UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF CONNECTICUT

INTERMARK FABRIC CORPORATION, Plaintiff, v. MICROFIBRES, INC. Defendant.	Civil Action No. 3:02 CV 1267 (AVC)

MEMORANDUM OF LAW IN SUPPORT OF:

PLAINTIFF INTERMARK FABRIC CORPORATION'S PROPOSED CLAIM CONSTRUCTION

ORAL ARGUMENT REQUESTED

I. INTRODUCTION

This is an action for patent infringement action concerning a flocked fabric. The Plaintiff, Intermark Fabrics Corporation ("Intermark"), commenced this action seeking a declaration of non-infringement and patent invalidity based on its own sale of a product that predates the asserted patent, United States Patent No. 5,981,021, entitled Transfer Printing Flocked Fabric (the "'021 patent"). In fact, the accused product, known as *Frosty* was produced by Intermark prior to the time its competitor, the Defendant Microfibers, Inc. ("Microfibers"), applied for its patent. Moreover, Microfibers supplied the flock for the product and was familiar with the production process and yet applied for a patent without disclosing the *Frosty* product to the Patent Office. Microfibers contacted various customers of Intermark in an effort to squash it. Intermark has ceased operations.

A flocked fabric is created by taking a substrate, such as a woven textile, coating an adhesive onto the textile substrate, and placing the coated substrate in a flocking chamber. In the flocking chamber, small pieces of flock, typically short pieces of nylon strands, are electrostatically charged, causing them to adhere into the adhesive in an upward orientation. The result is a material which has the appearance of velvet. Flocked fabrics have a wide range of applications such as clothing and upholstery. Flocked fabrics may be printed by a variety of printing methods – such as transfer printing and wet printing. Flocked fabrics are frequently referred to as Greige goods prior to finishing operations such as transfer printing.

During the prosecution of the asserted '021 patent, which last nearly six years and involved numerous rejections, the inventor distinguished the prior art by relying on the term "dark." This term appears in the independent claims 1, 11, 12, 13 and 20 of the '021 patent. The use of pigmented adhesives for flocked fabrics was known. The inventor argued that the use of

"dark" pigmented adhesives was novel. Thus, the term "dark" as it appears in the asserted claims needs to be construed by the Court.

The term "dark" is a term of relative value that is very difficult to define. There is no known standard for the term dark in the textile industry. Moreover, the specification of the '021 patent does not specifically define the term "dark" in any scientific manner. During the prosecution of the '021 patent, the patent office repeated rejected the claims of the '021 patent on the basis that the term "dark" was vague. Microfibers submitted samples to the patent office (which it did not retain) to support a definition of dark. There is simply no way to define the term "dark" according to the specification. The samples are not part of the patent specification (and do not exist).

Given the absence of a scientific definition in the prosecution history, in order to construe the term "dark", extrinsic evidence is necessary. The term "dark" should be defined according to its light spectrum with reference to some objective measure. One approach is the use of the Munsell Chart, as described in greater detail below. With the Munsell Chart, the lightness or darkness of the color is expressed by numbers in the range of 1 to 9.

Intermark contends that the term "dark" should be defined by the Court as " a color having a value of 1 or close to 1 under the Munsell System." In support of its contention, Plaintiffs offer the expert declaration of Ronald Perry, Ph.D., Professor of Textile Chemistry, *Emeritus*, at the University of Massachusetts, Dartmouth.

II. THE LAW OF CLAIM CONSTRUCTION

By way of review, courts analyze infringement in two steps. First, the court determines the meaning and scope of the patent claims asserted to be infringed as a matter of law. The second step is comparing the properly construed claims to the device or method accused of

infringing. *Markman v. Westview Instruments Inc.*, 52 F.3d 967 (Fed. Cir. 1995) *(en banc), aff'd*, 517 U.S. 370 (1996) (patent construction, including terms of art within its claim, is exclusively within the province of a judge).

