

NOTE: Pursuant to Fed. Cir. R. 47.6, this disposition is not citable as precedent. It is a public record. This disposition will appear in tables published periodically.

## United States Court of Appeals for the Federal Circuit

00-1112

KLAUS E. HOLTZ  
(doing business as Omni Dimensional Networks),

Plaintiff-Appellant, v.

CONEXANT SYSTEMS, INC.,

Defendant-Appellee.

---

DECIDED: December 26, 2002

---

Before CLEVINGER, Circuit Judge, FRIEDMAN, Senior Circuit Judge, and PROST, Circuit Judge.

CLEVINGER, Circuit Judge.

Klaus E. Holtz appeals the judgment of the United States District Court for the Northern District of California, granting summary judgment of noninfringement of U.S. Patent No.

4,366,551 in favor of Conexant Systems, Inc. Holtz v. Conexant Sys., Inc., No. C-97-20493-JF (N.D. Cal. Oct. 20, 1999). Because there is no dispute that the accused products fail to implement every limitation of the claimed method, we affirm the judgment of the district court.

I

The patent-in-suit ("the '551 patent") relates to machine implemented methods of storing and retrieving data. In particular, the learning algorithms described and claimed by the '551 patent may be used to construct "dictionaries" from streams of input text by storing ordered sets of ASCII character data in the form of a memory network structured by pointers. Once stored in such a dictionary, a string of characters may be represented by a single number corresponding to the network address of the last character in the string; traversing the dictionary network from that address to the first character of the string reconstructs the entire sequence of characters represented by the single address. The algorithms of the '551 patent may be used to implement a compression protocol for transmitting data between computers, because computers equipped with matching dictionaries can simply send and receive the address numbers of dictionary entries rather than the entire sequence of characters represented by that dictionary entry.

Holtz filed suit in the United States District Court for the Northern District of California in 1997 against Conexant's predecessor, Rockwell International Corporation, following unsuccessful attempts to convince Rockwell to take a license to the '551 patent. Rockwell manufactured, and Conexant now manufactures, integrated modem chipsets that implement a data compression standard, known as V.42 *bis*, recommended by the International Telecommunication Union. Holtz alleged that Rockwell's modem chipsets (like those of other manufacturers) performed methods claimed by the '551 patent when compressing and decompressing data according to the V.42 *bis* protocol.

Upon Rockwell's motion for partial summary judgment, the district court ruled that laches limited Holtz's recovery for infringement, if any, to the period after Holtz filed suit. Holtz v. Rockwell Int'l Corp., No. C-97-20493-JF (N.D. Cal. Sept. 30, 1998). While the court determined that Holtz did not actually come to discover Rockwell's alleged infringement until 1993, Rockwell's open and notorious adoption of the V.42 *bis* standard, when coupled with Holtz's intimate involvement in the data compression field, led the district court to impute to Holtz constructive knowledge of the alleged infringement dating back to 1990. The resultant seven-year delay before Holtz's action invoked the presumption of laches, which the district court found that Holtz had failed to rebut.

After construing the claim terms "data sequence," "starting number," "each storage location," and "terminating," see Holtz v. Rockwell Int'l Corp., No. CH-97-20493-JF (N.D. Cal.

Dec. 18, 1998), the district court granted summary judgment of noninfringement to the defendant (now appearing in its current aspect of Conexant). Holtz v. Conexant Sys., Inc., No. C-97-20493-JF (N.D. Cal. Oct. 20, 1999). The district court found no dispute of material fact that limitations (b), (c), and (h) of claim 1 could not be met, either literally or under the doctrine of equivalents, by Conexant's implementation of V.42 *bis*. Holtz appeals the grant of summary judgment of noninfringement, challenging the district court's construction of "starting number" and "terminating," as well as its finding that no triable issues of fact existed with respect to infringement of limitations (b), (c), and (h) of claim 1. The parties, and the district court's opinion, deal exclusively with the question of claim 1's infringement, and we direct our review accordingly.

## II

When a district court grants summary judgment, we review without deference to the district court whether there are disputed material facts, and review independently whether the prevailing party is entitled to judgment as a matter of law. SunTiger, Inc. v. Scientific Research Funding Group, 189 F.3d 1327, 1333, 51 USPQ2d 1811, 1814 (Fed. Cir. 1999). Summary judgment is proper "if the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." Fed. R. Civ. Proc. 56(c). Summary judgment is improper "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986). Because the determination of infringement, whether literal or under the doctrine of equivalents, is a question of fact, Bai v. L & L Wings, Inc., 160 F.3d 1350, 1353, 48 USPQ2d 1674, 1676 (Fed. Cir. 1998), summary judgment of noninfringement is proper only if no reasonable jury could find that every limitation of the claim in question would be met by the accused product or device. As the nonmovant on a summary judgment motion, Holtz was entitled to have all of his evidence believed, and all justifiable inferences drawn in his favor. See Anderson, 477 U.S. at 255.

## III

We begin at the beginning, with the initialization step of the claimed method. Step (b) of claim 1 defines the procedure to initiate processing of a new string. According to step (b), the computer forms a two-position "input character matrix" composed of the first character in the string and a "starting number." Step (b) also requires this input matrix to be stored in a "machine operable buffer region." Once the input matrix is stored in the buffer, the process proceeds to step (c), wherein the computer begins to search for a match between the input matrix (stored in the buffer) and a dictionary entry (stored in the "storage region" of step (a)).

