

# **United States Court of Appeals for the Federal Circuit**

05-1074, -1075, -1100

ON DEMAND MACHINE CORPORATION,

Plaintiff-Cross Appellant,

v.

INGRAM INDUSTRIES, INC. and LIGHTNING SOURCE, INC.,

Defendants-Appellants,

and

AMAZON.COM, INC.,

Defendant-Appellant.

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Appealed from: United States District Court for the Eastern District of Missouri

Magistrate Judge Mary Ann L. Medler

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DECIDED: March 31, 2006

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Before NEWMAN, MAYER, and BRYSON, Circuit Judges.

NEWMAN, Circuit Judge.

Ingram Industries, Inc., Lightning Source, Inc., and Amazon.com, Inc. (collectively the defendants) appeal the judgment of the United States District Court for the Eastern District of Missouri,<sup>1</sup> holding them liable for infringement of United States Patent No. 5,465,213 (the Ross patent) owned by On Demand Machine Corporation (ODMC). We

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<sup>1</sup> On Demand Machine Corp. v. Ingram Indus., Inc., No. 4:01cv1668MLM (E.D. Mo. Oct. 28, 2004) (judgment); July 23, 2004 (order denying enhancement of damages); July 5, 2003 (claim construction order).

conclude that the jury verdict of infringement was based on a partly incorrect claim construction, and that on the correct construction a reasonable jury could not find the patent to be infringed. Accordingly, the judgment of infringement is reversed and the damages award vacated. The grant of a royalty-bearing license during appeal is vacated, and the issues raised by cross-appeal are moot.

## BACKGROUND

The Ross patent is for a "System and Method of Manufacturing a Single Book Copy," wherein a single copy of a book is printed and bound, generally at the site of sale, upon provision to the customer of computerized information about the book. According to the Ross patent, a retail seller of books provides a computer console for customer use, wherein the computer stores promotional and other information such as book reviews and price, and also stores the complete text of the book and the design of its cover. The customer can browse through the stored information, inspect the text, and select a book for purchase; the book is then printed and bound, preferably at the same site. The patent's Summary of the Invention describes the system as follows:

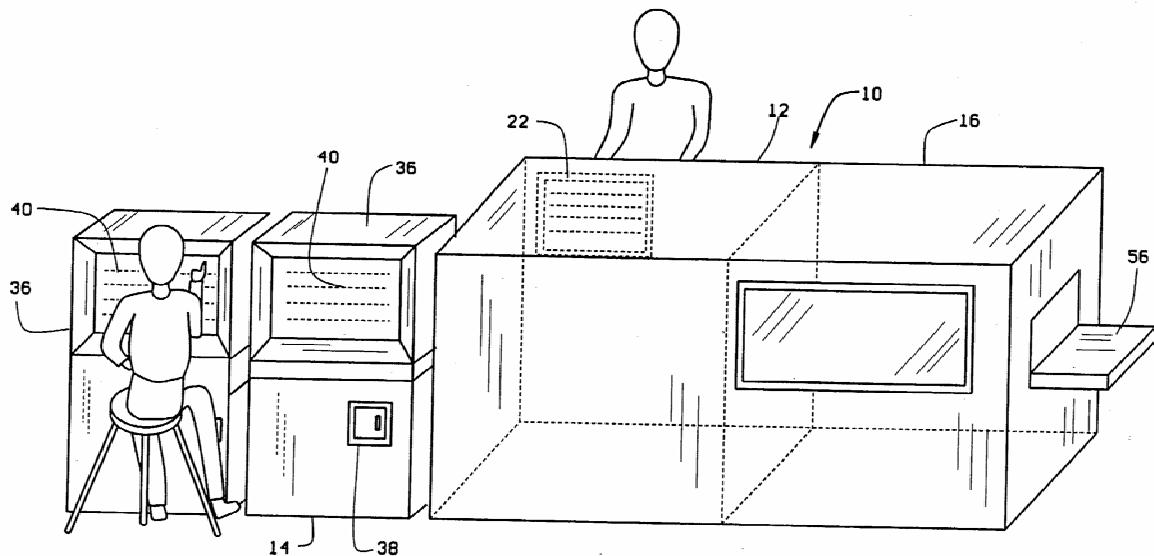
A customer module (e.g. a customer kiosk) permits the consumer to access the promotional sales information on a display screen which may include general information such as a list of best sellers or specific information (e.g. a sample chapter) about individual books in which the consumer may have some interest. Such promotional sales information may include a graphical simulation of the book, descriptive information provided by the publisher, as well as a synopsis and critique of the book by a book reviewer presented in full motion video and stereo sound. The consumer may browse though the introduction, abstracts or selected pages of the book on the computer module screen.

