee has defined a "tile" to be "selectable," tiles are still selectable even if an independent claim does not mention selectability and a dependent claim does.

v. "capable of displaying refreshed content"

Microsoft's stated objection to this phrase stems from its position that "refresh rate" and "retrieval rate" mean different things in the context of the patent. *Def.'s Br.* at 10. It points out, correctly, that the word "refresh rate" only appears in independent claim 1, while independent claims 22 and 46 use "retrieval rate" in its place. *Id.* This, in Microsoft's view, means that only the tiles of claim 1 are capable of displaying refreshed content, and therefore a "tile" generally is not.

The Court later addresses the respective meanings of "refresh rate" and "retrieval rate." However, even if "refresh rate" and "retrieval rate" are given Microsoft's construction, a "tile" is still "capable of displaying refreshed content." First, Microsoft concedes that the tiles of independent claim 1 are capable of displaying "refreshed" content, *Def.'s Br.* at 10; the dispute is only whether the tiles of independent claims 22 and 46 have the same characteristic. Microsoft's preferred construction of "retrieval rate," the phrase in those claims, is "a recurring time interval at which information is retrieved." *Id.*

Independent claim 22 speaks of a collection of tiles and a collection of information sources, a set of instructions for associating the tiles with the

information sources, a set of instructions for retrieving information from the information sources "in accordance with a . . . retrieval rate," and a set of instructions to "present information" to the tiles "in accordance with [the] . . . retrieval rate." '403 Patent at claim 22, 25:25-42. The sum of this process—adopting for the moment Microsoft's construction of "retrieval rate"—is to repeatedly obtain information from some source at a "recurring time interval" and present it to the tile. Claim 22 also states that the display is "arrange[d] [into] an array of tiles." *Id.* claim 22, 25:28-29. If the display is divided up into tiles, a tile is a "graphical representation of an associated information source," and the tiles are periodically given new information from the information source, it must be the case that a tile is "capable of displaying refreshed content." This is true even if one accepts Microsoft's definition of "retrieval rate."[9]

The relevant portions of independent claim 46 are nearly identical. That claim speaks of dividing "a display into an array of tiles," associating an information source to each tile, retrieving information from the information source "in accordance with a . . . retrieval rate," and presenting the information to the tile "in accordance with said . . . retrieval rate." *Id.* claim 46, 26:58-27:4. Again, even if "retrieval rate" means "a recurring time interval at which information is retrieved," as Microsoft insists, the tile must be "capable of displaying refreshed content."

[9] In fact, this conclusion would hold even if a tile were in all other respects merely "[a]n area of a display which presents content from an information source," as Microsoft argues. *Def.'s Br.* at 7.

Because all three independent claims logically require that tiles are capable of displaying refreshed content, the Court includes "capable of displaying refreshed content" in its construction of "tile."

vi. Conclusion

It is impermissible to import details of the specification into the claims in the guise of claim construction. *SuperGuide*, 358 F.3d at 875. However, the Court takes as a corollary to this principle that it is equally impermissible to ignore the specification altogether to broaden a claim into invalidity. After careful consideration, the Court concludes that within the '403 Patent, a "tile" is "a graphical representation of an associated information source capable of displaying refreshed content, the graphical representation being persistent and selectable to provide access to underlying information of the associated information source."

B. "array of tiles"

SurfCast proposes that "array of tiles" be construed as "multiple tiles displayed in an orderly fashion." *Joint Claim Construction Chart* 1. Microsoft proposes that the phrase mean "[a] collection of tiles. The tiles may, but need not, be arranged in a grid." *Id.* The PTO construed "array of tiles" to mean "an ordered set of two or more tiles." *PTO Op.* at 11.

1. Position of the Parties

a. SurfCast

SurfCast argues that an "array of tiles" is "multiple tiles displayed in an orderly fashion." *Pl.'s Br.* at 14. Its argument rests mainly on portions of the specification that use the phrase "array of tiles." For instance, the Summary of the

Invention states that the invention's method includes steps of "partitioning a visual display of a computer into an array of tiles in a non-overlapping configuration." *Id.* at 14 (citing '403 Patent at 4:57-59). The section defining "tile objects" states that a representative tile can contain a secondary grid of tiles; the representative tile "displays a further array of tiles that may be displayed in full by expanding [the representative tile] to occupy the full area of the display." *Id.* (citing '403 Patent at 9:8-11). It also cites several embodiments with similar language. *Id.* (citing '403 Patent at 12:6-8 ("FIG. 8 shows one embodiment in which all tiles are the same size and are presented in an array comprising M rows and N columns")); *id.* (citing '403 Patent at 13:59-60 ("When a tile is partitioned into a further array of tiles, the grid configuration program can also be used"). In SurfCast's view, this language establishes that when the patent uses the phrase "array of tiles" it means "multiple tiles displayed in an orderly fashion." *Id.*

b. Microsoft

Microsoft's preferred construction of "array of tiles" is: "A collection of tiles. The tiles may, but need not, be arranged in a grid." *Def.'s Br.* at 11. Microsoft begins with the proposition that "[a]n 'array' is a common term in computer science with a well-understood meaning: a collection of items." *Id.* (citing DICTIONARY OF COMPUTER AND INTERNET TERMS 24 (Douglas Downing, Michael Covington, & Melody Mauldin Covington eds., 6th ed. 1998) (DICTIONARY OF COMPUTER TERMS) (defining "array" as "a collection of data items that are given a single name and distinguished by numbers (subscripts)")). It claims that "nothing in the specification provides a reason to depart from this well understood meaning, and

thus an 'array of tiles' should be construed to mean simply a collection of tiles." *Id.* at 11-12.

Microsoft disputes that an "array of tiles" should be inherently ordered, as SurfCast proposes, because "displayed in an orderly fashion" is "thoroughly subjective." *Id.* at 12. As a demonstration, Microsoft presents four small boxes inside a larger box, each smaller box placed into one of four equal quadrants of the larger box. *Id.* Although each small box is inside its own quadrant, its position relative to the top left of the quadrant varies slightly from quadrant to quadrant. *Id.* Microsoft proposes that "a juror who believes this arrangement is 'orderly' is no less wrong or right than one who believes it is not." *Id.* The Court understands Microsoft to mean that it would be reasonable for a juror to find it orderly because the small boxes are all within one of four equal quadrants, but that it would also be reasonable for a juror to find it disorderly because each small box is at a slightly different offset within its quadrant. Microsoft cites *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350-51 (Fed. Cir. 2005) for the proposition that subjective claim requirements have in the past been held to render the claim invalid as indefinite.

Finally, Microsoft attacks the specification passages presented by SurfCast, claiming that they do not show that an "array of tiles" must necessarily display in an "orderly fashion." *Def.'s Br.* at 12. It claims that the passages show instead that an array of tiles may be ordered, but that this is not a required characteristic of an

array of tiles. *Id.* at 12-13. Consequently, Microsoft concludes that SurfCast's construction improperly reads limitations from the specification into the claims.

2. Analysis

a. The Patent Does Not Use the Computer Science Meaning of "Array"

First, the Court is not convinced by Microsoft's attempt to conflate the computer science definition of "array" with the patent's use of "array." It is true that "array" is a venerable term in computer science. *E.g.*, Dennis M. Ritchie, *The Development of the C Language*, in 2 HISTORY OF PROGRAMMING LANGUAGES 688 (Thomas J. Bergin & Richard G. Gibson eds., 1996) (tracing the development of the early programming languages BCPL, B, and C, and noting the use of "array" to denote collections of data in memory). It is equally true that the word "array," as used by computer programmers in the year 2000 while writing computer programs, referred to a collection of data items. DICTIONARY OF COMPUTER TERMS, *supra*, at 24. But "array" as used in this sense refers to data stored in computer memory, not to a group of elements in a human interface. Microsoft's own documentation of the "CArray" class in Microsoft Foundation Classes 6.0, Microsoft's then-current software development kit in 2000, demonstrates that an "array" is a collection of instantiated objects residing in computer memory. *CArray*, Microsoft Developer Network, http://msdn.microsoft.com/en-us/library/aa235465(v=vs.60).aspx (last

visited Mar. 12, 2014) (*CArray Documentation*) (describing a programming language construct used to store and refer to data in memory).[10]

But when the '403 Patent speaks of an "array of tiles," it consistently refers to them in the context of a human interface. It refers, not to the virtual objects in the computer's memory, but to the layout of visual elements in the display space. *E.g.*, '403 Patent at 4:57-59 ("partitioning a visual display of a computer into an array of tiles in a non-overlapping configuration"). The visual layout of a human interface is a wholly different conceptual terrain than the inner workings of computer memory. Furthermore, nowhere else in the patent is there any reference to a specific programming language construct that would be used to implement the invention; even the patent's discussion of the software architecture of the invention lacks any implementation details at this level of specificity. *See* '403 Patent at 14:26-23:28.

b. Construction of "array of tiles"

SurfCast's proposed construction is more convincing than Microsoft's because it reflects, not only the consistent usage of "array of tiles" in the specification, but the overall purpose of the invention. The Court is mindful that in *Thorner*, the Federal Circuit reversed a district court for reading "attached" as "affixed to an exterior surface" merely because of consistent usage in the specification. 669 F.3d at 1368. Under *Thorner*, were consistent usage the only consideration here, it

[10] In computer science, arrays are ordered and accessible by referring to a numeric index. DICTIONARY OF COMPUTER TERMS, *supra*, at 25 ("[T]he declaration DIM X(5) creates an array of five elements that can be referred to as X(1), X(2), X(3), X(4), and X(5)"); *see also CArray Documentation* ("As with a C array, the access time for a CArray indexed element is constant and is independent of the array size"). This contradicts Microsoft's assertion that an "array of tiles" is unordered. Even if Microsoft were correct that the '403 Patent refers to in-memory "arrays," they would still be inherently ordered.

might be improper to read "array of tiles" as implying an orderly presentation.[11] However, upon reading and digesting the full context of the '403 Patent, one skilled in the art would understand that "array of tiles" necessarily includes "displayed in an orderly fashion."

First, "orderly" is not, as Microsoft claims, necessarily subjective. The most apt definition of "orderly" in this context is "arranged or disposed in a neat, tidy manner or in a regular sequence." Flexner & Hauck, *supra*, at 1363. The Court grants that "neat" and "tidy" are subjective. However, whether things are "arranged in a . . . regular sequence" is mathematically objective. Although a "regular sequence" might be quite complex and governed by conditional rules, it is ultimately objective and predictable. The Court understands SurfCast to use "orderly" in this second, objective manner because it is the only usage that makes sense in the context of the '403 Patent.

