United States District Court,
E.D. Texas, Lufkin Division.

ARIBA, INC,
Plaintiff.
v.
EMPTORIS, INC,
Defendant.

Civil Action No. 9:07-CV-90

Aug. 7, 2008.

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MEMORANDUM OPINION AND ORDER CONSTRUING CLAIM TERMS OF UNITED STATES PATENT NOS. 6,216,114 ***and*** 6,499,018

RON CLARK**, District Judge.**

Plaintiff Ariba, Inc. filed suit against Defendant Emptoris, Inc. claiming infringement of United States Patent Nos. 6,216,114 ("the '114 patent") and 6,499,018 ("the '018 patent"). These patents relate to methods and apparatuses for conducting electronic auctions.

The court conducted a *Markman* hearing on May 23, 2008 to assist the court in interpreting the meaning of the claim terms in dispute. FN1 Having carefully considered the patents, the prosecution history, the parties' briefs, and the arguments of counsel, the court now makes the following findings and construes the disputed claim terms. FN2

FN1. To become familiar with the technology underlying both patents from the perspective of one skilled in the art and to better understand the technical aspect of the parties' arguments, the court appointed Dr. Devika Subramanian as technical advisor. [Doc. # 63 & 64]. Dr. Subramanian received her Ph.D. in computer science from Stanford University in 1989. She is Professor of Computer Science at Rice University where she has been on the faculty since 1995. Her research interests are in artificial intelligence and machine learning. Her work is applied, and has appeared in premier conferences and journals in many areas of

science and engineering, including computer systems and networking. She has given invited lectures on her work at national and international conferences, and has won teaching awards at Stanford, Cornell University, and Rice. Her curriculum vitae can be found at http://www.cs.rice.edu/~devika.

FN2. The transcript of the hearing contains a number of representations and agreements of the parties and their answers to technical questions from the court, which assisted the court in reaching the conclusions set out in this Order. This Order governs in the event of any conflict between the Order and the court's questioning and preliminary analysis at the hearing. The transcript will be cited as Tr. at p. ---- ll. __.

I. CLAIM CONSTRUCTION STANDARD OF REVIEW

Claim construction is a matter of law. Markman v. Westview Instruments, Inc., 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996) ("*Markman II*"). "The duty of the trial judge is to determine the meaning of the claims at issue, and to instruct the jury accordingly." Exxon Chem. Patents, Inc. v. Lubrizoil Corp., 64 F.3d 1553, 1555 (Fed.Cir.1995) (citations omitted), *cert. denied,* 518 U.S. 1020, 116 S.Ct. 2554, 135 L.Ed.2d 1073 (1996).

" '[T]he claims of the 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*) (citation omitted), *cert. denied,* 546 U.S. 1170, 126 S.Ct. 1332, 164 L.Ed.2d 49 (2006). "Because the patentee is required to 'define precisely what his invention is,' it is 'unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms.' " Phillips, 415 F.3d at 1312 (quoting White v. Dunbar, 119 U.S. 47, 52, 7 S.Ct. 72, 30 L.Ed. 303 (1886)).

The words of a claim are generally given their ordinary and customary meaning. Phillips 415 F.3d at 1312. The "ordinary and customary meaning of a claim term 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 1313. Analyzing "how a person of ordinary skill in the art understands a claim term" is the starting point of a proper claim construction. *Id.*

A "person of ordinary skill in the art is deemed to read the claim term not only in context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification." Phillips, 415 F.3d at 1313. Where a claim term has a particular meaning in the field of art, the court must examine those sources available to the public to show what a person skilled in the art would have understood the disputed claim language to mean. *Id.* at 1414. Those sources "include '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.* (citation omitted).

"[T]he ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." Phillips, 415 F.3d at 1314. In these instances, a general purpose dictionary may be helpful. *Id.*

However, the Court emphasized the importance of the specification. "[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, Inc., 90 F.3d 1576, 1582 (Fed.Cir.1996)). A court is authorized to review extrinsic evidence, such as dictionaries, inventor testimony, and learned treaties. Phillips, 415 F.3d at 1317. But their use should be limited to edification purposes. Id. at 1319.

The intrinsic evidence, that is, the patent specification, and, if in evidence, the prosecution history, may clarify whether the patentee clearly intended a meaning different from the ordinary meaning, or clearly disavowed the ordinary meaning in favor of some special meaning. *See* Markman v. Westview Instruments, Inc., 52 F.3d 967, 979-80 (Fed.Cir.1995); *aff'd,* 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). Claim terms take on their ordinary and accustomed meanings unless the patentee demonstrated "clear intent" to deviate from the ordinary and accustomed meaning of a claim term by redefining the term in the patent specification. Johnson Worldwide Assoc., Inc. v. Zebco Corp., 175 F.3d 985, 990 (Fed.Cir.1999).

The " 'ordinary meaning' of a claim term is its meaning to the ordinary artisan after reading the entire patent." Phillips, 415 F.3d at 1321. However, the patentee may deviate from the plain and ordinary meaning by characterizing the invention in the prosecution history using words or expressions of manifest exclusion or restriction, representing a "clear disavowal" of claim scope. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1327 (Fed.Cir.2002). If the patentee clearly intended to provide his own definitions, the "inventor's lexicography governs." Phillips, 415 F.3d at 1316.

