

United States District Court,  
N.D. Georgia, Rome Division.

**COLLINS & AIKMAN FLOOR COVERINGS, INC., Mohawk Industries, Inc., Mohawk Brands, Inc., and Shaw Industries Group, Inc,**  
Plaintiffs.

v.  
**INTERFACE, INC,**  
Defendants.

**Interface, Inc., Interface Americas, Inc., and Interface Flooring Systems, Inc,**  
Plaintiffs.

v.  
**Shaw Industries, Inc., Shaw Industries Group, Inc., Shaw Contract Flooring Services, Inc., and Shaw Contract Flooring Installation Services, Inc,**  
Defendants.

**Interface, Inc., Interface Americas, Inc., and Interface Flooring Systems, Inc,**  
Plaintiffs.

v.  
**Mohawk Industries, Inc., Mohawk Carpet Corporation, Aladdin Manufacturing Corporation, and Mohawk Commercial, Inc,**  
Defendants.

**Interface, Inc., Interface Americas, Inc., and Interface Flooring Systems, Inc,**  
Plaintiffs.

v.  
**Collins & Aikman Floor Coverings, Inc., Tandus U.S., Inc., and Tandus Group, Inc,**  
Defendants.

Civil Action File Nos. 4:05-CV-0133-HLM, 4:05-CV-0189-HLM, 4:05-CV-0190-HLM, 4:05-CV-0191-HLM

**May 29, 2007.**

Court-Filed Expert Resumes

***ORDER***

**HAROLD L. MURPHY, District Judge.**

The case is before the Court for construction of the disputed terms in U.S. Patent No. 6,908,656 (the "'656 Patent"). FN1

FN1. The Court notes that all docket entry numbers in this Order refer to *Collins & Aikman Floorcoverings, Inc., et al., v. Interface, Inc.*, 4:05-CV-133-HLM.

The Court also observes that, on December 1, 2006, the parties entered a Stipulation of Dismissal dismissing with prejudice all claims that Mohawk asserted against Interface with regard to U.S. Patent No. 5,549,064 (the "'064 Patent"), and dismissing without prejudice all counterclaims that Interface asserted with regard to the '064 Patent. (Docket Entry No. 296.) The Court therefore need not construe the formerly disputed '064 Patent terms.

## **I. Background**

### **A. The '656 Patent**

Interface, Inc. ("Interface") is the assignee of the '656 Patent, titled Orthogonally Ambiguous Carpet, which relates to carpet tiles and a method of designing the same. (Interface's Opening Claim Constr. Br. '656 Patent Ex. 2 ("'656 Patent").) In general terms, the invention claimed in the '656 Patent is directed to carpet tiles that have patterns and color schemes that eliminate the need to orient the tiles relative to one another with respect to pattern, nap, and dye lot. ( *Id.* )

Claim 1 is representative of the invention:

1. Carpet tiles comprising tile edges and textile faces, each face having a pattern comprising a plurality of shapes having shape edges, wherein:

a. at least some of the shapes comprise at least one shape edge that parallels at least one tile edge;

b. the pattern comprises at least a background color and a first color different from the background color and of similar intensity to the background color;

c. at least some adjacent shapes on each tile comprise at least one common color; and

d. when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit orthogonal ambiguity without pattern alignment between adjacent tiles.

('656 Patent col. 5, ll. 25-39.)

### **B. Procedural Background**

The Court adopts the lengthy procedural background set forth in its Order of November 2, 2005, consolidating four related patent infringement cases. (Order of Nov. 2, 2005.)

On February 28, 2006, the Court denied with leave to renew Collins & Aikman Floorcoverings, Inc. ("CAF"), Mohawk Industries, Inc., Mohawk Brands, Inc. ("Mohawk"), and Shaw Industries Group, Inc.'s ("Shaw") Motion for Partial Summary Judgment regarding the '656 Patent's validity. (Order of Feb. 28, 2006.) The Court declined to construe the scope of the '656 Patent without the benefit of claim construction and instructed the parties to proceed in compliance with the Northern District of Georgia's Local Rules of Practice for Patent Cases. ( *Id.* )

On July 27, 2006, the Court granted CAF, Mohawk, and Shaw's request to file a joint claim construction brief regarding the '656 Patent. (Order of July 7, 2006.)

On May 1, 2006, the parties filed their Joint Claim Construction Statement regarding the '656 Patent. (Docket Entry 163.)

On July 31, 2006, CAF, Mohawk, and Shaw filed their Opening Claim Construction Brief regarding the '656 Patent. (Docket Entry No. 202.)

On July 31, 2006, Interface filed its Opening Claim Construction Brief regarding the '656 Patent. (Docket Entry Nos. 203 & 204.)

On August 21, 2006, CAF, Mohawk, and Shaw filed their Responsive Claim Construction Brief regarding the '656 Patent. (Docket Entry No. 213.)

On August 21, 2006, Interface filed its Responsive Claim Construction Brief regarding the '656 Patent. (Docket Entry Nos. 215 & 216.) Interface also requested a claim construction hearing for the '656 Patent. (Id.)

On September 14, 2006, the parties filed a Consent Motion Concerning Claim Construction Hearing stating that CAF, Mohawk, and Shaw do not oppose a claim construction hearing for the '656 Patent and requesting that any claim construction hearing only include oral argument by the parties' counsel. (Docket Entry No. 234 .) On September 15, 2006, the Court denied the above Motion without prejudice and as premature. (Order of Sept. 15, 2006.)

On November 27, 2006, the Court denied Interface's Motion to file a supplemental claim construction brief regarding the disputed terms "orthogonal ambiguity," "similar intensity," and "any." (Order of Nov. 27, 2006.) Rather than prolong the already lengthy claim construction briefing process, the Court ordered the parties to make any additional claim construction arguments and present any additional exhibits and evidence at the scheduled *Markman* hearing. ( *Id.*)

On November 29, 2006, the Court directed the parties to notify the Court as to which of the '656 Patent's disputed terms the parties would focus on at the *Markman* hearing. (Order of Nov. 29, 2006.) On December 14, 2006, the parties filed a Joint Notice Identifying Terms to be Argued at *Markman* Hearing, and identified the following terms: (1) "orthogonal ambiguity" and its variants; (2) "similar intensity" and its variants; (3) "background color;" (4) and "in any side-by-side or rotational orientation relative to each other." (Docket Entry No. 301.)

On December 19, 2006, the Court held a *Markman* hearing regarding the ' 656 Patent terms currently in dispute. (Docket Entry No. 307.)

On December 20, 2006, the Court directed the parties to file with the Clerk the complete, chronological prosecution history for the '656 Patent, and color paper copies of the parties' December 19, 2006, *Markman* hearing PowerPoint presentations. (Order of Dec. 20, 2006.)

On December 29, 2006, CAF, Mohawk, and Shaw manually filed the history of the '656 Patent. (Docket Entry No. 310 ("File Hist. '656 Patent Vols. 1 & 2".))

On January 12, 2007, Court Reporter Dennis Reidy filed a transcript of the December 19, 2006, *Markman* hearing. (Docket Entry No. 312.)

On January 19, 2007, the Court denied Interface's Motion for Leave to File a Supplemental Brief Concerning the Accused Infringers' New Proposed Construction of "Orthogonal Ambiguity," and directed the Clerk to send the parties an electronic copy of the Court's draft Claim Construction Order. (Order of Jan. 19, 2007.)

On March 13, 2007, CAF, Mohawk, and Shaw filed their Notice of Change in Claim Construction Record. (Docket Entry No. 361.) On March 20, 2007, Interface filed its opposition to that Notice. (Docket Entry No. 363.)

On March 30, 2007, CAF, Mohawk, and Shaw filed their Notice of Additional Change in Claim Construction Record. (Docket Entry No. 370.) On April 2, 2007, Interface filed its opposition to that Notice. (Docket Entry No. 371.)

On April 4, 2007, the Court directed the Clerk to send the parties an electronic copy of the Court's second draft claim construction Order, specifically regarding the disputed term "background color." (Order of April 4, 2007.) The Court directed the parties to file supplemental briefs and reply briefs regarding that term, (*id.*), and the parties have done so.

Claim construction briefing is complete and the Court concludes that the claim construction issues regarding the '656 Patent are ripe for resolution by the Court.

## **II. Claim Construction Standard**

Claim construction is a question of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 970-71 (Fed.Cir.1995) (en banc), *aff'd*, 517 U.S. 370, 116 S.Ct. 1384 (1996). It is bedrock principle of patent law that "the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed.Cir.2005) (en banc) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed.Cir.2004)). Generally, the words of a claim are given their ordinary and customary meaning, which "is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention...." *Id.* at 1312-13 (citations omitted).

In some instances, the meaning of a claim term as understood by someone with 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." *Phillips*, 415 F.3d at 1314. In most instances, however, the Court must go further than the readily understood meaning. In such cases, sources available to the public aid the Court in determining the meaning of claim language. *Id.* These sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art." *Id.* (quoting *Innova*, 381 F.3d at 1116). During claim construction, "[t]he sequence of steps used by the judge in consulting various sources is not important; what matters is for the court to attach the appropriate weight to be assigned to those sources in light of the statutes and policies that inform patent law." *Id.* at 1324.

"[T]he claims themselves provide substantial guidance as to the meaning of particular claim terms." *Phillips*, 415 F.3d at 1314. Both "the context in which a term is used in the asserted claim" and the "[o]ther claims of the patent in question" are useful for understanding the ordinary meaning. *Id.*

"[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.' " Phillips, 415 F.3d at 1315 (quoting Vitronics Corp. v. Conceptronic, 90 F.3d 1576, 1582 (Fed.Cir.1996)). In short, the claims "must be read in view of the specification, of which they are a part." Markman, 52 F.3d at 979. Thus, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." Phillips. 415 F.3d at 1316 (quoting Renishaw PLC v. Marposs Societa' per Azioni, 158 F.3d 1243, 1250 (Fed.Cir.1998)).

On occasion, "the specification may reveal a special definition given to a claim term ... that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." Phillips, 415 F.3d at 1316 (citing CCS Fitness, Inc. v. Brunswick Corp., 288 F.3d 1359, 1366 (Fed.Cir.2002)). In other instances, the specification may "reveal an intentional disclaimer, or disavowal, of claim scope by the inventor.... In that instance as well, ... the inventor's intention, as expressed in the specification, is regarded as dispositive." *Id.* (citing SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343-44 (Fed.Cir.2001)).

The Court should also consider the patent's prosecution history. Phillips, 415 F.3d at 1317. "Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Id.* (citing Lemelson v. Gen. Mills, Inc., 968 F.2d 1202, 1206 (Fed.Cir.1992)). However, unlike the specification, the prosecution history "represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation...." *Id.* For that reason, the prosecution history "often lacks the clarity of the specification and thus is less useful for claim construction purposes." *Id.*

The Court may also rely on extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." Phillips, 415 F.3d at 1317 (quoting Markman, 52 F.3d at 980.) For example, because they "endeavor to collect the accepted meanings of terms used in various fields of science and technology," "dictionaries, and especially technical dictionaries, ... have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology...." *Id.* at 1318 (citing Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed.Cir.2002)). However, for many reasons, external evidence is generally less reliable than the intrinsic record. *Id.* For instance, "extrinsic evidence by definition is not part of the patent and does not have the specification's virtue of being created at the time of patent prosecution for explaining the patent's scope and meaning." *Id.* In addition, "extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* at 1318-19 (providing more reasons why extrinsic evidence is less reliable than intrinsic evidence).

In addition to disputing the meaning of certain terms, CAF, Mohawk, and Shaw claim that the terms "orthogonal ambiguity," "similar intensity," and "background color" are insolubly ambiguous and cannot be construed, and therefore are indefinite. (DJ Pls.' Opening Claim Constr. Br. '656 Patent.) Pursuant to 35 U.S.C.A. s. 112's definiteness requirement, every patent's specification must "conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." 35 U.S.C.A. s. 112, para. 2.

