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19 UNITED STATES DISTRICT COURT  
20 NORTHERN DISTRICT OF CALIFORNIA  
21 SAN FRANCISCO DIVISION

22 ORACLE AMERICA, INC.  
23 Plaintiff,  
24 v.  
25 GOOGLE INC.  
26 Defendant.

Case No. CV 10-03561 WHA

**ORACLE’S JURY INSTRUCTION  
OBJECTION AND REQUEST FOR  
RULING REGARDING  
“SYMBOLIC REFERENCE”**

Dept.: Courtroom 8, 19th Floor  
Judge: Honorable William H. Alsup



1 Any implication that a number cannot be a symbolic reference would be inconsistent with  
 2 the Court's ruling on Google's proposed construction of "symbolic reference" as limited to string-  
 3 or character-based references. Google's argument made clear that by string- or character-based, it  
 4 was referring to a sequence of characters, not "number-based references":

5 Second, as one of the largest software companies in the world, Oracle is certainly  
 6 familiar with what the words "string" and "character" mean as they relate to  
 7 software. The Microsoft Press Dictionary cited in Oracle's Opening Brief defines a  
 8 "string" as a "data structure composed of a sequence of characters, usually  
 9 representing human-readable text." See Ex. P, Microsoft Press Computer  
 10 Dictionary 374 (2d ed. 1994). This definition, which uses both "string" and  
 "character," is consistent with the manner in which "symbolic reference" is used  
 throughout the specification, and confirms that Google's more precise  
 construction, which does not encompass number-based references, is correct. See,  
 e.g., '104 patent at Figs. 1A and 1B (showing slot numbers 1 and 2 as "numeric"  
 references, and single character strings "x" and "y" as "symbolic" references).

11 (ECF 102 at 15.) In its *Markman* Order, the Court flatly rejected Google's proposed language:

12 Google's proposed modifier "string- or character-based" does not correspond to  
 13 any terms or concepts appearing in the intrinsic record and will not be read in from  
 the proffered extrinsic sources.

14 (ECF 137 at 22.)

15 By its evidence and argument during this trial, however, Google seeks to resuscitate its  
 16 lost argument and to confuse the jury into thinking that a number cannot be a symbolic reference.  
 17 The Court should bar Google from doing so.

## 18 **II. OBJECTION REGARDING INCLUSION OF "DYNAMIC" IN JURY** 19 **INSTRUCTION**

20 In light of the testimony elicited from Google witnesses on Friday, May 11, 2012, Oracle  
 21 renews its *Markman* objection to inclusion of the phrase "that is resolved dynamically rather than  
 22 statically" in the definition of "symbolic reference" in the Court's Draft Jury Instruction No. 11  
 23 (ECF 1121 at 5).<sup>1</sup>

24 The '104 patent is clear as to what "static" and "dynamic" mean in the context of the  
 25 patent. It uses the terms "static" and "dynamic" *as adjectives* to characterize numeric and

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26  
 27 <sup>1</sup> Oracle preserves all prior objections made to the jury instructions and verdict form at the  
 28 charging conference on May 10, 2012, and in briefs filed with the Court before the charging  
 conference addressing proposed jury instructions.

1 symbolic references, respectively: “[T]he main interpretation routine determines if the data  
2 reference is *static, i.e., numeric, or dynamic, i.e., symbolic . . .*” (TX 4015 at Col. 5:11-13,  
3 emphasis added.)

4 As defined in Instruction No. 11, however, those terms are ambiguous. From Google’s  
5 questioning of witnesses, it is apparent that Google intends to exploit that ambiguity. To avoid  
6 juror confusion with respect to Instruction No. 11, Oracle requests that the Court consider either  
7 (1) removing the phrase “that is resolved dynamically rather than statically,” or (2) clarifying the  
8 meaning of “static” and “dynamic” as used in the context of the ’104 patent.<sup>2</sup>

9 As the Court explained in its Claim Construction Order, numeric (static) references  
10 identify a memory location directly, while symbolic (dynamic) references require resolution to a  
11 memory location:

12 *A numeric data reference* was one that identified data directly by its memory-  
13 location address. For example, the command “load the data stored in memory slot  
14 2” contains a numeric reference to the data stored in slot 2 (col. 1:26–41). The  
15 claimed invention would use a *static subroutine* to interpret this numeric data  
16 reference — all it would have to do is go get whatever data is stored in slot 2 . . . .

16 *A symbolic data reference*, on the other hand, did not identify data directly by its  
17 memory-location address. Instead, a symbolic reference identified data by a  
18 “symbolic name” (col. 1:64–67). For example, the command “load the data  
19 called y” contains a symbolic reference to the data called y. The claimed  
20 invention would use a *dynamic subroutine* to interpret this symbolic reference —  
21 it would have to figure out that “y” means “17” or that “y” means “the data stored  
22 in memory slot 2,” and then get the data called y (col. 5:13–19).

23 (ECF 137 at 20-21, emphasis added.)

