

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

DEVINE LICENSING LLC,

Plaintiff,

v.

TERADATA CORPORATION,

Defendant.

C.A. No.

TRIAL BY JURY DEMANDED

COMPLAINT FOR INFRINGEMENT OF PATENT

COMES NOW, Devine Licensing LLC (“Devine” or “Plaintiff”), through the undersigned attorneys, and respectfully alleges, states, and prays as follows:

NATURE OF THE ACTION

1. This is an action for patent infringement under the Patent Laws of the United States, Title 35 United States Code (“U.S.C.”) to prevent and enjoin defendant Teradata Corporation (hereinafter “Defendant”), from infringing and profiting, in an illegal and unauthorized manner and without authorization and/or of the consent from Devine, from U.S. Patent No. 6,339,769 (the “769 patent”, attached hereto as Exhibit “A”) pursuant to 35 U.S.C. § 271, and to recover damages, attorney’s fees, and costs.

THE PARTIES

2. Plaintiff is a Texas entity with its principal place of business at 2108 Dallas Pkwy., Suite 214-1018, Plano, Texas 75093-4362.

3. Upon information and belief, Defendant is a corporation organized under the laws of Delaware, having a principal place of business at 17095 Via Del Campo, San Diego, California 92127. Upon information and belief, Defendant may be served with process at The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

JURISDICTION AND VENUE

4. The Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) because the action arises under the Patent Laws of the United States, 35 U.S.C. §§ 1 et seq.

5. This Court has personal jurisdiction over Defendant by virtue of its systematic and continuous contacts with this jurisdiction, including residing in Delaware, as well as because of the injury to Devine, and the cause of action Devine has risen, as alleged herein.

6. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Delaware Long Arm Statute, *Del. Code. Ann. Tit. 3, § 3104*, due at least to its substantial business in this forum, including: (i) at least a portion of the infringements alleged herein; and (ii) regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in Delaware and in this judicial district.

7. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b) because Defendant resides in this District.

FACTUAL ALLEGATIONS

8. On January 15, 2002, the United States Patent and Trademark Office ("USPTO") duly and legally issued the '769 patent, entitled "Query optimization by transparently altering properties of relational tables using materialized views" after a full and fair examination. (Exhibit A).

9. Devine is presently the owner of the patent, having received all right, title and interest in and to the '769 patent from the previous assignee of record. Devine possesses all rights of recovery under the '769 patent, including the exclusive right to recover for past infringement.

10. The '769 patent contains six independent claims and sixty-six dependent claims. Defendant commercializes, inter alia, methods that perform all the steps recited in at least one claim of the '769 patent.

11. The invention claimed in the '769 patent comprises a method optimizing database queries using a materialized view for a table referenced in the query, wherein the materialized view has different properties than the referenced table.

12. The method allows a user to optimize a query in a computer system by transparently altering properties of relational tables using materialized views.

13. The technology embodied by the '769 patent improved techniques for the replication of materialized views in a massively parallel processing (MPP) environment.

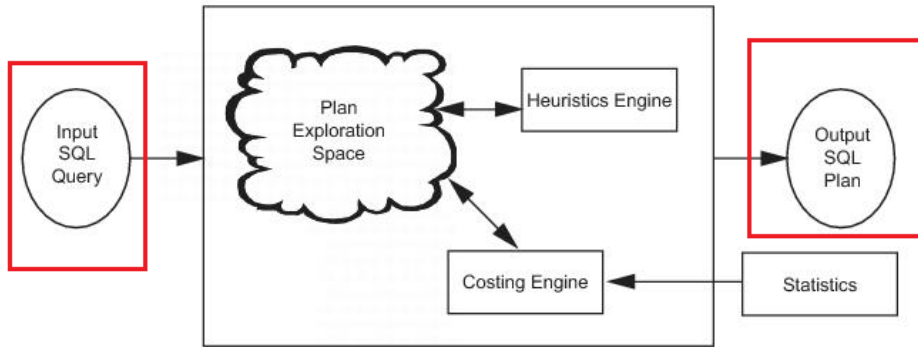
DEFENDANT'S PRODUCTS

14. Defendant offers products, such as the "Teradata Database 15.10" (the "Accused Instrumentality"), that practices a method of optimizing a query (e.g., by means of a query optimizer) in a computer system, the query being performed by the computer system to retrieve data from a database stored on the computer system, as recited in the preamble of claim 1 of the '769 patent and as shown on Defendant's website¹.

15. As recited in the first step of claim 1, the Accused Instrumentality practices accepting the query into the computer system by allowing a user to submit a query.

¹ <https://docs.teradata.com/viewer/document/oZkZd8RlhUSQ2t4Aa5aIRA>, last visited April 12, 2019.