Only claims that are "not amenable to construction" or "insolubly ambiguous" are indefinite. Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347 (Fed.Cir.2005). Whether claim terms are definite thus

depends on whether the terms can be given a reasonable meaning. *Id.* Difficult issues of claim construction, however, do not automatically result in a holding that those claims are indefinite. *Id.* A claim is sufficiently clear to avoid invalidity on indefiniteness grounds if the meaning of the disputed claim is discernible, even though the task may be formidable and reasonable persons may disagree about the conclusion. *Exxon Research & Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed.Cir.2001). Thus, claims are only indefinite if reasonable efforts at claim construction prove futile. *Id.*

### **III. Analysis of the '656 Patent**

As an initial matter, the parties dispute the construction of several terms that appear in more than one claim in the '656 Patent. Generally, a "claim term should be construed consistently with its appearance in other places in the same claim or in other claims of the same patent." *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed.Cir.2001); *see also* *Phonometrics, Inc. v. N. Telecom, Inc.*, 133 F.3d 1459, 1465 (Fed.Cir.1998) ("A word or phrase used consistently throughout a claim should be interpreted consistently.") The parties have provided no reason to depart from the general rule in this case. Consequently, the Court will only construe a disputed term once, with the understanding that its construction will apply throughout the various claims of the '656 Patent.

The Court also observes that the parties appear to have whittled down the number of disputed terms. In their May 1, 2006, Joint Claim Construction Statement, the parties listed approximately twenty-three disputed terms, including some repetitious or variant terms. In their July 31, 2006, and August 21, 2006, Opening and Responsive Briefs, however, the parties focused on eight disputed terms. Thus, only the following terms are currently at issue: (1) "orthogonal ambiguity" and its variants; (2) "similar intensity" and its variants; (3) "background color;" (4) "without pattern alignment between adjacent tiles" and its variants; (5) "the carpet tiles cut from the web all comprise a common color;" (6) "in any side-by-side or rotational orientation relative to each other;" (7) "shapes;" and (8) "parallels." (DJ Pls.' Opening Claim Constr. Br. '656 Patent at 1-2.) The Court analyzes those disputed terms, following the general principles of claim construction set forth *supra* Part II.

Additionally, the Court recognizes that CAF, Mohawk, and Shaw filed two Notices of Change in Claim Construction Record, but concludes that the issues raised in those Notices would be more appropriately raised when the validity of the '656 Patent is before the Court. The Court therefore declines to address those Notices at this time, and instead, construes the currently disputed terms below.

#### **A. "Orthogonal Ambiguity" and Its Variants**

The parties agree that "orthogonal ambiguity" is defined in the '656 Patent's specification as meaning: "tiles may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place to the ordinary viewer and thereby still achieving an appearance of continuity across the entire installation as if the tiles were part of a broadloom web." ('656 Patent col. 1, ll. 67-col. 2, ll. 5; *see also* Interface's Opening Claim Constr. Br. '656 Patent at 18; DJ Pls.' Resp. '656 Patent at 6.)

CAF, Mohawk, and Shaw, however, argue that, although the specific definition given to "orthogonal ambiguity" by the inventor governs, that definition is indefinite as a matter of law. Those parties contend that the term has no clear boundaries because neither the patent nor the relevant art provides objective meaning or mode of measurement as to what "look[s] out of place to the ordinary viewer."

CAF, Mohawk, and Shaw argue that neither the patent, the prosecution history, nor the art define the

"ordinary viewer." Those parties contend that virtually every witness conceded that people have different perspectives and personal tastes, both of which will be impacted by the viewing conditions under which their perceptions are tested. CAF, Mohawk, and Shaw also argue that there are no objective guidelines as to what "look[s] out of place." Those parties contend that the patent, prosecution history, and art are silent with regard to the meaning of that phrase and that there is no way to consistently and uniformly determine when a pattern will not look continuous. Those parties also contend that the patent provides no guidance on the viewing conditions, the length of time or number of tiles that should be viewed, or the viewing vantage point when determining what "look[s] out of place."

At the *Markman* hearing, CAF, Mohawk, and Shaw argued that the definition for the term "orthogonally ambiguous" set forth in the '656 Patent's specification has no objective anchors. Those parties also proposed the following alternative construction of "orthogonal ambiguity": "an appearance that results from the design parameters set forth in Claim 1 subparagraphs (a)-(c)." (J. Notice at 2, Dec. 19, 2006, Hr'g Tr.)

Interface argues that "orthogonal ambiguity" is a term understood in the art and that carpet tile customers have adopted the above definition in product specifications. Interface argues that the above parties focus on two phrases, but gloss over the rest of the above definition.

Interface contends that the issue is not whether there is a specific group of people believed to be "ordinary," but what one skilled in the art of carpet tile design expects the installation to look like to customers. Interface contends that when a carpet tile installation achieves the industry-known continuous appearance of a broadloom web, then it does not have tiles that appear out of place to the ordinary viewer. Interface also contends that the phrase "looking out of place" is understood by those in the art and that those skilled in the art are familiar with the lighting, time, and number of tiles used to make a "mock up" installation in order to make the above assessment.

At the *Markman* hearing, Interface argued that the issue currently before the Court is the construction of the disputed terms and not the issue of validity or infringement. Interface also argued that the scope of the claim is clear, and that only the issue of infringement is unclear.

## 1. Claim Language

The term "orthogonal ambiguity" and its variant "orthogonally ambiguous" are specifically used in Claims 1, 20, 21, and 26, and are adopted by all other dependent claims. Those uses are set forth below, respectively.

"Orthogonal ambiguity" is first used in Claim 1 and relates to carpet tile assembly: "when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit *orthogonal ambiguity* without pattern alignment between adjacent tiles." ('656 Patent col. 5, ll. 35-38 (emphasis added).)

The second use is found in Claim 20, relies on Claim 1 for antecedent basis, and also relates to tile production and assembly: "A method of producing the floorcovering of claim 18 FN2 comprising forming carpet tiles having textile faces exhibiting *orthogonal ambiguity* and positioning the carpet tiles side-by-side on a flooring surface in any side-by-side or rotational orientation relative to each other." ('656 Patent col. 6, ll. 35-39 (emphasis added).)

FN2. Claim 18 states: "Floorcovering comprising at least two carpet tiles of claim 1 positioned side-by-side." ('656 Patent col. 6, ll. 27-28.)

The third use is found in Claim 21, relies on Claim 1, and similarly relates to tile production and assembly: "A method of producing carpet tiles of claim 1 comprising forming carpet tiles having an *orthogonally ambiguous* pattern that does not require pattern alignment between adjacent tiles." ('656 Patent col. 6, ll. 40-43 (emphasis added).)

The fourth and final use is found in Claim 26 and also relates to tile assembly: "when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit *orthogonal ambiguity* without alignment of shapes between adjacent tiles." ('656 Patent col. 7, ll. 7-10 (emphasis added).)

In the context of the above claims, it is clear that "orthogonally ambiguous" relates to the type of pattern created when a designer uses the parameters set forth in Claim 1 subsections a through c.FN3 The above claims also explain that the "orthogonally ambiguous" patterned tiles created by those design parameters do not require pattern or shape alignment between adjacent tiles when those tiles are assembled on a flooring surface.

FN3. The pattern described in Claim 1 comprises a plurality of shapes having shape edges, where: (a) at least some of the shapes comprise at least one shape edge that parallels at least one tile edge; (b) the pattern comprises at least a background color and a first color different from the background color and of similar intensity to the background color; and (c) at least some adjacent shapes on each tile comprise at least one common color. ('656 Patent col. 5, ll. 25-34.)

Based on the above claim language, the Court finds that "orthogonal ambiguity" refers to a carpet tile pattern that does not require pattern or shape alignment between adjacent tiles during assembly. This context, however, does not provide a complete definition for the term "orthogonally ambiguous." The Court thus turns to the specification for assistance in interpreting that term.

## **2. Specification**

As discussed above, the parties agree that the term "orthogonally ambiguous" is defined in the '656 Patent's specification. The Court recognizes that a patent's specification may reveal a special definition given to a claim term by the patentee and that the inventor's lexicography governs. Phillips, 415 F.3d at 1316. The Court also recognizes that, "[w]hen the meaning of a term as used in a patent is clear, that is the meaning that must be applied in the construction of the claim and in the infringement analysis." Voice Techs. Group, Inc. v. VMC Sys., Inc., 164 F.3d 605, 613-14 (Fed.Cir.1999). The Court therefore examines the various sections of the '656 Patent's specification.

Here, the '656 Patent's "Field of the Invention" describes the invention as relating to "a method of designing carpet tiles having patterns or color schemes that allow for placement of the carpet tiles in any orientation with respect to the adjacent carpet tiles while still achieving the appearance of broadloom carpet." ('656 Patent col. 1, ll. 7-11.)



The "Background of the Invention" explains that traditionally, carpet tiles require proper alignment relative to other tiles with regard to pattern and nap, and require tiles from the same dye lot. ('656 Patent col. 1, ll. 14-52.) As the specification explains, "[i]f one [traditional] carpet tile is oriented improperly with respect to adjacent carpet tiles, it is usually readily apparent that the tile has been misplaced, thereby destroying the appearance of continuity of pattern, nap, and color of the entire carpet tile installation." ( Id. col. 1., ll. 52-56.)

The "Summary of the Invention" then states that the '656 Patent addresses the above problem "by providing carpet tiles and a method of making carpet tiles having patterns and color schemes that obviate the need to orient the tiles (with respect to pattern or nap) relative to each other and that generally eliminate the need to match tiles as to dye lot." ('656 Patent col. 1, ll. 61-66.) Instead, according to the '656 Patent's specification, the invented tiles:

exhibit *orthogonal ambiguity*, meaning that the tiles may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place to the ordinary viewer and thereby still achieving an appearance of continuity across the entire installation as if the tiles were part of a broadloom web.

( Id. col. 1, l. 67, col. 2, ll. 1-5 (emphasis added).) The specification then describes the design characteristics of an "orthogonally ambiguous" pattern, and explains that

[b]ecause the pattern on each tile appears random, placement of the tiles on the floor in any direction simply creates a larger, apparently random pattern, rendering it impossible for any tile to look out of place. Such randomness masks the visual effects of having adjacent carpet tiles with misaligned or differently-oriented naps and also masks slight color variations resulting from dye lot differences ... Given the apparent randomness of the pattern and color scheme, worn out or soiled tiles in a particular installation may easily be replaced with an unused tile without the new tile looking as dramatically different from the remaining tiles as often results with tiles with conventional patterns.

( Id. col. 2., ll. 30-37, 45-49.) The summary states that an object of the '656 Patent is "to provide carpet tiles that may be laid in any orientation with respect to each other and still achieve the appearance of a continuous piece of broadloom carpet." ( Id. col. 2, ll. 50-53.)

Finally, the "Detailed Description of the Drawings" states that "[a] number of factors contribute to the orthogonal ambiguity of each carpet tile, including pattern shapes and arrangement and shape colors." ('656 Patent col. 3, ll. 10-12.) It also explains that the "[u]se of multiple shapes and colors contributes to the apparent random quality of the pattern, thereby making an installation of such tiles appear to be continuous without regard to the orthogonal orientation of the tiles within the installation." ( id. col. 3, ll. 47-51.)

Contrary to CAF, Mohawk, and Shaw's contentions, the '656 Patent's specification clearly explains what causes any given tile in a carpet installation to "look[ ] out of place to the ordinary viewer." The specification states that the patented carpet tiles have "patterns and color schemes that obviate the need to orient the tiles (with respect to pattern or nap) ... and generally eliminate the need to match tiles as to dye lot." ('656 Patent col. 1, ll. 62-67.) The specification explains that it is usually readily apparent when a tile has been misplaced in a traditional carpet tile installation, and that an "orthogonally ambiguous" pattern makes it impossible for tiles to look out of place by "mask[ing] the visual effects of having adjacent carpet tiles with misaligned or differently-oriented naps and also mask[ing] slight color variations resulting from dye lot differences." ( Id. col. 1, ll. 52-54, col. 2, ll. 35-37.) The '656 Patent does not focus on or define the

"ordinary viewer" as a distinct term, separate from the above phrase.

Taking into consideration the claim language and the specification, the Court concludes that the special meaning for the disputed term "orthogonal ambiguity" set forth in the '656 Patent's specification is reasonably clear and precise and therefore that meaning should be applied in the construction of the disputed claims. Consequently, the Court finds that "orthogonal ambiguity" and its variants must be construed to mean that "tiles may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place to the ordinary viewer and thereby still achieving an appearance of continuity across the entire installation as if the tiles were part of a broadloom web."

### 3. Prosecution History

The Court also analyzes the prosecution history to determine whether it provides support for the above interpretations of the '656 Patent's claims and specification.

