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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91193335
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

EMBARCADERO TECHNOLOGIES, INC.,

Opposer,

v.

RSTUDIO, INC.

Applicant.

Opposition No. 91193335

Applications S.N.

77/691980

77/691984

77/697987

APPLICANT'S TRIAL BRIEF

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INTRODUCTION

RStudio, Inc. (“Applicant”) hereby submits its Trial Brief on the merits in the instant Opposition No. 91193335, filed by Embarcadero Technologies, Inc. (“Opposer”) on January 9, 2010, in which Opposer has opposed the applications for registration related to Applicant’s RSTUDIO mark, specifically Application Nos. 77/691,980 (Class 9), 77/691,984 (Class 41), and 77/691,987 (Class 42).

Opposer has failed to meet its burden to demonstrate by a preponderance of the evidence that consumers are likely to be confused or mistaken as to the source, association or sponsorship of Applicants goods and/or services sold under its RSTUDIO mark in relation to Opposer’s ER/STUDIO mark, subject of Federal Registration No. 2,203,227. Applicant further submits that the facts in evidence demonstrate that Applicant’s mark for statistical computing software and related services has a different connotation and commercial impression than Opposer’s mark for design and architecture software primarily related to relational databases and that the respective goods and services are dissimilar, purchased carefully by sophisticated consumers, share virtually no market interface, have not created any actual consumer confusion, and are simply not likely to cause any measure of confusion in the marketplace.

Applicant has denied the allegations set forth in the Notice of Opposition in its Answer filed on January 27, 2010. The parties have presented testimony and submitted evidence through notices of reliance. Opposer has filed its Trial Brief as required by Trademark Rule 2.128(a)(1). Applicant hereby respectfully requests that the Board dismiss the instant Opposition.

DESCRIPTION OF THE RECORD

As set forth in Trademark Rule 2.122, 37 C.F.R. §2.122, the record includes:

- The pleadings of the instant proceeding
- Applicant's applications for the mark RSTUDIO (Nos. 77/69980; 77/691,984, and 77/691,987)
- Opposer's pleaded registration for the mark ER/STUDIO (No. 2,203,227)

Opposer entered the following additional evidence during its testimony period:

- Trial testimony, with attached exhibits, of Mr. Jason Tiret on behalf of Opposer given on February 9, 2011.
- Notice of Reliance (hereinafter "Opposer's NOR"), including:
 - Applicant's website as of February 28, 2011
 - The Rule 30(b)(6) discovery deposition, including exhibits, of Joseph Allaire on behalf of Applicant taken on September 27, 2010
 - Various website publications concerning the R statistical computing language
 - Various website publications concerning the Ruby computing language,
 - Website announcement of the 2010 Use R! The R User conference,
 - Dictionary definitions of the term "statistics"
 - Excerpts of Opposer's website as of February 28, 2011
- Rebuttal Notice of Reliance, including:
 - Applicant's website as of May 25, 2011
 - Various publications concerning the R statistical computing language,
 - Excerpts from Opposer's website as of May 6, 2011

Applicant entered the following additional evidence during its testimony period:

- Trial testimony, with exhibits, of Joseph Allaire on behalf of Applicant given on April 15, 2011
- Notice of Reliance (hereinafter “Applicant’s NOR”), including:
 - Designated portions, with exhibits, of the discovery deposition of Jason Tired on behalf of Opposer, taken on November 4, 2010
 - Opposer’s Amended Responses to Applicant’s First Set of Interrogatories, specifically No. 14
 - A printed publication concerning the R computing language
 - Applicant’s website as of April 18, 2011
 - Collection of web publications demonstrating common use of the term “STUDIO” in connection with software
 - Collection of web publications demonstrating that the term “ER” as it related to software means “entity relationship”
 - Excerpts from Opposer’s website
 - Website publication demonstrating the breadth of the statistical computing software category

ISSUES FOR THE BOARD’S CONSIDERATION

At issue in the instant proceeding is the sole question as to whether Applicant’s RSTUDIO mark, under the analysis set forth in *In re. E.I. Du Pont de Nemours & Co.*, 3476 F.2d 1357, 177 USPQ 563 (CCPA 1973), is likely to cause confusion, mistake, or deception among consumers as to the source, association or sponsorship of Applicant’s products and services in relation to Opposer’s ER/STUDIO mark for distinctly different goods and services acquired

through careful sales conditions by highly sophisticated consumers.