A query optimizer is an intricate software system that performs several transformations on SQL queries. The following graphic is a very high-level representation of an SQL query optimizer.



16. As recited in the second step of claim 1, the Accused Instrumentality practices determining whether there exist one or more materialized views for one or more tables referenced in the query, wherein the materialized view has different partitioning or replication properties than the tables referenced in the query. For example, the Accused Instrumentality uses materialized views, which can be partitioned or its other properties can be changed independently and differently vis a vis the actual table referenced by a query.

JOIN INDEX is a materialized view. Its definition is permanently stored and the data is updated whenever the base tables referred in the join index is updated. JOIN INDEX may contain one or more tables and also contain pre-aggregated data. Join indexes are mainly used for improving the performance.

There are different types of join indexes available.

- Single Table Join Index (STJI)
- Multi Table Join Index (MTJI)
- Aggregated Join Index (AJI)

Single Table Join Index

Single Table Join index allows to partition a large table based on the different primary index columns than the one from the base table.

17. As recited in the third step of claim 1, the Accused Instrumentality practices analyzing whether at least a portion of the query can be evaluated using one or more of the

materialized views in a local fashion, so that no data movement is required for the evaluation. For example, the Accused Instrumentality uses join index (e.g., materialized view), which is stored in OUC cache. Therefore, no data movement is required for the evaluating queries using materialized views (e.g., join index).

The following Parser components populate the object use count cache with both object use count and UDI data.

This Parser component ...	Populates the OUC cache with this type of information ...
<p>Red tree</p> <p>The red tree is the Parser tree output of the Resolver and the Query Rewrite subsystem.</p>	<ul style="list-style-type: none"> • Table • View • Macro • Trigger
<p>White tree</p> <p>The white tree is the Parser tree output of the Optimizer.</p>	<ul style="list-style-type: none"> • Join index • Hash index • Statistics
<p>Dispatcher</p> <p>The output of the Dispatcher is the AMP steps.</p>	<p>Runtime data on the following step-level operations.</p> <ul style="list-style-type: none"> • Delete • Insert • Update

18. As recited in the fourth step of claim 1, the Accused Instrumentality practices rewriting the query to use one or more materialized views rather than an original table or tables referenced in the query. For example, the Accused Instrumentality rewrites queries using materialized views.

View Materialization and Other Database Object Substitutions

Perhaps the most obvious query rewrite concern is instantiating virtual database objects and replacing specified query structures with more high-performing substitutes when possible.

For example, all views referenced by a query must be resolved into their underlying base tables or covering indexes before the query can be performed. These rewrite methods also replace base tables and table joins with hash, join, or even secondary indexes whenever the substitution makes the query perform more optimally. These substitutions also apply to view materialization if base tables referenced by the view can be replaced profitably, Partial GROUP BY rewrites, and Common Spool Usage rewrites. The term *materialized view* is sometimes used to describe database objects like snapshot summary tables, and hash or join indexes (see Gupta and Mumick, 1999). For purposes of the current discussion, the term refers to materializing the base table components of a view definition in a spool relation.

For various reasons, these query rewrites are performed by the Optimizer subsystem after the Query Rewrite subsystem has completed its various rewrite tasks.

19. As recited in the fifth step of claim 1, the Accused Instrumentality practices executing the rewritten query using one or more materialized views. For example, the Accused Instrumentality executes the query resulting from the query optimizer, which uses materialized views.

Teradata Database Optimizer Processes

This topic provides a survey of the stages of query optimization undertaken by the Optimizer. The information is provided only to help you to understand what sorts of things the Optimizer does and the relative order in which it performs them.

Query Optimization Processes

The following processes list the logical sequence of the processes undertaken by the Optimizer as it optimizes a DML request. The processes that are listed here do not include the influence of parameterized value peeking to determine whether the Optimizer should generate a specific plan or a generic plan for a given request (see [Parameterized Requests](#)) other than to note that it does make that determination.

The input to the Optimizer is the Query Rewrite ResTree' (see [Query Rewrite and Optimization](#)). The Optimizer then produces the optimized white tree, which it passes to an Optimizer subcomponent called the Generator (see [Generator](#)).

The Optimizer generates a *static plan* for all of the requests it processes by computing the cost of all the possible plan variations and selecting the plan with the lowest cost, and often chooses to use a static plan for a request. During the process of generating a static plan, the Optimizer assumes that all of the compilation-time demographic information it has is accurate and generates the plan for the entire request. However, this assumption is not always true, particularly for complex queries, where even all the advanced demographic estimation methods used by Teradata Database such as derived statistics and enhanced costing formulas can generate inaccurate cardinality, CPU usage, and I/O counts for the intermediate steps of a plan that lead to poor static plans.