In a June 21, 2004, Supplemental Office Action Summary, the patent examiner discussed the term "orthogonally ambiguous" with regard to the '656 Patent's application:

Specifically, the specification discloses a particular method of making a patterned carpet tile which exhibits *orthogonal ambiguity* upon installation. However, applicant attempts to claim all *orthogonally ambiguous* carpet tiles (with or without pattern alignment) and asserts that the first to invent something new deserves to get broad coverage of the invention in the claims. While this assertion may be true, applicant has not invented the concept of *orthogonally ambiguous* carpet tiles [note Eusemann's teaching of tiles capable of being laid in a random rotation for foolproof installation, col. 2, lines 49-54)[sic]. While it is clear Eusemann's tiles have *orthogonal ambiguity* with pattern alignment, applicant's claims are still broader in scope that [sic] what is originally disclosed.

What applicant has invented is a particular carpet tile pattern which enables the tile to be laid in any random orientation upon installation without pattern alignment. This design feature is applicant's contribution to the art.

(File Hist. '656 Patent Vol. 2, June 21, 2004, Supplemental Office Action at 10 (emphasis added).) In rejecting certain claims set forth in the '656 Patent's application, the patent examiner stated that,

Eusemann discloses carpet tiles having partitioned pattern shapes. Said tiles may be woven or tufted carpet tiles. Eusemann explicitly teaches that said carpet tiles may be laid in a scattered or completely irregular pattern of rotation so that installation is foolproof. Thus, the tiles can be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place (i.e., *orthogonally ambiguous* ). Additionally, Figures 2 and 3 of Eusemann show floorcoverings wherein the locations at which adjacent tiles abut are not visually prominent.

( Id. at 12, para. 22 (citations omitted and emphasis added).)

In a September 28, 2004, Notice of Allowability, regarding the '656 Patent' s application, the patent examiner stated that the design features that produce orthogonal ambiguity were included in claim 1, and stated as follows:

For the record, it is noted that the claimed design features are not merely ornamental, but rather relate to the function of the substrate. The design pattern of shapes and colors as recited in the claims is critical to the function of the carpet tiles as orthogonally ambiguous. In other words, the claimed design enables the tiles to be laid randomly in an installation without the need to align the pattern or nap of the tiles with respect to each other. Therefore, the design features are given patentable weight and said claims are allowed.

(File Hist. '656 Patent Vol. 2, Sept. 28, 2004, Notice of Allowability at 3-4, para. 5, 8.)

In an October 4, 2004, Notice of Allowability, the patent examiner approved Interface's amendment to Claim 82, regarding a prior art rejection, because the claim was "limited to carpet tiles exhibiting *orthogonal ambiguity* without alignment of shapes between adjacent tiles." (File Hist. '656 Patent Vol. 2, Oct. 4, 2004, Notice of Allowability at 3, para. 6 (emphasis added).) The patent examiner also stated that all standing objections and rejections to the '656 Patent application were overcome and that,

[f]or the record, it is noted that the claimed design features are not merely ornamental, but rather related to the function of the substrate. The design pattern of shapes and colors as recited in the claims is critical to the function of the carpet tiles as *orthogonally ambiguous*. In other words, the claimed design enables the tiles to be laid randomly in an installation without the need to align the pattern or nap of the tiles with respect to each other.

( Id. at 3-4, para. 8 (emphasis added).)

The '656 Patent's prosecution history does not indicate that the patent examiner objected to or did not understand the specification's use of the phrase "looking out of place to the ordinary viewer." ( *See generally* File Hist. '656 Patent Vols. 1 & 2.) Additionally, the same patent examiner reviewed a continuation of the '656 Patent, U.S. Patent No. 7, 083,841, (the "'841 Patent"), which includes the disputed definition for the term "orthogonally ambiguous" set forth above, and the '841 Patent for Orthogonally Ambiguous Carpet Tiles Having Curved Edges was issued on August 1, 2006. (DJ Pls.' Ex. 20 at 1 (U.S. Patent Application Serial No. 10/165,842); Interface Ex. 54 (U.S. Patent No. 7,083,841).)

Considering the '656 Patent's prosecution history and the patent examiner's analysis and comments regarding the term "orthogonal ambiguity," the Court finds that the '656 Patent's prosecution history supports the Court's interpretation of that term and its variants, as set forth *supra* Parts III.A.1.-2.

#### **4. Extrinsic Evidence**

The parties have submitted extrinsic evidence regarding the disputed term "orthogonal ambiguity." For the reasons set forth *supra* Parts III.A.1.-3., the Court finds that the specification clearly defines the meaning of the term "orthogonal ambiguity" and its variants and teaches that tiles "look[ ] out of place to the ordinary viewer" when it is readily apparent that the pattern, shapes, and nap of adjacent tiles are not aligned or that those tiles' colors are not from matching dye lots. For the reasons set forth in the Court's February 28, 2006, Order, the Court will not address the parties' arguments regarding the validity of the above terms until the parties and the Court have the benefit of a final construction of the disputed claims. (Order of Feb. 28, 2006.) Consequently, the Court therefore finds that construction of the above disputed terms is appropriate before consideration of CAF, Mohawk's, and Shaw's extrinsic evidence and invalidity arguments.

#### **5. Summary**

For the reasons discussed *supra* Parts III.A.1.-4., the Court finds that "orthogonal ambiguity" and its variants are defined in reasonably clear and precise terms in the '656 Patent's specification. The Court emphasizes that it is not ruling on the validity of the above disputed term at this time. Consequently, the Court construes "orthogonal ambiguity" to mean that "tiles may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place to the ordinary viewer and thereby still achieving an appearance of continuity across the entire installation as if the tiles were part of a broadloom web."

## **B. "Similar Intensity" and Its Variants**

CAF, Mohawk, and Shaw also argue that "similar intensity" is insolubly ambiguous and incapable of proper construction. Those parties contend that neither the '656 Patent's intrinsic record nor the art provides an objectively understandable definition or common meaning. Those parties also contend that the '656 Patent's specification does not define "similar intensity" deliberately and clearly, and that any use of the phrase "significantly stands out" in such a definition would be equally indefinite. Similarly, at the *Markman* hearing, CAF, Mohawk, and Shaw argued that there is no objective standard for the term "similar intensity" in the '656 Patent's claims, specification, or prosecution history. Those parties contend that, without a basis in the '656 Patent's specification, it would be improper to narrow the term to only mean brightness or dullness because the testimonial record reflects multiple definitions for the term "intensity." Those parties also argued that the Court must consider whether one skilled in the art would know whether colors were of "similar intensity," and suggested that the issue of measurement is insoluble because of the multiple possible meanings for the term "intensity." Additionally, those parties suggested that persons of ordinary skill in the art would not understand what is of "similar intensity" or not.

Interface argues that the '656 Patent expressly defines a visual test for determining whether colors have "similar intensity"-colors of "similar intensity" do not significantly stand out from each other. In its Opening Claim Construction brief, Interface argued that the term "similar intensity," as it is used in the '656 Patent, "relates to the visual relationship of two colors used together rather than the academic or theoretical cause of perceived differences in the visual appearance of those colors." (Interface Opening Claim Construction Br. at 25.) Interface contends that the '656 patent clearly defines "similar intensity" in terms of the common ground among carpet tiles designers, the visual appearance of carpet tiles, and argues that those skilled in carpet tile design are familiar with assessing whether a color will significantly stand out from the other colors on carpet tiles so as to draw the eye to that color. Similarly, at the *Markman* hearing, Interface argued that "similar intensity" is defined in the '656 Patent's specification as "no one color significantly stands out from the other colors." Interface also contended that the '656 Patent is a visual patent with visual elements, rather than mathematical formulas.

### **1. Claim Language**

The term "similar intensity" is specifically used in Claims 1, 8, 12, and 17. Those claims state that the colors used in the carpet tiles at issue must be "of similar intensity" or "have similar intensities." ('656 Patent col. 5, ll. 31-33, 53-55, 65-67 & col. 6 ll. 25-27.) The Court examines the disputed term in the context of each claim below.

Claim 1's preamble focuses on the patterned face of the carpet tiles at issue. Claim 1's preamble explains that each carpet tile face has "a pattern comprising a plurality of shapes having shape edges." ('656 Patent col. 5, ll. 26-28.) Subpart 1.b. then states that "the pattern comprises at least a background color and a first color different from the background color and of *similar intensity* to the background color...." ( *Id.* col. 5. ll. 31-33 (emphasis added).) Subpart 1.c, then explains that "at least some adjacent shapes on each tile

comprise at least one common color...." ( Id. col. 5. ll. 34-35.)

Claim 7 relies on Claim 1 for antecedent basis, and teaches "a pattern further compris[ing] a second color different from the background color and the first color." ('656 Patent col. 5, ll. 50-52.) Claim 8 teaches "carpet tiles of claim 7, wherein the background color, the first color, and the second color have *similar intensities*." ( Id. col. 5, ll. 53-55 (emphasis added).) Claims 11 and 12 are similarly related and teach a pattern that includes a third color different from the other three colors, where all four colors have similar intensities. ( Id. col. 5, ll. 62-67.)

Claim 17 claims the following:

The carpet tiles of claim 1, wherein at least some of the shapes of the pattern on each tile are formed from at least one of a plurality of colors comprising at least the background color, the first color, and a second color, wherein at least one of the shapes on each tile is formed from the background color only, at least one of the shapes on each tile is formed from the background and the first color only, at least one of the shapes on each tile is formed from the background color and the second color only, and at least one of the shapes on each tile is formed from the background color, the first color, and the second color, wherein the background color, the first color, and the second color have *similar intensities*.

('656 Patent col. 6, ll. 15-27 (emphasis added).)

In the context of the above claims, it is clear that the pattern on each tile face is formed from a plurality of colored shapes. The Court finds that the above claims teach that the term "similar intensity" and its variants must be construed in the context of colors in a pattern creating colored shapes. The Court finds, however, that the claim language does not provide a definition for the term "similar intensity" and its variants. Consequently, the Court turns to the specification for assistance in construing the disputed term.

## **2. Specification**

The parties disagree as to whether the '656 Patent's specification defines "similar intensity." Here, the '656 Patent's specification twice states that "[a]ll of the colors ... should have *similar intensities* so that no one color significantly stands out from the other colors." ('656 Patent col. 2, ll. 28-30 & col. 3, ll. 42-44 (emphasis added).)

The first use of the above phrase appears in the "Summary of the Invention" section, and, specifically, in the following paragraph that describes how the carpet tiles of the '656 Patent are produced:

The orthogonally ambiguous tiles of this invention are produced by first producing a carpet web having a pattern exhibiting the characteristics described herein and then cutting the web into tiles in the conventional ways that tiles are typically cut from a carpet web produced for that purpose. The web has a pattern of shapes having at least some straight edges that will parallel the tile edges but that appear to be randomly oriented and positioned within the pattern. The shapes are formed from a color or combination of colors so that adjacent shapes on each tile have at least one color in common. Furthermore, each tile always has at least one color in common with every other tile, so that when the tiles are laid, the colors on adjacent tile coordinate. All of the colors typically should have *similar intensities* so that no one color significantly stands out from the other colors.

('656 Patent col. 2, ll. 16-30 (emphasis added).)

The second use of the disputed term appears in the "Detailed Description of the Drawings" section, which states, in relevant part:

... A number of factors contribute to the orthogonal ambiguity of each carpet tile, including pattern shapes and arrangements and shape colors.

The pattern produced on web 22 produces tiles with shapes that appear randomly positioned on the tile. Only shapes having certain characteristics are usable. First, at least some of the shapes must have straight sides parallel to the "machine" and "cross-machine" direction of the web 22, and therefore parallel to the tile edges.

...

Size of the shapes within the pattern is also important, as is lateral position of the shapes within the web. The shapes generally must be small enough so that several shapes will end up positioned within each tile.

...

Each tile preferably has the same background color. At least one color, different from the background color, is used to form the shapes on the tile. Regardless of how many colors are used, all of the colors should have *similar intensities* so that no one color significantly stands out from the other colors. Note that multiple shapes may be, and preferably should be, formed on each tile. It is important, however, that each shape have at least one color in common with adjacent shapes on the tile. Use of multiple shapes and colors contributes to the apparent random quality of the pattern, thereby making an installation of such tiles appear to be continuous with regard to the orthogonal orientation of the tiles within the installation.