The district court construed "starting number" to mean an address number (i.e., a pointer) to a memory location at which a STOP code is stored. While Holtz argued that the starting number could be any particular number, the district court found that the only "starting number" disclosed by the specification was a pointer to a memory location containing a STOP

code, and limited the claim accordingly. The district court then granted summary judgment of noninfringement with respect to this claim element, because V.42 *bis* marks the first character of a dictionary entry with a special "NULL" pointer, rather than a pointer to a memory location that in turn holds a STOP code.

With respect to the claim construction, Holtz contends that the district court erroneously imported a limitation from the specification into the claims, because "starting number" is not a unique term that can be construed only with reference to the specification. Holtz further argues that it is not even necessary for the computer to recognize the "starting number" as marking the first character of a dictionary entry, because such recognition is important only for the decoding process of claim 2, not the encoding process of claim 1. Conexant, for its part, relies on the mandatory language of the specification at column 6, lines 44-47: "A special STOP code must be stored in the memory device at the location specified by the starting ADDRESS [i.e., the location pointed to by the starting number]."

We think it unnecessary to resolve this dispute over the construction of limitation (b), because, assuming arguendo that the NULL pointers of V.42 *bis* serve as "starting numbers," it is undisputed that claim limitation (c) cannot then be satisfied. Step (c) of claim 1 requires the contents of the buffer region to be compared to the contents of storage locations to determine if the input character matrix corresponding to the first character of the data sequence has already been stored. In the context of building a dictionary for use in data compression, this step will determine if the first character of the data sequence has been stored as the first character of a dictionary entry. In contrast, V.42 *bis* initializes its dictionary with a "root" entry of each of the 256 possible starting characters combined with a NULL pointer. Thus, even before the first character of the data sequence has been read, a V.42 *bis* dictionary already contains 256 entries, each one comprised of a character and a NULL pointer indicating that it is the first character in a potential longer word.

The district court concluded that because V.42 *bis* already starts with all 256 possible "first data characters" stored in its dictionary, it does not store the first data character of the data sequence into a "buffer region" as required by step (b). Further, the district court noted that V.42 *bis* pairs all 256 possible initial characters with the NULL pointer, not just the "first data character" of the data sequence as recited by step (b). The district court therefore found no possibility that V.42 *bis* could infringe step (b) of the claim.

However, even if we assume that initialization of V.42 *bis*'s root level entries satisfies step (b), there remains no possibility that step (c) can be infringed with respect to the first character of the data sequence. It is undisputed that V.42 *bis* never searches memory to determine whether an input matrix comprised of the first data character and a NULL pointer has been stored, because all combinations of all possible first data characters associated with a NULL pointer are already known to be stored. Holtz concedes, as he must, that V.42 *bis* therefore does not perform step (c) with respect to the first character, stating: "The Conexant method apparently recognizes this, and omits that futile step."

That such a step may be "futile" does not, however, excuse its omission from the accused method. Claim 1 makes no provision for skipping step (c), and it was undisputed at oral argument that claim 1 requires its steps to be performed in sequential order. Accordingly, the possibility that step (c) is performed on subsequent characters of the data stream does not suffice to bring the V.42 *bis* algorithm within the ambit of claim 1.<sup>[1]</sup> It is axiomatic, of course, that in order for infringement of a method patent to lie, all claimed steps of the method must be performed. EMI Group N. Am., Inc. v. Intel Corp., 157 F.3d 887, 896, 48 USPQ2d 1181, 1188 (Fed. Cir. 1998). Claim 1 unmistakably requires that the matrix formed from the starting number and the first character of the data sequence in step (b) be searched for in step (c), and V.42 *bis* does not perform that search. There is no possibility that Conexant's chipsets implementing V.42 *bis* perform all steps of the claimed method, and therefore no possibility of establishing literal infringement.

The undisputed fact that step (c) is not performed for the first character also precludes any possibility of infringement under the doctrine of equivalents. It is equally axiomatic that equivalency is assessed for each claim limitation, and application of the doctrine of equivalents cannot eliminate any limitation in its entirety. Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 29 (1997). Because the accused method omits limitation (c), any assertion of equivalency would have the effect of eliminating limitation (c) with respect to the first data character.

The impossibility of satisfying limitation (c) of claim 1, even if it is assumed that Holtz's remaining claim construction and infringement arguments would prevail, means that no reasonable fact-finder could find claim 1 infringed. Conexant was therefore entitled to summary judgment of noninfringement.

Because the foregoing provides sufficient basis to sustain the district court's judgment of noninfringement, it is unnecessary to consider the other grounds relied upon by the district court in granting summary judgment, or the merits of Conexant's laches defense. See Athletic Alternatives, Inc. v. Prince Mfg., Inc., 73 F.3d 1573, 1583, 37 USPQ2d 1365, 1374 (Fed. Cir. 1996). Accordingly, the judgment of the district court is affirmed.

---

[1] Treating a succeeding character of a V.42 *bis* data stream as claim 1's "first data character" does not circumvent this difficulty, for then initialization step (b) is not performed on the "first data character." To the extent that an entirely unbounded definition of the "starting number" would permit step (b) to be performed upon any character of a V.42 *bis* data sequence, regardless of its position in the data sequence, we hold that the starting number must be associated with the "root" of a tree network. See Declaration of Klaus Holtz, 5:22-6:4 (Oct. 5, 1998).