IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

BEDROCK COMPUTER TECHNOLOGIES LLC,	§	
	§	
Plaintiff,	§	
	§	**CASE NO. 6:09-cv-269-LED**
v.	§	
	§	**Jury Trial Demanded**
SOFTLAYER TECHNOLOGIES, INC., et al.	§	
	§	
Defendants.	§	

BEDROCK'S RESPONSE TO DEFENDANTS' MOTION FOR SUMMARY JUDGMENT OF INDEFINITENESS AS TO CLAIMS 1, 2, 5, AND 6 OF U.S. PATENT NO. 5,893,120

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I. INTRODUCTION

In addition to Defendants' improper reliance on attorney argument to support their Motion for Summary Judgment (Dkt. No. 283), Defendants do not apply the correct legal framework for evaluating the claims of the patent-in-suit, misidentify the recited functions, and ignore structure disclosed in the '120 patent. As such, Defendants cannot begin to carry their clear and convincing evidentiary burden, and their motion should be denied. Moreover, when these claims are properly evaluated vis-à-vis the complete specification of the '120 patent, Bedrock's proposed constructions should be adopted.

II. STATEMENT OF ISSUES

The issue before the Court is whether the Defendants have met their clear and convincing evidentiary burden in demonstrating that one skilled in the art would not understand the scope of claims 1, 2, 5, and 6 of the '120 patent when read in light of the specification, thereby invalidating those claims.

III. BEDROCK'S RESPONSE TO DEFENDANTS' STATEMENT OF UNDISPUTED MATERIAL FACTS

1. Undisputed.

2. Disputed. Contrary to Defendants' assertion, a hash function is not "any series of mathematical operations that transforms [a] key into an index or storage address for a hash table." Rather, a "hashing function can be any operation on the key that results in subscripts *mostly uniformly distributed* across the [hash] table." *See* '120::5:3-5 (emphasis added). Not every series of mathematical operations will uniformly (or mostly uniformly) distribute the universe of keys across a hash table.

3. Disputed. Contrary to the Defendants' implication, executing a hashing function is not a recited function of this claim term. In any event, the specification of the '120 patent discloses pseudocode for hashing. Specifically, the specification discloses the invocation of

function “hash,” which takes “record_key” as an argument and “returns value in the range 0 . . . table_size -1.” *See* ’120 at the “Search Table Procedure” and “Alternate Search Table Procedure” appendices. The ’120 patent also lists algorithmic operations that could serve as the inner functionality for hashing: “truncation, folding, transposition, modulo arithmetic, and combinations of these operations.” *See* ’120::5:5-7.

4. Disputed. In addition to the pseudocode that implements the hash table, Bedrock also cites the specification’s description of this code. *See* Dkt. No. 275 at 24.

5. Undisputed.

6. Disputed. Contrary to the Defendants’ implication, “generating [a hash table] subscript” is not a recited function of this claim term, and as stated in ¶ 3 *supra*, the specification of the ’120 patent discloses both pseudocode for hashing as well as algorithmic operations that could serve as the inner functionality for hashing.

7. Disputed. Contrary to the Defendants’ implication, “accessing the linked list through a hashing function” is not a recited function for any claim term.

8. Undisputed.

9. Disputed. The ’120 patent discloses an algorithm for dynamically determining the maximum number of records to be removed. *See* ’120::6:56-7:15; *see also* Decl. of Dr. Mark Jones (Dkt. No. 275-8) at ¶¶ 22-24. And contrary to the Defendants’ claim that “[t]he named inventor agrees that the specification does not disclose an algorithm” for this limitation, the inventor stated that he could program a computer with the algorithm disclosed in the specification for dynamically determining the maximum number of records to be removed. *See* Dkt. No. 283-2 at 289:1-19.

10. Disputed. Although neither the Search Table Procedure by itself nor the Alternate Search Table Procedure by itself performs the recited function, the algorithm disclosed in the '120 patent, which chooses between these two procedures, performs the recited function. *See* '120::6:56-7:15.

IV. LEGAL FRAMEWORK

Construing a means-plus-function limitation involves multiple inquiries. "The first step in construing [a means-plus-function] limitation is a determination of the function of the means-plus function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed.Cir.2001). Once a court has determined the limitation's function, "the next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* The absence of internal circuitry or code within a corresponding structure does not automatically render the claim indefinite; rather, "the specification need only disclose adequate defining structure to render the bounds of the claim understandable to an ordinary artisan." *See Telecordia Techs., Inc. v. Cisco Systems, Inc.*, Nos. 2009-1175, 2009-1184, 2010 WL 2653251, at *10 (Fed. Cir. July 6, 2010) (citing *Intel Corp. v. VIA Techs., Inc.*, 319 F.3d 1357, 1365-66 (Fed. Cir. 2003)).