FACTUAL BACKGROUND

A. RStudio, Inc. and the RSTUDIO Statistical Computing Software Product

RStudio, Inc. was founded by its CEO Joseph Allaire in 2008. Allaire Testimony at 113:15 – 114:6, Ex. 2 at pp. 1-2 (attached hereto as Appendix A). Mr. Allaire has worked in the software industry for nearly twenty years. *Id.* at p. 1. He is highly knowledgeable about the sorts of software products sold by both Applicant and Opposer and, in fact, has previously developed very successful software applications.¹ *Id.* at pp. 1-2. Since forming RStudio, Inc., Mr. Allaire has created a software product called RSTUDIO. *Id.* at p. 2. The RSTUDIO software is a set of integrated tools that make it easier and more productive to work with R, which is a computing language used for advanced statistical computing and graphics. *Id.* RSTUDIO is capable of performing advanced statistical computations on data contained within two dimensional datasets. *Id.* In addition to the RSTUDIO software, RStudio, Inc. also intends to sell services such as training, hosting, consulting, and technical support related to the RSTUDIO product. *Id.*

Statistics is the science that deals with the collection, classification, analysis and interpretation of data. *Id.* With the help of statistical computing software, statistical calculations of an advanced and complex nature can be carried out quickly, efficiently and accurately. *Id.*

¹ Prior to starting RStudio, Inc., Mr. Allaire developed the ColdFusion programming language which is used for writing dynamic web applications. *Id.* The development of ColdFusion eventually led to the formation of Allaire Corp., a software company which produced several other software products. *Id.* Allaire Corp. was acquired in or about 2001 by Macromedia. *Id.* ColdFusion has since been acquired by Adobe and is still available today. *Id.* In 2002, Mr. Allaire formed Onfolio, a company which built tools to help people collect information from the web and publish information to the web. *Id.* Onfolio was acquired by Microsoft in or around early 2006 and the Onfolio tools continue to be distributed by Microsoft and are now called Windows Live Writer. *Id.* at pp. 1-2.

Statistical computing software such as RSTUDIO is software that enables the advanced analysis of datasets aimed at carrying out complex calculations such as drawing inferences about a population based on a sample, understanding the correlations between variables, understanding the causes of social and natural phenomena, and predicting future events based on past data. *Id.* at pp. 2-3. By way of example, a user of RSTUDIO software might take a two dimensional dataset with several points of data related to patients with diabetes, such as gender, ethnicity, average weight, average glucose reading, etc., and load this dataset into RSTUDIO in order to perform statistical calculations on the data. Allaire Testimony at 197:9-201:9.

Statistical Computing software is a particular category of software which has been in existence for at least thirty years, if not longer. Allaire Testimony at 117:16-123:13. This is made clear by a Wikipedia publication titled “Comparison of statistical packages” containing various tables which compare “the general and technical information for a number of statistical analysis packages.” *Id.* at Ex. 4 (attached hereto as Appendix B); *see also* Ex. 15 (screen capture of Wikipedia page). This publication lists SAS, SPSS, and STAT as well as R which are recognized industry leaders in the category of statistical computing software.² Allaire Testimony at 122:16-22. Significantly, no ER/STUDIO product is listed, because, simply put, ER/STUDIO products are not statistical computing software as they do not perform any of the functions of statistical computing software discussed in the publication. *Id.* at 124:2-7. These functions listed in the Wikipedia publication, which are the primary types of analyses that advanced statistical computing software may perform are:

² This publication does not specifically list RSTUDIO, which had not been publicly available for any length of time when the list was last updated. However the R programming language, to which RSTUDIO is specifically linked, is on the list. It is possible that RSTUDIO will be added in the future, but because RSTUDIO may be considered as part of the R “category” it might not be separately listed. Allaire Testimony at 121:23-122:13.

- (1) Regression and multiple regression, which attempt to estimate the magnitude of the relationship between a dependent variable and one or more independent variables. It is widely used for prediction and forecasting. By way of example, using the diabetes example set forth above, a user of statistical computing software such as RSTUDIO might want to understand the influence of a person of average weight gaining fifteen (15) pounds on that individual's glucose level – this could be done using regression tools.
- (2) Analysis of variance or “ANOVA,” which attempts to draw conclusions about whether the variation in one or more variables is attributable to one or more other variables. Again, using the diabetes example set forth above, a user of RSTUDIO or other statistical computing software could use ANOVA to determine if there is a meaningful statistical relationship between ethnicity and diabetes.
- (3) Time series analysis, which consists of analyzing observations collected at some fixed time interval, for example, once a day or once a minute, to understand the characteristics of a variable over time and/or to forecast future events based on past ones.

Allaire Testimony, Ex. 2 (Appendix A); 117:16-123:13, Ex. 4 (Appendix B) ; 199:1-23. In addition, statistical computing software such as RSTUDIO permits the rendering of statistical graphics, which are used to support the analyses described above. *Id.*, Ex. 2 (Appendix A) at 3.