('656 Patent col. 3, ll. 10-18, 30-31, 40-52 (emphasis added).)

Additionally, the above specification section also summarizes the '656 Patent's five "rules" for creating a pattern in accordance with the invention at issue. Rule 2 requires the "[u]tilization of a pattern of shapes on the web formed by colors of approximately the *same intensity* as the background color and each other."

('656 Patent col. 4, ll. 3-5 (emphasis added).)

The '656 Patent's specification reveals that the use of multiple shapes is an important element of the apparently random pattern created on each carpet tile face. The specification also teaches that the qualities of those shapes affect the resulting pattern, including shape size, arrangement, and the colors from which the shapes are formed. Based on the use of color in the '656 Patent's claims and specification, it is clear that, here, "similar intensity" does simply not refer to the technical aspects of color, i.e., a particular red or blue, but describes color in terms of its overall use in the patented pattern, including the use of color to form the pattern's shapes. The Court also observes that it is clear that the size and arrangement of those colored shapes affect the resultant pattern. The Court therefore finds that the specification teaches that the term "similar intensity" is a term of degree that describes the overall visual quality or impact of colors as they are used in shapes of various sizes and in various arrangements, and provides the following standard for measuring that degree: "no one color significantly stands out from the other colors."

The Court, however, recognizes that "[w]hen a word of degree is used the district court must determine whether the patent's specification provides some standard for measuring that degree," and that "[t]he trial court must decide ... whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification." *Seattle Box Co. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818,

826 (Fed.Cir.1984). Consequently, the Court examines the prosecution history and voluminous extrinsic evidence with regard to the above interpretation and to determine whether one of ordinary skill in the art would understand "similar intensity" when read in light of the '656 Patent's specification.

### 3. Prosecution History

The '656 Patent's prosecution history contains relevant discussions regarding the use of color in the '656 Patent. The disputed term "similar intensities" also is used several times in the prosecution history. The Court examines the most relevant passages below.

The patentee discussed the use of color and shapes in the '656 Patent in a July 29, 2002, Amendment and Response to Office Action. The patentee stated, in relevant part, that:

The Action uses the term "pattern" to refer to the shapes of the tiles ... Applicants' use of the term "pattern" refers, by contract, not to the shape of the entire tile but to the appearance of the face of the tile and to shapes, colors, etc. within the pattern on that face....

... While the Examiner is of course correct that it is known that "colors may be modified," the limitations of applicant's claims ... are not merely "modifications of colors." Those limitations are specific to certain properties of shapes, background color, adjacency of colors and shapes, and intensities of color.

(File Hist. '656 Patent Vol. 1, July 29, 2002, Amendment and Resp. at 16.)

In a June 16, 2003, Office Action, the patent examiner acknowledges that an ordinary carpet pattern designer would understand that the size and color of shapes impact carpet patterns:

It would have been an obvious matter of design choice to provide Eusemann with each of the tiles to comprise a pattern not identical to any other tile of the assembly since it is known in the art that size and colors may be modified to meet the consumer's desired pattern absence [sic] of showing unexpected results.

(File Hist. '656 Patent Vol. 1, June 16, 2003, Office Action at 8.) Similarly, in a December 17, 2003, Office Action, the patent examiner discusses the structural features of the '656 Patent's "orthogonally ambiguous" pattern and understands that those features are related:

Some of these features include the plurality of colors, the plurality of shapes, the relationship of said shapes to the tile edge, and the relationship of the colors and shapes in adjacent tiles, and the relationship of the overall pattern of each tile to the other tiles (i.e., not identical).

(File Hist. '656 Patent Vol. 2, December 17, 2003, Office Action at 7-8.) The patent examiner goes on to discuss the disputed term "similar intensities":

... Eusemann fails to teach colors of the same intensities. However, it would have been obvious to one skilled in the art to select colors for the patterned carpet tile that have *similar intensities* in order to create an aesthetically pleasing floorcovering. Additionally, one would be motivated to select colors of like intensities so that when assembled in the "foolproof" scattering method, the tiles would seem to be more coherent.

( Id. at 11 (emphasis added); *accord* id. June 21, 2004, Supp. Office Action at 13 (stating same).)

The Court finds that the '656 Patent's prosecution history does not indicate that the patent examiner objected to the specification's use of the term "similar intensities." Rather, the patent examiner appears to understand the specification's suggested standard-that no one color significantly stands out from the other colors-by stating that it is known in the art that size and colors may be modified to achieve a desired pattern and that the use of similarly intense colors would make carpet tiles "seem to be more coherent." The Court also examines the extrinsic evidence in order to determine if one skilled in the art would understand the disputed term in light of the '656 Patent's specification.

#### **4. Extrinsic Evidence**

At the *Markman* hearing, Shaw, Mohawk, and CAF argued that there are multiple ways to define intensity. Those parties also suggest that the deposition witnesses had multiple definitions for intensity and did not agree when asked if colors on a particular carpet tile were of similar intensity.

The Court notes that the parties have submitted volumes of extrinsic evidence, all of which the Court has reviewed. The Court, however, will not repeat all of that evidence in this Order. The extrinsic evidence submitted by the parties reveals that color is an important aspect of carpet tile design, that the visual appearance of colors in carpet designs can be contextual, that carpet designers have a varied color vocabulary, and that decisions about color use in carpet designs are frequently made by visual observation and discussion among designers and sometimes made by using tools, such as a color eye. The extrinsic evidence also reveals that carpet designers frequently use descriptive terms and phrases, rather than scientific color terminology, to communicate about color and to develop carpet tiles with a specific, desired appearance.

For the above reasons, the Court finds that the term "similar intensity" and its variants is drafted as precisely as the subject matter permits and, when read in light of the claims and specification, those skilled in the art of carpet tile design will be able to understand and apply the teachings of the '656 Patent. *See Ga.-Pac. Corp. v. U.S. Plywood Corp.*, 258 F.2d 124, 136 (2d Cir.1958). Consequently, the Court finds that the extrinsic evidence supports the Court's construction of the term "similar intensity" set forth *supra* Part III.B.2.

#### **5. Summary**

For the reasons set forth *supra* Parts III.B.1.-4., the Court adopts the explanation of the term "similar intensity" and its variants as set forth in the '656 Patent's specification, and construes the term "similar intensity" to mean that "no one color significantly stands out from the other colors." After reviewing the '656 Patent, and the exhibits and depositions submitted by the parties, the Court concludes that the term "similar intensity" is intended to refer to color as it is presented in the '656 Patent's overall pattern, and that the term "similar intensity" and its variants encompasses multiple characteristics of color. Based on the extrinsic evidence, the Court also concludes that one skilled in the art would understand what is claimed by the '656 Patent, when read in light of the specification. Consequently, the Court construes "similar intensity" and its variants to mean that, "no one color significantly stands out from the other colors."

#### **C. "Background Color"**

CAF, Mohawk, and Shaw argue that "background color" is insolubly ambiguous and incapable of proper construction. Those parties contend that the '656 Patent's claims provide no information or guidance as to



how one determines which color is a "background color" as distinguished from other pattern colors or a background color of a particular tile. Those parties also contend that the disputed term does not have an ordinary meaning to those skilled in the art and would vary depending on the type of tile, pattern, and machine used in production. Additionally, CAF alone argues that "background color" is defined by an embodiment in the specification describing one example of the pattern at issue on a conventional carpet tufting machine with two rows of needles.

At the *Markman* hearing, CAF, Mohawk, and Shaw argued that the intrinsic evidence does not support the Court's construction of the term "background color" set forth in its November 27, 2006, Draft Order, "color all tiles have in common," (Draft Order of Nov. 27, 2006), and argued that the Court should consider the extrinsic evidence regarding the disputed term. Those parties argued that the background color of one tile is not necessarily the background color of another tile, and that Interface's proposed construction would potentially define background color the same way as other colors used in a given pattern.

Interface argues that the '656 Patent defines the meaning of "background color." Interface contends that the disputed term is used to refer to a color the tiles have in common, and that a background color will be a color all tiles have in common. Interface also contends that more than one background color may be used in the pattern at issue. At the *Markman* hearing, Interface argued that the purpose of having a background color is to give continuity to the carpet tiles in any given random installation. Interface contends that a number of colors can be the background color and that the '656 Patent does not require a particular background color. Interface also contends that the background color is nothing more than a color that the tiles have in common because its purpose is to ensure that there is continuity, or common colors across the area.

## 1. Claim Language

The term "background color" is used repeatedly throughout the majority of the '656 Patent's first twenty-three claims. ('656 Patent cols. 5-6.) The Court examines those repeated uses below.

Claim 1 teaches, in relevant part:

Carpet tiles comprising tile edges and textile faces, each face having a pattern comprising a plurality of shapes having shape edges, wherein:

- a. at least some of the shapes comprise at least one shape edge that parallels at least one tile edge;
- b. the pattern comprises at least a *background color* and a first color different from the *background color* and of similar intensity to the *background color*;
- c. at least some adjacent shapes on each tile comprise at least one common color;
- d. when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit orthogonal ambiguity without pattern alignment between adjacent tiles.

('656 Patent col. 5, ll. 26-39 (emphasis added).)

Claim 5 relies on Claim 1 for antecedent basis, and teaches carpet tiles "wherein at least one shape of the pattern comprises only the *background color*." ( *Id.* col. 5, ll. 45-46 (emphasis added).)

Claim 6 relies on Claim 1 for antecedent basis, and teaches carpet tiles "wherein at least one shape of the pattern comprises the *background color* and the first color." ( *Id.* col. 5, ll. 47-49 (emphasis added).)

Claims 7 through 14 are dependent claims which teach carpet tile patterns composed of an increasing number of colors, in addition to the background color and first color of Claim 1. ('656 Patent cols. 5 & 6.) Additionally, Claims 9 through 10, and 13 through 14, teach carpet tiles wherein at least one shape of the pattern comprises the background color combined with one or more of those additional colors. ( *Id.*)

For example, Claim 7 is dependent on Claim 1 and teaches carpet tiles "wherein the pattern further comprises a second color different from the *background color* and the first color." ('656 Patent col. 5, ll. 50-52 (emphasis added).) Claim 9 teaches "[t]he carpet tiles of claim 7, wherein at least one shape of the pattern comprises only the *background color* and the second color ." ( *Id.* col. 5, ll. 56-58 (emphasis added).) Similarly, Claim 10 teaches "[t]he carpet tiles of claim 7, wherein at least one shape of the pattern comprises the *background color*, the first color, and the second color." ( *Id.* col. 5, ll. 59-61 (emphasis added).)

Likewise, Claim 17 relies on Claim 1 for antecedent basis and teaches carpet tiles

wherein at least some of the shapes of the pattern on each tile are formed from at least one of a plurality of colors comprising at least the *background color*, the first color, and a second color, wherein at least one of the shapes on each tile is formed from the *background color* only, at least one of the shapes on each tile is formed from the *background color* and the first color only, at least one of the shapes on each tile is formed from the *background color* and the second color only, and at least one of the shapes on each tile is formed from the *background color*, the first color, and the second color, wherein the *background color*, the first color, and the second color have similar intensities.

('656 Patent col. 6, ll. 15-27 (emphasis added).)

Claim 19 also relies on Claim 1 and relates to at least two carpet tiles of Claim 1 laid side-by-side. ('656 Patent col. 6, ll. 18-20.) Claim 19 teaches that the background color and at least the first or second color is the same for those two tiles. ( *Id.*)

Claim 23 teaches that where the carpet tiles of Claim 1 are formed by designing a pattern for a carpet web, that pattern is designed by:

- a. selecting a *background color* for the carpet web;
- b. using a plurality of colors, including the *background color*, to form shapes on the carpet web; and
- c. designing and positioning the shapes on the carpet web so that at least one shape has at least one straight side parallel to an edge of the carpet web and adjacent shapes have at least one common color.

('656 Patent col. 6, ll. 49-57 (emphasis added).)

In the context of the above claims, the Court finds that each carpet tile face clearly has a pattern comprised of (1) a plurality of shapes, (2) at least one background color, and (3) at least one additional color. The '656

Patent's claims also teach that the background color forms shapes in the pattern and can be paired with other colors to form such shapes. The Court observes that the above claims specifically use the term "background" to refer to a color, but simply labels all other colors numerically, such as first, second, third, etc. Furthermore, Claim 23 teaches that a background color can be selected for an entire carpet web upon which shapes are formed, thus suggesting that a "background color" has a specific function in a pattern in addition to being used to form shapes. In the above context, the Court finds that it is clear that the term background color refers to an initial color upon which pattern shapes of other colors are formed, and which also forms such shapes or portions of shapes. The Court turns to the specification for additional assistance in constructing the disputed term.