Claim terms will be given their ordinary and accustomed meaning, unless there is "an express intent to impart a novel meaning to [the] claim [term]" by the patentee. *York Products, Inc. v. Central Tractor Farm & Family Center*, 99 F.3d 1568, 1572 (Fed. Cir. 1996); *see also Sage Products., Inc. v. Devon Industries, Inc.*, 126 F.3d 1420, 1423 (Fed. Cir. 1997). In order to impart a specific meaning to a claim term, i.e., for the inventor to be her own lexicographer, such lexicography must appear "with reasonable clarity, deliberateness, and precision." *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir.1994); *see also Abbott Laboratories v. Novopharm Ltd.*, 323 F.3d 1324 (Fed. Cir. 2003).

Where a claim term is unambiguous in light of the specification and file history, there is no need to resort to extrinsic evidence. *See Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996). However,

> extraneous evidence is to be used in the court's understanding of the patent . . . such evidence [is considered to be] an aid to the court in coming to the correct conclusion as to the true meaning of the language employed in the patent.

Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448, 1454 N.3 (Fed. Cir. 1998) (*en banc).*

III. BACKGROUND

a. The Prosecution History

On July 31, 1992, the first related patent application to the '021 patent, which contained 25 claims, was filed by Microfibres with the Patent Office. The inventor was listed as James R.

McCulloch ("McColluch"). The '021 patent is assigned to Microfibres, and McCulloch is listed as the sole inventor.

Microfibres set forth the problem in the prior art to which the proposed invention addressed, as follows:

> [I]t has not been possible previously in printing the flocked fabrics with transfer printing to achieve deep, dark shades using conventional print papers. When this is attempted, there are problems of grin-through, crocking and inferior lightfastness. The fabric substrate can be seen between the fibers, interfering with the desired visual effect of the printed pattern. Efforts to add dyestuff to print paper in order to achieve deeper shades have been unsuccessful because dyestuff in such heavy concentrations is not fully absorbed into the fibers. As a result the dyestuff can rub off, an undesirable and commercially unacceptable result. The rubbing off of colors in this fashion is known as "crocking." Accordingly there is a need in the art for an improved method for transfer printing onto flocked fabrics to achieve deep, dark shades, and also a need for deep, darkly transfer printed flocked fabrics.

See Declaration of William J. Cass, Ex. 1, '021 Patent Prosecution History, Book 1, Tab 1, p. 1 - 2.

Microfibres represented to the Patent Office that the conventional way that flocked fabric was made was with a clear adhesive. For example, the '021 patent provides that "[f]locked fabrics are known to be made by adhering short fibers, typically nylon or polyester to a substrate using, conventionally, a clear adhesive." Ex. 1, '021 Patent Prosecution History, Book 1 Tab 1, p. 1.

In the Detailed Description of the Preferred Embodiments, the '021 patent reaches that, under the invention, a preferably dark pigmented adhesive is used in lieu of the conventional clear adhesives to manufacture flocked fabric:

> The present invention is made possible, in part by preparation of the flocked fabric. In lieu of using the conventional clear adhesives used for adhering the flock to the substrate, a pigmented adhesive is substituted ... A pigment is added to the basic adhesive, the precise color of the pigment being dictated by desired results. Preferably, the pigment is of a dark color to help achieve the deep, dark color in the printed fabric. The pigment may be black or other dark shades such as navy blue, dark red, dark green, or the like.

Ex. 1, '021 Patent Prosecution History, Book 1, Tab 1, pgs. 3-4.

On March 17, 1993, the examiner issued the first Office Action wherein all of the claims were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Microfibres regarded as the invention. The examiner set forth a number of claim elements that were indefinite, one of which was "a dark pigmented adhesive." Ex. 1, '021 Patent Prosecution History, Book 1, Tab 5, p. 2.