Statistical computing software such as RSTUDIO, much like virtually every other software application, utilizes data. *Id.* Statistical computing software specifically utilizes data that is organized into two dimensional datasets. *Id.* A two dimensional dataset is one table, generally read from a text file, which contains multiple rows and columns whereby the columns represent variables and the rows represent observations of those variables. *Id.* The two dimensional datasets used by statistical computing software are distinct and different from relational databases, which use multiple tables which can be related with one another in order to eliminate redundancy and represent complex relationships. *Id.*

RSTUDIO and other statistical computing software are tools used for statistical computing and are generally not capable of performing functions which are not related to statistical computing. *Id.* at p. 4. For example, statistical computing software is not a design tool

capable of designing or maintaining a relational database, which requires database design tool software. *Id.* Database design tools are a completely different kind of software and the advanced statistical calculations which can be carried out with statistical computing software are not required for the design or maintenance of a relational database. *Id.*

B. The ER/STUDIO Products

The ER/STUDIO products sold by Opposer are design and architecture software tools. Opposer's NOR, Ex. L, p. 1 (excerpt of Opposer's website categorizing ER/STUDIO products as design and architecture tools). Design and architecture tools are used to design or build the specifications for software and/or its components, such as databases, as opposed to application development tools, which are used to build software. Allaire Testimony at 136:13-24; Opposer's NOR, Ex. L, p. 1 (excerpt of Opposer's website describing ER/STUDIO Data Architect as a "[d]ata modeling tool for designing and understanding databases"). None of the ER/STUDIO products are statistical computing software. Allaire Testimony, 146:21-1467:10. Some ER/STUDIO products are capable of performing certain statistical functions and presenting statistical data in a graphical format, but these capabilities are limited exclusively to statistical information concerning metadata. Applicant's NOR, Ex. A at 43:20-44:3; Tired Testimony at 174:6-21. Metadata is data about a database itself as opposed to external data that might be stored within a database. Applicant's NOR, Ex. A at 25:11-14. For example, metadata could be data about the number of rows of information in different tables of a relational database and ER/STUDIO could perform basic statistical calculations on this metadata, such as determining how many rows, on average, are contained in each table in the relational database. *Id.* at 40:12-15. The capability to perform certain statistical calculations on its own metadata does not qualify ER/STUDIO products as statistical computing software. Allaire Testimony 147:7-10 (testifying that ER/STUDIO products possess no native ability to perform statistical computing).

Rather, the ER/STUDIO products are predominantly associated with and used for designing and developing databases and indeed Opposer's "flagship" product ER/STUDIO Data Architect is a database design tool. Applicant's NOR, Ex. A at 12:3-10 and 14:1-8 (describing ER/STUDIO as a database design and development tool and describing ER/STUDIO Data Architect as Opposer's "flagship" database tool). In addition to ER/STUDIO Data Architect, there are other products sold under the ER/STUDIO mark including ER/STUDIO Business Architect, ER/STUDIO Software Architect, and ER/STUDIO Portal as well as a small number of "add-on" products, specifically ER/STUDIO Metawizard, ER/STUDIO Viewer, and ER/STUDIO Repository. Opposer's NOR, Ex. L, p. 1 (excerpt of Opposer's website listing ER/STUDIO products). These products are all intimately connected to Opposer's flagship database design and architecture products and have nothing to do with statistical analyses.

ER/STUDIO Business Architect, while not a database design tool itself, is a database driven tool which interacts with ER/STUDIO Data Architect and maps out conceptual models that document very detailed database information in a manner more easily understood by business users. Opposer's NOR, Ex. A at 19:14-21:8; Tired Testimony, 120:8-14. ER/STUDIO Software Architect, also not a database design tool, is nonetheless a database related tool which allows the user to design and document software applications and how the applications will interact with a database.³ *Id.* at 21:15-22:14. The ER/STUDIO Portal is not a stand-alone design application, but rather a tool that interfaces with the models created by other ER/STUDIO design

³ Opposer testified that ER/STUDIO Software Architect is used to document information of "software that is going to interact with the database" and that it is basically used for "documenting the software application" which has "a lot of different parts to it that would interact with the database." Applicant's NOR, Ex. A at 21:15-22:14. Additionally, Opposer testified that software designed by ER/STUDIO Software Architect is primarily used for the design side in the development of software to interact with the database and that development tools, as opposed to design and architecture tools, are usually used to build the software application. Tired Testimony at 125:4-6; Applicant's NOR, Ex. A. at 22:15-25.

and architecture tools. *Id.* at 23:13-18. Finally the ER/STUDIO “add-on” products, while not design tools themselves, like ER/STUDIO Portal are used in conjunction with the models generated by the ER/STUDIO design and architecture products. *Id.* at 23:13-15; 23:23-24:7; and 25:15-26:1.

ARGUMENT

I. The *Du Pont* Factors Indicate No Likelihood of Confusion

To determine whether a likelihood of confusion exists in the context of a Section 2(d) opposition, the Board analyzes the relevant facts under the thirteen factor test recited in *In re E.I. Du Pont de Nemours & Co.*, 476 F.2d 1357, 177 USPQ 563 (CCPA 1973). The burden of proving that a likelihood of confusion exists unquestionably lies with the Opposer, who must demonstrate this likelihood by a preponderance of the evidence. *Life Zone Inc. v. Middleman Group Inc.*, 87 USPQ2d 1953, 19589 (TTAB 2008). In the instant proceeding, the following *Du Pont* factors are most applicable:

1. The similarity or dissimilarity of the marks in their entireties as to appearance, sound, connotation, and commercial impression;
2. The similarity or dissimilarity and nature of the goods or services as described in an application or registration in connection with which a prior mark is in use;
3. The conditions under which and buyers to whom sales are made, i.e. “impulse” vs. careful, sophisticated purchasing;
4. The nature and extent of any actual confusion;
5. The market interface between the applicant and the owner of the prior mark; and
6. The extent of potential confusion.