If a request happens to contain some independent components such as noncorrelated scalar subqueries, nonfolded derived tables or views, remote table operators, or some combination of these, the Optimizer can fragment the request into smaller components called request fragments. The demographics and inferred data from the execution of the plan fragments are used to plan subsequent request fragments. The request fragments are planned and executed incrementally. See [Incremental Planning and Execution](#) for more information about this process.

The Optimizer first generates a static plan for a request and then determines whether to execute the static plan or to generate and execute a dynamic plan. Information gathered while generating the static plan is used as part of this determination.

The Optimizer either sends the complete static plan or the summary information from the static plan as part of the first dynamic plan fragment to the dispatcher to apply workload filters, throttles, and classification criteria for the request. This behavior is controlled by an internal DBS Control field. Contact Teradata Customer Support if this field needs to be changed.

20. The elements described in paragraphs 14-19 are covered by at least claim 1 of the '769 patent. Thus, Defendant's use of the Accused Product is enabled by the method described in the '769 patent.

COUNT I (DIRECT INFRINGEMENT OF THE '769 PATENT)

21. Plaintiff realleges and incorporates by reference the allegations set forth in paragraphs 1 to 20.

22. Defendant has, prior to launching the Accused Product in the United States, performed internal testing with said Accused Product.

23. In violation of 35 U.S.C. § 271, Defendant is now, and has been directly infringing the '769 patent.

24. Defendant has had knowledge of infringement of the '769 patent at least as of the service of the present complaint.

25. Defendant has directly infringed and continues to directly infringe at least claim 1 of the '769 patent by using, at least through internal testing, the Accused Instrumentality without authority in the United States, and will continue to do so unless enjoined by this Court. As a direct and proximate result of Defendant's direct infringement of the '769 patent, Plaintiff has been and continues to be damaged.

26. By engaging in the conduct described herein, Defendant has injured Devine and is thus liable for infringement of the '769 patent, pursuant to 35 U.S.C. § 271.

27. Defendant has committed these acts of infringement without license or authorization.

28. As a result of Defendant's infringement of the '769 patent, Devine has suffered monetary damages and is entitled to a monetary judgment in an amount adequate to compensate for Defendant's past infringement, together with interests and costs.

COUNT II
(INDIRECT INFRINGEMENT OF THE '769 PATENT)

29. Plaintiff realleges and incorporates by reference the allegations set forth in paragraphs 1 to 28.

30. In violation of 35 U.S.C. § 271, Defendant is now, and has been indirectly infringing the '769 patent.

31. Defendant has had knowledge of infringement of the '769 patent at least as of the service of the present complaint.

32. Defendant has indirectly infringed and continues to indirectly infringe at least claim 1 of the '769 patent by actively inducing its respective customers, users, and/or licensees to directly infringe by using the Accused product. Defendant engaged or will have engaged in such inducement having knowledge of the '769 patent. Furthermore, Defendant knew or should have known that its action would induce direct infringement by others and intended that its actions would induce direct infringement by others. For example, Defendant sells, offers to sell and advertises the Accused Product through websites or digital distribution platforms that are available in Delaware, specifically intending that its customers use it. Furthermore, Defendant's customers' use of the Accused Product is facilitated by the invention described in the '769 patent. As a direct and proximate result of Defendant's indirect infringement by inducement of the '769 patent, Plaintiff has been and continues to be damaged.

33. By engaging in the conduct described herein, Defendant has injured Devine and is thus liable for infringement of the '769 patent, pursuant to 35 U.S.C. § 271.

34. Defendant has committed these acts of infringement without license or authorization.

35. As a result of Defendant's infringement of the '769 patent, Devine has suffered monetary damages and is entitled to a monetary judgment in an amount adequate to compensate for Defendant's past infringement, together with interests and costs.

DEMAND FOR JURY TRIAL

36. Devine demands a trial by jury of any and all causes of action.

PRAYER FOR RELIEF

WHEREFORE, Devine prays for the following relief:

- a. That Defendant be adjudged to have directly infringed the Patents-In-Suit either literally or under the doctrine of equivalents;
- b. An accounting of all infringing sales including, but not limited to, those sales not presented at trial;
- c. That Defendant, its officers, directors, agents, servants, employees, attorneys, affiliates, divisions, branches, parents, and those persons in active concert or participation with any of them, be permanently restrained and enjoined from directly infringing the Patent-In-Suit;
- d. An award of damages pursuant to 35 U.S.C. § 284 sufficient to compensate Devine for the Defendant's past infringement, including compensatory damages;
- e. An assessment of pre-judgment and post-judgment interest and costs against Defendant, together with an award of such interest and costs, in accordance with 35 U.S.C. § 284; and
- f. That Devine have such other and further relief as this Court may deem just and proper.

Dated: April 29, 2019

DEVLIN LAW FIRM LLC

/s/ Timothy Devlin

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DEVINE LICENSING LLC***