Next, the overwhelming majority of references to "array of tiles" in the specification and claims are consistent with orderliness in the objective sense. The Summary of the Invention makes three broad statements about visual collections of tiles: (1) "[t]he present invention comprises a grid of tiles," '403 Patent at 4:37-39; (2) "the present invention comprises a method executed by a computer . . . comprising the steps of: partitioning a visual display . . . into an array of tiles in a non-overlapping configuration," *id.* at 4:55-61; and (3) "the present invention additionally includes . . . a . . . set of instructions to partition a display into an array

[11] *But see supra* note 10 (describing the orderly nature of an "array").

of tiles." *Id.* at 4:65-5:3. If the invention comprises a grid of tiles, and also a method and instructions for rendering an array of tiles, it stands to reason that the array of tiles will be rendered with reference to a grid. This is not to say that "array" and "grid" mean the same things; it only means that the Summary imputes the orderly properties of a grid to the usage of "array."

The illustrations of the invention bear out this association; whenever the patent shows groups tiles, they are in a grid, which is "orderly." *Id.* at figs. 1, 4, 7-11, 14. Furthermore, the patent, describing a representative tile, uses "array of tiles" when referring to tiles arranged in a grid. *Id.* at 9:1-11 ("FIG. 4 illustrates representative tiles. . . . Tile 406 displays a further array of tiles [illustrated as a 3x3 grid in Fig. 4] that may be displayed in full by expanding tile 406 to occupy the full area of the display"). The descriptions of Figures 8-11, all of which are objectively orderly, refer to the tiles as an "array." *E.g.*, *id.* at 12:6-8 ("FIG. 8 shows one embodiment in which all tiles are the same size and are presented in an array comprising M rows and N columns").

The preceding discussion goes to consistent usage, and the *Thorner* Court made clear that consistent usage alone is not enough to impute a limitation to the claims. 669 F.3d at 1368. But in this case, the purpose of the invention and the description of its purported novelty confirm that an "array of tiles" is orderly.

The human interface concept described in the '403 Patent is meant to allow a computer user to keep track of multiple information sources in a more rational way than the prior art. It criticizes the icons and windows paradigm:

> [U]sers . . are . . . finding that they have no effective way of managing the multiplicity of available data types and information sources. It is difficult both to conduct two or more different types of computing activities at the same time or to monitor two or more different information sources simultaneously because the tools available are confusing, inflexible, and/or otherwise difficult to implement. Users require immediate access to a wide variety of up to date content presented in a flexible, easily customized interface.

'403 Patent at 2:54-63. Likewise, it states that "[t]he user must contend with a wide range of icons and program windows that may occupy space on a user's display screen . . . An effort to standardize the ways in which different types of information are presented to the user would be advantageous." *Id.* at 3:13-15, 16-19. Criticizing the then-present method of bookmarking internet locations and other information, it claims that "[t]he missing capability is a visual categorization in which an area of the display unit itself becomes the bookmark and the arrangement on the display becomes the categorization, independent of the type of content." *Id.* at 4:3-7.

This is the context in which the claims state that the invention is, for instance, "[a] method . . . comprising . . . partitioning a visual display of the device into an array of tiles." *Id.* claim 1, 24:15-20. The point of the invention, from the patent's perspective, is to bring order to a human interface paradigm that had grown chaotic as evolving technologies increased the number of information sources that computer users wished to view.[12] The "array of tiles," while not the exclusive name for a visual collection of tiles, is certainly the most common, both in the specification and the claims. In this context, one of skill in the art, upon reading

[12] The Court expresses no opinion on whether the patent's criticism of the prior art is well-founded, or whether the patent is novel or non-obvious. Those are questions for another day.

and digesting the patent, would appreciate that an "array of tiles" is "multiple tiles displayed in an orderly fashion." Were the array not orderly in the objective sense, it would defeat the purpose of the invention.[13]

As a postscript, the Court points out that an "orderly fashion" is not necessarily a grid. There is no need to add Microsoft's additional sentence—clarifying that "[t]he tiles may, but need not, be arranged in a grid"—because this is already communicated by "orderly." Many orderly arrangements are not grids. The Court construes "array of tiles" to mean simply that they are displayed in some objectively orderly fashion.

C. "partitioning a visual display of the device into an array of tiles" and "arrange a display into an array of tiles"

The parties initially agreed that these two phrases—the first found in independent claim 1, the second found in independent claims 22 and 46—should be given the same construction. *Joint Claim Construction Chart* 1. Microsoft proposed that they both be construed as "depicting/depict an array of tiles on some or all of a display," and SurfCast proposed "dividing/divide some or all of a display into an array of tiles." *Id.* Microsoft later amended its proposed construction and asked that "arrange a display into an array of tiles" not be given any particular construction. *Def.'s Revised Constructions* at 1. The PTO construed the phrase to mean "dividing a display or window into two or more tiles." *PTO Op.* at 13.[14]

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[13] The PTO's construction, "an ordered set of two or more tiles," *PTO Op.* at 11, is functionally identical to "multiple tiles displayed in an orderly fashion." The Court views the PTO and SurfCast's constructions as interchangeable.

[14] Microsoft and SurfCast proposed different constructions to the PTO than they did to this Court. Microsoft proposed: "[A] presentation of two or more tiles within a portion or region of the

1. Position of the Parties

a. SurfCast

SurfCast contends that the plain meanings of the claim terms "partitioning" and "arrange," as used in the patent, are more consistent with "dividing/divide some or all of a display" than "depicting/depict . . . on . . . a display." *Pl.'s Br.* at 15. It claims that "partitioning" means to divide space, and here the space is a display. *Id.* It cites the American Heritage Dictionary for the common meaning of "partition": "to divide into parts, pieces, or sections." *Id.* (citing THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1320 (3d ed. 1992)). It insists that Microsoft's definition "operates to remove any meaning imputed by the term 'partitioning' from the claim." *Id.* SurfCast cites *Innova/Pure Water, Inc. v. Safari Water Filtration Systems*, 381 F.3d 1111, 1119 (Fed. Cir. 2004), for the proposition that "all claim terms are presumed to have meaning in a claim," and that consequently it would be improper to construe these phrases without the meaning of "partition." SurfCast also disagrees with Microsoft's construction because it "flips the focus of the claim language from the display to the tiles and only requires showing a collection of tiles on the display with no particular order or arrangement." *Pl.'s Br.* at 16.

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display, including within a window." *PTO Op.* at 12. SurfCast proposed: "[D]ividing some or all of a display into a non-overlapping array of tiles." *Id.* Thus, the parties' differing arguments limit the usefulness of the PTO's construction here. Microsoft did not argue to this Court that the "partitioning . . ." phrase must "includ[e] within a window," and SurfCast did not argue that it should include "non-overlapping." The PTO perceived the "sole dispute" between the parties to be "whether the tiles may be overlapping," but the parties have presented a broader dispute to this Court. The Court deems the PTO's construction persuasive to the extent that it adopts SurfCast's "dividing" rather than Microsoft's "depicting" language.

b. Microsoft

Microsoft argues that the specification refers to the functionality described in the independent claims in terms of "displayed," "presented," and "rendered." *Def.'s Br.* at 13 (citing '403 Patent at 9:5-67, 12:6-8, 19:34-36, 22:51-56). It takes from this language that the array of tiles should be "depicted," its chosen verb. Microsoft also contends that SurfCast's "divided" will be confusing to the jury because it is not consistent with presentational language of the specification. It also claims that dependent claim 3 speaks of partitioning an array into non-overlapping tiles; in Microsoft's view, if claim 1 requires "dividing" then partitioning into non-overlapping tiles is superfluous. Thus, Microsoft contends, under the doctrine of claim differentiation, "dividing" cannot be the correct verb.

2. Analysis

The dispute about these terms stems in large part from the parties' different understanding of "array of tiles." If, as Microsoft requested, an array of tiles is given its computer science meaning—a collection of virtual objects in memory—then it makes sense to "depict an array of tiles on some or all of a display." This is because the array itself, a blob of data in memory, has no inherent visual characteristics; the tiles within the array must be "depicted," or made perceivable by a human being. But if, as SurfCast requested, an array of tiles means "multiple tiles displayed in an orderly fashion," then it makes sense to "divide some or all of a display into an array of tiles." The array already has some visual characteristics because it is a human interface element (it is "displayed"); it remains only to present the array on screen by allocating some visual space to it.

The Court already determined that an "array of tiles" is "multiple tiles displayed in an orderly fashion," and that conclusion weighs heavily in favor of SurfCast's construction here. "Dividing/divide some or all of a display into an array of tiles" would be consistent with the Court's construction of "array of tiles," and therefore would make more sense to a jury. Microsoft's assertion of the doctrine of claim differentiation does not defeat SurfCast's construction because the "partitioning" of the visual display into an array of tiles, found in claim 1, does not require the "non-overlapping configuration of tiles . . . [of a] uniform size and shape" found in claim 3. Partitioning the display—making room for the array of tiles—is distinct from laying out tiles within the display space allocated to the array of tiles.

Finally, the Court rejects Microsoft's amended proposal that "arrange a display into an array of tiles" be given its plain and ordinary meaning. The two phrases serve nearly identical functions in all three independent claims. Neither party has advanced any explanation of why claim 1 uses slightly different language to describe this process, and the Court can perceive none. Because both phrases appear to mean the same thing, the Court gives them the same construction.

In sum, both the phrase "partitioning a visual display of the device into an array of tiles" and "arrange a display into an array of tiles" mean "dividing/divide some or all of a display into an array of tiles." This follows naturally from the conclusion that "array of tiles" means "multiple tiles displayed in an orderly fashion."