The merits of the instant proceeding as they relate to the above enumerated *Du Pont* factors are

discussed in detail below and clearly indicate that there is no likelihood of confusion between Applicant's RSTUDIO mark on the one hand and Opposer's ER/STUDIO mark on the other. Opposer's has failed to meet its burden and, therefore, the Opposition should be dismissed and Applicant's applications should be approved for registration.

A. The Respective Marks are Easily Distinguished and Convey Different Meanings

Applicant's RSTUDIO mark and Opposer's ER/STUDIO mark have significantly different connotations and commercial impressions such that relevant consumers can easily distinguish between the two marks.

1. There are a Large Number of STUDIO-Formative Software Products Creating a Crowded Field Such that Software Consumers are Accustomed to Distinguishing Among Products Using the Common Term "STUDIO"

The term "STUDIO" as applied to marks for technical programming and database software products is quite common. As it relates to software, the term "STUDIO" is understood to indicate a product that provides all the necessary virtual tools to complete a particular task, metaphorically similar to the environment which would exist in a physical artist's studio or a music studio. Applicant's NOR, Ex. B (Opposer's response to Applicant's Interrogatory No. 14); Allaire Testimony at 177:7-178:17. Applicant has proffered evidence which demonstrates the existence of no fewer than fifty (50) software products with STUDIO-formative names, many of which are directly competitive with Opposer's and Applicant's products. Applicant's NOR, Ex. E; Allaire Testimony at 166:17-176:19 and Ex. 9 (Summary pages of Exhibit 9 attached hereto as Exhibit C). For example, the products IBM Data Studio, Optim Development Studio, and SQL Studio are all related to database development and administration and are competitive with ER/STUDIO. *Id.* at 169:4-19, 172:12-24. In fact, Opposer, in addition to its ER/STUDIO

products, sells or has sold other software with STUDIO-formative names, specifically DT STUDIO and RAD STUDIO. Applicant's NOR, Ex. A at 96:16-24.

Such pervasive use of STUDIO-formative software names creates a crowded field. It is well established that where marks exist in a crowded field, consumers are not likely to be confused by common elements among any two of the marks within the crowd. *Miss World (UK), Ltd. v. Mrs. America Pageants, Inc.*, 856 F.2d 1445, 1449 (9th Cir. 1988) (no likelihood of confusion between MISS WORLD and MRS. OF THE WORLD). Rather, consumers become accustomed to the repeated use of the common elements and distinguish the marks in other ways. *Id.* Simply put, the law recognizes the marketplace reality that, where the same and similar marks are widely used, consumers are capable of differentiating between them. *Id.* Because a large number of STUDIO-formative software marks coexist in commerce, Opposer's ER/STUDIO and Applicant's RSTUDIO, both marks containing the "STUDIO" term, can be distinguished from one another, and can be distinguished from the plethora of other STUDIO-formative marks in use. In short, in regard to the shared term "STUDIO," no likelihood of confusion exists because marks containing such a term may be registered "for the same or closely related goods or services because the remaining portions of the marks are sufficient to distinguish the marks as a whole from one another." *In re Hamilton Bank*, 222 U.S.P.Q. 174, 179 (TTAB 1984) (internal citation omitted) (no likelihood of confusion between KEY and several KEY-formative marks including KEYCHECK and CB KEY).

There is no likelihood of confusion between ER/STUDIO and RSTUDIO resulting from the shared term "STUDIO" and, as such, this term being shared by both marks should not serve to prevent the registration of Applicant's RSTUDIO mark. Also, as indicated in *In re Hamilton Bank* and discussed in detail below, the remaining elements of Applicant's and Opposer's marks

are sufficient to distinguish them from one another. Moreover, Opposer and Applicant's marks, unlike the marks contemplate in *In re Hamilton Bank*, are not for the same or closely related goods and services, making the two marks even less likely to be confused.

2. The Terms “ER” and “R” Convey Different and Easily Distinguishable Meanings to the Intended Consumers of the Respective Goods and Services

In regard to distinguishing Opposer's and Applicant's marks, Applicant does not concede that ER/STUDIO and RSTUDIO are, in fact, similar. However, assuming for argument's sake that the marks are similar, even similar marks having different commercial impressions respective to the parties' goods and/or services have been found to present no likelihood of confusion.⁴ *In re Sears, Sears, Roebuck and Co.*, 2 USPQ2d 1312 (TTAB 1987) (finding no likelihood of confusion between CROSSOVER for bras on the one hand and CROSS-OVER for ladies' sportswear on the other where consumers perceive the commercial impression differently for the respective goods); *In re British Bulldog, Ltd.*, 224 USPQ 854 (TTAB 1984) (finding no likelihood of confusion between PLAYERS for shoes on the one hand and PLAYERS for men's underwear on the other where consumers perceive the commercial impression differently for the respective goods). Directly in accordance with Board precedent, the different meanings afforded each of the marks in question, as discussed below, more than suffice in providing a means for consumers to distinguish between Applicant's and Opposer's respective marks based on their overall connotation and commercial impression.