II. PATENT BACKGROUND AND TECHNOLOGY

Both the '018 patent and the '114 patent are divisional applications of Application No. 09/252,790, filed on February 19, 1999 and eventually embodied in United States Patent No. 6,230,146, not currently in suit. FN3 The patents-in-suit describe a method and system for conducting electronic auctions in an industrial procurement market. The inventions claim ways to overcome technical challenges engendered by the nature of conducting an auction in a real-time and interactive online environment.

FN3. The specifications of the two patents are the same, although printing requirements resulted in differences in column and line number citations. When discussing claim terms common to both patents, this order will cite only to the specification of the '018 patent.

The '018 patent relates to bid limits, specifically bid limits to reject bids that are not desirable. A bid limit can set a rule as to the minimum or maximum amount that a current bid must be in order to beat a previous bid. For example, a "bid ceiling" would be the highest amount the buyer is willing to pay, whereas a "bid floor" would be the point at which the purchaser would expect a lower bid to be made at the expense of quality or service. The '018 patent claims an *individual* bid ceiling rather than a market ceiling that applies equally to all bidders. With this feature, the bidder with the best price does not automatically win the auction. Instead, a host of non-price factors, such as quality or incumbency, can be considered to influence the purchaser's final decision. The patent describes a scheme in which the software sets ceilings for each seller based on their initial quotations. This gives the buyer the opportunity to conduct price discovery and retain the flexibility of choosing a winner other than the lowest bid.

The '114 patent describes what type of bid will trigger overtime for a given lot. This innovation implements the "going, going, gone" dynamic of a live auction into an electronic auction by utilizing an overtime feature, in which the closing time of a lot is automatically extended if a qualifying bid is received in a pre-

determined interval of time before the scheduled closing time. The length of the overtime period is flexible and variable based on the last bid that triggers the overtime. The patents-in-suit also claim rules for triggering overtime for a second or third interval.

III. ONE OF ORDINARY SKILL AND THE SCOPE OF PRIOR ART

Neither party addressed in their opening briefs the qualifications of one of ordinary skill in the pertinent art. At the *Markman* hearing, Ariba's attorney, Mr. Robert Haslam was very concerned about nuances of the court's proposed definition because it stated that "advanced degrees might substitute for experience." Tr. at p. 6, ll. 11-20, Court's Ex. 1 [Doc. # 121, Attachment # 1, p. 1]. Mr. Haslam indicated that he did not want the definition to include an educator with an advanced degree instead of practical experience in the field because that might be a person of "extraordinary skill." Tr. at p. 9, ll. 9-22. This appears to be nothing more than a preemptive strike at Emptoris' expert witness.

Emptoris' attorney, Mr. Stephen Muller, expressed concern that not enough emphasis was placed on familiarity with economic theory and mathematics because this could open up an attack on his expert. Tr. at p. 10-13. These patentees did not invent auctions-not even electronic auctions. They developed improvements to electronic auctions. Tr. at p. 21, l. 16-23, l. 5. Statements at the hearing might lead one to believe that those with the computer skills to build and practice the inventions disclosed in these patents are mere techno-serfs performing menial tasks at the direction of auction lords. Tr. at p. 10, ll. 13-21. These arguments seem focused on bolstering the credentials of anticipated witnesses and denigrating those of others.

A review of the patents makes it clear that a person of ordinary skill in the art covered by these patents would have a combination of skills. It is a rare case in which the exact way knowledge is acquired will be important to claim construction or to analysis of infringement and invalidity contentions. Neither party could explain to the court why such would be important in this case. Tr. at p. 12, l. 23-14, l. 5; p. 16, l. 9-p. 19, l. 4. If either party is attempting to preserve some subtle point of error in this regard, the court considers it to have been waived.

Based on the patents and their cited references, the tutorials, and the responses of counsel at the hearing, the court finds that "one of ordinary skill in the art" covered by these patents is someone with the equivalent of a "four-year" degree from an accredited institution (usually denoted in this country as a B.S. degree) in computer science or a field of study involving programming and using computers, and two years of experience researching, designing, developing or implementing computer programs that involve e-commerce. He or she should be familiar with auction theory and electronic auctions. Extensive experience and technical training might substitute for educational requirements, while advanced education might substitute for experience. *See* Tr. at p. 5-20.

III. CLAIM CONSTRUCTION

The first two disputed terms are found in claim 1 of the '018 patent, which reads as follows:

A method of limiting **bids** in an **electronic auction,** comprising:

(a) setting an individual **bid** ceiling for each of a plurality of potential sellers, wherein an individual **bid** ceiling 60 for at least one of said plurality of potential sellers is different from an individual **bid** ceiling for another of said plurality of potential sellers;

(b) receiving **bids** from one or more potential sellers;

(c) determining whether a received **bid** for a potential 65 seller is greater than a corresponding individual **bid** ceiling for said potential seller; and (d) sending a **bid** message to said potential seller in accordance with said determination; wherein the auction is a downward auction.