D. "user-defined array size"

SurfCast proposes that "user-defined array size" be construed as "the number and arrangement of tile positions in the array as specified by the user." *Joint Claim Construction Chart* 1. Microsoft proposes that "user-defined array size" be construed as "the number of elements in an array, as specified by the user." *Id.* The PTO construed the term to mean "the number and arrangement of tiles to display, as specified by the user." *PTO Op.* at 16.[15]

1. Position of the Parties

a. SurfCast

SurfCast proposes that "user-defined array size" means "the number and arrangement of tile positions in the array as specified by the user." *Pl.'s Br.* at 16. In support of this construction, SurfCast turns first to the prosecution history of the patent, in which the applicant addressed a rejection by the examiner based on similarity to prior art, "McFedries." *Id.* at 16 (citing '403 File History 14). This passage reads:

> In respect of claim 2, the Examiner has alleged that a user-defined array size is "associated with tiling the panels in a horizontal or vertical fashion" as described in McFedries. Applicants respectfully disagree. McFedries does not teach a user-defined array size. In fact, the number of panels in McFederies' array is simply the number of open windows at the time they are tiled. That number will be the same whether the windows are tiled horizontally or vertically, but has nothing to do with an array size defined by a user.

[15] Microsoft argued to the PTO that "user-defined array size" should mean "an amount of space determined to be necessary to present a user-defined number of tiles in a display." *PTO Op.* at 16.

Id. SurfCast takes from this passage that "'user-defined array size' therefore means more than just a user selecting the number of tiles in the array"; rather, it also embraces "the number and arrangement of tile positions." *Pl.'s Br.* at 16-17.

SurfCast also points to the specification to show that a user may specify more than simply the number of tiles that are part of the array. *Pl.'s Reply* at 5. For instance, "'a user may specify a presentation of the grid, consisting of its dimensions (i.e., the number of tiles to display and their arrangement).'" *Id.* (quoting '403 Patent at 11:9-11). Likewise, it identifies "'one embodiment in which all tiles . . . are presented in an array comprising M rows and N columns. There is no particular requirement that the arrangement consists of more than one row and more than one column.'" *Id.* (quoting '403 Patent at 12:7-10). SurfCast concludes that one skilled in the art would understand that the user may specify the number of rows and columns in a grid-like array, defining the size of the array. *Id.*

b. Microsoft

Consistent with its construction of "array of tiles" in the technical, computer science sense, Microsoft construes "user-defined array size" to mean "the number of elements in an array, as specified by a user." Microsoft begins with the proposition that "size," as a term, does not include the concept of arrangement or position. *Def.'s Br.* at 14. It presents the example of a living room; "[t]he size of one's living room says nothing of how it is arranged." *Id.* Microsoft also disputes SurfCast's interpretation of the prosecution history. *Id.* at 15. It reads the passage from the '403 File History to show that the applicant distinguished McFedries on the grounds that the prior art system did not allow a user to define "the *number* of panels"

displayed. *Id.* (quoting '403 File History at 14) (emphasis in original). Microsoft interprets this response to mean that the applicant was not distinguishing McFedries on the ground that it could not let the user control the arrangement of panels. *Id.* Microsoft also points out that the response acknowledges that the McFedries invention could, in fact, control the arrangement by tiling horizontally or vertically. *Id.*

2. Analysis

The '403 File History is incomplete without understanding the "McFedries" prior art. This is a reference to a book by Paul McFedries, *The Complete Idiot's Guide to Windows 95* (2d ed. 1997). '403 File History at 11. From what the Court can discern,[16] the passage cited by the examiner dealt with automatically rearranging the then-open windows on screen to take up identical space and become located adjacent to each other in either a horizontal or vertical fashion. The applicants seem to say that, unlike the process McFedries describes—which relies on the number of then-open windows—their invention allows the user to specify some arbitrary number of positions available for human interface elements (windows in McFedries, tiles in the '403 Patent). In other words, if three windows were open, the McFedries process would result in three adjacent, identically-sized windows. The applicants told the examiner that what they had invented was different than McFedries because it allowed the user to specify that there are three slots on screen for tiles to fit into, regardless of how many tiles are actually present.

[16] Although both parties argue that the applicant's distinction of this book supports their own construction, neither party provided the relevant excerpt from the book.

Understanding that the prosecution history is of less interpretational value than the patent itself, the Court concludes that this passage supports SurfCast's construction. The applicants distinguished McFedries on the ground that their invention permitted the user to specify the number of positions available for tiles. While the distinction does not speak to the arrangement of those positions, it at least speaks to the number of positions. This is closer to SurfCast's proposed construction, "the number and arrangement of tile positions in the array as specified by the user," than it is to Microsoft's proposed construction, "the number of elements in an array, as specified by a user."[17]

It remains to determine whether a "user-defined array size" also speaks of the arrangement of tile positions. This dispute, like several others already described, stems in part from the parties' divergent constructions of "array of tiles." If an "array of tiles" is a one-dimensional block of memory storing a collection of virtual objects, its "size" is simply a non-negative integer value. If, on the other hand, an "array of tiles" is "multiple tiles displayed in an orderly fashion," then the concept of "size" is more complex.

The Court has already construed "array of tiles" to mean "multiple tiles displayed in an orderly fashion." When speaking of the size of this orderly display, it is not sufficient merely to address the number of positions. For instance, if the orderly display was a grid, saying that there are sixteen positions would not fully

[17] The PTO stated, without discussion, that that "the specification provides no support for SurfCast's proposed tile "positions." *PTO Op.* at 16 (citing '403 Patent at 11:9-11). Instead, it adopted "the number and arrangement of tiles to display, as specified by the user." *Id.* The Court respectfully disagrees with the PTO's construction for the reasons discussed above.

describe the "size" of the array; it would also be necessary to specify that the array is 4x4, or 2x8, or 1x16. These dimensional measurements are arrangements of positions, not merely quantities of positions. It follows that "size," when applied to an "array of tiles," must include the concept of arrangement.

Consequently, the Court construes "user-defined array size" to mean "the number and arrangement of the positions in the array as specified by the user."

E. "refresh rate" and "retrieval rate"

The phrase "refresh rate" appears in independent claim 1, while "retrieval rate" appears in independent claims 22 and 46. SurfCast proposes the same construction for both, while Microsoft proposes different constructions. The Court addresses the two phrases together.

Microsoft proposes that "refresh rate" be construed as "a recurring time interval at which information displayed in a tile is refreshed." *Joint Claim Construction Chart* at 1. It proposes that "retrieval rate" be construed as "a recurring time interval at which information is retrieved." *Id.* SurfCast proposes that both terms be construed as "criteria for updating." *Id.* Microsoft's revised construction proposes, as an alternative, that "refresh rate" mean "a rate at which information displayed in a tile is refreshed" and that "retrieval rate" mean "a rate at which information is retrieved." *Def.'s Revised Constructions* at 1. The PTO construed the terms to mean "a recurring time interval at which information displayed in a tile is refreshed or retrieved." *PTO Op.* at 14.

1. Position of the Parties

a. SurfCast

SurfCast proposes that both "refresh rate" and "retrieval rate" be construed as "criteria for updating." In support of its construction, SurfCast relies heavily on a preferred embodiment in which tiles are updated in response to two events that are not defined by a specific time interval: first, when a locally stored file is updated, and second, at a certain time of the day.[18] *Pl.'s Br.* at 17-18. SurfCast points out that "a construction 'that excludes a preferred embodiment from the scope of the claim is rarely, if ever, correct.'" *Id.* at 18 (quoting *Accent Packaging*, 707 F.3d at 1326).

Next, SurfCast claims that the plain and ordinary meaning of "rate" is not limited to "a recurring time interval," as Microsoft proposes. It cites the dictionary definition of "rate": "a quantity measured with respect to another [measured] quantity." *Id.* at 18-19 (quoting THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE at 1500).[19] SurfCast points out that there is no limitation to time in the comparison measurement, supplying the example of changing the oil in a car every three thousand miles. *Id.* at 19.

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[18] The time of day updating is not tied to a consistent time interval because there may be varying real quantities of time between the same time of day in any two sets of consecutive days. In the United States, this could happen when the country enters or exits Daylight Savings Time; in any nation, it could happen on a year that has a "leap second." *See Leap Seconds*, Naval Oceanography Portal, http://www.usno.navy.mil/USNO/time/master-clock/leap-seconds (last visited Sept. 27, 2013) ("Civil time is occasionally adjusted by one second increments to ensure that the difference between a uniform time scale defined by atomic clocks does not differ from the Earth's rotational time by more than 0.9 seconds").

[19] SurfCast omits the second "measured" from its quotation of the dictionary definition. The omission does not appear to be material to this analysis.

Next, SurfCast contends that Microsoft's proposed construction adds ambiguity that will confuse the jury. *Id.* It points out that Microsoft's construction will result in some redundant verbiage if it replaces, word for word, either of the disputed claim terms. *Id.* For instance, claim 1 would become "updating information . . . presented to said first tile in accordance with said recurring time interval at which information displayed in a tile is refreshed." *See id.*

Finally, SurfCast claims that Microsoft's proposed construction of "retrieval rate" is inconsistent with the language in both claims 22 and 46 specifying that the retrieval rate is used to present data to the tiles as well as to retrieve information. *Id.*

b. Microsoft

Microsoft proposes that "refresh rate" mean "[a] recurring time interval at which information displayed in a tile is refreshed," and that "retrieval rate" mean "[a] recurring time interval at which information is retrieved." *Def.'s Br.* at 15. Microsoft's analysis begins from the principle that different claim words are presumed to have different scope. *Id.* (citing *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1333 (Fed. Cir. 2006)). Thus, in Microsoft's view, the two terms presumptively have different meanings. *Id.* Furthermore, Microsoft points out, the phrase "criteria for updating" does not appear in the patent. *Id.* In Microsoft's view, "criteria for updating" is so broad as to read "rate" out of the claims. *Id.* at 15-16.

Microsoft also disputes that the preferred embodiment cited by SurfCast supports the construction "criteria for updating." *Id.* at 16. Microsoft reads the

language about updating a tile in response to changes in a word processing file on the disk, not as suggesting a time-independent refresh, but rather as describing a situation where the refresh functionality is turned off. *Id.* In other words, because the update is not time-bound, it must be that the user has elected not to refresh in accordance with a "rate" at all. *Id.* In a footnote, Microsoft expresses a fallback theory: that the embodiment describes a periodic check of the hard disk, at a very short time interval, to see if the file has changed; if it has, the process of the invention updates the tile. *Id.* at 16 n.7.

In support of its own proposed construction, Microsoft claims that its proposal captures the ordinary sense of "refresh rate" and "retrieval rate." *Id.* at 16-17.