## 2. Specification

The parties disagree as to whether the '656 Patent's specification defines "background color." The '656 Patent's specification discusses "background color" and uses it in an example describing the pattern on a conventional carpet tufting machine with two rows of needles.

The '656 Patent's "Background of the Invention" teaches that conventional carpet tiles normally have a direction as a result of "(1) the pattern on the tiles and/or (2) the manufacturing process." ('656 Patented. 1, ll. 17-21.) The above specification section also teaches that a traditional patterned carpet tile must be installed so that its pattern aligns with the pattern of adjacent tiles. ( *Id.* col. 1, ll. 22-39.) The specification also discusses solid color carpet tiles and indicates that such tiles do not have a pattern but may need to be similarly aligned as a result of their other characteristics. ( *id.* col. 1, ll. 40-42.)

The "Summary of the Invention" section explains that the tiles of the '656 Patent "are first produced by producing a carpet web having a pattern exhibiting the characteristics described herein and then cutting the web into tiles...." ('656 Patent col. 2, ll. 17-20.) That section further explains that the pattern shapes "are formed from a color or combination of colors so that adjacent shapes on each tile have at least one color in common," and that "each tile always has at least one color in common with every other tile, so that when the tiles are laid, the colors on adjacent tiles coordinate." ( *Id.* col. 2, ll. 24-30.)

The '656 Patent's "Detailed Description of the Drawings" explains that the size of the shapes within the pattern is important, and that "[t]he shapes must generally be small enough so that several shapes will end up positioned within each tile." ('656 Patent col. 3, ll. 30-33.) That section also explains that "[e]ach tile preferably has the same *background color*," and that "[a]t least one color, different from the *background color*, is used to form the shapes on the tile." ('656 Patent col. 3, ll. 39-41 (emphasis added).) The section then explains that "multiple shapes may be, and preferably should be, formed on each tile," and that, "[w]hile the adjacent shapes of each tile have at least one color in common, additionally, each tile preferably has at least one color in common (in addition to the *background color* ) with every other tile, so that when the tiles are laid, the colors on adjacent tiles will coordinate." ( *Id.* col. 3, ll. 53-57 (emphasis added).)

The "rules" for creating the pattern at issue are summarized as follows:

1. Utilization of a *background color* for the entire web from which tiles will be cut.
2. Utilization of a pattern of shapes on the web formed by colors of approximately the same intensity as the *background color* and each other.

3. Utilization of shapes small enough for several to appear on each tile.
4. Utilization of shapes having straight edges parallel to the tile edges.
5. Utilization of a pattern causing each tile cut from their web to have at least 1 color in common with each other tile.

('656 Patent col. 4, ll. 1-12 (emphasis added).)

The section then describes Figure 1 of the '656 Patent and explains how the carpet web in that figure may be formed by a conventional carpet tufting machine with two rows of needles as follows:

One row of needles may be threaded up with a single *background color* that is present across the entire carpet web. The second row of needles may be threaded with yarns of other colors as described below. The pattern of shapes is created on the carpet web by controlling the height of the yarn. The farther the yarn is pushed through the primary backing, the greater its height in the finished carpet tile and the more predominant the color of the yarn is to the ordinary observer. In the pattern shown in FIG. 1., the background yarn A tufts have a uniform height across their entire pattern, so that at least some background yarn A is visible in all areas of the pattern, and some areas show only background yarn A....

The *background color* A (in this instance, yellow) is tufted over the entirety of the carpet web ... As explained above, the color of the yarn that is tufted with the greatest tuft height in the finished carpet tile is the more predominant color to the ordinary observer. Thus, creating patterns with colors B and C requires that the yarn be tufted so that the height of the yarn tufts of colors B and C varies with respect to each other. In other words, if a shape of color B is desired, then the yarn of color B is tufted to form yarn tufts that are higher than the surrounding yarn tufts formed by yarn of color C so that color B is more predominant than color C and thereby forms the pattern shape....

... In this embodiment, the shapes of tile 1 are made from: (1) the *background color* A only; (2) the *background color* A and color B only; (3) the *background color* A and color C only; (4) the *background color* A, color B, and color C; (5) the *background color* A and color D only; and (6) the *background color* A, color C, and color D. In this way adjacent shapes of each tile have at least one common color.

Moreover, adjacent tiles have at least one color in common (in addition to the *background color* ). For examples, tile 1 and tile 2 have both color C and color D in common, when the tiles are placed on the floor, therefore the colors on these adjacent tiles blend to facilitate the appearance of continuity.

('656 Patent col. 4, ll. 13-67, col. 5, ll. 1-5 (emphasis added) .)

Finally, the specification explains that the above embodiment was provided for the purpose of illustrating the invention at issue, and states that,

[f]urther modifications and adaptations to these embodiments will be apparent to those skilled in the art and may be made without departing from the spirit of the invention or the scope of the following claims. For instance different shapes and sizes of shapes than those illustrated can be used. Similarly, a wide variety of color combinations is possible. Furthermore, while the embodiment described above is tufted, the face fabric could also be woven on a conventional or computer controlled Jacquard or other loom, and the face fabric

could be fusion bonded or formed in other manners. This invention could also be used for modular flooring or surface covering materials other than carpet tile, such as vinyl tile.

('656 Patent col. 5, ll. 11-25.)

CAF argues that the above specification text defines "background color" as a single color of yarn that is threaded up on one row of needles from a conventional carpet tufting machine, that is of the lowest-uniform height present across the entire web and visible in all areas of the pattern, and that is the only yarn shown in some areas of the pattern.

The Court is not persuaded by CAF's argument. CAF's proposed additional "background color" requirements of needle row, height, and visibility are not found in the specification's earlier summary of the "rules" for creating a pattern in accordance with the invention or in the '656 Patent's claims discussed above. Additionally, the "background color" definition proposed by CAF is clearly disclosed in the context of explaining a preferred embodiment of the invention. Examples set forth in the specification, however, may not be used to narrow the scope of the claims, unless the patentee intends the claims and the preferred embodiment to be "strictly coextensive." Phillips, 415 F.3d at 1323; *see also* Vulcan Eng'g Co. v. Fata Aluminum, Inc., 278 F.3d 1366, 1376 (Fed.Cir.2002) ("This court has often explained that the claims are construed in light of the specification, and are not limited to a designated 'preferred embodiment' unless that embodiment is in fact the entire invention presented by the patentee."). The Court cannot find, and CAF has not pointed to, any indication in the '656 Patent that its claims are to be strictly coextensive with the preferred embodiment above.

The Court finds that the '656 Patent's specification supports the Court's analysis *supra* Part III.C.1. Like the '656 Patent's claim language, its specification teaches that each tile face contains multiple shapes, a background color, and at least one additional color. According to the specification, the pattern requires the use of "a background color for the entire web" and the use of "a pattern of shapes on the web formed by colors of approximately the same intensity as the background color and each other." In the context of the claim language discussed *supra* Part III.C.1. and the above specification, it is clear that the term background color refers to a color present throughout the pattern. The specification also clearly teaches that a background color alone can be used to form shapes, or, when combined with one or more other colors, can be used to form portions of shapes. The Court therefore construes the disputed term "background color" as "a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors."

### **3. Prosecution History**

The Court also analyzes the prosecution history to determine whether it provides support for the above interpretations of the '656 Patent's specification and claims. The Court observes that the patent examiner used the term in several discussions of prior art. ( *See* File Hist. '656 Patent Vols. 1 & 2.) The Court provides examples of such discussions below.

In a March 28, 2002, Office Action regarding the '656 Patent's application, the patent examiner stated that:

Desai fails to disclose that the shapes are further formed from at least one of a plurality [of] colors comprising at least a *background color*, a first color, and a second color, wherein at least one of the shapes is formed from the *background color* only, at least one of the shapes is formed form [sic] the *background*

*color* and the first color only, at least one of the shapes is formed from the *background color* and second color only, and at least one of the shapes is formed from the *background color*, the first color, and the second color, wherein the *background color*, the first color, and the second color have similar intensities and wherein the adjacent shapes comprise at least one common color.

(File Hist. '656 Patent Vol. 1, Mar. 28, 2002, Office Action at 4 (emphasis added).)

The patent examiner made similar observations regarding the disputed '656 Patent term, without any apparent confusion, in a June 16, 2003, Office Action. In that same Office Action, the patent examiner stated that,

Eusemann discloses a method wherein the pattern for the carpet web is designed by selecting a *background color* for the carpet web, using a plurality of colors, including the *background color*, to form shapes on the carpet web and designing and positioning the shapes on the carpet web so that at least one shape has at least one straight side parallel to an edge of the carpet web and adjacent shapes have at least one common color.

(File Hist. '656 Patent Vol. 1, June 16, 2003, Office Action at 5 (emphasis added and citations omitted).)

The '656 Patent's prosecution history does not indicate that the patent examiner objected to the use of the disputed term in the '656 Patent's claims or specification. Although the disputed term is used in the prosecution history, the Court finds that those documents do not further define the term "background color."

#### **4. Supplemental Briefing issues**

On April 4, 2007, the Court issued a second draft Order construing the term "background color" as "a color present throughout the pattern that may form pattern shapes alone or combined with another color or a combination of other colors. (Draft Order of Apr. 4, 2007.) The Court directed the parties to file supplemental briefs and reply briefs regarding the above construction. The Court now addresses the parties' additional arguments made in those briefs.

##### **a. CAF, Mohawk, and Shaw's Objections<sup>FN4</sup>**

FN4. The Court observes that CAF, Mohawk, and Shaw comment on the amount of time spent on the claim construction phase of this litigation. The Court notes that this is a complex case, that the parties submitted several volumes of evidence, that those parties specifically requested that the Court review that evidence, and that the Court honored those parties' request. The Court also notes that this case is not the only case on the Court's docket, nor is it the only complex case before the Court at this time. Consequently, CAF, Mohawk, and Shaw should not assume that claim construction has been unduly difficult for the Court simply because the Court did not issue its claim construction Order immediately after the *Markman* hearing.

CAF, Mohawk, and Shaw argue that the term "background color" is indefinite because it renders the boundaries of the '656 Patent elusive. Those parties argue that the Court's second draft construction of the term raises more questions than it answers, and is not supported by the intrinsic record or a common understanding of the term by skilled artisans. Those parties expand on their objections with the following two main arguments.

##### **i. The New Construction is Not Supported by the Intrinsic Record or a Common Understanding by**

## Skilled Artisans

CAF, Mohawk, and Shaw contend that "background color" does not enjoy a common understanding among persons of ordinary skill in the art and is not defined in the specification, as required by *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312-16 (Fed.Cir.2005). Those parties cite their expert, Simeon N. Crisler, a carpet manufacturing and design consultant with LGM Technical Carpet Service and a former Milliken employee, who states that only the '656 Patent's preferred embodiment teaches a special definition of "background color"-a color threaded up on one row of needles on a tufting machine. (Interface Opening Claim Constr. Br. Ex. 17 (Dep. of Simeon N. Crisler, July 14, 2006) at 246; Supp.App. Support DJ Pls.' Responsive Claim Constr. Br. Ex. 50 (Crisler Dep.) at 245-246 .) Those parties also argue that the Court's definition does not reflect a commonly understood and universally applicable concept of "background color," as it is not found in any treatise and was not articulated by any witness, and that the specification offers no such special definition. Those parties assert that the Court's definition is "an amalgam of bits and pieces from the specification that yields a definition found nowhere in the patent," and that the Court's definition contradicts the patent. (Docket Entry No. 379 at 3.) According to those parties, the Court's definition requires that every tile have the same background color; whereas, the specification states that it is merely preferable for each tile to have the same background color.

Interface responds to the above arguments by asserting that CAF, Mohawk, and Shaw misstate the legal standard for claim construction. Interface argues that *Phillips* simply sets out a framework for construing claims from the perspective of the person of ordinary skill who is deemed to have read the term in the context of the entire patent. Interface also argues that "background color" is amenable to construction and that the Court's recent proposed construction is consistent with the '656 Patent.