1. "Bid." Used in '018 patent**, claim 1, 16, 31 and 38;** '114 patent**, claims 31, 32, 39-42, 49, 50, 53, 66, 69, 82, 98, 106 and 107.**

Ariba proposed "a statement of what one is offering to give or take for something; esp.: an offer of price." Emptoris stated that "Ariba's proposed construction is not 'wrong' ..." but that a better construction is "an offer to pay an amount (upward auction) or to receive an amount (downward auction)." Def.'s Claim Constr. Br. at 6 [Doc. # 99].

The patentees made no attempt to provide a special definition for "bid." As described in detail in the "Background Of The Invention," electronic auctions, including electronic reverse auctions, were well-known prior art, with which one of ordinary skill would be familiar. Tr. at p. 20, l. 25-p. 23, l. 5. *See* '018 patent, col. 1-8.. The parties' dispute over the definition of "bid" seems somewhat artificial, aimed at obtaining an advantage in the debate over infringement and invalidity rather than clarifying a term for the jury.

The claims at issue in both patents pertain to auctions for items or groups of items such as a business purchasing industrial supplies or components or families of components. There is no claim of a method or system for Requests for Proposals (RFP), outlining how a general contractor would propose to accomplish a task such as construction of a building or a bridge. The disputed claims of the '018 patent and the '014 patent pertain to supplier-bidding auctions in which sellers downwardly bid against one another. '018 patent, col. 2, ll. 19-22.

"The supplier-bidding auction model requires that the bidding product or service be defined by the buyer (identified as Buyer **10** in FIG. **1**)." '018 patent, col. 2, ll. 54-56. The auction coordinator **20** in FIG. **1** works with the buyer and uses data from the buyer to prepare "a specification **50** for *each* desired product or part." '018 patent, col. 2, ll. 56-63 (emphasis added). The bidders then interact to establish a closing price. '018 patent, col. 2, ll. 24-26.

The parties agree that non-price factors can be included in a bid. Tr. at p. 31, ll. 13-15. At the hearing, the court proposed the definition: "the terms on which a seller offers to provide something requested by a buyer or on which a buyer offers to acquire something from a seller." Court's Ex. 2 [Doc. # 121, Attachment # 1, p. 2]. This definition incorporates the requirement that the buyer defines what is to be acquired, while retaining the seller's ability to compete on terms other than price (e.g., delivery time). *See* '018 patent, col 16, ll. 50-54. ("More generally, it is contemplated by the present invention that any aspect of a line item bid (e.g., unit price, quantity, delivery time, line item characteristic, etc.) can be related to, and thereby adjusted based upon a change in one or more aspects of the supplier's bid....")

Emptoris' only suggestion was for the definition to specifically exclude any possible barter exchanges. Tr. at p. 39, ll. 4-7. While neither party could give an example of a real-world situation in which price was not a factor, Emptoris could point to no basis in the specification or prosecution history for including this

limitation, and the court found none. A monetary price is shown in the examples at '018 patent, col. 16, ll. 5-29. However, the numbers in the "market bid" columns of Fig. 6C and 6D have no currency designation. Presumably they could represent ounces of gold or carbon credits in an emissions trading scheme. The court will define the term as follows:

"Bid" means: "the terms, on which a seller offers to provide something requested by a buyer or on which a buyer offers to acquire something from a seller."

2. "Electronic Auction." Used in '018 patent**, claim 1, 16 and 31;** '114 patent**, claims 31, 41, 51-53, 66-69, 82 and 98.**

Emptoris asserts that "electronic auction" is not a limitation because it appears only in the preamble of each independent claim. FN4 When considering whether a preamble limits a claim, the court must analyze the preamble 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." *On* Demand Mach. Corp. v. Ingram Indus., 442 F.3d 1331, 1343 (Fed.Cir.2006). Language in a preamble "limits a claim where it breathes life and meaning into the claim ..." Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111, 1118 (Fed.Cir.2004).

FN4. At the hearing, Emptoris admitted that it is not very "concerned with the technical legal question" of whether the term is a limitation. Tr. at p. 40, l. 25-p. 41, l. 4.

Emptoris's position is not well founded. These patents do not deal with English auctions at a cattle barn or silent auctions at a charity event. They disclose alleged improvements to electronic auctions. The patents-in-suit do use the phrase "the Auction" without including the adjective "electronic." But this is always in the context of describing an electronic auction. "[T]he Auction is conducted electronically between potential suppliers **30** at their respective remote sites and the coordinator **20** at its site ." '018 patent, col. 3, ll. 46-67. The court finds that the preambles of these independent claims are limitations because each is a "necessary and defining aspect" of the invention.

The court now turns to the conflict between the parties' two proposed constructions. Ariba contends that this term means "a computer-mediated real-time auction in which interactive bidding is conducted over a communications network." Emptoris proposes "an auction conducted using modern communication tools, e.g., computers and computer networks." The primary dispute is whether the computer plays an active role when processing information for purposes such as determining whether a bid is authorized or determining new rankings.

As noted above, electronic auctions were well known in the prior art. The patentees described prior art electronic auctions in detail in the "Background" section of the specification and did not act as lexicographers to coin a special definition of the term. As early as 1998, electronic auctions were described as "fundamental technology for electronic commerce." Michael Harkavy, J.D. Tygar, and H. Kikuchi, *Electronic Auctions with Private Bids,* presented at the 3rd Usenix Workshop in Boston, MA Aug. 31 1998, *available at* http:// www.usenix.org/event/ec98/full_papers/harkavy/harkavy.pdf. *See also* Michael A. Crew & Menahem Spiegel, *Obtaining the Best from Regulation and Competition,* p. 41-45 (Springer 2005), *portions available at* http://books.google.com.

