

EXHIBIT C

IN THE UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS

MARSHALL DIVISION

NORTHEASTERN UNIVERSITY *
and JARG CORP. *

* Civil Action
* No. 2:07-CV-486 (TJW)

VS.

GOOGLE INC. *

ORAL AND VIDEOTAPED DEPOSITION OF
KENNETH BACLAWSKI
AUGUST 27, 2009

ORAL AND VIDEOTAPED DEPOSITION OF KENNETH
BACLAWSKI, produced as a witness at the instance of the
Defendant and duly sworn, was taken in the above-styled
and numbered cause on the 27th day of August, 2009,
from 9:04 a.m. to 5:08 p.m., before MARSHA EVANS,
Certified Shorthand Reporter in and for the State of
Texas, reported by machine shorthand, at the offices of
Vinson & Elkins, 2801 Via Fortuna, Suite 100, Austin,
Texas, pursuant to the Federal Rules of Civil Procedure
and the provisions stated on the record or attached
hereto.

Job No.: 213552

1 content labels are represented using a data structure
2 called a KEYNET." What's the reference to content
3 label? What is that referring to?

4 A. The term content is used to refer to the
5 collection of objects or documents that are being
6 indexed. The term label is a term for the annotation
7 that is actually indexed by the -- by this KEYNET --
8 KEYNET system.

9 Q. So a content label is a -- is a representation
10 of some information in the corpus; is that right?

11 A. No, not necessarily. It could have additional
12 annotations that are not actually in the content. It
13 could have information that is explicitly in the
14 content. It's -- it's really an independent annotation
15 in general, although as I say it could be very closely
16 linked to the content.

17 Q. And what does it mean that both the queries
18 and the content labels are represented using the data
19 structure called a KEYNET?

20 A. It means that the same data structure is used
21 for both of these.

22 Q. And is that important for some reason that
23 they use the same data structure?

24 A. Yes. It's necessary for them to have the same
25 data structure so that one can match the queries with

1 the objects or the -- or the documents that are in the
2 collection.

3 Q. You referred earlier to a KEYNET being a
4 graphical structure, and this paper refers to it as a
5 directed graph. Is that the same -- same idea?

6 MR. RYAN: Objection, form.

7 THE WITNESS: Graphical structure
8 consists of vertices and edges. The edges are
9 typically directed, meaning it goes from one vertex to
10 another vertex, hence the name directed graph.
11 Although sometimes undirected edges are used.

12 Q. (By Mr. Pollack) If you'll turn to page 2738,
13 Exhibit 17, in this range there's a paper entitled An
14 Abstract Model For Semantically Rich Information
15 Retrieval. It looks like it's dated March 31st, '94,
16 coauthored by yourself and someone named Dan Simovici.
17 See that?

18 A. Yes.

19 Q. Who is Dan Simovici?

20 A. Dan Simovici is a professor at the University
21 of Massachusetts Boston. He was the coauthor of this
22 paper.

23 Q. What was his role in the KEYNET project?

24 A. He was not very much involved in it. The only
25 connection that he had was in this particular paper we

1 identified uniquely by an object identifier (OID) and
2 is described by a content label." Is that reference to
3 content label, is that the same content label that
4 we referred to earlier in our discussions associated
5 with the KEYNET papers?

6 A. The context here is a little different. It
7 just says that it's written in a form of artificial
8 language specified by the ontology. But roughly
9 speaking it's a similar concept.

10 Q. Okay. The second paragraph states that, "An
11 ontology can also specify weight information such as
12 the strength of a relationship or the degree of
13 prototypicality of an attribute value." Can you
14 explain that a little bit more to me what you
15 understand to mean that an ontology can specify weight
16 information?

17 A. Weight information has to do with the kind of
18 fuzzy aspect of information retrieval, so that one can
19 distinguish between stronger and weaker matches to
20 concepts and relationships.

21 Q. Okay. So the weight information could be, for
22 example, some added information contained within a
23 content label, for example?

24 A. Yes. Weight information can be in a content
25 label.

1 Q. The next paragraph starts talking about
2 queries. The second sentence reads, "A fragment of a
3 content label or a query is a part of the content label
4 or query consisting of a limited number of attributes
5 and attribute values joined by relationships." What
6 does it mean -- well, what are attributes and attribute
7 values, first of all?

8 A. The attributes and attribute values there are
9 the vertices of this content label, and then you have
10 the attribute values joined by relationships.

11 Q. So am I correct in understanding that, for
12 example, if a query complies with this structure that
13 we're talking about earlier about being a graphical
14 representation of vertices and edges, the fragment of
15 that query might be a subset of that -- a piece of that
16 graph? Would that be accurate?

17 A. Yes. It's part of it.

18 Q. And this breaking up of a query or a content
19 label into -- into fragments, that conceptually is
20 related to what we talked about earlier when we were
21 looking at the fragmentation algorithm in the KEYNET
22 papers. Is that the concept that's being referred to
23 here?

24 MR. RYAN: Objection, form.

25 THE WITNESS: The KEYNET paper is an

1 A. I just recently reviewed a couple of papers
2 for a journal on -- I can't remember the title.
3 Knowledge and communities and cultures, something like
4 that. I don't remember the precise name.

5 Q. I'm going to just refer you back to -- we used
6 the term earlier, but the term fuzzy query. What's
7 generally your understanding of what a fuzzy query is?

8 MR. RYAN: Objection, form.

9 THE WITNESS: Fuzzy -- a fuzzy query is
10 one for which the query itself and the results have
11 weights or degrees of importance, so that a result is
12 more or less -- you know, varying degrees of strength
13 with respect to the -- the query.

14 MR. POLLACK: Why don't we take five.

15 THE VIDEOGRAPHER: Off the record at
16 4:59 p.m.

17 (Recess from 5:00 to 5:07)

18 THE VIDEOGRAPHER: We're back on the
19 record at 5:06 p.m.

20 Q. (By Mr. Pollack) Professor, I just want to
21 clear something up. I might have asked an ambiguous
22 question earlier. We talked about after resigning as a
23 board member that you haven't had any further -- done
24 any further work for Jarg. I just want to clarify,
25 have you had any additional consulting work that you've