For the following reasons, the Court concludes that it may appropriately rely on the specification to construe the term "background color," and that the Court has not construed that term to require that every tile have the same background color.

According to *Phillips*, in cases where the meaning of a claim term as understood by persons of skill in the art is not immediately apparent and where the patent may use terms idiosyncratically, the court must

look[ ] to "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." Those sources include "the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art."

415 F.3d. at 1314 (citations omitted). *Phillips* further explains that,

to begin with, the context in which a term is used in the asserted claim can be highly instructive.... Other claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment as to the meaning of a claim term ... The claims, of course, do not stand alone. Rather, they are part of "a fully integrated written instrument," consisting principally of a specification that concludes with the claims. For that reason, claims 'must be read in view of the specification, of which they are a part.' ... [T]he specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." ... It is therefore entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims."

*Id.* 1314-17 (citations omitted). The Court also observes that the *Phillips* court warned that "extrinsic evidence consisting of expert reports and testimony is generated at the time of and for the purposes of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* at 1318.

Considering *Phillips*, it appears that CAF, Mohawk, and Shaw's argument concerning the sources and requirements for construction of a term are disingenuous. Even if a term is not specifically defined in the specification, or does not enjoy a common definition in treatises or among those skilled in the art, the Court may still determine that the claim can be defined and may rely heavily on the specification to construe the claim. The Court also has reviewed the extrinsic evidence submitted by the parties regarding the term "background color," and the Court is not convinced that one skilled in the art would not understand the '656 Patent's use of the term "background color" in the context of the '656 Patent's claims and specification.

Additionally, the Court is not persuaded by CAF, Mohawk, and Shaw's argument that the Court's definition of "background color" contradicts the '656 Patent. The above definition was written specifically to include the possibility that a given claim may not require carpet tiles to share the same background color. Those parties assume that the term "pattern" refers only to the carpet web; whereas, the use of the term "pattern" depends on the language of a specific claim. In Claim 1, for example, the term pattern clearly refers to the design on a single carpet tile: "[c]arpet tiles comprising tile edges and textile faces, *each face having a pattern* comprising a plurality of shapes having shape edges, wherein: ... the pattern comprises at least a background color" ('656 Patent col. 5, ll. 26-28, 31-32 (emphasis added).) In contrast, Claim 23 clearly discusses the term pattern in the context of the design on a carpet web: "The method of claim 22, wherein *the pattern for the carpet web* is designed by: ... selecting a background color for the carpet web." (*Id.* 6, ll. 49-51 (emphasis added).) CAF, Mohawk, and Shaw's complaint therefore is solved by reading the proposed definition into a specific claim. In the context of Claim 1, the pattern referred to clearly is the pattern on each tile face. Replacing the term "background color" with the Court's construction, "a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors," does not require every tile to have the same background color. Rather, Claim 1 still requires only that each tile face have a pattern comprising at least a background color, or "a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors."

For the above reasons, the Court is not persuaded by CAF, Mohawk, and Shaw's contentions that the Court improperly used the specification to construe an insolubly ambiguous term left undefined by the '656 Patent or that the Court's construction contradicts the '656 Patent. The Court therefore rejects those arguments.

## **ii. The New Construction Remains Indefinite**

CAF, Mohawk, and Shaw also argue that, even if the Court's definition is appropriate, the terms "pattern," "present," and "throughout" raise a whole host of new ambiguities that are not resolved by the intrinsic or extrinsic record. Those parties question (1) whether the background color must be present throughout the pattern on a tile face, or throughout the entire carpet web; (2) whether a color is present even if it is not visible; FN5 and (2) whether "throughout" means present on every tile, every square foot, every square inch, or every other stitch row. Those parties assert that the answers to the foregoing questions cannot be found in the '656 Patent's claims, specification, or prosecution history, and that the background color cannot be objectively identified and distinguished from other colors that appear throughout the web.



FN5. CAF, Mohawk, and Shaw make the following observation in a footnote regarding the above question: "With tufted tiles, yarns are often pulled down low in certain areas of the pattern so the colors are not visible, even though they are technically present." (Docket Entry No. 379 at 4 n. 4.)

Interface argues that patent law does not require the absolute certainty demanded by CAF, Mohawk, and Shaw. Interface cites *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 2007 WL 1086539 (Fed.Cir. Apr. 12, 2007), for the proposition that, "a sound claim construction need not always purge every shred of ambiguity. The resolution of some line-drawing problems-especially easy ones like this one-is properly left to the trier of fact." 483 F.3d 800, 2007 WL 1086539, at \*5.

Interface argues that the question of whether a "background color" must be throughout a pattern on a web or a pattern on a tile is answered by the '656 Patent's claims, and that the background color is present throughout the pattern of either the carpet web or the carpet tiles in an installation. Interface also argues that CAF, Mohawk, and Shaw fail to explain why one skilled in the art would not understand "present throughout the pattern," and that the '656 Patent expressly states that the function of a background color is to facilitate an appearance of continuity from tile to tile. Interface also contends that whether a color is present throughout the pattern can be addressed by the fact-finder without the precise stitch frequency required by CAF, Mohawk, and Shaw, and asserts that a color is present throughout the pattern if it is common to the tiles.

For the following reasons, the Court is not persuaded by CAF, Mohawk, and Shaw's arguments that the Court's construction of the term "background color" is no more definite and creates new ambiguities.

First, as discussed *supra* Part III.CAa.i., the second proposed definition resolves the issue of improperly limiting a given claim to require a single background color where the claim does not set forth such a limitation, an issue which CAF, Mohawk, and Shaw raised in the *Markman* hearing. Likewise, for the reasons set forth *supra* Part III.CAa.i., the Court need not construe the term "pattern." Whether the term "pattern" refers to the pattern on a tile face or the entire carpet web is dictated by the specific claim, and the '656 Patent's claims are sufficiently clear on that issue.

Second, with regard to the term "present," a background color necessarily must be visible in some areas of the pattern in order to form pattern shapes. As noted by CAF, Mohawk, and Shaw it is possible for a tufted yarn to be pulled down low in certain areas of a pattern, so that the yarn is present but not visible. The Court declines to revise its construction of "background color" to state that a background color must be visible in all areas of a pattern, given that the '656 Patent is not limited to tufted carpet.

Third, the Court need only define the term "background color" with whatever specificity and precision is warranted by the relevant evidence. Here, the Court construed the term "background color" with the precision warranted by the '656 Patent's claim, specification, and prosecution history. Whether a color appears frequently enough in a particular pattern to be present "throughout" the pattern may be properly left to the fact-finder. *See Acumed LLC*, 483 F.3d 800, 2007 WL 1086539, at \*5. The Court need not give additional precision regarding stitch frequency in a carpet web because such precision is not set forth in the '656 Patent and also because the '656 Patent states that it is not limited to tufted carpet but may be formed in a variety of other manners and may be used to create a variety of floorcoverings, including vinyl tile.

The Court therefore is not persuaded by CAF, Shaw, and Mohawk's objections. Consequently, the Court

retains the construction for the term "background color" set forth *supra* Part III.C.2.

## **b. Interface's Objections**

Interface agrees that a background color may form pattern shapes alone or combined with another color or a combination of other colors, and that a background color can be described as a color present throughout a pattern. Interface, however, argues that its original proposed definition-"a color the tiles have in common"-is shorter and simpler for a jury. Interface urges the Court to adopt Interface's shorter definition for brevity and for the reasons previously presented by Interface.

CAF, Mohawk, and Shaw argue that Interface's above response proves their point that the term "background color" is indefinite. Those parties argue that there is a material difference between the Court's first and second proposed definitions, yet Interface states that the '656 Patent comfortably accommodates either draft definition. Those parties assert that the above circumstance proves that the term "background color" is malleable enough to capture a limitless number of definitions depending on the tastes, visual perspective, interests, and experiences of the reader. Those parties also argue that Interface's proposed definition would allow Interface to pick any color as a background color on most of the accused products because all colors on most of those products appear on every tile.

For the reasons stated *supra* Parts III.C.1.-4.b., the Court construes the term "background color" as "a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors." Additionally, the above construction addresses the possibility that a carpet web may be threaded with two background colors, and distinguishes background colors from other colors, as other colors need not be present throughout a pattern. For the reasons discussed above, the Court also is not persuaded by Interface's objections. Consequently, the Court retains the construction for the term "background color" set forth *supra* Part III.C.2.

## **5. Summary**

For the reasons discussed *supra* Parts III.C.1.-4., the Court finds that the term "background color" can be clearly defined by reference to the '656 Patent's claims, specification, and prosecution history, and without reference to the extrinsic evidence .FN6 Consequently, the Court construes the disputed term "background color" as "a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors."

FN6. The Court observes, however, that it has reviewed the volumes of extrinsic evidence submitted by the parties.

## **D. "Without Pattern Alignment Between Adjacent Tiles" and Its Variants**

CAF, Mohawk, and Shaw argue that "without pattern alignment between adjacent tiles" means "without the edges or the periphery of pattern shapes on one carpet tile aligning or matching up with the edges or periphery of pattern shapes on a carpet tile immediately next to it when the tiles are arranged side-by-side in a floorcovering installation." Those parties contend that the above term is defined by the patent examiner in the '656 Patent's prosecution history, and that Interface offered no objection or qualification in response to that definition.

Interface argues that the above disputed term does not require construction. Interface contends that CAF, Mohawk, and Shaw's proposed construction simply substitutes other words for words that are easily understood, and that there is no need to construe words such as "alignment" with a proposed definition using "aligning." Interface also contends that the proposed construction, "when tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile," unnecessarily duplicates or modifies words that were subsequently added to the claims.

As an initial matter, the Court addresses Interface's argument that the remaining disputed '656 Patent terms, including the above terms, do not need to be construed. The Court observes that post- *Markman*, the Federal Circuit has persistently stated that "the trial judge has the duty and responsibility to interpret the claims at issue." *Exxon Chem. Patents, Inc. v. Lubrizol Corp.*, 64 F.3d 1552,1556 (Fed.Cir.1995): *see also* *AFG Indus., Inc. v. Cardinal IG Co.*, 239 F.3d 1239, 1247 (Fed.Cir.2001) ("It is critical for trial courts to set forth an express construction of the material claim terms in dispute...."). The Court's research has uncovered some cases in which courts declined to construe a term, such as where the term would be readily understood in its ordinary, everyday sense. *See* *Biotec Biologische Naturverpackungen GmbH & Co. KG v. Biocorp, Inc.*, 249 F.3d 1341, 1349 (Fed.Cir.2001) (holding that district court did not err when it declined to construe "melting" where term did not depart from its ordinary meaning or otherwise require construction); *Applera Corp. v. Micromass UK Ltd.*, 186 F. Supp 2d 487, 524, 546 (D.Del.2002) (declining to construe "maintaining," "maintain," and "whereby," where terms were used in their ordinary sense or were "self-evident"). The Court finds that although some words in the disputed term may be self-evident, the above term in its entirety is not and therefore requires construction.

## 1. Claim Language

The term "without pattern alignment between adjacent tiles" and its variants is used in Claims 1, 21, and 36. Claim 1 teaches carpet tiles "having a pattern comprising a plurality of shapes having shape edges, wherein ... when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit orthogonal ambiguity without pattern alignment between adjacent tiles." ('656 Patent col. 5, ll. 36-39.) Claim 21 relies on Claim 1 for antecedent basis and teaches "[a] method of producing the carpet tiles of claim 1 comprising forming carpet tiles having an orthogonally ambiguous pattern that does not require pattern alignment between adjacent tiles." ( *Id.* col. 6., ll. 41-44.) Finally, Claim 26 teaches that "when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit orthogonal ambiguity without alignment of shapes between adjacent tiles." ( *Id.* 7, ll. 7-10.)

In the context of the above claims, it is clear that the claims themselves incorporate portions of CAF, Mohawk, and Shaw's proposed construction. Specifically, both Claims 1 and 26 explain that the carpet tiles are "assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile..." ('656 Patent col. 5., ll. 36-39 & col. 7, ll. 7-10.) As an antecedent claim, Claim 21 necessarily incorporates the language of Claim 1. Additionally, the above claim language teaches that the pattern at issue is comprised of shapes with shape edges.