Because the word STUDIO is commonly used in connection with computer software, as

⁴ The parties' goods and services are discussed in detail in Argument Section B. Applicant submits that the parties' respective goods and services are dissimilar and thus, not likely to lead to a likelihood of confusion. Specifically, Applicant's **RSTUDIO** product is statistical computing software with related services and Opposer's **ER/STUDIO** products are software design and architecture products for or related to relational databases.

described above, consumers with use the other elements of each mark, in Opposer's case "ER" and in Applicant's case "R," to distinguish the marks. These remaining elements are sufficient to distinguish the two marks, as the terms "ER" and "R" as applied to software have very different and specific meanings.

a. The Term "ER" as Applied to Software Means "Entity Relationship," a Term Commonly Known to Opposer's Customers

It is clearly established by the record and by Opposer's own admission that the term "ER" as applied to software means "entity relationship." Applicant's NOR, Ex. A at 95:8-17; Allaire Testimony at 160:22-161:5. In the field of computer software the term "ER" has no other meaning. Applicant's NOR, Ex. A at 95:13-17; Allaire Testimony at 161:6-9. In fact, Opposer concedes that users of ER/STUDIO products are likely to understand the term "ER" to mean "entity relationship." Applicant's NOR, Ex. A at 95:18-22. The term "entity relationship" even appears in the identification of goods and services of Opposer's ER/STUDIO Registration, which is "entity relationship modeling software for SQL databases" in Class 09. Moreover, Applicant has proffered substantial evidence that "ER" in fact means "entity relationship," specifically a collection of fifty (50) internet publications referring to "entity relationship" as "ER," including, *inter alia*, dictionary definitions, product descriptions, and academic papers. Allaire Testimony at 161:10-165:24, Ex. 8 (collection of internet publications and accompanying testimony related thereto) (Summary pages of Exhibit attached hereto as Appendix D); Applicant's NOR, Ex. F.

"Entity relationship" is a term associated with relational databases and refers to a model or diagram which gives a visual representation of the structure of data within a database. Allaire Testimony, Ex. 8 at RS714-RS728; *Id.* at 129:3-131:20 and Ex. 6 (testifying as to the definition

of “entity relationship” and regarding example of an entity relationship diagram); Applicant’s NOR, Ex. F at RS714-RS728. Opposer argues that, although the mark ER/STUDIO may have originally been conceived to convey its connection to relational databases through the commonly understood meaning of the term “ER,” its common law use of the mark has far exceed this meaning. This is simply not the case. As discussed *supra* in Factual Background Section B and *infra* in Argument Section B, all the products in the ER/STUDIO family are related directly to relational databases or are closely associated with relational databases.⁵ Even assuming for argument’s sake that this weren’t the case, it simply does not matter because the most salient point is not whether ER/STUDIO products continue to be closely related to relational databases (which they are). Rather, what is truly important is that the relevant consuming public understands ER to mean “entity relationship” which is what creates the distinct commercial impression of Opposer’s mark.

b. The Term “R” as Applied to Software Signifies the R Computer Language for Statistical Computing upon Which RSTUDIO is Based

“R” is a programming language used for statistical computing. Allaire Testimony at 124:11-13; Opposer’s NOR, Ex. H. The R programming language is among the industry leaders in the field of statistical computing software. Allaire Testimony at 122:16-22. The RSTUDIO software is a statistical computing product that provides a set of tools which improve the productivity of an R user and will not work if the R computing language is not also installed on the user’s computer. *Id.* at 124:14-21. Applicant’s website www.rstudio.org makes frequent and consistent reference to its interdependence with the R computing language. Applicant’s NOR,

⁵ “Entity relationship” is a term linked to relational databases as such databases are based on the relationships of database tables or “entities.” Allaire Testimony at 130:6-18.

Ex. D. Therefore, any customer interested in purchasing statistical computing software who may not otherwise be aware of the R computing language despite its industry prominence would clearly come to be aware of the significance of the term “R” upon visiting Applicant’s website, which is the only place where the RSTUDIO product is distributed. Applicant’s NOR, Ex. A at 180:15-184:15. As such, the term “R” as used in the mark RSTUDIO can only be understood to refer to the R computing language and is inextricably linked with Applicant’s goods and services.

Because the term STUDIO as applied to software is ubiquitous, viewing both parties’ marks in their entirety, consumers will naturally distinguish the ER/STUDIO and RSTUDIO marks by distinguishing between the terms “ER” and “R” which, in the software field have undeniably different and highly recognizable meanings to the relevant purchasers which are also closely tied to both parties’ respective and dissimilar goods and services.⁶ Therefore, the two marks have very different connotations and commercial impressions such that they are not likely to be confused.