...

It is therefore an object of the invention to provide a book manufacturing system which is capable of storing data corresponding to the text and color graphical cover of tens of thousands of different books, as well as promotional sales text and color graphics for aiding the consumer in choosing

a book for purchase, and facilitate the high speed manufacture of a single copy of a selected book on the immediate premises while the customer waits for a very short time.

Col. 1, line 63 - col. 2, line 8; col. 3, lines 7-14. The patent explains the advantages of providing promotional information to the customer, along with immediate production and delivery of the selected book. Patent Figure 2 shows a sales kiosk with the customer at the computer, and adjacent printing/binding equipment:



F I G . 2

Defendant Lightning Source is a book printing company with a factory in LaVergne, Tennessee, and defendant Ingram Industries is the corporate parent of Lightning Source. Lightning Source prints and sells books as ordered by publishers, wholesalers, and retailers

such as Amazon.com, but does not sell directly to the public. Purchasers may order books from Lightning Source through its website or by electronic data interchange (EDI), identifying the book by its title and author or ISBN (International Standard Book Number). Lightning Source usually prints books in batches, often as large as several hundred books, but may also print single copies if ordered. Lightning Source testified that the turn-around time from order until delivery ranges from one to fifteen days. Defendant Amazon.com is a seller of books and other products to the public on the internet: its internet website provides promotional and sales information on individual books, and receives orders from customers. Amazon.com does not print books, but may order single or multiple copies from Lightning Source to fill orders from the public.

While the Ross patent application was pending, Mr. Ross offered to license his invention to Ingram Industries, a commercial printer. They entered into a one-year confidentiality agreement beginning in February 1995, and Mr. Ross disclosed his patent application and business plans to Ingram. The Ross patent issued on November 7, 1995. Ingram sought the advice of counsel, who advised that Ingram could practice on-demand printing in a non-infringing manner. In September 1996 Ingram informed Mr. Ross that Ingram was not interested in obtaining a license. Ingram then created a subsidiary company, Lightning Source, to print books to order for resellers but not for the general public.

In 1997 ODMC requested reexamination of the Ross patent, citing several additional references. Claims 7 and 8 were duly confirmed by the Patent and Trademark Office, and are as follows (with bracketed numbers as added by the district court):

7. A method of high speed manufacture of a single copy of a book comprising the steps of: [2] storing the text of a plurality of books in a computer, [3] storing a plurality of covers for books to be printed in said computer, said covers being stored in a bit mapped format,[4] storing sales information relating to said plurality of books in a computer, [5] providing means for a customer to scan said sales information, [6] enabling the customer to select which book or a portion of a plurality of books, [7] commanding a computer to print the text of said selected books and a cover in response to said selection, [8] retrieving the text of said selected books from a computer, [9] printing the text of said selected books on paper pages, and [10] binding said paper pages together to form said selected one of said books.

Claim 8 is similar, but varies in the clauses relating to the book cover:

8. A method of high speed manufacture of a single copy of a book comprising the steps of:[2] storing the text of a plurality of books in a computer, [3] storing sales information relating to said plurality of books in a computer, [4] providing means for a customer to visually review said sales information, [5] commanding a computer to print the text of a selected one of said books in response to a customer's selection, [6] retrieving the text of said selected one of said books from a computer, [7] printing the text of said selected one of said books on paper pages, [8] binding said paper pages together to form said selected one of said books, [9] storing graphical information corresponding to the cover of each of said books, [10] commanding a computer to reproduce said graphical information on a book cover, and  
[11] binding said paper pages together with said cover therearound.