In its response to the Office Action, Microfibres argued that one benefit of adding a dark pigment to the base adhesive is that a lower pressure is then required to transfer print and thus the pile of the fabric is not crushed during the transfer print process. Ex. 1, '021 Patent Prosecution History, Book 1, Tab 6, p. 3. Microfibres then addressed the rejection that the term "dark pigmented adhesive" was indefinite by stating "whether the pigmented adhesive is a light or dark color is something every first-grader knows and needs no elaboration." Ex. 1, '021 Patent Prosecution History, Book 1, Tab 6 p. 5. Microfibres also submitted to the PTO six fabric samples that consisted of two samples of three different print patterns. Microfibres represented that in each of the three pairs of samples, one sample was made in accordance with the invention, i.e. a "darkly pigmented adhesive" and the other with "a conventional, light colored adhesive." Ex. 1, '021 Patent Prosecution History, Book 1, Tab 6, p. 3.

In an Office Action dated November 3, 1993, the examiner maintained the rejection of all the claims under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Microfibres regarded as the invention. Specifically, with respect to claim 1 (which is claim 1 in the issued '021 patent) the examiner stated:

> In claim 1, the term dark is seen to be indefinite since it is a relative term. See patent 3,999,940 col. 3 lines 61-66 where "darker color" is described. Yet the claims in this patent do not contain the offending terms since it is indefinite. Applicant has not even defined dark in the specification, through that would not cure the claim.

In an Office Action dated November 3, 1993 and in each of the six office actions that followed during the prosecution of the '021 patent over the course of the next several years, the examiner repeatedly rejected all of the claims in the application as obvious under 35 U.S.C. § 103. In doing so the Examiner cited to the following three patents: (1) United States Patent No. 4, 314,813 to Masaki (hereinafter "Masaki Patent"); (2) United States Patent No. 4,049,374 to Rejito (hereinafter "Rejito Patent"); and United States Patent No. 2,308,429 to Smith, et. al. (hereinafter "Smith Patent"). See Ex. 1, '021 Patent Prosecution History, Book 1, Tabs 7, 11, 17, 22, 27, 31 and 34; Ex. 3, Masaki Patent; Ex. 4, Rejito Patent; and Ex. 5, Smith Patent.

In each such office action, the examiner opined that it would have been obvious to one skilled in the art to combine the Masaki Patent and the Rejito Patent, which teach transfer printing flocked fabric, with the Smith Patent, which "teaches flocking a textile substrate by adhering the flock to the substrate with a blue pigmented 'cement' which is the adhesive used to adhere the flock to the substrate", to create the flocked fabric claimed by Microfibres. Ex. 1, '021 Patent Prosecution History, Book 1, Tabs 7, 11, 17, 22, 27, 31 and 34.

On December 1, 1993, following the issuance of the November 3, 1993 Office Action, the examiner held an interview with patent counsel for Microfibres. At issue during the interview was the indefinitness of the term "dark" under 35 U.S.C. §112 and how Microfibres could better define that term in the specification of the patent. During the interview on December 1, 1993, in conjunction with discussing the "112 problems", the examiner referenced

the Smith Patent and United States Patent No. 4,963,422 to Katz et. al (hereinafter "Katz Patent"). Ex. 1, '021 Patent Prosecution History, Book 1, Tab 9 and Ex. 8, Katz Patent .

On January 24, 1994, following the interview, Microfibres submitted a response to the November 3, 1993 Office Action. Microfibres amended claim 13 of the initial '021 patent application (which is claim 13 of the '021 patent) which claimed only a "pigmented adhesive", by adding the limitation that the pigmented adhesive be a "dark" pigmented adhesive. Ex. 1, '021 Patent Prosecution History, Book 1, Tab 10, p. 1.

In that same response, Microfibres represented that while it is known to use "color adhesives" in the manufacture of flocked fabrics but did not disclose that it was known in the prior art to use dark pigmented adhesives in the manufacture of flocked fabrics. Ex. 1, '021 Patent Prosecution History, Book 1, Tab 10, p.4.

Microfibres then distinguished the Smith Patent by arguing that it did not teach dark pigmented adhesives as the blue pigment in the cement disclosed in Smith is only one part in 80,000, and therefore the blue pigment "would clearly be insufficient to impart any significant color to the cement." Microfibres went on to distinguished the Katz Patent by arguing that it "only mentions that colored adhesives ' --- can be used to create further effects thereby varying the ornamental appearance of the product ---'" and that Katz and the prior art generally fail to disclose transfer printed flocked fabric with a dark pigmented adhesive. Ex. 1, '021 Patent Prosecution History, Book 1, Tab 10, pgs. 1, 4-5.