2. Analysis

a. The Terms Can Be Construed Identically

Microsoft is correct that different words in the patent presumptively mean different things. *Applied Med.*, 448 F.3d at 1333 n.3 (citing *CAE Screenplates Inc. v. Heinrich Fielder Gmbh & Co. KG*, 224 F.3d 1308, 1317 (Fed. Cir. 2000)). However, the Federal Circuit expressed this concept with an additional subtlety: "[T]he use of two terms in a claim requires that they connote different *meanings*, not that they necessarily refer to two different *structures*." *Id.* (emphasis in original). The Federal Circuit added that "[t]he prosecution history, specification, comparison with other claims in the patent, and other evidence may require that two terms in a claim refer to different structures." *Id.* (citing *Phillips*, 415 F.3d at 1312-19). The

'403 Patent describes software, not a tangible thing; however, software certainly has virtual characteristics that are conceptually akin to "structures."[20]

The phrase "refresh rate" appears in independent claim 1 in this context:

> A method . . . comprising:
> selecting a plurality of information sources;
> partitioning a visual display of the device into an array of tiles, wherein each tile in said array of tiles is associated with an information source in said plurality of information sources;
> assigning a first *refresh rate* to a first tile of said array of tiles and a second *refresh rate* to a second tile of said array of tiles;
> updating information from a first information source in said plurality of information sources presented to said first tile in accordance with said first *refresh rate*; and
> simultaneously
> updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second *refresh rate*.

'403 Patent claim 1, 24:15-33 (emphasis added). Each tile has a refresh rate; each tile has an information source; and the method updates information from each information source in accordance with the refresh rate. The Court has already construed "tile" to mean, in part, a "graphical representation of an associated information source capable of displaying refreshed content"; it follows that when the method updates the information source, it also updates the visual display of the tile with "refreshed content." Thus, besides being a property of a tile, the "refresh rate" governs two things: (1) under what circumstances the method retrieves new

[20] A data structure is a "way[] of arranging information in the memory of a computer." DICTIONARY OF COMPUTER AND INTERNET TERMS 126 (Douglas Downing et al., eds., 10th ed. 2009).

information from the information source, and (2) under what circumstances the method updates the associated tile's visual display.

The phrase "retrieval rate" appears in both independent claims 22 and 46. Claim 22 describes an electronic readable memory with five sets of instructions: (1) to control simultaneous communication with a plurality of information sources; (2) to arrange a display into an array of tiles; (3) to associate information sources with tiles; (4) to "retrieve information from . . . [the] information source[s] in accordance with . . . [their] retrieval rate[s]"; and (5) to "present information to . . . [the] tile[s] in accordance with . . . [their] retrieval rate[s]." *Id.* claim 22, 25:25-44. Claim 46 is similar; it describes a device with a processor that executes instructions identical in substance to those of claim 22. *Id.* claim 46, 26:47-27:4. Notably absent from either claim 22 or 46 is any language about assigning a retrieval rate to a tile; dependent claims 41 and 42 add this feature to independent claim 22, and dependent claims 48 and 49 add it to independent claim 46. *Id.* at claims 41-42, 26:34-38; *id.* at claims 48-49, 27:7-11. Absent those specializations, the retrieval rate exists independently of the tile in claims 22 and 46. Nonetheless, the "retrieval rate" in these claims still governs (1) under what circumstances the instructions retrieve information from the information source, and (2) under what circumstances the instructions update the associated tile's visual display.

Under this analysis, there is no barrier to "refresh rate" and "retrieval rate" being given the same construction. The fact that the phrases use slightly different terms does not change the fact that they perform identical functions. The difference

in nomenclature likely stems from the fact that in independent claim 1 the "refresh rate" is always assigned to tile; the tile is by definition "refreshable." By contrast, in claims 22 and 46, the "retrieval rate" is independent of the tiles, and so it is more appropriate to refer to the rate in terms of the information source, from which information is "retrieved." The patentee likely chose slightly different words because of the different context of the independent claims, but the meanings of both phrases can be captured by the same construction, contrary to Microsoft's position. The Court addresses shortly whether construing the terms identically is the correct result.

b. A "Rate" Is Not Necessarily a Time Interval

The parties' dispute turns largely on whether the embodiment described in column 12 of the '403 Patent mandates that "refresh rate" and "retrieval rate" be given a construction that makes reference to a time interval. SurfCast insists that doing so would improperly exclude the embodiment described in column 12, lines 53-56; Microsoft counters that the embodiment describes a situation where the user has turned off the refresh rate functionality.

First, the words of the patent squarely rebut Microsoft's principle argument. The patent says:

> In a preferred embodiment . . . the grid manages the refresh rate of each tile in the grid. For example, for locally stored word processing or spread sheet files, the user might configure the tiles to refresh only when the underlying data is written to the local hard drive. Similarly, a user might configure tiles containing infrequently updated HTML data from the Internet to refresh at a certain time each day.

'403 Patent at 25:50-57. The patent says nothing about the user disabling the refresh rate; rather it gives examples of a refresh rate. The Court does not conclude that in its first two examples of "managing" the refresh rate, the patent actually describes the user disabling it altogether.

Microsoft's fallback argument is equally unavailing. In its footnote 7, it claims that the embodiment describes a situation where the user has defined the refresh rate relative to a very short time period, and that the grid is checking the underlying file repeatedly over that very short period. *Def.'s Br.* at 16 n.7. But that is not what the patent describes; it says "the user might configure the tiles to refresh only when the underlying data is written to the local hard drive." '403 Patent at 12:53-55. From the user's perspective—the one that counts in this sentence—the tile refresh is triggered by an event that is not bound to a discrete time interval; rather, it is a conditional event. Likewise, the example in which the refresh rate defines a time of day at which to update HTML data also describes a rate that is not bound to a specific time interval from the user's perspective.

Furthermore, nothing about the embodiment requires that it be implemented in the way that Microsoft describes in its footnote. Although repeatedly checking the underlying file is certainly one method to implement the embodiment, others are possible. For instance, the underlying file could be configured to broadcast notice to any listeners whenever any process made changes to the file; among those listeners could be the grid that is subject to the "refresh rate." This technique does not require periodically polling the file, and was well known in 2000. *Observer*,

Microsoft Developer Network, http://msdn.microsoft.com/en-us/library/ff649896.aspx (last visited Mar. 12, 2014) (describing the Observer pattern, in which a "subject" object is programmed to automatically notify an "observer" object whenever the subject changes) (citing ERICH GAMMA et al., DESIGN PATTERNS: ELEMENTS OF REUSABLE OBJECT-ORIENTED SOFTWARE (1995)). This further demonstrates that the refresh rate need not be a specific interval of time.

The Court concludes that a "rate," as used in the claims, is not necessarily measured temporally. A construction limited to temporal rates would improperly exclude the preferred embodiment described in column 12, *Accent Packaging*, 707 F.3d at 1326, and nothing in the claim language or specification suggests that the term should be so limited.[21]

c. Construction of "refresh rate" and "retrieval rate"

Although Microsoft's main arguments against "criteria for updating" as the construction of "refresh rate" and "retrieval rate" do not prevail, SurfCast's terse, general phrasing could mislead the jury. Microsoft's proposals—that "refresh rate" be "[a] recurring time interval at which information displayed in a tile is refreshed" and "retrieval rate" be "[a] recurring time interval at which information is retrieved"—are more specific and precise in the context of the claims. However, as noted above, they improperly limit "rate" to only temporal periods. A better construction would use the best elements of both proposals. Consequently, the

[21] The PTO observes that "a claim need not be construed to encompass every disclosed embodiment when the claim language is clearly limited to one or more embodiments." *PTO Op.* at 15 (citing *TIP Systems, LLC v. Phillips & Brooks/Gladwin, Inc.*, 529 F.3d 1364, 1373 (Fed. Cir. 2008)). Assuming this statement is true in principle, it is inapplicable here because there is no evidence that the claim language is "clearly limited to one or more embodiments."

Court construes "refresh rate" to mean "the criteria for updating information displayed in a tile." Likewise, the Court construes "retrieval rate" to mean "the criteria for retrieving information."[22]

F. "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile"

This is the first of four disputed claim terms whose meanings are tightly related to each other. The Court treats them one at a time, understanding that the construction of each term influences the constructions of the others. Some of the dispute between the parties as to these terms hinges on their disagreement over "refresh rate" and "retrieval rate," which the Court has already resolved. *Supra* Section IV.E. Much of the remainder turns on a dispute over the meaning of "simultaneous." *See infra*, Sections IV.H to IV.I.

However, before reaching that issue, the Court must first address two precursor terms, of which the first is "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile." This phrase appears in independent claim 1. SurfCast contends that the term can be given its plain and ordinary meaning. *Pl.'s Br.* at 20. Microsoft proposes that it mean "updating the information displayed in the tile." *Def.'s Br.* at 18.

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[22] SurfCast objects that Microsoft's proposed construction of "retrieval rate" "fails to reflect the plain language of the claim instructing that the retrieval rate also applies to *presenting* information and not just retrieving information." *Pl.'s Br.* 19 (emphasis in original). However, the claims speak of presenting information in accordance with the retrieval rate. '403 Patent at claim 22, 25:41-44; *id.* at claim 46, 27:1-4. Given that, there is no loss of claim scope by construing "retrieval rate" as "the criteria for retrieving information"; it simply means that in claims 22 and 46 the "criteria for retrieving information" govern both the updating and the presenting of information.

1. Position of the Parties

a. SurfCast

SurfCast proposes that "updating information from a first information source in said plurality of information sources presented to said first tile" be given its plain and ordinary meaning. *Pl.'s Br.* at 20. However, SurfCast devotes no briefing to this particular term, focusing instead on its preferred construction for the related terms containing "simultaneously." *See id.* at 20-26.

b. Microsoft

Microsoft proposes that the phrase means "updating the information displayed in the tile." *Def.'s Br.* at 19. In support of this construction, Microsoft offers that the "updating described in the patent uniformly refers to the updating of the tile image on the display." *Id.* (citing '403 Patent at 10:4-5 and '403 Patent at 12:46-47). It also observes that the specification consistently uses "the word 'present' to refer to the display of information." *Id.* (citing '403 Patent at 10:51-53 and '403 Patent at 12:26-29). Finally, Microsoft contends that SurfCast has conceded the point when, in the portion of its brief discussing the "simultaneously" terms, it refers to the "'individual data transfer for a single *update of the second tile*.'" *Id.* (quoting *Pl.'s Br.* at 21) (emphasis added by Microsoft). Microsoft takes this phrase to mean that SurfCast "believes this term relates to updating the information displayed in the tile." *Id.*

2. Analysis

First, SurfCast has not conceded the point. SurfCast's brief refers to "data transfer for a single update of the second tile," *Pl.'s Br.* at 21; data transfer is not

necessarily the same thing as updating information on a display. However, Microsoft is correct that all three independent claims speak of updating a tile's visual display at the "rate" at which the various processes retrieve information from an information source. '403 Patent at claim 1, 24:26-28; *id.* at claim 22, 25:41-44; *id.* at claim 46, 27:1-4. Microsoft is also correct that "updating the information displayed in the tiles themselves is the very point of the invention." *Def.'s Br.* at 19 (citing '403 Patent at 7:55-59). The Court agrees that the language "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile," even in the context of independent claim 1, is somewhat ambiguous as to whether the operation includes updating the visual display of the tile. Consequently, it would be helpful to remind the jury that claim 1 also embraces this display-updating characteristic.