After the reexamination Mr. Ross informed Ingram that Lightning Source was infringing the Ross patent and again offered a license. Ingram and Lightning Source again sought the opinion of counsel, who advised that "the printing of books in accordance with the flow diagram of Exhibit A by Ingram, would not constitute infringement of the claims of the Ross patent." (Opinion Letter of Sept. 20, 1996). Counsel also advised that infringement would not be found if the claims were limited to the embodiment shown in the specification, but cautioned that if a trier of fact were to look at the claim language in isolation from the specification and the embodiment described therein, infringement might be found, although

such broad claims would be of questionable validity in view of the prior art. Opinion letter of November 19, 1998 ("To be at risk, the claims would have to be interpreted very broadly and a broad interpretation of the claims could well invalidate them.") Lightning Source sought the opinion of other counsel, who were of similar view. Ingram and Lightning Source then declined the proffered license.

ODMC filed suit against Ingram Industries, Lightning Source, and Amazon.com, alleging infringement of claims 7 and 8 and that the infringement was willful. The district court held a Markman hearing and construed various claim terms, and instructed the jury accordingly. The jury returned a verdict of infringement, and awarded \$15,000,000 in compensatory damages. The jury also found the infringement to be willful, but the court denied ODMC's request for enhanced damages and attorney fees, explaining that this was "an extremely close case." On this appeal the defendants challenge the district court's construction of several claim terms, dispute various jury instructions, and argue that a reasonable jury could not have found infringement on the correct claim construction. They also state that the damages award was excessive or speculative.

The district court rejected ODMC's request for an immediate injunction, and authorized continuing operation by the defendants through the conclusion of all appellate and post-appellate proceedings at a royalty rate of 12.64425% of Lightning Source's revenues for operations covered by the patent. ODMC describes this remedy as a compulsory license and argues that it was improperly granted, citing the general rule that a patentee has the right to an injunction. This is the subject of ODMC's cross-appeal.

## DISCUSSION

Claim construction is a matter of law, and receives plenary review on appeal. Markman v. Westview Instruments, Inc., 52 F.3d 967, 978 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996); see Cybor Corp. v. FAS Technologies, Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (*en banc*). The reviewing court determines whether a reasonable jury, on correct instruction of law, could reasonably have reached the verdict reached by this jury; that is, was there substantial evidence in support of the verdict, when disputed questions of fact and factual inferences are resolved in favor of the party that received the verdict. See, e.g., Richardson v. Suzuki Motor Co., Ltd., 868 F.2d 1226, 1235 (Fed. Cir. 1989).

A jury instruction based on incorrect law, such as an erroneous claim construction that may have affected the verdict, receives de novo review. An erroneous jury instruction may warrant a new trial, see Ecolab Inc. v. Paraclipse, Inc., 285 F.3d 1362, 1373 (Fed. Cir. 2002), or the court may consider whether, on the correct instruction, the jury could have reached only one verdict. See, e.g., Cybor, 138 F.3d at 1454. The court's award of a royalty-bearing license during appeal and refusal to issue an immediate injunction are reviewed on the standard of abuse of discretion.

I

### ***Claim Construction***

The district court held a Markman hearing and construed the disputed terms of the claims. Only claim 8 was presented for jury verdict, and the claim terms are reviewed in that context.

These claim construction proceedings took place in 2002-03, at a time when conflicting Federal Circuit panel opinions were producing uncertainty as to the law of claim construction. See Phillips v. AWH Corp., 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*)

(clarifying the law and resolving conflicts in claim construction). This court in Phillips emphasized that the proper judicial construction of a claim and its terms is from the viewpoint of a person of ordinary skill in the field of the invention; the court must determine how such a person would understand the claim in the context of the particular technology and the description in the specification, with due reference to the prosecution history. Thus the court in Phillips, resolving conflict, stressed the dominance of the specification in understanding the scope and defining the limits of the terms used in the claim. 415 F.3d at 1313.