B. The Goods and Services Associated with the Respective Marks are Very Dissimilar

The goods and services of Applicant and Opposer, both technical software products, are very dissimilar and, as such, are not likely to cause confusion. While it is understood that the

⁶ Opposer’s preposterous proposition that its ER/STUDIO mark may somehow be recognized or perceived by consumers as somehow derivative of Applicant’s RSTUDIO mark because the term “E” is sometimes uses as a prefix meaning “electronic” such that ER/STUDIO would be taken to be an “electronic” version of RSTUDIO. This argument is facially untenable. While it may be true that certain terms such as e-mail, e-trade, or e-commerce are, in fact, understood to be “electronic” versions of previously non-electronic concepts such as mail, trading, or commerce in general, RSTUDIO and ER/STUDIO, broadly speaking, are both software. Software is inherently electronic, therefore it strains credulity to think that the consuming public would perceive ER/STUDIO, itself an electronic product to be an “electronic” version of RSTUDIO, also an intrinsically electronic product. Allaire Testimony at 178:18-180:14.

Board will analyze likelihood of confusion based on the information provided in Applicant's goods and services descriptions, because the goods are technical in nature, it is entirely appropriate to consider extrinsic evidence to determine the specific meaning of the description of goods. *In re Trackmobile, Inc.*, 15 USPQ2d 1152, 1154 (TTAB 1990) (acknowledging utility of considering extrinsic evidence to understand meaning of identification of goods and services and holding that such evidence should be considered); see also *Pharmacia Inc. v. Asahi Medical Co., Ltd.*, 222 USPQ 84, 85-86 (TTAB 1984) ("the Board must be concerned that the uses and meanings of technical or scientific terms therein are or have been made quite clear if we are to properly assess relationships between the goods in issue"). Applicant therefore provides the Board with the information necessary to understand the technical specificities of the goods in question in the instant proceeding.

1. The Fact that the Respective Goods of the Parties are Both Software Products Does Not Render the Goods Similar

Software products may not properly be considered similar for likelihood of confusion purposes simply because they both fall into the category of software. The Board has explicitly held that software is not itself a particularized category of goods and that the salient question regarding likelihood of confusion between different marks for software is what specific type of software is being offered under the respective marks. In *Electronic Data Systems Corp. v. EDSMA Micro Corp.*, the Board held that opposer's EDS and applicant's EDSA marks were not likely to be confused, concluding that "[a]ll computer programs process data, but it does not necessarily follow that all computer programs are related." 23 USPQ2d 1460, 1462 (TTAB 1992). In reaching its conclusion in *Electronic Data Systems*, the Board recognized that opposer's software systems for the management of electronic data processing were not the same or similar goods as applicant's software for electrical distribution system analysis and design. *Id.*

In fact, the Board explicitly stated that “the fact that both parties provide computer programs does not establish a relationship between the goods or services, such that consumers would believe that all computer software programs emanate from the same source simply because they are sold under similar marks. *Id.* (internal citation omitted). Likewise, the Board reached a similar conclusion in *Reynolds and Reynolds Co. v. I.E. Systems Inc.*, finding no likelihood of confusion between Opposer’s ACCU marks and Applicant’s ACCULINK marks, stating that the “crux of this case is that applicant is offering a specific type of software for operational uses while the products and services offered by opposer . . . are applications software aimed at a very narrow field.” 5 USPQ2d 1749, 1752 (TTAB 1987).

In light of the applicable case law, it is clear that the RSTUDIO and ER/STUDIO goods or services are not likely to lead to consumer confusion. The software sold under each mark is distinctly different, aimed at decidedly different users, and any connection between the two based on the use of data is simply too attenuated as has been clearly set forth in the Board’s prior holdings. This is particularly true in light of the distinctive differences between the goods and service offered or to be offered under the respective parties marks, discussed in detail immediately below.

2. RSTUDIO is Statistical Computing Software with No Native Capability to Interface with Relational Databases

RSTUDIO software, as referred to in Applicant’s Class 9 application, is used for the purpose of advanced statistical computing and resides squarely within the long established category of statistical computing software. Allaire Testimony at 114:9-12, 117:16-123:13; Factual Background Section A, *supra*. It is fully interdependent with the R computing language for statistical computing. Allaire Testimony at 124:11-125:18. RSTUDIO software cannot

interface or interact directly with relational databases. *Id.* at 131:21-132:5. Instead, the external data used by RSTUDIO software must be organized in two dimensional datasets, similar to an ExcelTM spreadsheet. *Id.* at 127:4-128:11, 214:10-23, and Ex. 5 (Ex. 5 is an example of a two dimensional dataset which can be used with RSTUDIO). RSTUDIO software is capable of using the external data from a two dimensional dataset for the purposes of performing advanced statistical calculations as describe in detail in Factual Background Section I, *supra*. By way of example, a user of RSTUDIO software might take a two dimensional dataset with several points of data related to patients with diabetes to determine if there are any significant relationships between variables within the data or to determine if any statistical predictions can be made based on the data and, in so doing, the user may use statistical graphics to depict the results. *Id.* at 197:9-201:9. RSTUDIO is not design and architecture software like ER/STUDIO branded software (discussed in the following section) and RSTUDIO is simply not capable of, for example, designing or maintaining a relational database in the manner an ER/STUDIO product can. Allaire Testimony at 227:1-13.