However, Microsoft's proposed construction is too narrow; it speaks only of "updating the information displayed in the tile." *Def.'s Br.* at 18. This construction could mislead the jury to conclude that the term refers only to updating a visual display, when in fact it also refers to obtaining information from an information source. Instead, the Court construes the phrase "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile" to mean "obtaining refreshed information from the information source and updating the information displayed in the tile." This captures both the notion of obtaining fresh information and of updating the visual display of the tile.

G. "in accordance with said [first/second] [refresh/retrieval] rate"

The second term that the Court must resolve before reaching the question of "simultaneously" is "in accordance with said [first/second] [refresh/retrieval] rate." This phrase appears, in its variations, in all three independent claims. '403 Patent at claim 1, 24:26-33; *id.* at claim 22, 25:36-40; *id.* at claim 46, 26:62-27:4. SurfCast proposes that the term be given its plain and ordinary meaning, *Pl.'s Br.* at 20; Microsoft proposes "at the interval set by the refresh/retrieval rate." *Def.'s Br.* at 18.

1. Position of the Parties

a. SurfCast

SurfCast proposes that this term should also be given its plain and ordinary meaning. *Pl.'s Br.* at 20. Again, SurfCast does not offer any argument defending this position. *See id.* at 20-26.

b. Microsoft

Microsoft proposes that the term be construed to mean "at the interval set by the refresh/retrieval rate." *Def.'s Br.* at 19-20. Microsoft argues that the phrase "in accordance with said [first/second] [refresh/retrieval] rate" could be ambiguous, because "a juror might interpret 'in accordance with' to require only a rough correspondence or some attenuated relationship to the actual refresh rate assigned to the tile." *Id.* at 19. Hewing to its theory that a "rate" means a time interval, Microsoft claims that any juror interpretation that is not bound to a specific, identifiable time interval would be incorrect. *Id.* Microsoft again claims that SurfCast has conceded the point, quoting SurfCast's proposed language for the

"simultaneously updating . . ." term: "at [the time] the update is to occur as set by the refresh rate assigned to the second tile." *Id.* at 20 (quoting *Pl.'s Br.* at 21).

2. Analysis

First, the Court again disagrees with Microsoft's contention that SurfCast's brief contains such a concession. SurfCast's proposed construction for the "simultaneously updating . . ." term is consistent with its theory that a "rate" is not necessarily a temporally-bound period. It says nothing about an "interval"; it simply describes "waiting for the next time at which the update is to occur as set by the refresh rate." *Pl.'s Br.* at 21. This interpretation is compatible with SurfCast's broader view of the meaning of "rate," and does not concede that the "in accordance with . . ." term embraces a time interval. *See* Section IV.E.2.b, *supra*.

Microsoft's proposed construction is consistent with its view that a "rate" is a time interval, but the Court has already considered and rejected that proposition. Given that the Court has already construed "refresh rate" and "retrieval rate," little would be added by giving an additional construction to "in accordance with said . . . [refresh/retrieval] rate." The jury will be able to apply the correct meaning without assistance. The Court will give "in accordance with said [first/second] [refresh/retrieval] rate" its plain and ordinary meaning, qualified by its construction of "refresh rate" and "retrieval rate."

H. "simultaneously updating information from a second information source in said plurality of information sources presented to said second tile in accordance with said second refresh rate"

This phrase appears only in independent claim 1. '403 Patent at claim 1, 24:29-33. However, it has close analogs in independent claims 22 and 46 that the Court addresses later. *Id.* at claim 22, 25:27-28; *id.* at claim 46, 26:54-55.

SurfCast initially proposed that the phrase means

> performing the repetitive process of updating the information presented to the second tile and waiting for the next time at which the update is to occur as set by the refresh rate assigned to the second tile at the same time or nearly the same time as said updating information from said first information source.

Pl.'s Br. at 21. SurfCast revised its position, suggesting instead that the term "simultaneously" means that "the ongoing processes of updating information presented to the two tiles occur at the same time, even if the updating of the two tiles occurs at different rates." *Pl.'s Revised Constructions* at 1. Microsoft, by contrast, proposes that the whole phrase be construed as "simultaneously updating the information displayed in the second tile at the interval set by the second refresh rate." *Def.'s Br.* at 21. The PTO adopted SurfCast's proposal. *PTO Op.* at 15.

1. Position of the Parties

a. SurfCast

SurfCast's basic theory of the meaning of "simultaneously" is that the individual data transfers for the first and second tiles "occur during the same time period, but not necessarily at the same time." *Pl.'s Br.* at 21. SurfCast denies that the first transfer must occur at the same moment as the second transfer, *id.*; rather, it views the two update operations as a pair of parallel processes, running at the

same time but not necessarily updating from the information source at the same time. *Id.* at 22-24. Rather, the updates occur at the moments in time designated by the refresh rate. *Id.*

In support of this interpretation, SurfCast offers the embodiment in which one tile is set to update when a document in the file system is changed, and a second tile is set to update HTML data from the internet at a particular time of day. *Id.* at 22-23. It observes that there will be some times during which the first process is actively updating, usually in response to the user saving work on an open document, and other times when it is not updating. *Id.* Likewise, there will be a particular time of day when the second process is downloading HTML data from the internet; at other times, the second process will not be updating. *Id.* SurfCast submits that these two processes are nonetheless simultaneous because they are both running at the same time, though not necessarily actively updating from the information source. *Id.* at 23.[23]

b. Microsoft

Microsoft vigorously disputes that claim 1 refers to a "process" of any kind: "SurfCast once again ignores the claim language, which never uses the word '*process*.'" *Def.'s Br.* at 20 (emphasis in original). Microsoft submits that the claim language requires "only the updating of information, which may or may not require

[23] SurfCast also contends that it is illogical for the step of "simultaneously updating information from a second information source . . . in accordance with said second refresh rate" to occur at any other time than during the same time window as "updating information from a first information source." *Id.* at 23. However, Microsoft does not appear to argue that the "simultaneously" language links any steps of the process other than those described in column 24, lines 26-33.

some type of data transfer and is never described as taking place over a '[period] of time.'" *Id.* at 20. Addressing SurfCast's example, Microsoft claims that the specification only explains that the tile is refreshed "at a certain time of day," not over a period of time. *Id.* at 20 (quoting '403 Patent at 12:56-58).[24] Microsoft concludes that it would be wrong to inject the word "process" into the construction of the disputed phrase.

Microsoft also disputes that the use of "simultaneously" in claim 1 permits anything but the updating of information at the same time—not, as SurfCast claims, the operation of two parallel processes that update independently of each other but which run at the same time. *Id.* at 21. Microsoft points to numerous instances of the word "simultaneously" in the specification that, in its view, show that the authors used the word to mean occurring in the same span of time. *Id.* (citing '403 Patent at 1:44-46, '403 Patent at 1:66-2:1, '403 Patent at 2:57-61, '403 Patent at 8:38-41, and '403 Patent at 11:12-14). Microsoft insists that because the ordinary meaning of "simultaneously" is "at the same time," SurfCast's proposal—that it means two simultaneous processes that may not update at exactly the same time—improperly reads a limitation into the claim. *Id.*

Finally, Microsoft asserts that SurfCast's interpretation would read "simultaneously" out of the patent because it could apply to any time period. *Id.* at

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[24] SurfCast accuses Microsoft of misquoting the patent, *Pl.'s Reply* at 7, and SurfCast appears to be correct. While Microsoft quotes the patent as saying "at a certain time of day," *Def.'s Br.* 20 (purporting to quote '403 Patent at 12:56-58), the patent itself says "at a certain time each day." '403 Patent at 12:56-57. SurfCast argues that this mischaracterization is material because "each day" suggests an ongoing, repetitive process rather than a one-off event. *Pl.'s Reply* at 7.

22. Under this interpretation, an update that occurred on Day 1 and an update that occurred on Day 2 would be "simultaneous" because they both occurred in the same week. *See id.* At oral argument, Microsoft offered a clear metaphor; in its view, SurfCast's interpretation of "simultaneously" would mean that George W. Bush and Barack Obama both occupied the office of President of the United States "simultaneously" because they were both President in the first decade of the twenty-first century. *Tr. of Proceedings*, *Markman Hr'g* 72-73 (ECF No. 120) (*Markman Hr'g*).

2. Analysis

The core of the disagreement over this term is the meaning of "simultaneously" in independent claim 1.[25] The action that happens "simultaneously" is "updating information . . . in accordance with . . . [a] refresh rate." '403 Patent at claim 1, 24:26-33. SurfCast takes this to mean the ongoing, repetitive process of updating the tiles; Microsoft, opposing SurfCast's construction, takes it to mean a single update that must take place at the same time. In other words, in SurfCast's construction the phrase refers to the relationship in time between the first and second updates, viewed as a repetitive series of occurrences; in Microsoft's construction, it refers to the relationship in time between individual occurrences. Microsoft's contention that "simultaneous" simply means "at the same time" has an intuitive, common sense appeal, but is less convincing in the unique context of the invention.

[25] A similar debate rages over the phrase "simultaneous communication" in independent claims 22 and 46, which the Court addresses later.