In the next office action which was dated April 18, 1994, and in the five office actions thereafter, the examiner stated that Microfibres acknowledged prior use of "pigmented adhesives" but that Microfibres argued that the prior art generally fails to disclose transfer printed flocked fabric with a "dark" pigmented adhesives. In each of those office actions, the

examiner also questioned the novelty of pigmenting the adhesive under the invention, as the examiner saw no appreciable difference in the samples submitted by McCulloch on August 17, 1993 and thus saw no evidence of a superior product. Ex. 1, '021 Patent Prosecution History, Book 1, Tabs 11, 17, 22, 27, 31 and 34.

Without responding to the April 18, 1994 Office Action, on August 22, 1994, Microfibres filed a continuation application under 37 C.F.R. 1.62 of the then patent application filed on July 31, 1992, and on September 30, 1994, Microfibres abandoned the patent application filed on July 31, 1992. Over a period of four years following the continuation application filed on August 22, 1994, Microfibres filed five more continuation applications, four of which Microfibres abandoned without any substantive prosecution. Ex. 1, '021 Patent Prosecution History, Book 1, Tabs 13, 14, 20, 21, 24, 25, 29, 30, 32, 33 and 36.

Before an office action issued in response to the sixth continuation application filed by Microfibres on November 13, 1998, Microfibres filed a Preliminary Amendment that included a Declaration of William Laird under 37 C.F.R. § 1.132 wherein Laird attributed the reason for filing several continuation applications from 1994 through 1998 with no substantive prosecution to scheduling problems:

> The Examiner is no doubt curious as to why a number of continuations have been filed without substantive prosecution. The reason is that applicant had intentions to run tests to generate the evidence suggested by the Examiner, but was having difficulty in arranging scheduling of the test.
>
> Ex. 2, '021 Patent Prosecution History, Book 2, Tab 3, pgs. 3-4.

On May 27, 1999, a Notice of Allowability was issued by the PTO and attached thereto was the Examiner's "Reasons for Allowance." Under the Reasons of Allowance, the examiner opined that the Smith Patent suggests only "the addition of a small amount of pigment to the adhesive." The examiner then opined that Microfibres solved the problem of grin-through:

> Thus there are two statements of the prior art reinforcing applicant's position that a dark adhesive is necessary to reduce grin through. Applicant has solved the same problem in a manner not taught in the prior art; that is by adding a pigment to the adhesive. (emphasis added)

Ex. 2, '021 Patent Prosecution History, Book 2, Tab 8.

IV. ANALYSIS

When construing the claims, a court first looks to the intrinsic evidence of record. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The patent claims, specification, and the prosecution history constitute intrinsic evidence. *Id.* In most cases, the intrinsic evidence alone will determine the proper meaning of the claim terms. *Id.* at 1583. However, courts have discretion to admit and use extrinsic evidence. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1319 (Fed. Cir. 2005). "Extrinsic evidence consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman,* 52 F.3d at 980.

In examining the intrinsic evidence of record, the analysis begins with the language of the claim itself, including the context in which individual terms appear. *Phillips*, 415 F.3d at 1312. The context of the surrounding claim language often determines the meaning of the claim. "Quite apart from the written description and the prosecution history, the claims themselves provide substantial guidance as to the meaning of particular claim terms." *Id.* at 1314. However, the Court must always consider the claim language in the context of the patent specification. *See Markman*, 52 F.3d at 979 (stating "[c]laims must be read in view of the specification, of which they are a part."). "The specification contains a written description of the invention which must be clear and complete enough to enable those of ordinary skill in the art to make and use it." *Vitronics Corp. v. Conceptronics, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). The specification also serves as a dictionary when it defines claim terms expressly or by implication. *Id.* As the

Federal Circuit recently reaffirmed *en banc*, "the specification 'is the single best guide to the meaning of a disputed term.'" *Phillips*, 415 F.3d at 1315 (quoting *Vitronics*, 90 F.3d at 1582).