V. ARGUMENT

A. Defendants Cannot Carry Their Burden with Attorney Argument.

As stated above, the critical inquiry in determining whether a 112 ¶ 6 claim is definite is whether the specification discloses "adequate defining structure to render the bounds of the claim understandable to an ordinary artisan." *See Intel*, 319 F.3d at 1365-66; *see also Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 953 (Fed.Cir.2007) ("The inquiry is whether one of skill in the art would understand the specification itself to disclose structure . . ."). Defendants have no evidence as to what one of ordinary skill in the art would appreciate when reading the patent;

indeed, the Defendants do not even *identify* a level of ordinary skill in their motion. Instead, the Defendants offer only attorney argument as to what structures are disclosed, what structures are not disclosed, and whether the disclosed structures are adequate. This is not competent evidence under Fed. R. Civ. P. 56(e) or L.R. CV-56(d), and it is certainly not clear and convincing evidence. For this reason alone, Defendants' Motion for Summary Judgment should be denied. In contrast, Bedrock, the non-movant, has evidence that one of ordinary skill in the art would understand the bounds of the claims. *See* Decl. of Dr. Mark Jones, *passim*.

B. The Disputed Limitations Are Definite.

1. "a hashing means to provide access to records stored in a memory of the system and using an external chaining technique to store the records with same hash addresses, at least some of the records automatically expiring" [claim 5]

The recited function of this limitation is "using hashing to provide access to records stored in a memory of the system and using an external chaining technique to store the records with same hash addresses, at least some of the records automatically expiring." The structures that perform this function are the portions of the application software, user access software or operating system software, described at '120::4:30-48 and illustrated in FIG. 2, of a computer system that includes at least a CPU 10 and RAM 11 of FIG. 1 as described at '120::3:52-56, where the portion of the software includes executable software instructions as disclosed in the psuedocode that defines the a chained hash table and the linked lists that are chained to it:

Definitions

The following formal definitions are required for specifying the insertion, retrieval, and deletion procedures. They are global to all procedures and functions shown below.

```
1. const table_size                                          /* Size of hash table. */
2. type list_element_pointer = ↑ list_element                /* Pointer to elements of linked list. */
3. type list_element =                                       /* Each element of linked list. */
     record
          record_contents: record_type;
          next: list_element_pointer                         /* Singly-linked list. */
     end
4. var table: array [0 . . . table_size – 1] of list_element_pointer   /* Hash table. */
                                                             /* Each array entry is pointer to head of list. */
   Initial state of table: table[i] = nil ∀ i 0 ≦ i < table_size        /* Initially empty. */
```

and/or as described at '120::5:16-41 or the equivalents thereof. *See* Decl. of Dr. Mark Jones at ¶¶ 25-27.

The Defendants mistakenly believe that "using hashing" in the recited function of this limitation requires the execution of a hashing function. *See* Mot. at 7. "Executing a hashing function," however, is not a required function of this claim. The '120 patent discloses a hashing technique with external chaining, which entails (i) a hash function, (ii) a hash table, and (iii) linked lists chained from the hash table. *See* '120::4:53-5:33. Of these "hashing means," it is the linked lists (numbers 2 and 3 in the pseudocode above) that "provide access to records stored in a memory of the system," and it is the hash table (number 4 in the pseudocode above) that "us[es] an external chaining technique to store the records with same hash addresses, at least some of the records automatically expiring." *See* Decl. of Dr. Mark Jones at ¶¶ 25-27. No additional function or structure is required for this claim limitation. A hash function does not provide access to records; rather, a hash function is used in accessing records. *See*, e.g., '120::4:67-5:3. The recited function, however, does not require "accessing." This understanding is reinforced by another limitation of claim 5: "a record search means utilizing a search key to access a linked list of records having the same hash address." The Defendants' attempt to require this recited function to include the execution of a hashing function is improper. *See Micro Chemical, Inc. v. Great Plains Chemical Co.*, 194 F.3d 1250, 1258 (Fed Cir. 1999) ("The statute [35 U.S.C. § 112 ¶ 6] does not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim."). Because the Defendants have misidentified the recited function of this limitation, they cannot even begin to carry their burden.

2. "a record search means utilizing a search key to access the linked list" [claim 1] and "a record search means utilizing a search key to access a linked list of records having the same hash address" [claim 5]

These claim terms are taken together because Bedrock proposes the same corresponding structures across both disputed terms, and the Defendants propose that both terms are indefinite for the same reasons. The recited functions of these claim terms are "record searching utilizing a search key to access the linked list" and "record searching utilizing a search key to access a linked list of records having the same hash address" respectively. The corresponding structures for these limitations are the portions of the application software, user access software or operating system software, as described at col. 4, lines 30-48 and illustrated in FIG. 2, of a computer system that includes at least a CPU 10 and RAM 11, see FIG. 1 and col. 3 lines 52-56; and executable software instructions as illustrated in Boxes 31-36 and Boxes 39-41 of FIG. 3, or as portions of the pseudo-code of Search Table Procedure (cols. 11 and 12) or Alternate Version of Search Table Procedure (cols. 11, 12, 13, and 14), and described in col. 5, line 57-col. 6 line 4 and col. 6 lines 15-20, or the equivalents thereof. *See* Decl. of Dr. Mark Jones at ¶¶ 10-13 and 31-32.