The analysis begins with the Court's construction of the subsidiary terms. The Court has construed "refresh rate" to mean "the criteria for updating information displayed in a tile." It has construed "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile" to mean "obtaining refreshed information from the information source and updating the information displayed in the tile." It has given the phrase "in accordance with said [first/second] [refresh/retrieval] rate" its plain and ordinary meaning, conditioned by the Court's construction of "refresh rate." These are all the elements of the action that is said to happen "simultaneously" in claim 1. Putting the pieces together, what is "simultaneous" is obtaining refreshed information from the information source and updating the information displayed in the tile, in accordance with the criteria for updating that information.

The key element that weighs in favor of SurfCast's basic concept of simultaneity is "in accordance with the criteria for updating." One single data transfer to update the tile can hardly be said to be "in accordance" with the criteria for updating that information, when the specification teaches that those criteria can include a repetitive time interval, a time of day, or an unpredictable condition such as the user saving a document. '403 Patent at 12:49-64. The whole clause to which "simultaneously" refers describes a continuous, iterative process, not a point in time.

Language in the specification strongly supports this conclusion as well, even setting aside the preferred embodiment that gives examples of refresh rates. For

instance, in one embodiment, "[w]hen a given tile is refreshed, the refresh operation is completed before refreshing the next tile in sequence." *Id.* at 12:41-42. This does not describe simultaneous individual tile updates, as Microsoft contends; it describes a continuous process of updating according to refresh criteria (here a cycle). Likewise, "[a] novel feature of the present invention is that the data content of any number of the programs can vary in real time and the rate at which the display of each is updated can be controlled by the user." *Id.* at 7:55-59. This teaching would not make sense if the user could specify independent refresh rates for the tiles, but the invention could only update one information source at the same time it updated a second source.

Linguistically, Microsoft's construction would sever "in accordance with said second refresh rate" from the rest of the sentence and only apply "simultaneously" to the first half. If Microsoft were correct, and "simultaneously" only referred to updating the visual display of two tiles, *Def.'s Br.* at 22, then "in accordance with said second refresh rate" would not appear in the sub-clause that is governed by "simultaneously" at all. But this is not how the patent was drafted; the "in accordance with" language appears in both of the sub-clauses that are modified by "simultaneously":

> updating information from a first information source in said plurality of information sources presented to said first tile *in accordance with said first refresh rate*; and
> simultaneously
> updating information from a second information source in said plurality of information sources presented to said second tile *in accordance with said second refresh rate*.

'403 Patent at claim 1, 24:26-33 (emphasis added).

Microsoft argues that claim 1 never mentions "individual data transfers," and speaks only of updating the visual display of two tiles. *Id.* This is textually correct, but unduly narrow. A single iteration of "updating" a tile—within the overall repetitive process defined by the criteria for updating ("in accordance with . . . [the] refresh rate")—necessarily involves a data transfer. The patent consistently associates updating the visual display of the tile with fetching refreshed information from some information source. *E.g.*, '403 Patent at 8:29-66. Indeed, as Microsoft concedes, "updating the information displayed in the tiles themselves is the very point of the invention." *Def.'s Br.* at 19. It would be impossible to update the information displayed in the tile without first obtaining some refreshed information; this involves an individual data transfer.

To explain this point by using Microsoft's presidential analogy, the forty-third and forty-fourth Presidents are more like two individual updates within either of the two update processes of claim 1. They were both selected "in accordance with said first refresh rate" of a four year election cycle; they were not selected simultaneously, even under SurfCast's construction. It would be more apt to say that the Presidency of the United States and the Governorship of the state of Maine are "simultaneous" under this construction. They are two separate "tiles," or

political offices, that are continuous but repetitively updated under independent criteria.[26]

The Court concludes that, at a conceptual level, independent claim 1 speaks of two simultaneous update processes, running in parallel but actively updating from their information sources asynchronously from each other. However, SurfCast's original proposed construction is much too complex and unwieldy to be useful to the jury; SurfCast's revised proposal is more effective. *Pl.'s Revised Constructions* at 1. Consequently, the Court construes "simultaneously" to mean that "the ongoing processes of updating information presented in the two tiles occur at the same time, even if the updating of the two tiles occurs at different times."

I. "simultaneous communication with a plurality of information sources"

The phrase "simultaneous communication with a plurality of information sources" occurs in independent claims 22 and 46, and plays a functional role equivalent to that of the "simultaneously updating . . ." language discussed above. Claim 22 speaks of "[a]n electronic readable memory to direct an electronic device to function in a specified manner, comprising . . . a first set of instructions to control simultaneous communication with a plurality of information sources." '403 Patent at claim 22, 25:25-28. Claim 46 describes "[a] system for facilitating the organization and management of multiple data sources, comprising: a device that

[26] The Court recognizes that every analogy is imperfect and that Microsoft used the presidential analogy to illustrate its argument, not to truly compare presidential terms to the facts in this case. The Court is not holding Microsoft to the details of its analogy, which the Court agrees is effective in making Microsoft's point. The Court is elaborating on Microsoft's analogy, not to engage in an irritating attack on the imperfect nature of the analogy by preferring its own imperfect analogy, but to help explain the Court's construction of the claim.

includes a processor configured to execute instructions . . . to . . . control simultaneous communication with a plurality of information sources." *Id.* claim 46, 26:47-55. The descriptions of the actual instructions are nearly identical between claims 22 and 46. *Compare id.* at claim 22, 25:27-44 *with id.* at claim 46, 26:54-27:4.

SurfCast originally proposed that "simultaneous communication" be construed to mean "repetitive series of individual communications with each of a plurality of information sources which occur during the same period of time." *Pl.'s Br.* at 24. Microsoft asks that the term be given its plain and ordinary meaning. *Def.'s Br.* at 22. SurfCast later revised its proposal, suggesting instead that "simultaneous communication" mean that "the ongoing processes of communicating with multiple information sources occur at the same time, even if the communications with the information sources occur at different rates." *Pl.'s Revised Constructions* at 1.

1. Position of the Parties

a. SurfCast

SurfCast relies initially on its theory of the meaning of "simultaneously" discussed above. *Pl.'s Br.* at 25. It also contends that the ordinary meaning of "simultaneous communications," in the context of computer networks, embraces a repetitive series of individual communications with the information sources. *Id.* This is so because even if the retrieval of information for two tiles from an external web site were scheduled to commence at the same time, the communications with the external site would not literally occur at the same instant. *Id.* One of skill in

the art would, SurfCast contends, understand that the communications, even if apparently simultaneous to the user, are actually broken up into "packets" and transmitted from the two external servers to the user's computer in an interleaved fashion. *Id.* SurfCast concludes that although the data transfers for those communications are technically happening in small segments at different times, the overall communication is still "simultaneous." *Id.* at 26. This, in SurfCast's view, supports its construction of "simultaneous communications." *Id.*

b. Microsoft

Microsoft incorporates its opposition to SurfCast's definition of "simultaneously" described previously. *Def.'s Br.* at 22. It also disputes SurfCast's analogy to network communications; in Microsoft's view, interleaved network packets are actually communicated "at the same time." *Id.* at 23. Finally, Microsoft disputes that "communications" should mean a "repetitive series of individual communications." *Id.* Microsoft instead urges that non-repetitive communications are also communications, as are communications that are not part of a series. *Id.* Consequently, Microsoft asks the Court to give the whole phrase its plain and ordinary meaning. *Id.* at 22-23.

2. Analysis

There are two points of contention within this disputed term: first, whether "simultaneous communication" must be construed as a "repetitive series" of communication; and, second, whether that repetitive series must "occur during the same period of time," as advanced by SurfCast, or simply "at the same time," as requested by Microsoft.

First, SurfCast's network packet example begs rather than answers the question. It does little good to claim that requests for HTML data initiated "at the same time" result in interleaved packets, and then assert that the interleaving means that "simultaneous" must therefore not be "in the same instant." The net result is that SurfCast claims "at the same time" does not mean "at the same instant"; it amounts to a circular definition. Microsoft's response is necessarily, and forgivably, merely a counter-assertion of definition rather than a useful explanation of the functional meaning of the words.

The Court has already considered the problem of the term "simultaneously" in the context of claim 1, and that result affects its view of claims 22 and 46. All three claims describe, with a few variations, the process of associating an information source with a tile and then periodically obtaining fresh information from the information source and presenting it to the tile. It would make little sense to adopt a construction of "simultaneous" in claims 22 and 46 contrary to the conceptual result in claim 1. However, the differences and relationships between the claims must inform the way in which that concept is expressed.

Claim 1 describes "[a] method executed by a device under the control of a program, said device including a memory for storing said program." '403 Patent at claim 1, 24:15-17. The substantive steps discussed above are said to be part of the method. *Id.* claim 1, 24:18-33. Claim 22, by contrast, describes "[a]n electronic readable memory to direct an electronic device to function in a specified manner," *id.* im 22, 25:25-26; the instructions (including "simultaneous communication") are

part of the memory. *Id.* claim 22, 25:27-44. Finally, claim 46 describes "a system for facilitating the organization and management of multiple data sources, comprising: a device that includes a processor configured to execute instructions, a memory connected to said processor to store at least one program . . . wherein said processor executes instructions." *Id.* claim 46, 26:47-53. The instructions of the claim perform the same substantive work as in claim 22. *Id.* at 26:54-65, 27:1-4. As noted previously, claim 1 includes the concept of assigning a refresh rate to a tile, which claims 22 and 46 lack (though that concept is added in dependent claims). And in claim 1, the "simultaneously" language addresses the update processes, whereas in claims 22 and 46 the "simultaneous" language merely addresses "communications with . . . information sources." However, in both claims 22 and 46, the claim language makes clear that the "communications" are retrieval and presentation of information "in accordance with a . . . retrieval rate." *Id.* claim 22, 25:36-44; *id.* at claim 46, 26:62-27:4. In other words, what is "simultaneous" in claims 22 and 46 is functionally, if not textually, identical to what happens "simultaneously" in claim 1.

In sum, apart from assigning a refresh rate to a tile, claims 22 and 46 do exactly the same basic work of communication that claim 1 describes. Claim 1 is a "method" executed by a device with a memory; claim 22 is a "memory"; and claim 46 is a "system . . . comprising . . . a device" with a memory and a processor. There is nothing about the fundamental nature of either claim 22 or 46 that makes the idea of "communications" any different than what appears in claim 1, and the Court

already ruled that claim 1 describes two parallel processes, running simultaneously, that sometimes (in accordance with a refresh rate) update information from an information source. This is, precisely, a "repetitive series of individual communications with each of a plurality of information sources which occur during the same period of time," as SurfCast originally proposed.