Absent an indication in the intrinsic record that the patentee acted as his own lexicographer or disclaimed the meaning of the terms, there is a heavy presumption in favor of the ordinary meaning of claim language as understood by one of skill in the art in view of all the evidence. *Bell Atlantic Network Svcs., Inc. v. Covad Comms. Group, Inc.*, 262 F.3d 1258, 1268 (Fed. Cir. 2001).

Extrinsic evidence should be relied upon only if the meaning of a term remains unclear after the court has fully evaluated the intrinsic evidence. *See, e.g., Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1332 (Fed. Cir. 2001); *Vitronics*, 90 F.3d at 1583. "Extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Phillips*, 415 F.3d at 1319. Extrinsic evidence may not be used to contradict the meaning of the claim terms as defined by the claims themselves, specification, and prosecution history. *Id.* at 1319. Accordingly, while extrinsic evidence, such as technical dictionaries and inventor deposition testimony may be useful "in order to better understand the underlying technology," the Federal Circuit in *Phillips* instructed clearly that intrinsic evidence is to be accorded primary significance in performing the task of claim construction. *Phillips*, 415 F.3d at 1319, citing *Vitronics*, 90 F.3d at 1584, n. 6.

In the instant case, the specification is devoid of any definition of the term "dark" with reference to any objective and scientific standard. Therefore, Intermark contends that the use of extrinsic evidence is appropriate in the construction of the term "dark" as it appears in the asserted claims.

In that regard, Intermark respectfully submits the Expert Declaration of Ronald S. Perry, Ph.D., Professor of Textile Chemistry, *Emeritus*, at the University of Massachusetts, Dartmouth. From 1973 through 1999, Dr. Perry was a Professor of Textile Chemistry at the University of Massachusetts, Dartmouth, where he taught a variety of courses including: Textile Chemistry, Physical Chemistry of Dyeing, Physical Chemistry of Surface Active Agents, Chemical Technology of Finishing and Polymer Chemistry. Additionally, Dr. Perry taught a class entitled Color Science which included subjects such as the source of color and methods to measure color. See Ex. 6, Declaration of Ronald S. Perry, Ph.D.

As noted by Dr. Perry, in the Summary of the Invention, the inventor implies that the use of dark pigmented adhesives in the manufacture of flocked fabrics is novel. In that regard, the '021 patent provides: "The disperse dye makes a deep, dark colored print. In a preferred embodiment, the pigment is black. Other dark pigments usable include those which are blue, green or red." Col. 2 lines 4 – 7. Flocked fabrics may be used for transfer printing, wet printing, piece dying, and other forms of processing. See Ex. 6, Declaration of Ronald S. Perry, Ph.D. and Ex. 7, '021 Patent.

According to Dr. Perry, generally, the term "dark" is not used in the textile industry to describe colors because of the difficulty in defining the term given its subjective nature. Nevertheless, the word "dark" describes a color of low or very low lightness. Lightness is one of three standard attributes used to describe the appearance of color. One of the earliest and most widely used systems for describing the color of materials is the Munsell color system, which has gained international acceptance. It is described in unabridged dictionaries and encyclopedias as well as in specialized publications of art, design, color photography, television, printing, paint, textiles and plastics. It is recognized as a standard system of color specification around the

world. The Munsell system can be used to describe what is meant by the word "dark" as in "*dark pigmented adhesive*". Ex. 6, Declaration of Ronald S. Perry, Ph.D.

The Munsell system is based on a standardized set of painted color surfaces, commonly called color chips, arranged in a globe-like 3-D space. See Figure 1 below from Dr. Perry's report below. The goal of the Munsell system is to present an arrangement of a full sample of color in equal perceptual intervals over the entire three dimensions of the color space. All colors are referenced using the so-called Munsell Notations which involves a combination of letters and numbers.