Although the above claims do not explicitly define "without pattern alignment," the Court finds that those claims incorporate the portion of CAF, Mohawk, and Shaw's expanded definition of "adjacent tiles." Furthermore, the Court finds that the proposed term "aligning" is not clearer than "alignment" and CAF, Mohawk, and Shaw obviously understand the meaning of "alignment" or they would not have suggested the Court use the term "aligning." Consequently, the Court declines to incorporate that extended definition into

its construction of the above disputed term, and finds that the claim language teaches that the "without pattern alignment between adjacent tiles" means "without alignment between the edges of shapes on adjacent tiles." The Court looks to the '656 Patent's specification and prosecution history for support of the above construction.

## **2. Specification**

The parties do not cite the '656 Patent's specification with regard to the above disputed term. Here, the specification's "Summary of the Invention" teaches that the tiles of the invention "are produced by first producing a carpet web having a pattern ... of shapes having at least some straight edges that will parallel the tile edges but that appear to be randomly oriented and positioned within the pattern," and that "[t]he shapes are formed from a color or combination of colors...." ('656 Patent col. 2, ll. 17-26.) The Court finds that, although the specification does not explicitly define the disputed term, the specification supports the Court's interpretation of that term as set forth *supra* Part III.D.1.

## **3. Prosecution History**

The disputed term above is discussed multiple times in the '656 Patent's prosecution history. The Court examines the two most helpful discussions.

In a December 17, 2003, Office Action Summary, the patent examiner discussed the phrase "without pattern alignment" with regard to the '656 Patent's application and also defined that phrase:

the phrase "*without pattern alignment between adjacent tiles*" is not considered new matter based upon applicant's persuasive arguments presented with the Amendment of September 15, 2003. Also, since said phrase is not explicitly defined in the specification, for the purposes of examination, it is stated that said phrase is given the meaning intended in the specification, which is consistent with the common understanding of the carpet tile art. Hence, the phrase "*without pattern alignment between adjacent tiles*" mean that the edges or the periphery of pattern shapes on one carpet tile do not align or match up with the edges or periphery of pattern shapes on an adjacent carpet tile when said tiles are arranged side-by-side in a floorcovering installation.

(File Hist. '656 Patent Vol. 2, Dec. 17, 2003, Office Action at 2-3 (emphasis added).)

For the reasons set forth *supra* Part III.D.1., the Court finds that the patent examiner's full definition is not required to define the disputed term adequately. Additionally, the Court finds that the above prosecution history supports the Court's interpretation of "without pattern alignment between adjacent tiles" as the phrase "without alignment between the edges of shapes on adjacent tiles."

## **4. Summary**

For the reasons discussed *supra* Parts III.D.1.-3., the Court finds that "without pattern alignment between adjacent tiles" and its variants can be clearly defined by reference to the '656 Patent's claims, specification, and prosecution history. Consequently, the Court construes "without pattern alignment between adjacent tiles" and its variants to mean "without alignment between the edges of shapes on adjacent tiles."

## **E. "The Carpet Tiles Cut From the Web All Comprise a Common Color"**

CAF, Mohawk, and Shaw argue that the phrase "the carpet tiles cut from the web all comprise a common color" in Claim 26 of the '656 Patent means "the carpet tiles cut from the web will all share at least one color, other than the background color." Those parties argue that the '656 Patent's specification indicates that the color referred to in the disputed term above is not the background color, but a color in addition to the background color.

Interface argues that the disputed term has a plain meaning and needs no construction. Interface contends that the term on its face requires carpet tiles that all comprise one common color. Interface argues that CAF, Mohawk, and Shaw's proposed construction would require two common colors and therefore add a limitation that is not contained in Claim 26 of the '656 Patent.

As an initial matter, the Court observes that the parties have focused their arguments specifically on the construction of the phrase "the carpet tiles cut from the web comprise a common color" in Claim 26 of the '656 Patent. The Court notes that the disputed phrase above does not appear in any other claims and that the parties are not arguing over the construction of the term "common color" outside of the context of Claim 26.

## 1. Claim Language

As discussed above, the disputed phrase only appears in Claim 26 of the '656 Patent, which claims:

Carpet tiles cut from a carpet web having a width and a length and comprising a textile face having a pattern comprising a plurality of shapes formed by a plurality of colors, wherein at least some adjacent shapes on the web comprise a common color and none of the shapes extends the full length or width of the web, wherein:

a. *the carpet tiles cut from the web all comprise a common color* and at least a portion of at least some of the plurality of shapes appear on each carpet tile cut from the web, each of which shapes having an edge that parallels at least one edge of the carpet tile on which it appears; and

b. when the tiles are assembled on a flooring surface so that each tile is adjacent to and abuts at least one other tile, the tiles exhibit orthogonal ambiguity without alignment of shapes between adjacent tiles.

('656 Patent col. 6, ll. 62-col. 7, ll. 11 (emphasis added).)

The Court finds that Claim 26 is an independent claim which teaches that the carpet tiles cut from the web all share a common color. As discussed *supra* Part III.C., the Court has construed the term "background color" to mean a "color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors." Although Claim 26 does not use the term "background color," it specifically states that the carpet tiles cut from the web *all* have a common color and that the pattern also is comprised of a plurality of shapes formed by a plurality of colors. The Court therefore finds that the above dispute phrase is readily understood. The term "all" does not depart from its ordinary meaning and does not otherwise require construction. The Court turns to the specification to support the above analysis.

## 2. Specification

The parties disagree as to whether the '656 Patent's specification defines the disputed phrase. CAF, Mohawk, and Shaw point to portions of the specification which state that "each tile preferably has at least

one color in common (in addition to the background color) with every other tile," "utilization of a pattern causing each tile cut from the web to have at least 1 color in common with each other tile," and "adjacent tiles have at least one color in common (in addition to the background color)." ('656 Patent col. 3 ll. 54-56, col. 4 ll. 10-12, col. 5, ll. 6-7 .) Those parties argue that the "common color" referred to in Claim 26 cannot be the background color and that it therefore must be a color other than background color.

The Court is not persuaded by those parties' arguments. The '656 Patent clearly indicates when it is referring to colors other than the background color and repeatedly points out when "each" tile has some additional color in common with "each" other tile. The phrase at issue in Claim 26, however, does not include those parties' proposed limitation and, instead, teaches that all tiles cut from the carpet web share a common color. The Court therefore find that the specification does not support CAF, Mohawk, and Shaw's proposed construction of the disputed phrase.

### **3. Summary**

For the reasons discussed *supra* Parts III.E.1.-2., the Court finds that the phrase "the carpet tiles cut from the web all comprise a common color" is readily understood and does not depart from its ordinary meaning in light of the '656 Patent's claims and specification. Consequently, the Court declines to construe the phrase "the carpet tiles cut from the web all comprise a common color."

#### **F. "In Any Side-By-Side or Rotational Orientation Relative to Each Other"**

CAF, Mohawk, and Shaw argue that "in any side-by-side or rotational orientation relative to each other" means "in one of sixteen possible positions relative to each other." Those parties contend that Claim 20 specifies no particular method of installation, and that each tile can be placed north, south, east, or west relative to a first tile and that the second tile can either face the same direction as the first tile or be placed at a 90, 180, or 270 degree rotation. Those parties also contend that "any" includes all carpet tile installation methods.

At the *Markman* hearing, CAF, Mohawk, and Shaw argued that the parties need guidance as to what the term "any" means. Those parties argue that the '656 Patent is not restricted to random installation, but that the patented tiles may be installed in other ways, such as monolithic and quarter-turn installations. Those parties also propose adding the following sentence to the claim term "positioning the carpet tiles ... in any side-by-side or rotational orientation": "Positioning the tiles in this manner does not exclude any method of installation."

Interface argues that the everyday meaning of the above disputed phrase, positioning without regard to position or direction, needs no construction. Interface contends that the installer need make no effort to intentionally align the tiles in a predetermined pattern. At the *Markman* hearing, Interface argued that only a random installation method is contemplated by the '656 Patent and that the above proposed additional language would read out language in Claim 20. Interface also argued that Figure 4 of the '656 Patent simply shows a progression of the carpet web depicted in Figure 1 to the purely random installation shown in Figure 5.

### **1. Claim Language**

As an initial matter, the Court notes that the disputed phrase above does not appear in any other claims and that the parties are not arguing over the use of the words "relative to each other." As discussed above, the

disputed phrase appears in Claim 20 of the '656 Patent, which claims: "A method of producing the floorcovering of claim 18 comprising forming carpet tiles having textile faces exhibiting orthogonal ambiguity and positioning the carpet tiles side-by-side on a flooring surface *in any side-by-side or rotational orientation relative to each other.*" ('656 Patent col. 6, ll. 36-40 (emphasis added).) Additionally, the disputed term "any" only appears in Claim 20.

The Court observes that the phrase "side-by-side" also appears in Claims 18, 19, and earlier in Claim 20, and that the parties do not dispute the meaning of the phrase "side-by-side" in those instances. Indeed, CAF, Mohawk, and Shaw proposed the phrase "side-by-side" for use by the Court in construing the phrase "without pattern alignments between adjacent tiles."

The Court finds that the terms "side-by-side" does not depart from its ordinary meaning and does not otherwise require construction. The Court also finds that the term "any" appears to be self-evident, but the Court will continue to examine that term at the request of the parties. Additionally, the Court observes that Claim 20 does not define "rotational orientation." The Court therefore turns to the specification for assistance in interpreting the terms "rotational orientation," which is not self-evident, and "any."

## 2. Specification

The '656 Patent specification's "Background of the Invention" teaches that "[m]ost carpet tiles are square," and that, where a first tile has been placed on a floor, "a second tile may be placed in four different positions relative to each side of the first tile by rotating the second tile in 90 degree increments relative to the first tile and by placing the second tile adjacent to each of the four sides of the first tile." ('656 Patent col. 1., ll. 25-30.) The specification's "Summary of the Invention" teaches that "[o]rthogonally ambiguous tiles must be positioned in one of sixteen positions relative to each other tile. Such positioning is achieved by rotating adjacent tiles in ninety degree increments relative to each other." ('656 Patent col. 2, ll. 6-9.)

The '656 Patent's specification also includes multiple drawings regarding the patented carpet tiles. Figure 1 is described in the specification as "a top plan view of a carpet tile web produced in accordance with one embodiment of this invention." ('656 Patent col. 2, ll. 60-61.) Figure 4 is described as "a top plan view of an assembly of carpet tiles cut from the web of Figure 1." ( *Id.* col. 3, ll. 1-2.) The tiles in Figure 4 are assembled in an apparently random side-by-side arrangement, but all tiles are positioned in the same rotational orientation-no rotation or a zero increment rotation). ( *Id.* Fig. 4.) Such a single direction installation was referred to by the parties at the *Markman* hearing as a "monolithic" installation. (Dec. 19, 2006, Hr'g Tr.) Figure 5 is described as "a top plan view of another assembly of the carpet tiles of Fig. 4." ('656 Patent col 3, ll. 3-4.) The tiles in Figure 5 are assembled in an apparently random side-by-side and rotational-all possible increment rotations-arrangement. ( *Id.* Fig. 5.)

The Court finds nothing in the '656 Patent's specification to indicate that Figure 4 is meant as a progressive step between the carpet web depicted in Figure 1 and the completely random assembly depicted in Figure 5, as Interface suggested at the *Markman* hearing. The specification simply refers to Figure 4 as "an assembly" and Figure 5 as "another assembly."

Additionally, the positions of the carpet tiles in Figures 4 and 5 do not appear to correspond in any way. Although Interface may be correct that the tiles of the '656 Patent do not need to be aligned in a particular direction, the claim language and the specification do not indicate that those tiles can only be assembled completely randomly and cannot be aligned randomly in a monolithic rotational direction, as depicted in

Figure 4. The Court, however, is hesitant to construe the term "any" to include the phrase "Positioning the tiles in this manner does not exclude any method of installation," as proposed by CAF, Shaw, and Mohawk. Claim 20 does not discuss specific installation methods or patterns, but simply refers to the placement of at least two carpet tiles side by side in "any side-by-side or rotational orientation relative to each other."

Taking the claim language and the specification into consideration, the Court therefore finds that the '656 Patent teaches that the phrase "rotational orientation" refers to rotations made in ninety degree increments relative to other carpet tiles. The Court also concludes that "any" is self-evident and does not require construction. To the extent that the parties seek direction regarding "any," the Court observes that the specification indicates that tiles may be placed randomly next to each other in the same, "monolithic" rotational direction, as suggested by CAF, Mohawk, Shaw, and Figure 4 of the '656 Patent, or in a completely random installation, as suggested by Interface and Figure 5 of the '656 Patent.