However, the Court agrees that SurfCast's revised construction also captures the meaning of the term and is phrased in clearer language. The Court construes "simultaneous communication" to mean that "the ongoing processes of communicating with multiple information sources occur at the same time, even if the communications with the information sources occur at different rates."

J. "assigning a [first/second] refresh rate to a [first/second] tile of said array of tiles"

This phrase occurs only in independent claim 1, as one of the elements of the method the claim describes. '403 Patent at claim 1, 24:23-25. SurfCast proposes that it be given its plain and ordinary meaning, *Pl.'s Br.* at 26, while Microsoft proposes that it be construed as "setting the rate at which a tile will display new information." *Def.'s Br.* at 23.

1. Position of the Parties

a. SurfCast

SurfCast argues that the phrase "assigning a [first/second] refresh rate to a [first/second] tile of said array of tiles" is not ambiguous, nor used in any way inconsistent with its plain and ordinary meaning. *Pl.'s Br.* at 26. In opposition to Microsoft's construction, SurfCast first claims that Microsoft's construction

introduces an inconsistent definition of "refresh rate." *Id.* at 26-27. Second, SurfCast views Microsoft's construction as itself ambiguous, since it repeats some phrases of the claim language without clarifying them. *Id.* at 27. Third, SurfCast disagrees with the use of the term "new information." *Id.*

On this last point, SurfCast suggests that "new" is misleading because an update operation could result in the same data being displayed in the tile. *Id.* For instance, it points out that a tile associated with a weather application might present the same temperature to the user after an update if the temperature has not changed. *Id.* This, SurfCast claims, is within the scope of the invention but is excluded by using "new information" in the construction of "assigning a [first/second] refresh rate to a [first/second] tile of said array of tiles." *Id.*

b. Microsoft

Microsoft finds support for its construction of the term in the specification. It points out that the specification "explains that the disclosed system stores a data structure for each tile, which . . . includes a 'refresh function [] that handles updates to the tile image.'" *Def.'s Br.* at 23 (quoting '403 Patent at 10:4-5). Microsoft equates "updating the tile image" with "displaying new information." *Id.* It finds further support in the patent's description of different ways to implement the timing of the refresh; these embodiments, according to Microsoft, require the rate to be "specifically set." *Id.* at 24. Microsoft concludes that its construction "captures these aspects of the claimed method in language the jury will readily understand." *Id.*

Microsoft rejects SurfCast's objection that its construction redefines "refresh rate," and disputes the claim that "new information" is incompatible with the patent's update language. *Id.* Microsoft cites the definition of "update" in WEBSTER'S THIRD NEW INTERNATIONAL DICTIONARY 2517 (1986): "to bring up to date." It views "not updating the tile" as "inconsistent with the word 'update.'" *Id.*

2. Analysis

First, Microsoft offers no explanation of why the phrase "assigning a . . . refresh rate to a . . . tile" is ambiguous, and the Court perceives none. Even assuming, for the purpose of argument, that Microsoft's proposed construction is a fair restatement of the phrase, unambiguous claim language needs no further construction. *See Phillips*, 415 F.3d at 1314 ("In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words"). The Court has already construed "tile," "refresh rate," and "array of tiles"; some justification ought to be offered for impressing on the jury a particular meaning of "assigning." There appears to be no reason to add further complexity to the phrase.

The Court construes "assigning a [first/second] refresh rate to a [first/second] tile of said array of tiles" to have its plain and ordinary meaning, qualified by the constructions the Court has already given to "tile," "array of tiles," and "refresh rate."

K. "[refresh/retrieval] rate is assigned automatically"

This phrase appears in dependent claims 11, 43, and 50—one for each of the three independent claims. '403 Patent at claim 11, 24:61-62; *id.* at claim 43, 26:39-40; *id.* at claim 50, 28:1-2. SurfCast proposes that it be construed to mean that the "[refresh/retrieval] rate is assigned without direct user input," *Pl.'s Br.* at 28, while Microsoft proposes "assigning a refresh/retrieval rate without direct input from an end user indicating the rate." *Def.'s Br.* at 24.[27]

1. Position of the Parties

a. SurfCast

SurfCast objects to Microsoft's construction on the grounds that it is improper to read "automatically" to mean "without input from an end user indicating the rate"; SurfCast preferred simply "without direct user input." *Pl.'s Br.* at 28. SurfCast reasons that the plain and ordinary meaning of "automatic" is "acting in a manner essentially independent of external influence or control," *id.* (citing THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE at 125), and that Microsoft's construction leaves open the possibility that the user could assign the rate indirectly without explicitly indicating it. *Id.* Indeed, at oral argument Microsoft proposed precisely such a scenario. *Markman Hr'g* at 76.

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[27] At oral argument, SurfCast apparently conceded that "without direct input from an end user indicating the rate" was an acceptable construction. *See Markman Hr'g* 75-77. However, SurfCast's Notice of Revised Claim Construction did not include this change, *see Pl.'s Revised Constructions*, so the Court does not consider the matter conceded.

b. Microsoft

In defense of its construction, Microsoft cites an embodiment in which the specification both uses the term "automatically" and implies the concept. *Def.'s Br.* at 25. In the embodiment with a "grid configuration wizard," '403 Patent at 13:52, the specification states that "a user can select a 'preconfigured' grid of tiles to display on the screen without specifying a refresh or retrieval rate for those tiles—these rates would thus be automatically assigned as a result of direct user input." *Def.'s Br.* at 25 (citing '403 Patent at 13:64-14:3). The same embodiment permits the user to construct a grid of tiles from a list of sample tile categories or by dragging and dropping a document onto the grid configuration program. *Id.* (citing '403 Patent at 14:4-14). Further, the embodiment "automatically" creates the grid based on the user's selections, which do not include a refresh or retrieval rate. *Id.* (citing '403 Patent at 14:19-24). Microsoft observes that in this embodiment, "the refresh rate is set based on user input, but the user input does not indicate what that rate should be." *Id.*

2. Analysis

The parties' dispute boils down to whether the "automatic" assignment happens without any direct user input at all, or whether it merely happens without any user input indicating the rate. The Court agrees with SurfCast that "automatically," in this context, means essentially independent of external influence or control. However, Microsoft's construction describes a process that is essentially independent. When the specification speaks of "automatic" assignment of a refresh rate, it is, as Microsoft points out, in connection with some form of human input

that is ultimately converted into a refresh rate—just not human input specifying the precise refresh rate that will be adopted. *See* '403 Patent at 13:52-14:24. The assignment of a refresh rate would not, in fact, be very useful if it were not in some way influenced by what the human user tells the computer. The benefit claimed by this aspect invention is that it converts simplified user input into a reasonable refresh rate without the user having to think about it. Thus, the Court views Microsoft as presenting a clearer view of the term.

Consequently, the Court construes the phrase "[refresh/retrieval] rate is assigned automatically" to mean "[refresh/retrieval] rate is assigned without direct user input indicating the rate."

L. "grid"

The term "grid" appears in claim 12: "[t]he method of claim 1 wherein said array comprises a grid wherein each of said tiles occupies a fixed position on said grid." '403 Patent at claim 12, 24:63-65. SurfCast proposes that "grid" be construed as "a regular layout of rows and columns, wherein a single tile may occupy more than one row and/or column." *Pl.'s Br.* at 28. Microsoft prefers simply "a regular arrangement of rows and columns." *Def.'s Br.* at 25. In its revised constructions, Microsoft offered to change "arrangement" to "layout" to move closer to SurfCast's interpretation, resulting in "a regular layout of rows and columns." *Def.'s Revised Constructions* at 2.

During oral argument, the parties nearly agreed that "grid" could be construed as "a regular layout of rows and columns wherein a single tile may, but need not, occupy more than one row and/or column." *See Markman Hr'g* at 79-80.

However, Microsoft later withdrew that concession, concerned that the definition did not include a regular layout of rows and columns that did not support any "spanning" at all. *Id.* at 82-84.[28] The parties later failed to reach an agreement on this term. *Compare Def.'s Revised Constructions* at 2 *with Pl.'s Revised Constructions*.

The PTO construed "grid" to mean "any presentation of tiles in a row and column orientation." *PTO Op.* at 19.[29]

1. Position of the Parties

a. SurfCast

SurfCast cites the specification's usage of "grid" in support of its position. *Pl.'s Br.* at 28-29 (citing '403 Patent at 11:62-64).[30] The specification states that a grid "'permits a regular layout of tiles on the display [screen] such that the tiles are uniform in size and shape, as depicted in Figs. 8-11.'" *Id.* at 28 (quoting '403 Patent at 11:62-64). The specification further explains that grid 700 of figure 9 includes "'an arrangement [of tiles][31] in which there is a unit tile size, that of tile 801-1-1, but

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[28] Microsoft uses the term "spanning" to describe a situation where a tile in a grid occupies more than one row and/or column. *Markman Hr'g* at 78-79, 82. The Court adopts this usage as convenient shorthand.

[29] This was Microsoft's proposed construction to the PTO. *PTO Op.* at 19.

[30] SurfCast's brief cites language from lines 62-64 of column 11, but its citation identifies lines 63-65. *See Pl.'s Br.* 28-29. This appears to be the result of an idiosyncrasy of the printing process in this and some other patents; paragraph breaks take up more space than normal lines, pushing the text out of phase with the printed line numbers in the patent. In the '403 Patent, the line number '65' appears next to the 64th line of column 11. In the claims themselves, e.g., columns 24-26, the line numbers can be as much as two lines offset. *E.g.*, '403 Patent at 25:45; *id.* at 26:65. The Court remarks on this oddity so as to dispel any suspicion that the Court might have mistaken the content of SurfCast's citation.