The computer software application manages an auction in real-time. *See* ' 018 patent, col. 3, ll. 46-66 ("A computer software application is used to *manage* the Auction....") (emphasis added). Bids are submitted electronically. Depending on the application used, the computer software may send RFQs to prospective bidders, receive, monitor, observe, and administer the bidding phase, and analyze and administer the results, which are viewed by the Buyer. ' 018 patent, col. 3, ll. 24-36. The court will construe this term as follows:

"Electronic auction" means: "an auction managed with a computer software application that enables invited bidders to submit bids via an electronic communication network and an auction coordinator to receive and act upon the bids."

The parties agreed to this definition of the term. Court's Ex. 3 [Doc. # 121, Attachment # 1, p. 3]; Tr. at p. 53, ll. 1-18; p. 55, l. 22-p. 56, l. 10. "Auction coordinator" in the claim term does not refer to the person using the patented method or system but to a computer, "coordinator **20,**" depicted in Fig. 3. FN5 This definition is not limited to situations in which a buyer organization is separate from the organization running the auction coordinator. *See* Tr. at 54-56.

FN5. Unfortunately, the drafter of the patent was somewhat imprecise in the use of "coordinator" and "buyer," using the words to also refer to the person or organization that organize and operate the system or method by operating "coordinator **20"** and "buyer **10."** *See* Tr. at p. 25, l. 20-p. 227, l. 25 (discussing '018 patent, col. 2, ll. 54-59).

3. "Lot." Used in '018 patent**, claim 9, 21 and 35;** '114 patent**, claims 31, 41, 51-53, 66-69, 82 and 98.**

Ariba states that the proper definition is "one or more items for purchase or sale that are bid upon as a unit." Emptoris proposes "one or more items for purchase or sale." At the hearing, the parties agreed to the following definition. Court's Ex. 4 [Doc. # 121, Attachment # 1, p. 4]; Tr. at p. 66, ll. 6-18.

"Lot" means: "one or more items grouped for bidding."

4. "Bidding device." Used in '018 patent**, claim 31-36 and 38.**

Claim 31 is an independent claim upon which claims 32-36 and 38 depend. Although the specification sets out no supporting algorithm, the patentee purports to claim software used by the bidder that, like any modern computer with a web browser, allows display of information about an auction and transmittal of bids to the auction over the internet. While the breadth of the claim is an invalidity issue, the claim language for this device also describes a method step that occurs at the server operated by the auctioneer. The inclusion of a method step in an apparatus claim is impermissible, and claim 31 states:

31. A **bidding device** operated by a potential seller during an on-line electronic auction, said **bidding device** comprising software that displays information about the auction to the potential seller and enables the potential seller to submit bids electronically to the auction;

software that displays information about the auction to the potential seller and enables the potential seller to submit bids electronically to the auction;

wherein the auction includes a plurality of potential sellers each of which has an individual bid ceiling, and an individual bid ceiling for the potential seller operating the **bidding device** is different from an individual

bid ceiling for another of said potential sellers;

wherein a bid submitted by the potential seller operating the **bidding device** is compared to the corresponding bid ceiling of the potential seller operating the **bidding device,** and the **bidding device** communicates a bid message to the potential seller operating the **bidding device** in accordance with the results of the comparison;

and wherein the auction is a downward auction.

Ariba's position is simply "all that the claim language requires is that the bidding device (1) display information about the auction to the potential seller, and (2) enable the potential seller to submit bids electronically to the auction." Ariba's Opening Brief, Doc. 91, p. 22 of 39, Tr. At 67, l. 13-24. For claim construction, Ariba proposes: "software running on a bidder's computer that displays information about the auction to the bidder and enables the bidder to submit bids to the auction via a communications network." So what has been invented here? Does the claim encompass all CPUs with monitors that can connect to the net, display information from an auctioneer (Coordinator **20** of Fig. 3), and send a bid message to the auctioneer?

That is in fact Ariba's position. "They [the claims] are also broad enough to cover the mere *use* of a web browser (that is not a component of a larger software application) to connect to the auctioneer's computer." Ariba's Opening Brief, [Doc. 91, p. 24 of 39] (emphasis added). If that was all that was in the claim, the question of breadth could be dealt with only when invalidity is considered. The problem is that one of the key elements of claim 31 is a method step that is conducted by some person or system other than the claimed device.

The preamble of claim 31 states that a bidding device is operated only by a potential seller, i.e. the bidder in a downward auction-Supplier **30** in Figures 3 and 4. The third element, or the second "wherein" clause, indicates that "a bid submitted by the potential seller operating the bidding device *is compared* to the corresponding bid ceiling of the potential seller operating the bidding device...." FN6 Ariba's lead counsel stated that this comparison occurs at the server side (buyer side, Coordinator **20**) because if it was done at each potential seller's station, it "would totally destroy the synchronization of the auction." Tr. at p. 72, ll. 13-24. Ariba's co-counsel agreed, stating that the comparison "occurs at the server side, or at the coordinator/buyer side." Tr. at p. 80, ll. 5-9. And, in fact, Figure 4, its description in the specification, and the specification's description of the seller setting the bid ceilings, leads to the conclusion that the comparison step in claim 31 is made not at, or by, the "bidding device," but at the coordinator's computer. ' 018 patent, col. 3, ll. 47-65; col. 21, ll. 15-23; col. 22, l. 23-col. 23, l. 6.