The Defendants focus on the aspect of the recited functions that requires "utilizing a search key to access a linked list." *See* Mot. at 8 (emphasis in original). Specifically, even though the Defendants recognize that the disclosed algorithm for accessing the linked list is "hashing on [the search] key to locate a storage address within the array," *see* id., they argue that these limitations are indefinite because there is no disclosed *hashing* algorithm. Executing a hashing function, however, is not part of the recited function for this limitation; rather, it is the structure disclosed in the specification for performing part of the recited function. As such, the Defendants' argument that "the specification fails to disclose a hash algorithm" misses the

point.[1] The absence of internal circuitry or code within a corresponding structure does not automatically render the claim indefinite; rather, "the specification need only disclose adequate defining structure to render the bounds of the claim understandable to an ordinary artisan." *See Telecordia Techs.*, 2010 WL 2653251, at *10. In other words, although the recited function must have structure in the form of a corresponding algorithm, the structure is not required, in turn, to have its own corresponding algorithm. Because Defendants employ a faulty legal framework for evaluating these claims, they cannot even begin to carry their burden.

3. "means for dynamically determining maximum number for the record search means to remove in the accessed linked list of records" [claims 2 and 6]

The recited function of this limitation is "dynamically determining maximum number of records for the record search means to remove in the accessed linked list of records."[2] The structure that performs the recited function is the portions of the application software, user access software or operating system software, described at '120::4:30-48 and illustrated in FIG. 2, of a computer system that includes at least a CPU 10 and RAM 11 of FIG. 1 as described at '120::3:52-56, where the portion of the software includes executable software instructions which, at the time the record search means is invoked by the caller, chooses whether to execute the

[1] The Defendants' assertion that "the specification fails to disclose a hash algorithm" is factually wrong as well. The specification of the '120 patent discloses pseudocode for hashing. Specifically, the specification discloses the function "hash," which takes "record_key" as an argument and "returns value in the range 0 . . . table_size -1." *See* '120 at the "Search Table Procedure" and "Alternate Search Table Procedure" appendices. The '120 patent also lists operations that could serve as the inner functionality for hashing: "truncation, folding, transposition, modulo arithmetic, and combinations of these operations." *See* '120::5:5-7.

[2] The Defendants suggest that the recited function should be construed to incorporate the same "single quantity" limitation that they propose in their non-112 ¶ 6 "dynamically determining" claim terms. *See* Mot. at 10. Recited function for 112 ¶ 6 claims are to be identified, not construed. *See Micro Chemical*, 194 F.3d at 1258 ("The statute [35 U.S.C. § 112 ¶ 6] does not permit limitation of a means-plus-function claim by adopting a function different from that explicitly recited in the claim.").

Search Table Procedure or the Alternate Version of Search Table Procedure. *See* '120::6:56-7:15. This choice is based on factors such as how much memory is available in the system storage pool, general system load, time of day, the number of records currently residing in the information system. *See id*; *see also* Decl. of Dr. Mark Jones at ¶¶ 22-24.

The Defendants focus on the search table procedures in isolation for their contention that there is no disclosed algorithm that performs the recited function. *See* Mot. at 9-10. This argument is a red herring. It is the *choice* between the two disclosed search table procedures, where the choice is based on factors such as how much memory is available in the system storage pool, general system load, time of day, the number of records currently residing in the information system, that performs the recited function of "dynamically determining maximum number of records for the record search means to remove in the accessed linked list of records." In fact, the Defendants only consider this algorithm in making the remarkable assertion that it corresponds to "a different, unclaimed function." *See* Mot. at 10. This unsupported attorney argument cannot break the clear linkage associating this algorithm to the recited function. See '120::6:66-7:4 ("The implementor even has the prerogative of choosing among these [search procedure] strategies *dynamically* . . . thus sometimes removing *all* expired records, at other times removing *some but not all* of them, and yet at other times choosing to remove *none* of them.") (emphasis added). *See also* Decl. of Dr. Mark Jones at ¶¶ 22-24. If anything, the Defendants' assertion that this algorithm relates to an unclaimed function highlights their error in attempting to import limitations into the recited function. *See* n.2, *supra*.

VI. CONCLUSION

For the foregoing reasons, Bedrock respectfully requests that the Court deny Defendants' Motion for Summary Judgment of Indefiniteness as to Claims 1, 2, 5, and 6, and that the Court adopt Bedrock's proposed constructions for the recited functions and corresponding structures.

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Respectfully submitted,
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CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of the forgoing document via the Court's CM/ECF system pursuant to the Court's Local Rules this 24th day of September, 2010.

/s/ J. Austin Curry
J. Austin Curry