#### **1. "Sales Information," Clauses [3] and [4] of Claim 8**

Although this case was tried before Phillips was decided, the district court mostly applied the precedent whose correctness has been confirmed. For example, although the district court approached the construction of "sales information" in claim clauses [3] and [4] by reciting general dictionary definitions, as follows:

The word "sales" is an adjective modifying the word "information." The dictionary definition of "information" is "1. knowledge derived from study, experience, or instruction; . . . 5. a non accidental signal used as an input to a computer or communication system." [citing several dictionaries],

the court held, correctly, that "these multiple dictionary definitions of 'information' and 'sales' should be construed in a manner which is consistent with their use in the intrinsic record." The district court then defined "sales information" as "data stored in a computer which is involved in the promoting and selling of a book," and that the term is not limited to promotional information, but includes descriptive information as well, such as price. The jury instruction was as follows:

The term "sales information" in Claim 8 is broader than promotional information and may include descriptive information which would aid in making a sale to the customer, such as the price of the book, Library of Congress notice, fly sheets, synopsis, plot outline, author's biographical summary, price, SKU and/or ISBN number.

The defendants argue that the district court construed and instructed the jury on "sales information" too broadly. They argue that the patent specification and prosecution history require that "sales information" always includes information that is promotional in nature, and that the term is not met by the provision of only price and identifying information such as title or ISBN. ODMC responds that the claims are not limited to the embodiment illustrated in the specification, and that "sales information" is infringed even when there is no promotional information included with the identifying information. In finding infringement the jury necessarily accepted the ODMC view, for the orders to Lightning Source carry only identifying information, and Lightning Source provides no promotional information.

In general, the scope and outer boundary of claims is set by the patentee's description of his invention. Phillips, 415 F.3d at 1313-14. The specification makes clear that sales information is that which would help the consumer to choose a book. We agree with the defendants that the prosecution history requires this claim construction, for the inclusion of promotional information was a material distinction from the prior art. Mr. Ross stressed that in his invention a customer can browse among books based on information concerning the substantive content of the book. The specification identifies "descriptive material such as a synopsis, plot outline, author's biographical summary, etc." as promotional information. Col. 6, lines 18-21. ODMC stressed this distinction from the prior art on reexamination:

It is submitted that in no way is a job file descriptor to be confused with means for allowing a customer to browse among a multiplicity of books stored on Patent Owner's system and to select the book of interest for on-demand printing and delivery to the customer.

The reexamination examiner agreed, stating as the ground of patentability that:

The prior art does not disclose or suggest the storing of sales information for customer review which provides descriptive information relating to stored books in a computer in combination with the customer selection of books or portions of books, . . . .

ODMC states that the term "sales information" is met by identifying information such as title or ISBN alone, for the specification states that the computer stores a "Book Attributes Description" and lists eleven attributes that "include the title of the book, its ISBN number and other information (as shown in FIG. 5) which help to describe the book and to provide the potential customer [with information] about the book." Col. 11, lines 3-9. ODMC argues that the ISBN is sufficient sales information, and that this claim term is met whether or not promotional material such as book reviews are also made available to customers. ODMC argues that the jury necessarily so found, in finding infringement.

The defendants argue that ODMC disavowed this interpretation in order to obtain the patent, and represented to the patent examiner that the inclusion of promotional material is what distinguishes this invention from the prior art. We agree with the defendants that "sales information" requires that promotional information is stored in the computer that is made available to the customer. The ISBN or the title and author are file identifiers, not promotional information. The jury instruction, if read to mean that identifying information alone can satisfy the "sales information" term, is incorrect.