FN6. Ariba did not dispute that this second "wherein" clause should be given limiting effect. In any case, the court finds that this "wherein" clause provides necessary elements to the claim, rather than merely states the inherent properties of the claim. The first and third "wherein" clauses merely describe the type of auction in which the device can be used. The second "wherein" clause states that the bid is compared with the seller's bid ceiling before the bidding device communicates the results.

This is an improper inclusion of a method step into an apparatus claim. *See* IPXL Holdings, L.L.C. v. Amazon.com, Inc., 430 F.3d 1377, 1384 (Fed.Cir.2005) The statutory class of invention, i.e. whether it is an apparatus claim or a method claim, is important. "A single claim which claims both an apparatus and the

method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph.") (quoting the PTO's *Manual of Patent Examination Procedure,* s. 2173.05(p)(II) (1989)).

This is not a case of a method claim preamble reciting physical structure of a system in which the method is practiced. Neither is the third element of claim 31 merely functional language in an apparatus claim, as in a means-plus-function claim. *See* Microprocessor Enhancement Corp. v. Texas Instruments Inc., 520 F.3d 1367, 1375 (Fed.Cir.2008). A device operated by a potential seller is claimed, and the step in question is performed by a different computer, operated by a potential buyer, or the buyer's auctioneer.

Because claim 31 recites both an apparatus and a method, it is indefinite and therefore invalid under 35 U.S.C. s. 112(2). Its dependent claims, claims 32-36 and 38, are likewise invalid.

5. "Second time interval." Used in '114 patent**, claims 31, 41, 51-53, 66-69, 82 and 98.**

Since this term is in dispute only in reference to the '114 patent, references will only be made to that patent specification's column and line numbers. This term and the next one to be construed, "overtime condition," are both found in claim 51 of the '114 patent, which reads as follows:

51. A method to control overtime in an electronic auction, comprising:

a) defining a first time interval, a **second time interval,** a first **overtime condition** and a first closing time for a first lot, wherein said first time interval is an overtime trigger interval representing a time interval during which an **overtime condition** can cause extension of a closing time;

b) determining whether said first **overtime condition** occurs during said first time interval; and

c) extending said first closing time using said second time interval in accordance with said determination.

Ariba proposes: "Same as overtime extension interval, *i.e.,* a time interval by which a scheduled closing time, whether an initially-scheduled time or an extended time, is extended. The interval is dynamic and flexible and can be variable." Emptoris suggests "an overtime period of predetermined duration." The parties agreed that the term refers to the overtime extension and not an extension of the trigger time. Tr. at p. 97, l. 19-98, l. 2.

Emptoris argues that the specification of the '114 patent envisions an interval that must be predetermined. In other words, Emptoris contends that when the bid is made that triggers overtime, the system already knows how long the overtime is going to be. Emptoris is unable to point to any line in the specification where a predetermined interval is discussed outside of the prior art systems. Emptoris stakes its interpretation almost entirely on the definition in col. 13, ll. 28-35, but that paragraph begins by limiting it to a prior art system. *See* '114 patent, col. 13, ll. 27 ("[T]he prior art system employed a simple, static model for Overtime, in which Overtime was triggered by a new low bid submitted within a predetermined time interval....") Based solely on the strength of prior art, Emptoris seeks to arbitrarily exclude any variable overtime extensions which are determined after the trigger bid is made.

Neither the language of the claims nor the specification of the '114 patent limits the overtime intervals to a predetermined amount set in advance before the trigger bid. The following passages in the '114 patent support the opposite construction:

The flexible overtime feature of the present auction system addresses the shortcomings of the prior static overtime feature. '114 patent, col. 13, ll. 38-40.

The variable duration aspect involves overtime extension intervals (time intervals by which a scheduled closing time, whether an initially-schedule time or an excluded time, is extended) and overtime trigger intervals (intervals before a scheduled closing time in which a bid meeting defined criteria will trigger overtime). '114 patent, col. 13, ll. 41-47.

The intervals can be the same (as in prior art system), or can be different from each other. '114 patent, col. 13, ll. 47-49.

The second aspect of flexible overtime is variable overtime triggers. '114 patent, col. 13, ll. 53-55.

Accordingly, the "predetermined" aspect of Emptoris' proposed definition is excessively restrictive. Whether there is flexibility in a particular invention will depend on the language of the claim using the term. Flexibility cannot be excluded by the definition of the term.

Perhaps recognizing the problems with its position, Emptoris suggests that the variability described in the specification refers to differences of the intervals from lot to lot rather than from among each other. Tr at p. 107, ll. 21-24. However, this argument addresses the issue of variability of intervals between each lot, and does nothing to refute the statement that each interval within the same lot can vary. The court therefore construes this term as follows:

"Second time interval" means "time interval by which a scheduled closing time, whether an initially-scheduled time or an extended time, is extended."