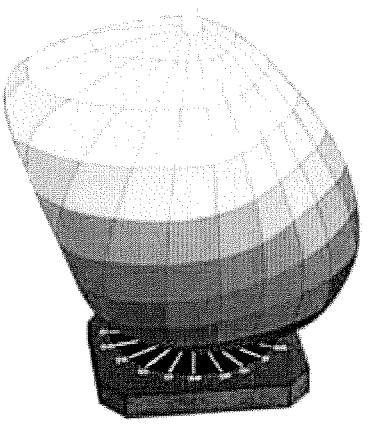

Figure 1. An Illustration of the Munsell Color Space

Each color is described by three attributes: HUE, VALUE AND CHROMA. HUE is the attribute which gives rise to color names such as blue, green, yellow, etc. VALUE is the attribute that expresses the ***lightness or darkness*** of the color. This is the characteristic that describes the color as lighter (brighter) or darker (duller). Value is expressed by numbers in the range of 1 to 9. Pure black (an ideal black) would be 0 and a pure white (an ideal white) would be 10, however, there are no color chips for these colors, since they are not possible to achieve. CHROMA is the attribute that expresses the strength or purity of the color. This is the

characteristic that indicates the saturation of the color or the amount of color in the object. Ex. 6, Declaration of Ronald S. Perry, Ph.D.

Hue is limited to one turn around the circle. See Figure 2 from Dr. Perry's Declaration below.

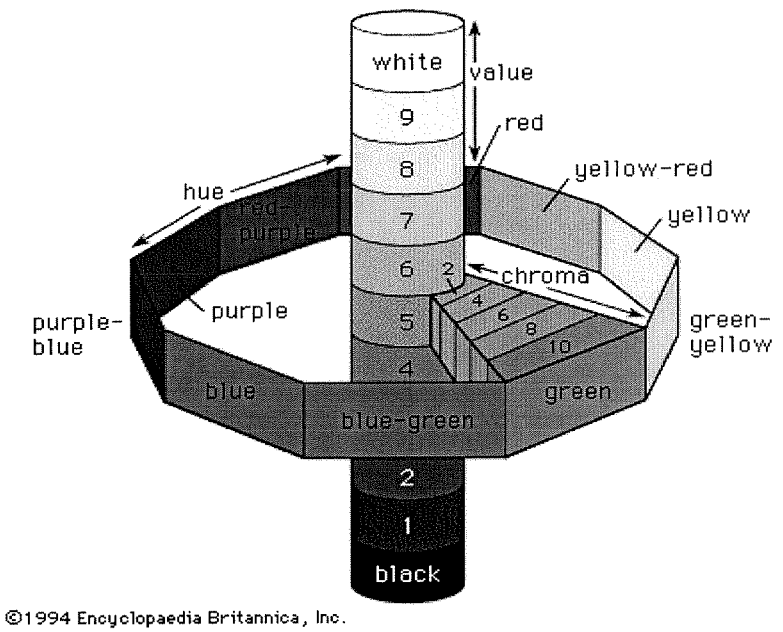

Figure 2. An Illustration of Hue, Value and Chroma With the Munsell System.

The lightness or darkness attribute (Value) is limited on the lower end of the vertical axis by pure black, which is as ***dark*** as a color can be, and on the top by pure white, which is as ***light*** as a color can be. Chroma is expressed by numbers 0 (achromatic) to 16 or more (highly saturated). Figure 1 illustrates the attributes of Hue, Value and Chroma in the Munsell system. Ex. 6, Declaration of Ronald S. Perry, Ph.D.

Thus, according to the expert opinion of Dr. Perry, dark pigmented adhesives would be those having a low or very low lightness and thus a value of 1 or very close to 1 in the Munsell system.

V. CONCLUSION

The specification of the '021 patent is devoid of any definition of the term "dark" with reference to any objective and scientific standard. Therefore, Intermark contends that the use of extrinsic evidence is appropriate in the construction of the term "dark" as it appears in the asserted claims. The term "dark" should be defined by the Court as "a color having a value of 1 or close to 1 under the Munsell System."

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CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the Plaintiff, Intermark Fabric Corporation's Proposed Claim Construction was filed via the Court's ECF system upon all counsel of record registered with the ECF system and a courtesy copy was served via regular mail on this 31st day of July, 2006 upon:

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