We conclude that on the correct construction of "sales information," claim clauses [3] and [4] cannot be met by Lightning Source's activities, for it was not disputed that the books

ordered from Lightning Source were ordered solely upon identifying data such as title or ISBN, without promotional information from Lightning Source. ODMC argues that Amazon.com provides sales information, producing joint infringement as to the 10% of Lightning Source's production that is ordered by Amazon. We discuss this aspect in Part II, infra.

## **2. "Customer," Clauses [4] and [5] of Claim 8**

The district court construed "customer" to mean anyone "who buys goods or services," and that the "customer" does not have to be an individual consumer or a retail customer. The court rejected the defendants' argument that the Ross patent is limited to "direct retail customer sales," and instructed the jury as follows:

The word "customer" is "one who buys goods or services" and, is not limited to a retail customer.

The defendants argue that this claim interpretation is broader than the specification allows, and that the entire focus of the Ross patented invention is that the "customer" is the person who orders and immediately receives the printed-to-order book, the ultimate consumer. The defendants point out that their orders come only from resellers, not from individual purchasers, and that printing is at a remote factory, not at the customer's site. They point out that the Ross specification describes the customer as a consumer who, upon choosing a book, sets in motion the "high speed manufacture of a single copy of a selected book on the immediate premises while the customer waits for a very short time." Col. 3, lines 7-15. The defendants argue that the district court, in refusing to include this limitation of "customer" in its Markman definition and jury instruction, placed too much weight on a dictionary definition of "customer" that is out of context.

ODMC argues that the patentee did not disavow the standard dictionary meaning of "customer," and that the Ross invention is not limited to any specific kind of customer. However, when the scope of the invention is clearly stated in the specification, and is described as the advantage and distinction of the invention, it is not necessary to disavow explicitly a different scope. See AstraZeneca AB v. Mut. Pharm. Co., 384 F.3d 1333, 1339-40 (Fed. Cir. 2004) ("Where the general summary or description of the invention describes a feature of the invention (here, micelles formed by the solubilizer) and criticizes other products (here, other solubilizers, including co-solvents) that lack that same feature, this operates as a clear disavowal of these other products"); Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1268-69, 1271 (Fed. Cir. 2001) ("the written description 'can provide guidance as to the meaning of the claims, thereby dictating the manner in which the claims are to be construed, even if the guidance is not provided in explicit definitional format.'" (quoting SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1344 (Fed. Cir. 2001))).

The Ross specification repeatedly reinforces its usage of the term "customer" as the retail consumer. See col. 7, lines 24-25 ("All customer actions are conducted within customer console 103"); col. 15, lines 59-60 ("the customer seats himself or herself in front of computer screen 157" as depicted in Fig. 2); col. 2, lines 8-12 ("if the consumer wishes to purchase a book, he may either pay for the book through a store clerk . . . or the consumer may enter his credit card into the system"). The specification distinguishes "general purpose machines . . . not specifically designed to be consumer operated for the on demand, automatic manufacturing of a single book at the point of sale." Col. 10, lines 37-43.

In Phillips, 415 F.3d at 1321, the *en banc* court explained that the role of the specification is to describe and enable the invention. In turn, the claims cannot be of broader scope than the invention that is set forth in the specification. Although we agree with the district court that the Ross invention does not concern itself with whether the "customer" reads the book or obtains it for resale, the focus of the Ross patent is immediate single-copy printing and binding initiated by the customer and conducted at the customer's site. The district court's definition of "customer" cannot eliminate these constraints in order to embrace the remote large-scale production of books for publishers and retailers.

**3. *"Providing Means for a Customer to Visually Review," Clause [4] of Claim 8***

The district court correctly viewed claim clause [4], "providing means for a customer to visually review said sales information," to be in means-plus-function form pursuant to 35 U.S.C. §112(6),<sup>2</sup> and instructed that the customer-operated computer module is the corresponding structure shown in the specification. The jury was instructed as follows:

Claim 8, clause 4, recites: "*providing means for a customer to visually review said sales information.*" The word "providing" in this clause has its usual and customary meaning, including to supply for use, contribute, or furnish.