Regarding the services proposed in Applicant's Class 41 and Class 42 applications, these services will be provided directly by Applicant and limited to hosting RSTUDIO for users or assisting users with the RSTUDIO software. Allaire Testimony 186:18-187:13; Opposer's NOR, Ex. B at 54:11-24, 55:17-22. Opposer's Brief, p. 34. Such services do not intersect in any way with the rights Opposer may have for any services it offers in conjunction with its ER/STUDIO products. In fact, Opposer's Registration for ER/STUDIO claims no services but rather only software goods in Class 09. Therefore, Opposer is limited only to enforcement of its actual common law use of its mark for services related to its software. Opposer offers no services related to statistical computing software, and therefore cannot claim that Applicant is offering or

intends to offer services which intersect with or relate to the limited services that Opposer offers.

3. ER/STUDIO Products are Predominantly Related to Database Design and Maintenance and the Limited Expansion of the Mark into Related Software Products has no Relation to Statistical Computing

As discussed in detail in Factual Background Section II, supra, Opposer's ER/STUDIO branded products are design and architecture software tools that enable database design and maintenance or which are closely related to relational databases. Opposer contends that the ER/STUDIO mark has naturally expanded beyond its original use in connection with database design and maintenance. Assuming for the sake of argument that this is true, even the ER/STUDIO products which do not specifically design or maintain a relational database such as ER/STUDIO Business Architect and ER/STUDIO Software architect, are nonetheless either closely linked to databases or interface directly with ER/STUDIO Data Architect, Opposer's flagship database design tool. Applicant's NOR, Ex. A at 12:3-10 and 14:1-8; 19:14-21:8; 21:15-22:14; Tired Testimony at 120:9-14; see also Factual Background Section II, supra. In addition, none of the ER/STUDIO products is statistical computing software. Allaire Testimony, 146:21-1467:10. In fact, it is clear from Applicant's testimony regarding a comprehensive summary of available statistical computing software that statistical computing software is a category apart and separate from design and architecture software and, moreover, that no ER/STUDIO product is disclosed or contemplated by the aforementioned summary to be statistical computing software. Allaire Testimony at 119:16-124:7; 135:8-15; and Ex. 4 (attached hereto as Appendix B). Attempts by Opposer to tout the statistical capabilities of its ER/STUDIO products are, at best, disingenuous because, as is clear from Opposer's own testimony, any statistical calculations which can be performed by ER/STUDIO are limited to calculations on the metadata created by those same products and cannot be used on external data

as is the case with RSTUDIO. Applicant's NOR, Ex. A at 43:20-44:3; Tired Testimony at 174:6-21.

Presumably in an effort to try to further stretch the reach of the proffered ER/STUDIO brand expansion, Opposer equates other software that it sells under brand names other than ER/STUDIO with the ER/STUDIO products. Opposer's Brief, p. 32. The instant proceeding relates to Opposer's ER/STUDIO mark and Applicant's RSTUDIO mark. Therefore, any allusion to Opposer's other brands, such as references to "Embarcadero's industry" or the entire range of software that "Embarcadero provides" is not relevant unless the other brands of software sold by Opposer are statistical computing software, but this is simply not the case – Opposer does not sell any statistical computing software. Allaire Testimony at 138:5-20. Therefore, Applicant objects to any and all references to other brands sold by Opposer as irrelevant under the Federal Rules of Evidence Rule 402.

Opposer further argues that, even though Applicant's RSTUDIO software has no native capability to interface with relational databases, that the existence of third party packages which can be added to the R programming language that permit R to interact with databases creates a likelihood of confusion between RSTUDIO and ER/STUDIO by creating a database nexus or overlap between the two products. Opposer's brief, p. 37-28. This argument is much too attenuated to hold any validity. In the first instance, it assumes the use of a third party product in conjunction with Applicant's software and therefore is not truly a comparison of the goods and services of the respective parties' marks. Additionally, use of such a third party package would in no way alter the nature of Applicant's product – it would remain statistical computing software and will be no more closely related to the ER/STUDIO products in any way. Lastly, this type of argument was expressly rejected in *Electronic Data Systems*, wherein the Board

clearly stated that two computer programs which process data were not, as a result of their shared data processing capabilities, similar. 23 USPQ2d at 1463. Opposer suggestion that a third party product which provides access to data in a database creates some likelihood of confusion between dissimilar software products is strikingly similar to the argument proffered by the Opposer in *Electronic Data Systems*. As the Board so clearly stated, “all computer software programs process data.” *Id.* The question is not the use of data or, as in this case, where the data is stored, it is a question of whether the software products at issue are the same or similar. RSTUDIO is software for statistical computing. ER/STUDIO is design and architecture software primarily directed to relational databases. The respective goods are not the same and are decidedly dissimilar.