### **3. Prosecution History**

In a July 12, 2004, Amendment and Response to Office Action, the patentee responded to the patent examiner's request for drawings to show a floorcovering exhibiting orthogonal ambiguity. The patentee responded as follows:

Accordingly, pursuant to the Action's suggestion, Applicants' Assignee submits new Figures 4 and 5 ..., each illustrating a different randomly oriented arrangement of the tiles of one embodiment of the present invention into a floorcovering. Figures 4 and 5 do not constitute new matter, but merely represent different orientations and positions of the tiles shown in the drawing of the web of Figure 1 that have been reassembled as taught by the specification at page 2, lines 10-19.

(File Hist. '656 Patent Vol. 2, July 12, 2004, Amendment and Resp. at 11.)

As discussed *supra* Part III.F.2., Figure 4 of the '656 Patent is a random monolithic (all tiles in same rotational direction) assembly and Figure 5 is a completely random assembly. ( *See* '656 Patent Figs. 4 & 5.) The Court therefore finds that the above explanation of Figures 4 and 5 by the patentee supports the Court's interpretation of the term "any" as self-evident, and including at least random monolithic and completely random carpet tile assemblies, as shown in '656 Patent Figures 4 and 5, respectively.

### **4. Summary**

For the reasons discussed *supra* Parts III.F.1.-3., the Court finds that the disputed term "in any side-by-side or rotational orientation relative to each other" needs only partial construction, specifically with regard to "rotational orientation." The term "rotational orientation" can be defined by reference to the '656 Patent's claims and specification. The intrinsic evidence teaches that "rotational orientation" refers to the rotation of carpet tiles in ninety degree increments to other tiles. Consequently, the Court construes "in any side-by-side or rotational orientation relative to each other" to mean "in any side-by-side or ninety-degree increment rotation relative to each other."

### **G. "Shapes"**

CAF, Mohawk, and Shaw argue that the term "shapes" means "forms distinguished from their surrounding by an outline and formed by a color or combination of colors."



Interface argues that the above proposed construction unnecessarily limits the term "shapes." Interface contends that the disputed term is used in its everyday sense and is not limited to having an outline.

## 1. Claim Language

The term "shapes" is used in every claim of the '656 Patent. ('656 Patent cols. 5-8.) Claim 1 teaches that the pattern on the carpet tiles of the invention is comprised of "a plurality of *shapes* having shape edges, wherein ... at least some adjacent *shapes* on each tile comprise at least one common color." ( Id. col. 5, ll. 26-28, 34-35 (emphasis added).)

Claims 5, 6, 9, 10, 13, and 14 teach carpet tiles wherein at least one shape of the pattern is comprised of only the background color; the background color and the first color; only the background color and the second color; the background color, the first color, and the second color; the background color and the third color; and the background color, the second color, and the third color, respectively. ('656 Patent col. 5, ll. 45-49, 56-61.)

Claim 17 relies on Claim 1 for antecedent basis and teaches that "at least some of the *shapes* of the pattern on each tile are formed from at least one of a plurality of colors." ('656 Patent col. 6, ll. 15-17 (emphasis added).)

Independent Claim 26 teaches carpet tiles "comprising a textile face having a pattern comprising a plurality of *shapes* formed by a plurality of colors...." ('656 Patent col. 6, ll. 62-65 (emphasis added).)

In the context of the above claims, it is clear that "shapes" are present in the pattern on each carpet tile, and that any given shape is formed from a color or a combination of colors. The Court therefore finds that the claim language teaches that the disputed term "shapes" means "forms comprised of a color or combination of colors." The Court turns to the '656 Patent's specification for further support of the above interpretation.

## 2. Specification

The '656 Patent specification's "Summary of the Invention" explains that "[t]he *shapes* are formed from a color or combination of colors so that adjacent shapes on each tile have at least one color in common." ('656 Patent col. 2, ll. 24-26 (emphasis added).) The specification also teaches that one of the "rules" for creating a pattern in accordance with the '656 patent is the use of "a pattern of *shapes* on the web formed by colors of approximately the same intensity as the background color and each other." ( Id. col. 3, ll. 66-67, col. 4, ll. 3-5 (emphasis added).)

Considering the above language, the Court finds that the '656 Patent's specification supports the Court's interpretation of the term "shapes" set forth *supra* Part III.G.1.

## 3. Prosecution History

The '656 Patent's prosecution history reveals that the patent examiner used the term "shapes" in a discussion of prior art. In a March 28, 2002, Office Action regarding the '656 Patent's application, the patent examiner stated that:

Desai fails to disclose that the *shapes* are further formed from at least one of a plurality of colors comprising at least a background color, a first color, and a second color, wherein at least one of the *shapes*

is formed from the background color only, at least one of the *shapes* is formed from the background color and the first color only, at least one of the *shapes* is formed from the background color and second color only, and at least one of the *shapes* is formed from the background color, the first color, and the second color, wherein the background color, the first color, and the second color have similar intensities and wherein the adjacent *shapes* comprise at least one common color.

It would have been obvious to one of ordinary skill in the art at the time of [sic] applicant's invention was made to have provided *shapes* that are further formed from at least one of a plurality [of] colors....

(File Hist. '656 Patent Vol. 2, Mar. 28, 2002, Office Action at 4-5 (emphasis added).) The '656 Patent's prosecution history does not indicate that the patent examiner objected to the use of the disputed term in the '656 Patent's claims or specification. The Court finds that the prosecution history supports the Court's interpretation of "shapes" set forth *supra* Part III.G.1.

#### **4. Extrinsic Evidence**

CAF, Mohawk, and Shaw cite a dictionary reference web site for their proposal that the term "shapes" requires the '656 Patent's forms to have an outline. Dictionary.reference.com defines "shape" as: "The characteristic surface configuration of a thing; an outline or contour ... Something distinguished from its surroundings by its outline." (DJ Pls.' Ex. 45.)

The Court is not persuaded by CAF, Mohawk, and Shaw's proposed requirement that the shapes of the '656 Patent require an outline. Although the shapes discussed in the '656 Patent have shape edges, there is no mention of an outline in the claim language, specification, or prosecution history. Nor do those parties argue that shapes cannot have edges without an outline, or that shapes cannot be comprised simply of a color or combination of colors without an outline. Incorporating an outline requirement into the meaning of the term "shapes" would unnecessarily limit the term. The Court therefore declines to incorporate CAF, Mohawk, and Shaw's suggestion that the disputed term "shapes" requires each form to have an outline.

#### **5. Summary**

For the reasons discussed *supra* Parts III.G.1.-4., the Court finds that the '656 Patent teaches that "shapes" are "forms comprised of a color or combination of colors." Consequently, the Court construes the disputed term "shapes" to mean "forms comprised of a color or combination of colors."

#### **H. "Parallels"**

CAF, Mohawk, and Shaw argue that the term "parallels" means "extends in the same direction, everywhere equidistant to, and not meeting with." Those parties contend that nothing in the patent indicates that the patentees intended parallel to have anything other than its ordinary meaning.

Interface argues that the above proposed construction requires strict mathematical certainty and excludes the everyday understanding that objects are parallel when they look like they are parallel. Interface contends that a tolerance range must be used when determining if a shape edge is parallel because machines are imperfect.

#### **1. Claim Language**

The disputed term "parallels" appears in Claims 1, 23, 26, and 28. In the above claims, the term "parallels" is used to discuss the orientation of some shape edges. Claim 1 teaches that "at least some of the shapes comprise at least one shape edge that parallels at least one tile edge." ('656 Patent col. 5, ll. 29-20.) Likewise, Claim 23 teaches a pattern design "positioning the shapes on the carpet web so that at least one shape has at least one straight side parallel to an edge of the carpet web...." ( Id. col. 6, ll. 54-56.) Claim 26 and its antecedent, Claim 28, similarly use the term "parallels" to discuss the orientation of shape edges in relation to the edges of carpet tiles, ( Id. col. 7, ll. 1-6, col. 8, ll. 1-7.)

The Court finds that the above claims teach that some shape edges will extend in the same direction as the edge of the carpet tile or web without intersecting that edge. The Court agrees with CAF, Mohawk, and Shaw, that the use of the term "parallels" in the '656 Patent's claims does not depart from its ordinary meaning. The Court turns to the specification to support the above analysis.

## 2. Specification

The '656 Patent specification's "Summary of the Invention" teaches that the carpet web "has a pattern of shapes having at least some straight edges that will *parallel* the tile edges but that appear to be randomly oriented and positioned within the pattern." ('656 Patent col. 2, ll. 21-24 (emphasis added).) The "Summary of the Invention" further explains that,

[t]he presence, within the pattern, of shapes with edges *parallel* to the edges of the tile insures that, if the shapes are partitioned when the web is cut into tiles, the partitioned shapes will not appear out of place, since the shapes of the pattern already include elements, having straight edges *parallel* to at least one of the tile edges, similar to the partitioned shapes, which have a straight edge defined by the straight edge of a panel.

( Id. col. 2, ll. 37-44 (emphasis added).)

The Court finds that the '656 Patent's specification supports the Court's finding *supra* Part III.H.1., that the term parallel does not depart from its ordinary meaning.

## 3. Summary

For the reasons discussed *supra* Parts III.H.1.-2., the Court finds that the term "parallels" is readily understood and does not depart from its ordinary meaning in light of the '656 Patent's claims and specification. Consequently, the Court declines to construe the term "parallels."

## V. Conclusion

ACCORDINGLY, the Court **CONSTRUES** the disputed claims in the '656 Patent as follows:

Disputed '656 Patent Term	Interface's Construction	CAF, Mohawk, and Shaw's Construction	Court's Construction
"orthogonal ambiguity" and its variants	"tiles may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of place to the ordinary viewer and thereby still achieving an	"may be laid in any side-by-side orientation with respect to adjacent tiles without looking out of	" tiles may be laid in any side-by-side orientation with respect to adjacent tiles

	appearance of continuity across the entire installation as if the tiles were part of a broadloom web. Installations of such tiles exhibit the appearance expected of installations of prior art carpet tiles oriented in the same direction, in which nap or pile direction differences at tile seams are disguised, but achieve this appearance regardless of the relative orientation of the tiles"	place to the ordinary viewer and thereby still achieving an appearance of continuity across an entire installation as if the tiles were part of a broadloom web"	without looking out of place to the ordinary viewer and thereby still achieving an appearance of continuity across the entire installation as if the tiles were part of a broadloom web"
"similar intensity" and its variants	"colors of a pattern have similar intensities when no one color significantly stands out from the other colors"	_____	"no one color significantly stands out from the other colors"
"background color"	"a color the tiles have in common"	CAF: "a single color of yarn that is threaded up on one row of needles from a conventional carpet tufting machine, and that is of the lowest-uniform height present across the entire web and visible in all areas of the pattern, and that is the only yarn shown in some areas of the pattern"	"a color present throughout the pattern that forms pattern shapes alone or combined with another color or a combination of other colors"
"without pattern alignment between adjacent tiles" and its variants	"without pattern alignment between adjacent tiles"	"without the edges or the periphery of pattern shapes on one carpet tile aligning or matching up with the edges or periphery of pattern shapes on a carpet tile immediately next to it when tiles are arranged side-by-side in a floorcovering installation"	"without alignment between the edges of shapes on adjacent tiles"
"the carpet tiles cut from the web all comprise a common color"	"the carpet tiles cut from the web all comprise a common color"	"the carpet tiles cut from the web all share at least one color, other than the background color"	"the carpet tiles cut from the web all comprise a common color"
"in any side-by-side or rotational	"in any side-by-side or rotational orientation relative to each other"	"in one of sixteen possible positions relative to each other"	"in any side-by-side or ninety-degree increment rotation relative to each other"

orientation  
relative to  
each  
other"

		"Positioning the tiles in this manner does not exclude any method of installation"	
"shapes"	"shapes"	"forms distinguished from their surroundings by an outline and formed by a color or combination of colors"	"forms comprised of a color or combination of colors"
"parallels"	"parallels"	"extends in the same direction, everywhere equidistant to, and not meeting with"	"parallels"

IT IS SO ORDERED.

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