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2 Section 112(6). An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The phrase "means for a customer to scan said sales information" in this clause [the words of claim 7] is interpreted to include a customer computer module, as described in Column 13, lines 54-67 and Column 14, lines 1-9, but does not include elements in the patent specification, which are referred to as being preferable, and thus a customer seat and ambient light are not included. Because this claim language concerns a means plus a function, the words "means for a customer to scan said sales information" include equivalents of a customer computer module which has the identical function permitting a customer to visually review the sales information which has been stored in a computer. Such equivalents include any computer monitor that gives a customer access to sales information that has been stored in a computer and any user input device for a customer to perform this function. These include accessing information by touching the computer screen or by use of structure that is equivalent thereof.

The defendants argue that the district court improperly invaded the province of the jury when it announced the equivalents that are "included," stating that it is the role of the trier of fact, here the jury, to determine equivalents under 35 U.S.C. §112(6). See Utah Med. Prods., Inc. v. Graphic Controls Corp., 350 F.3d 1376, 1383 (Fed. Cir. 2003) (equivalents under §112(6) is a question of fact); Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1268 (Fed. Cir. 1999) (comparing overall structures corresponding to the claimed function).

ODMC states that it was not incorrect for the district court, in the context of claim construction, to instruct the jury as to possible equivalents of the computer monitor and how the customer accesses the sales information. Although equivalents do not lose their factual identity in a means-plus-function context, in the uncertain boundary between law and fact in claim construction, the giving of an instruction that is not incorrect factually is not reversible error. The infringement issue as to this clause, as the district court's instruction implemented, is not whether the computer contains a touch screen, but whether the defendants "provide" a computer means to customers. See Acromed Corp. v. Safomor

Danek Group, Inc., 253 F.3d 1371, 1382 (Fed. Cir. 2001) (limitations on the structure for means plus function claims must relate to the function at issue).

It is undisputed that these defendants do not provide a computer to the customer. ODMC states that the defendants provide themselves with computers and that Amazon.com provides sales information that a customer can access through any computer. However, this is not the Ross invention, which requires that the bookseller "provides" the customer with the computer for use in this unified browsing/ordering/printing system. Although a witness for ODMC testified to his belief that the defendants encourage retail booksellers to provide computers for customer use, there was no evidence of such booksellers providing a computer system whereby the ultimate customer can initiate printing and binding of a selected book from data that had been entered into the computer.

Amazon states that while it provides computer-accessible information about books, including promotional information, it does not provide computers or computer kiosks. Consumers use their own computers to order books from Amazon, which in turn may place orders with Lightning Source. However, the consumer cannot order that the book be printed. As summarized by the district court:

Evidence at trial established that the books printed by Lightning Source are the result of various types of "demands": wholesalers use computer-ordering systems that do not involve any viewing of sales information available on any web site; two retailers order books in a similar manner; some publishers order books by EDI (Electronic Data Interchange) transactions where there is no use of any web site; other publishers order books by placing orders through the Lightning Source web site, but that ordering process requires no viewing of sales information; retail customers may order Lightning Source-printed books through Amazon's web site by reviewing sales information, but the books may have already been printed as a result of an Amazon order to Lightning Source.

Order of July 23, 2004, at 13. The evidence summarized by the district court was undisputed: Publishers, wholesalers, and retailers, order books from Lightning Source in various ways, but there is not direct ordering by retail customers.

**4. *"Printing on Paper Pages," Clause [7] of Claim 8***

It was undisputed at trial that Lightning Source prints on rolls or webs of paper rather than on pre-cut sheets. The district court ruled that "printing the text of said selected one of said books on paper pages" of clause [7] does not mean that the book must be printed on previously separated pages; that is, the printing can be on long webs or continuous rolls and then cut into pages. This resulted in the following jury instruction:

This clause requires the printing of one or more books. The term "paper pages" does not require the text to be printed on sheets of paper, as opposed to being printed on continuous rolls or any other of a variety of forms of paper, although the book which is produced by the process must be comprised of pages as opposed to rolls.