[31] This bracketed language does not appear in the patent, but does appear, without brackets, in SurfCast's quotation. It does not appear to change the meaning of the sentence.

tile 802-1-2 and tile 802-N-1 (sic, 802-M-1)[32] have been configured to occupy regions of the grid equal to exact multiples of the unit tile size.'" *Id.* at 29 (quoting '403 Patent at 12:13-16). Figure 9 of the patent, to which SurfCast directs the Court, does show several tiles that occupy multiple rows and/or columns of the underlying grid. *Id.* (exhibiting '403 Patent, fig. 9). SurfCast concludes that "the specification makes clear that a single tile can occupy more than one column and/or row as stated in SurfCast's proposed construction." *Id.*

b. Microsoft

Microsoft views SurfCast's construction as an attempt to import an optional feature of a grid into the definition of the term. *Def.'s Br.* at 26. Microsoft's basic point is that while some grids could support spanning, not every grid must support spanning. *Id.* Some arrangements of rows and columns could still fall within the definition of "grid" but only permit each tile to take up one column/row combination. *Id.* Under SurfCast's interpretation, according to Microsoft, a regular arrangement of rows and columns that did *not* allow spanning would not be a grid. *Id.* Microsoft asserts that there is no basis for limiting the claim in this fashion. *Id.*

2. Analysis

Just as with "tile," Section IV.A.2.a, *supra*, the patentee here shows intent to act as his own lexicographer with respect to "grid." The specification provides a section entitled "Grid Object" that explains that it will teach what a "grid" is in the context of the patent. '403 Patent at 10:40-43. This section of the specification then

[32] SurfCast supplied this correction, which appears to be proper.

goes on to give numerous details of a "grid." For instance, it is a "matrix of tiles," *id.* at 10:49; it "controls the layout and priorities of the tiles," *id.* at 10:53-54; and its presentational attributes are "its dimensions (i.e., the number of tiles to display and their arrangement), and the programs or files to be associated with each tile." *Id.* at 11:10-12.

However, the spanning feature on which SurfCast relies to support its construction comes from just one preferred embodiment, and is never mentioned again. *See* '403 Patent at 11:62-12:29. This suggests, not that all "grids" support spanning, but that one particular kind of "grid" supports it. If the patentee had meant that every grid supported spanning, the spanning feature would have occurred, not in an embodiment, but in the definition of a grid. Alternatively, had every instance of a grid in the specification mentioned or obviously supported spanning—or had spanning been inherently necessary for the invention to be useful, as with the "persistence" of "tiles"—then it might be appropriate to read it in. But this is not such a case as the persistence of tiles, where excluding the feature would defeat the entire purpose of the invention. A grid of tiles is still a meaningful feature even without spanning. Given the singularity of the reference, it would be improper to import this feature from one embodiment into the claim term. *Thorner*, 669 F.3d at 1368.

At oral argument, Microsoft suggested that construing "grid" to necessarily include spanning would be like claiming that "an automobile is a four-wheel vehicle, but has a top that may be retracted." *Markman Hr'g* at 77. This is a strong simile.

Some cars have retractable roofs, but that does not mean that all cars have retractable roofs. In the same way, some grids support spanning—as taught by the preferred embodiment—but nothing about the specification compels the conclusion that all grids support spanning.

Nonetheless, it should be made clear to the jury that spanning is a possible feature of grids. The Court construes "grid" to mean "a regular arrangement of rows and columns, which may, but need not, allow a single tile to occupy more than one row and/or column." This satisfies Microsoft's objection that an arrangement of rows and columns that does not support spanning is still a "grid," and also preserves the preferred embodiment of columns 11-12.

M. "wherein each of said tiles occupies a fixed position on said grid"

This language appears in claim 12: "[t]he method of claim 1 wherein said array comprises a grid wherein each of said tiles occupies a fixed position on said grid." '403 Patent at claim 12, 24:63-65. SurfCast proposes that the term be construed as "wherein each tile occupies a particular position in the regular layout of rows and columns," *Pl.'s Br.* at 30, while Microsoft initially proposed "wherein each tile occupies a specific row and column position in the grid." *Def.'s Br.* at 26. Microsoft later revised its proposal to: "wherein each tile occupies a row and column position on the grid that cannot be changed by the end-user." *Def.'s Revised*

Constructions at 2. The PTO construed the term to mean "each tile occupies a particular cell or a particular plurality of cells of said grid." *PTO Op.* at 20.[33]

1. Position of the Parties

a. SurfCast

SurfCast argues that its construction accounts for the possibility that a tile could occupy more than one row/column position on the grid; its "particular position" language is intended to address this feature. *Pl.'s Br.* at 30. SurfCast views Microsoft's construction as restricting the position of a tile to a single row and column, thus excluding one of the preferred embodiments. *Id.* (citing '403 Patent, fig. 9).

b. Microsoft

Microsoft argues that its construction does not exclude a grid that contained tiles occupying more than one row/column position. *Def.'s Br.* at 26. In support of its construction, it cites a portion of the specification that describes the grid as storing the position of a tile by its row and column number. *Id.* at 26-27 (citing '403 Patent at 13:12-14). Microsoft also proposed, as an alternative, that the Court give the term its plain and ordinary meaning. *Id.* at 27.

At oral argument, Microsoft changed the nature of its objection. It now began to object that SurfCast's interpretation of "fixed" is incorrect because it allows for the tile to be moved from one position to another. *Markman Hr'g* at 80-81.

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[33] Before the PTO, Microsoft proposed "presenting a tile in a specific cell within a row and column of a grid, and does not require the tile to remain in the identical location on the display." *PTO Op.* at 19. SurfCast proposed "wherein each tile occupies a particular position in the regular layout of rows and columns." *Id.*

Microsoft now claims that under SurfCast's interpretation, even if a tile is moved by the user it is still "fixed"; this is improper, according to Microsoft, because the classic concept of fixation in space implies that the tile can only appear in a single location.[34] *Id.* Microsoft's revised construction—"wherein each tile occupies a row and column position on the grid that cannot be changed by the end-user"—reflects this new theory. *Def.'s Revised Constructions* at 2.

2. Analysis

First, the Court is not convinced by Microsoft's view that the term "fixed" means that the user can never move the tile. Nothing in the patent suggests this limitation. In fact, the definition of "tile" states that one preferred embodiment permits the user to adjust the properties of an already-created tile; it describes "a toolbar function . . . which may permit an array of special buttons to appear on or adjacent to the tile for the purposes of adjusting properties of the tile." '403 Patent at 10:14-16. The specification also states that the column and row number is one of the attributes of a tile. *Id.* at 13:12-14 ("The grid also stores other attributes of tiles such as their respective positions on the grid as given by their column and row number"). Putting these elements together, the specification teaches that in some circumstances the user can move the tile from one "fixed" position to another. While the tile may indeed occupy only one position on the grid at a time, "fixed"

[34] In its discussion of fixation in space, counsel for Microsoft wisely steered clear of certain uncertainty principles in quantum physics that might suggest a different result. The Court is loath to unpack the terrifying implications of Schrödinger's Tile.

does not mean "immutable." Microsoft's alternative construction reads in a limitation not supported by either the specification or the claim language.

After careful review of the two initial proposed constructions, the Court agrees with Microsoft that there is very little difference between them, and that both are susceptible to a reading that would either limit or not limit spanning. Nevertheless, the Court's construction of "grid" should eliminate any confusion. Because a "grid" permits spanning but does not require it, there is little to be gained by attempting to give a specialized meaning to "fixed position." The jury should readily appreciate, from the construction of "grid," that a tile within such a grid may or may not occupy more than one row and/or column. There is also little danger that the jury will infer from the word "fixed" that the tile can never be moved from its initial location on the grid. The PTO's construction, while supported by the specification and claims, does not add clarity to the term. Consequently, the Court gives the phrase "wherein each of said tiles occupies a fixed position on said grid" its plain and ordinary meaning.

V. CONCLUSION

Both SurfCast and Microsoft approached the task of claim construction with clear, internally consistent theories of what the '403 Patent describes. That the Court has by and large agreed with SurfCast's constructions reflects in part the strength of that internal consistency on both sides. The construction of one term often impacts the construction of others, both at a lexicographic and a conceptual level. Nowhere is this more apparent than in the construction of "tile(s)," which, in

one way or another, influences almost every other claim term. The parties have obviously considered carefully both the terms that they have selected for the Court to construe and their positions on those terms, and both parties have been exceptionally well represented, pressing their positions cogently and thoughtfully.

Claim construction is not an exercise performed in a void. As counsel for both sides readily admitted at oral argument, the construction of these disputed claim terms is central both to the validity of the patent and to the issue of infringement. The Court understands that its constructions of the disputed terms will return to the microscope of exacting analysis in later dispositive motions, jury instructions, and, at some point, de novo appellate review before the Federal Circuit.

The Court adopts the following claim constructions for the '403 Patent:

The term "tile(s)" will mean "a graphical representation of an associated information source capable of displaying refreshed content, the graphical representation being persistent and selectable to provide access to underlying information of the associated information source."

The term "array of tiles" will mean "multiple tiles displayed in an orderly fashion."

The terms "partitioning a visual display of the device into an array of tiles" and "arrange a display into an array of tiles" will both mean "dividing/divide some or all of a display into an array of tiles."

The term "user-defined array size" will mean "the number and arrangement of the positions in the array as specified by the user."

The term "refresh rate" will mean "the criteria for updating information displayed in a tile."

The term "retrieval rate" will mean "the criteria for retrieving information."

The term "updating information from a [first/second] information source in said plurality of information sources presented to said [first/second] tile" will mean "obtaining refreshed information from the information source and updating the information displayed in the tile."

The term "in accordance with said [first/second] [refresh/retrieval] rate" will be given its plain and ordinary meaning, qualified by the Court's construction of "refresh rate" and "retrieval rate."

The term "simultaneously" in claim 1 will mean that "the ongoing processes of updating information presented in the two tiles occur at the same time, even if the updating of the two tiles occurs at different times."

The term "simultaneous communications" in claims 22 and 46 will mean that "the ongoing processes of communicating with multiple information sources occur at the same time, even if the communications with the information sources occur at different rates."

The term "assigning a [first/second] refresh rate to a [first/second] tile of said array of tiles" will be given its plain and ordinary meaning, qualified by the Court's construction of "tile(s)," "refresh rate," and "array of tiles."

The term "[refresh/retrieval] rate is assigned automatically" will mean "[refresh/retrieval] rate is assigned without direct user input indicating the rate."

The term "grid" will mean "a regular arrangement of rows and columns, which may, but need not, allow a single tile to occupy more than one row and/or column."

The term "wherein each of said tiles occupies a fixed position on said grid" will be given its plain and ordinary meaning, qualified by the Court's construction of "tile(s)" and "grid."

The Court DENIES SurfCast's Motion to Stay Pending *Inter Partes* Review (ECF No. 150).

SO ORDERED.

/s/ John A. Woodcock, Jr.
JOHN A. WOODCOCK, JR.
CHIEF UNITED STATES DISTRICT JUDGE

Dated this 14th day of March, 2014