6. "Overtime condition." Used in '114 patent**, claims 51-53, 66-69 and 82.**

Ariba proposes "a property of a bid which, if satisfied, can cause the closing time for the lot to be postponed." Emptoris argues that the definition is "a bid that triggers overtime." At the hearing, the parties agreed to the court's proposed definition. Court's Ex. 6 [Doc. # 121, Attachment # 1, p. 6]; Tr. at p. 113, ll. 5-13. The court finds that this term is construed as follows:

"Overtime condition" means: "a property of a bid that triggers overtime."

MEANS-PLUS-FUNCTION CLAUSES

The remaining terms the parties ask the court to construe involve means-plus-function clauses under 35 U.S.C. s. 112(6). Where a claim includes the word "means," a presumption is invoked that s. 112(6) applies. *See* Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1248 (Fed.Cir.2005). This presumption may be rebutted if the claim recites "sufficient structure for performing the claimed function...." *Id*.

Determining the claimed function and the corresponding structure of means-plusfunction clauses are matters of claim construction, so it is appropriate to deal with these issues at the *Markman* stage. WMS Gaming Inc., v. Int'l Game Tech., 184 F.3d 1339 (Fed.Cir.1999). Claim construction of a means-plus-function limitation involves two steps. *See* Medical Instrumentation and Diagnostics v. Elekta AB, 344 F.3d 1205, 1210 (Fed.Cir.2003). The court must first identify the particular claimed function, and then look to the

specification and identify the corresponding structure for that function. *Id*. "Under this second step, 'structure disclosed in the specification is corresponding structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim.' " *Id*. (citations omitted). "While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function." Default Proof Credit Card System, Inc. v. Home Depot U.S.A., Inc., 412 F.3d 1291, 1298 (Fed.Cir.2005).

Since the functions at issue are computer implemented, the patent must disclose an algorithm to be performed by the computer to accomplish the recited functions. Aristocrat Technologies Australia Pty Ltd. v. International Game Technology, 521 F.3d 1328, 1333 (Fed.Cir.2008). This does not mean that the patentee must disclose specific source code for the computer. Id. at 1338. The term "algorithm" is not limited to a formula of mathematical symbols. For example, the steps, formula, or procedures to be performed by the computer might be expressed textually, or shown in a flowchart. *See* Application of Freeman, 573 F.2d 1237, 1245-46 (C.C.P.A.1978) and cases cited therein.

Regardless of the format, the structure, in this case a computer which executes an algorithm, must be sufficiently disclosed so that one of ordinary skill in the art can determine the limitations on what is claimed. *See* Aristocrat, 521 F.3d at 1337; *see also,* Budde v. Harley-Davidson, Inc., 250 F.3d 1369, 1381-82 (Fed.Cir.2001); In re Dossel, 115 F.3d 942, 946-47 (Fed.Cir.1997).

In *Dossel,* the specification described a device that receives data from two sources and then "computes, from the received data, the current distribution by mathematical operations including a matrix inversion or pseudo inversion, and then outputs the result to a display." 115 F.3d at 946. The specification also said " 'known algorithm' could be used to solve the standard equations which are known in the art." *Id*. This description disclosed sufficient structure.

7. "A first computer readable program code means for enabling the computer system to offer a lot, defined at least in part by a buyer, to a plurality of potential sellers, said lot having at least one product." Used in '114 patent**, claim 31.**

The parties agree, and the court finds, that this is a means plus function clause under s. 112 para. 6, and that the function is "to enable a lot, defined at least in part by a buyer, to be offered to multiple potential sellers."

Emptoris asserts that this means-plus-function clause is indefinite, and fails to comply with the *quid quo pro* requirements of 35 U.S.C. s. 112, para. 6. Tr. at p. 125, l. 23-p. 126, l. 9. However, Emptoris suggests that the court wait until a motion for summary judgment is filed before considering the issue. The court should, as part of claim construction, determine the function and the corresponding structure, or lack thereof, as a matter of law. Biomedino, LLC v. Waters Technology Corp., 490 F.3d 946, 949 (Fed.Cir.2007).

One of ordinary skill in the art would understand "to offer a lot" to potential sellers means to display the available lots on the computer to the selected sellers at the beginning of the auction, and then update the status of the lots after the auction commences until it closes. *See* '114 patent, col. 3, ll. 29-33. *See also* Harkavy et al, supra at p. 10.

The claim limitation in question recites a "program code means" to accomplish this function, so the question is whether sufficient structure associated with this function is disclosed by the specification.

To begin, the function is described in the specification. The RFQ process by which the lots are "defined at least in part by a buyer" occurs at the server (coordinator/buyer) side, as described at '114 patent, col. 3, ll. 12-20. The auction coordinator electronically sends the information about the lot or lots to the invited sellers. '114 patent, col. 3, ll. 15-17. The "suppliers **30** *submit bids* **58** on the lots and monitor the progress of the bidding by the participating suppliers **30.** '114 patent, col. 3, ll.34-36 (emphasis added).

"[I]nformation is conveyed between the coordinator **20** and the suppliers **30** via a communications medium such as a network service provider **40"** accessed through telephone modem connections or direct network connections. '114 patent, col. 3, ll. 53-57. Software is "used to make a connection through telephone lines or the Internet to the server component." '114 patent, col. 3, l. 63-col. 4, l. 2. While this is specifically stated in reference to the client component, it would be obvious to one of ordinary skill that the coordinator/buyer must also have software allowing receipt and transmission of information.