The defendants argue that this interpretation and instruction are incorrect, and that the claim requirement that the book be printed "on paper pages" means that the paper is in the form of pages when printed, rather than being cut into pages after printing. The defendants stress that the Ross patent is for an immediate-production automatic printing process, and not one that requires commercial-scale equipment for paper-cutting after printing.

The specification states that the patented invention is the printing of individual copies of books at the customer site rather than in a "factory setting," col. 1, lines 13-19, and illustrates a "page printer 26," which prints a "stack of paper text pages," col. 8, lines 22-40, showing page-size paper. The specification describes the Ross invention only as printing on individual pages, as distinguished from a "factory setting" and the production of multiple

copies. The Ross invention, and the claims, are directed to the on-site printing and binding of a single copy, for which printing on large webs and the requirement of cutting to page size would require equipment and procedures inimical to the substance of the Ross invention.

We conclude that the district court erred in construction of this clause. When this clause is correctly construed, no reasonable jury could find that it reads on a process of printing on large sheets or webs of paper that require the further processing step of cutting into pages after printing.

## **5. *The Preamble***

The district court held that the preamble phrase "high speed manufacture of a single copy of a book" does not limit the claim to immediate printing or require that only one copy be printed, and instructed the jury that:

The phrase "high speed manufacture" in the preamble does not limit the claim to require that all other steps, such as a customer's scanning sales information, selecting a book, and then printing and binding a book must take place within a short period of time. The preamble also does not limit the claim to the manufacture of a "single copy" of a book, as opposed to manufacturing several or multiple copies. . . . and does not require that the book be bound with a cover.

The defendants argue that this instruction is incorrect, and that the preamble explicitly limits the claim, in that it states the invention to which the claim is directed. They also point out that clauses [9], [10], and [11] require a cover.

In considering whether a preamble limits a claim, the preamble is analyzed to ascertain whether it states a necessary and defining aspect of the invention, or is simply an introduction to the general field of the claim. In Kropa v. Robie, 187 F.2d 150, 152 (CCPA

1951), the court aptly described the inquiry as whether the preamble is "necessary to give life, meaning and vitality to the claims or counts." See, e.g., Poly-America, L.P. v. GSE Lining Tech., Inc., 383 F.3d 1303, 1309-10 (Fed. Cir. 2004) (the specification described the "blown-film" as a fundamental characteristic of the invention, and its use in the preamble limited the claims); In re Cruciferous Sprout Litigation, 301 F.3d 1343, 1347-48 (Fed. Cir. 2002) (the preamble phrase "rich in glucosinolates" was limiting because the patentee relied on the preamble to distinguish the prior art in prosecution); General Elec. Co. v. Nintendo Co., Ltd., 179 F.3d 1350, 1361-62 (Fed. Cir. 1999) (where the specification made clear that the invention was a mode of display of binary data on a raster scanned display device rather than all display devices, the preamble language "displaying a pattern on a raster scanned display device by mapping bits" was a claim limitation).

The preamble serves to focus the reader on the invention that is being claimed. We conclude that the preamble in this case necessarily limits the claims, in that it states the framework of the invention, whose purpose is rapid single-copy printing of a customer's selected book as stated in clauses [5], [6], [7], and [8]. The high speed manufacture of a single copy is fundamental to the Ross invention, for the specification highlights that the customer may have a printed and bound copy within "three to five minutes." Col. 2, line 33. While ODMC points out that Lightning Source's web site touts "In one week, we craft 70,000+ books, one at a time," such mass production is not the invention described and claimed by Ross.

The district court's instruction that the preamble in this case does not limit the claim was incorrect, for the entirety of the claim implements the preamble's high speed manufacture of a single copy, upon customer review of the stored sales information,

promptly printing and binding the single copy in response to the customer's selection. The preamble embraces the totality of these limitations, and limits the claim to the subject matter of the preamble.