24 The patent’s clear adjectival use of “dynamic” and “static” and the Court’s explanation of  
25 the terms was not adequately reflected in the actual construction – and hence current jury  
26 instruction – of the term “symbolic reference.” Instead, “static” and “dynamic” were turned into  
27

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28 <sup>2</sup> The Court’s Claim Construction Order states: “While this order acknowledges that the  
parties have a right to the construction of all disputed claim terms by the time the jury instructions  
are settled, the Court will reserve the authority, on its own motion, to modify the constructions in  
this order if further evidence — intrinsic or extrinsic — warrants such a modification.” (ECF 137  
at 5-6.) Because Google’s arguments are contrary to the Court’s explanation of the terms  
“dynamic” and “static” in the Claim Construction Order, clarification is warranted.

1 adverbs, and “symbolic reference” was construed to mean “a reference that identifies data by a  
2 name other than the numeric memory location of the data, *and that is resolved dynamically rather*  
3 *than statically.*” (*Id.* at 22, emphasis added.)

4 Oracle objected to the inclusion of the last phrase (in italics), noting that confusion might  
5 arise over the meaning of “dynamic.” (ECF 132 at 2.) The Court declined to remove that phrase,  
6 but explained:

7 Because this word [“dynamic”] comes directly from the ’104 patent, its use therein will  
8 further inform the construction of ‘symbolic reference.’ The word ‘dynamic’ is not being  
9 imported from a vacuum.

10 (ECF 137 at 22.)

11 The confusion that Oracle feared has now materialized at trial. Google is relying on an  
12 interpretation of “dynamic” as referring to *the timing* of symbolic reference resolution, rather than  
13 the nature of the symbolic references. To this end, Google questioned Android engineer  
14 Andy McFadden as follows:

15 Q. Is dexopt a static or a dynamic optimization?

16 A. It performs static optimizations.

17 Q. Why is it called a static optimization?

18 A. Because it doesn’t require information that is only available at runtime.

19 Q. And when you use the word “runtime” in that answer, how are you using  
20 it?

21 A. Uhm, in the sense that – well, there’s different – things happen at different  
22 times. So there’s compile time, where the compilers in dx are running.  
23 There’s install time, when packages are being downloaded to the device  
24 and installed. And then there’s runtime when the application itself is  
25 actually executing.

26 Q. Does dexopt operate when the Dalvik bytecode is actually executing?

27 A. No.

28 Q. Is that why you use the term – why you say it’s not a dynamic process?

A. Yes.

1 (RT at 3762:24-3763:19 (McFadden).) Based on this testimony and Google’s arguments, the jury  
 2 may be misled into believing that dexopt does not infringe the ’104 patent because it operates at  
 3 “install time” rather than “at runtime when the application itself is actually executing.”

4 The term “dynamic” as used in the ’104 patent has nothing to do with the *timing* of  
 5 symbolic reference resolution – *i.e.*, whether it happens at “runtime” or not. Neither the ’104  
 6 patent nor the Court’s Claim Construction Order ascribe a temporal meaning to “dynamic.”  
 7 Instead, “dynamic” refers to the nature of symbolic references – they are “dynamic” in that they  
 8 must be resolved to identify the memory location of the underlying data based on memory  
 9 conditions that exist at whatever time the resolution occurs. (TX 4015 at Col. 5:10-31; ECF 137  
 10 at 20-21.) Understood in this way, Google’s Mr. McFadden admitted that Android’s dexopt  
 11 dynamically resolves symbolic into numerical references:

12 Q. But dexopt resolves what even you concede are symbolic references?

13 A. True.

14 Q. And it resolves them into numerical references?

15 A. True.

16 Q. And because that resolution process depends on the conditions actually  
 17 existing on the handset, when those conditions change by way of a system  
 update, dexopt needs to rerun?

18 A. True.

19 Q. And in that sense it’s dynamic?

20 A. No.

21 Q. Because you disagree with what “dynamic” means?

22 A. I’m not sure what you mean by “dynamic,” but it is possible that we  
 23 disagree.

24 Q. If I mean by dynamic, depending on conditions on the handset which can  
 change from time to time, then it is dynamic; true, sir?

25 A. Okay.

26 (RT at 3769:8-3770:1 (McFadden).)

27 To avoid juror confusion over the meaning of “dynamic” in the definition of “symbolic  
 28 reference,” the Court should either:

1 (1) remove the phrase “that is resolved dynamically rather than statically” from the  
2 definition of “symbolic reference”; or

3 (2) clarify the construction to conform it to the meaning of “dynamic” and “static” in  
4 the Court’s Claim Construction Order by adding one sentence – “Symbolic reference” means “a  
5 reference that identifies data by a name other than the numeric memory location of the data, and  
6 that is resolved dynamically rather than statically. *“Dynamic” means that the reference requires*  
7 *resolution to identify a memory location, while “static” means the reference directly identifies a*  
8 *memory location.”*

9 Google cannot claim prejudice from this clarification, as it would conform the meaning of  
10 “dynamic” to the Court’s discussion in the Claim Construction Order.

11  
12 Dated: May 13, 2012

MORRISON & FOERSTER LLP

13  
14 By:  /s/ Michael A. Jacobs

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