This description in the specification linking the function to the structure lays out the information flow, specifies where each piece of information to be displayed resides, and specifies the software architecture within which the task is to be accomplished. In short, this "first computer readable program code means" claim limitation, when viewed by one of ordinary skill in light of the specification references set out above, discloses common software that allows communication between the buyer/coordinator computer and those of the sellers-components of prior art electronic auctions, which were well known. FN7 The innovative features of claim 31 are found in its third and fourth "computer readable code means" limitation clauses. A more detailed description of the structure associated with this first function is not needed in the specification for one of ordinary skill to practice, or design around, the invention.

FN7. For example, it would not be necessary to tell someone of ordinary skill, as defined by the court, that, with appropriate passwords, the computers could communicate via a standard web browser.

The structure associated with the function of this claim limitation is: "software that allows the buyer/coordinator and the potential sellers to communicate information regarding one or more lots electronically."

8. "A second computer readable program code means for enabling the computer system to define a closing time for said lot, wherein said closing time for said lot defines a time before which bids for the lot are to be submitted by a potential seller." Used in '114 patent**, claim 31.**

The parties agree, and the court finds, that this is a means plus function clause under s. 112 para. 6, and that the function is "to enable a closing time for the lot to be set."

Ariba contends that the structure is: "software programmed to set a closing time for the lot" set forth in the '114 patent, col. 4, ll. 18-22. Emptoris states that the structure is "software programmed to set a closing time for the lot." At the hearing, the parties agreed that the structure is set forth in the '114 patent, col. 4, ll. 18-20 ("Each lot ... accepted by the server application.").

9. "Means for enabling the computer system to determine if a received bid satisfies at least one behind-market bid lot extension criteria within a first time interval of said closing time for said lot, wherein said at least one behind-market bid lot extension criteria can be satisfied if said received bid is not better than a current best bid." Used in '114 patent**, claim 31.**

The parties agree, and the court finds, that this is a means plus function clause under s. 112 para. 6, and that the function is: "to enable the determination of whether a received bid satisfies a behind-market bid extension criteria within an overtime trigger interval."

Ariba's brief suggests that the structure is: "software programmed to evaluate each received bid against stored parameters to determine whether overtime should be triggered as described at 14:41-49 and software programmed to perform the operations in step 520 of Figure 11 as described at 12:52-60. In an alternative embodiment, software programmed with a code module that evaluates a received bid and returns a value of 'true' if a received bid should trigger an overtime, or 'false' if it should not, as described at 14:50-59 and software programmed to perform the operations in step 520 of Figure 11 as described at 12:52-60." At the hearing, Ariba stated that it erred by proposing step 530, rather than step 520 of Figure 11. Tr. at p. 130, ll. 17-20.

Emptoris suggests "software programmed to: a. determine if the bid is received within an overtime trigger interval; and b. determine if the bid satisfies a behind-market bid lot extension criteria."

A recitation to the jury of Ariba's proposed construction containing ninety-four words would do little to assist any juror, as those without advanced degrees would be hard-pressed to decipher such a lengthy paragraph. To those who are not persons of skill in the art, Ariba's proposed construction would itself need to be further construed. Ariba conceded that for simplicity's sake, it would be more beneficial to use Emptoris' summary for the jury. Tr. at p. 133, ll. 16-18.

Emptoris agrees that there is an "alternative embodiment" disclosed at '114 patent, col. 14, ll. 50-59, but believes that because it is irrelevant to this lawsuit, omitting this embodiment would make the jury's analysis easier. At the hearing, the parties agreed that the alternative embodiment will be put in the claim construction order, but if the parties agree that in this particular case, it is unnecessary for the jury to consider this embodiment, then it will be omitted at that time. Tr. at p. 131, l. 23-132, l. 6.

The court finds that the corresponding structure to this means-plus-function clause is: "software programmed to: a. determine if the bid is received within an overtime trigger interval; and b. determine if the bid satisfies a behind-market bid lot extension criteria," (as described at '114 patent, col. 14, ll. 41-49) and the embodiment disclosed at '114 patent, col. 14, ll. 50-59: and equivalents thereof.FN8

FN8. Ariba asserts that structure is also disclosed at '114 patent, col. 12, ll. 52-61 and step 530 of Fig. 11. Emptoris argues this applies only to claims of the '146 patent. The parties agree that for purposes of simplifying this case, the construction above can be given.

10. "Means for enabling the computer system to extend said closing time for said first lot by a second time interval if said bid satisfies at least one behind-market bid lot extension criteria." Used in '114 patent**, claim 31.**

The parties agree, and the court finds, that this is a means-plus-function clause under s. 112 para. 6. Ariba argues that the function is "to enable the closing time for a first lot to be extended by a second time interval." Emptoris states that the function is "to enable the closing time of the first lot to be extended by the second time interval if the received bid satisfies at least one behind-market bid lot extension criteria." At the hearing, Ariba stated that it would be unopposed to inclusion of the rest of the function. Tr. at p. 135, l. 17-

p. 136, l. 8. The court therefore adopts Emptoris' proposal for the function of this means-plus-function clause.