## II

### ***Conclusion***

The parties disputed most of the claim terms. Although we agree with the district court that each term standing alone can be construed as having varying degrees of breadth, each term must be construed to implement the invention described in the specification. See Phillips, 415 F.3d at 1316 (Fed. Cir. 2005) ("The 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."); Autogiro Co. of Am. v. United States, 384 F.2d 391, 397-98 (Ct. Cl. 1967) ("use of the specification as a concordance for the claim . . . is a basic concept of patent law"). Care must be taken lest word-by-word definition, removed from the context of the invention, leads to an overall result that departs significantly from the patented invention.

The defendants argue that no reasonable jury could have found that defendants infringe claim 8 on application of the correct claim construction. Lightning Source stresses that its system of producing books, usually in batches of 300, is the factory setting that Ross distinguished as a basis of patentability. The defendants concede that on occasion a single copy may be ordered and printed by Lightning Source, but that generally multiple copies are ordered and produced. Defendants argue that neither Lightning Source nor Ingram nor Amazon provides customers with access to computers, and that no defendant provides or offers to customers an apparatus for point-of-purchase manufacture of a book.

None of the defendants provides a system of computer access, nor sites for immediate printing and binding. The district court observed that wholesalers and publishers and stores, when ordering from Lightning Source, do not view promotional information; and that when retail customers order from Amazon's website the books may already have been printed.

ODMC responds that the customers provide themselves with computers, whether individual consumers or resellers. ODMC states that even if this court deems promotional material to be required by "sales information," and even if Lightning Source and Ingram do not provide promotional material, Amazon.com does provide such information to customers by computer. ODMC argues that when a customer orders from Amazon upon reviewing Amazon's promotional information, and Amazon in turn orders that the book be printed by Lightning Source, the defendants together infringe the patent. ODMC states that the jury could reasonably have found that Lightning Source and Amazon were liable for joint infringement, for the district court instructed as to joint infringement, as follows:

It is not necessary for the acts that constitute infringement to be performed by one person or entity. When infringement results from the participation and combined action(s) of more than one person or entity, they are all joint infringers and jointly liable for patent infringement. Infringement of a patented process or method cannot be avoided by having another perform one step of the process or method. Where the infringement is the result of the participation and combined action(s) of one or more persons or entities, they are joint infringers and are jointly liable for the infringement.

We discern no flaw in this instruction as a statement of law. However, the fundamental precept of the Ross invention is that the customer uses an on-site computer to view promotional information, and then initiates rapid single copy printing. A customer's placing an order with Amazon, who in turn obtains the book, even if it is printed in single copy, is

not the Ross invention. Each of these components of the claimed invention is in the prior art; their combination is the patentable invention, and it is the practice of the combination that is essential to infringement. Taken separately, Amazon's method of taking orders for books is prior art; Amazon does not print books, and the immediate on-site printing of the Ross invention is absent.

The printing of a single copy of a book, using computer technology and high-speed printing, was prior art to the Ross patent. The defendants correctly point out that the Ross invention is the immediate printing and binding of a copy of a book, where the customer initiates this activity upon review of promotional information stored in a computer that is provided by the seller. Mr. Ross stressed during reexamination that the distinction of his invention over the Interpress reference is the inclusion of promotional information for customer access, and prompt book production. The Interpress reference, as described by the reexamination examiner, shows computer-stored book text and information (but not promotional information), a means for selectively retrieving a stored book, and high-speed printing plus binding with a cover. However, Interpress does not show the direct customer role contemplated in the Ross patent; that role is central to the claim construction.

We conclude that no reasonable jury could find infringement, on the correct claim construction. The judgment of infringement is reversed. Because we reverse the judgment of infringement, the damages award is vacated.

### III

The cross-appeal relates to the district court's denial of an immediate injunction upon entry of the district court's judgment, and the court's setting of a royalty for continuing

operations during appeal. That remedy is within the district court's discretion. However, in view of our holding of non-infringement, the cross-appeal is moot, and is dismissed.

Each party shall bear its costs.

REVERSED; CROSS APPEAL DISMISSED