Ariba contends that the structure is: "software programmed to perform the steps set forth at '114 patent, col. 14, ll. 31-40.FN9 The first sentence of this section, which claims a "variety" of unspecified "ways" is not a sufficient algorithm, but the remaining sentences are sufficient. Emptoris agrees that this section discloses proper structure, but argues that the structure is more simply described as: "software programmed to: a) store the amount of the second time interval in memory; b) if the bid satisfies the behind-market bid lot extension criteria, then trigger overtime by adding the value of the second time interval to the currently scheduled closing time."

FN9. "In one embodiment, a parameter is stored in storage 22B that specifies the length of the overtime period for each lot. This parameter is read from storage 22B into memory 22A for use by the server component of the application software when an Auction is loaded. When overtime is triggered on a given lot, the server component adds the value of that lot's overtime parameter to the market closing time, adjusting its closing time accordingly. Second, flexible overtime triggers are implemented by storing two parameters (in the same manner as the other parameters above): one that specifies the market rank necessary for a bid to trigger overtime and one that specifies a maximum distance, expressed as either a percentage or a nominal value, that a bid can be from the market-leading bid to trigger overtime. Each bid received is evaluated against these parameters to determine whether overtime should be triggered."

The parties agree that an embodiment is disclosed in the '114 patent, col. 14, ll 32-40 (beginning with "a parameter is stored ..."). Tr. at p. 136, l. 18-138, l. 2. The parties also seem to agree that Emptoris' proposed construction is a more "user-friendly" version of the corresponding structure. Id. The primary dispute is whether there is a second embodiment disclosed in the Abstract of the patent.

The Abstract states that a subsequent lot can be extended with a "flexible overtime feature, in which the properties of the event triggering the extension and the of the [sic] overtime period(s) triggering the extension and the overtime period(s) can be tailored to a particular auction ..." Abstract, ' 114 patent. This portion of the Abstract discusses the *properties or features* of the event triggering the extension. These features allow the auction to become more discriminatory about the bid before overtime is triggered, but do not provide structure for enabling an extension of the overtime. If the court were to adopt Ariba's suggestion that the Abstract lists a corresponding structure, there would be virtually no limit to the kinds of programs which could be used.

The court finds that corresponding structure is "software programmed to: a) store the amount of the second time interval in memory; b) if the bid satisfies the behind-market bid lot extension criteria, then trigger overtime by adding the value of the second time interval to the currently scheduled closing time," (as described at '114 patent, col. 14, ll 32-40) and equivalents thereof.

11. "Means for determining whether said received bid is received within a third time interval of said closing time." Used in '114 patent**, claim 32.**

The parties agree, and the court finds, that this is a means-plus-function clause under s. 112 para. 6, and that the function is "determining whether the received bid is received during an overtime trigger interval." The parties agree that even though this clause discusses the third interval, the clause actually relates to the first

interval and states "third" only due to faulty drafting during the prosecution. Tr. at p. 158, l. 3-159, l. 4.

Ariba states that the structure is "software programmed to determine whether the bid is received during an overtime trigger interval as shown in step 520 of Figure 11 and as described at 12:52-60. ('The Auction continually receives bids at step 510 until a predetermined interval of time before the scheduled closing time (the closing trigger interval). This is shown by the step 510-step 520 loop. At the closing trigger interval time, the software checks to see if any trigger bids have been made at step 530. For example, if the closing time interval is 2 minutes, then at 2 minutes before the scheduled closing of the lot, the software will check to see whether any trigger bids have been made."). Emptoris argues that the structure is: "software programmed to determine whether the bid is received during an overtime trigger interval."

At the hearing, the parties agreed, and the court finds, that the corresponding structure is "software programmed to determine whether the bid is received during an overtime trigger interval. At the closing trigger interval, the software checks to see if any trigger periods have been made." Tr. at p. 164, l. 13-p. 165, l. 9.

12. "Means for determining whether said received bid is within a predefined number of rank ordinal positions of said current best bid." Used in '114 patent**, claim 39.**

The parties agree, and the court finds, that this is a means-plus-function clause under s. 112 para. 6, and that the function is "determining whether said received bid is within a predefined number of rank ordinal positions of said current best bid."

The parties also agree that the corresponding structure is "software programmed to determine if the received bid is within a predefined number of rank ordinal positions of the current best bid." Ariba proposes to tack on the description at col. 13, 62-67. ("In the disclosed auction system, overtime triggers can be based on other parameters and criteria. For example, the rank of a bid can be considered, and overtime triggered based in part on whether the rank of the bid is lower than the established criterion. Thus, the criterion can be established that a trigger bid must be a bid that is a new best bid or is the second or third best bid.").

There is no substantial disagreement between the parties; instead, the only question is whether to add the additional language. At the hearing, the parties agreed to leave off the quotation. Tr. at p. 166, ll. 8-19. Therefore, the corresponding structure is: "software programmed to determine if the received bid is within a predefined number of rank ordinal positions of the current best bid."

IV. CONCLUSION

The jury shall be instructed in accordance with the court's interpretation of the disputed claim terms in the '018 and '014 patents.

So **ORDERED.**

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Ariba, Inc. v. Emptoris, Inc.

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