For all the foregoing reasons, Applicant’s RSTUDIO goods and services are distinctly different from Opposer’s ER/STUDIO products and services. Therefore, the dissimilarity between the parties’ goods and services weigh heavily in finding no likelihood of confusion.

C. The Respective Goods and Services are Carefully Purchased by Highly Sophisticated Consumers

Where a high degree of care is used in making a purchasing decision, through a period of significant contemplation by purchasers highly knowledgeable about the product, particularly where a product is expensive, the potential for likelihood of confusion is reduced due to the high degree of care employed by the potential purchaser. *Edwards Lifesciences Corp. v. VigiLanz Corp.*, 94 USPQ2d 1339, 1413-14 (TTAB 2010) (finding no likelihood of confusion between VIGILANCE and VIGILANZ based in part on degree of care made by sophisticated purchasers). As discussed immediately below, RSTUDIO statistical computing software and ER/STUDIO design and architecture software are procured by consumers highly knowledgeable about the

respective products and in each case the procurement decision is made over a period of contemplation, in some instances greater than a year. This high degree of sophistication supports a finding that the respective goods are not likely to be confused.

1. RSTUDIO is an Open Source, Cost-Free Software Product Used by Sophisticated Consumers Engaged in Advanced Statistical Computing

RSTUDIO may be procured at no cost. Allaire Testimony at 184:16-184:17. Even so, the decision whether or not to acquire and use RSTUDIO is made by sophisticated consumers engaged in a highly contemplative process. *Id.* at 184:18-186:17. In the case of RSTUDIO the issue contemplated by potential users is not the price *per se*, but rather the effectiveness of the product in relation to the time the user invests in performing their job. *Id.* As per Applicants testimony:

A: Customers are quite discerning about what tools they use. It's a very significant choice because it defines kind of what tools you have available, and the assets of those tools and limitation of those tools define how effective you can be in your work. So typically customers make a pretty careful evaluation about what tools they use.

A: And the real cost is not the price that you pay but your time. It's how your spend your time and how effective your time is in getting your job done. So it is a very significant choice and it has a cost that is not an economic cost but rather a time cost.

Id. at 185:13-19, 186:10-17. Moreover, individuals using RSTUDIO “are solving complex problems using a complex tool.” *Id.* at 184:23-24. In short, the decision whether to acquire and use RSTUDIO statistical computing software is not an impulse purchase, but rather a contemplative decision made by a sophisticated consumer.

2. ER/STUDIO Software Products are Expensive, Used by Sophisticated Consumers, and Generally Purchased Over a Lengthy, Deliberative Period of Time

The process by which ER/STUDIO design and architecture software is purchased is likewise quite contemplative. As per Opposer's testimony regarding the ER/STUDIO sales cycle:

A: It can take anywhere from a day to a year. I mean it's really – the sales cycle can vary quite a bit. When you're dealing with ER/STUDIO and the products underneath that, it's probably one of our, I would say longer sales cycles. . . . So it could take, I would say, you know, someone want it right now, one day to quite some time.

Q: And how often, in your knowledge, do you have the I-want-it-right-now, one-day sales?

A: These days, kind of rare. So I would say it's maybe weeks, months, and then for larger companies that we have to do a lot of work on the legal side, iron out the license agreement, that could take a lot of time. I mean, we've had sales cycles go even beyond a year.

Applicants NOR, Ex. A. at 48:8-49:2. Additionally, the ER/STUDIO software is being used by sophisticated consumers such as data modelers, data architects, database developers, database architects, etc. *Id.* at 61:4-6. It may, in fact, be a sophisticated end-user who makes the purchase decision for a product such as ER/STUDIO. Allaire Testimony at 188:21-189:9. In such a case the purchaser is acutely aware of the source of the software because the source provider is an important consideration in assessing the value of the software. *Id.* at 189:15-190:3. However, architecture and design products such as ER/STUDIO may be purchased by a committee through a rigorous process requiring significant time and effort which likely necessitates interaction between the purchasing committee and the source of the software. *Id.* at 190:8-191:1.

There are also significant costs associated with purchasing ER/STUDIO software. For

example, a single license for ER/STUDIO Data Architect is available at a base price of \$1,300.00 for a single database platform. Applicant's NOR, Ex. A. at 62:21-25. But the same product to be used for multiple databases merely for one license costs \$3,700.00. *Id.* at 63:1-3. One license for ER/STUDIO XE, which includes all the ER/STUDIO products, costs \$5,995.00 for a single license. [REDACTED]

[REDACTED]

Taking into account the foregoing, the purchasing decision made in relation to both Applicant's RSTUDIO and Opposer's ER/STUDIO products are made by sophisticated consumers, through a contemplative process requiring time and consideration and requiring, in the case of RSTUDIO the consideration of real time cost and in the case of ER/STUDIO significant economic cost, all of which lead to the conclusion that the purchasing conditions favor a finding of no likelihood of confusion.

D. The Respective Goods and Services Cannot be Used for the Same or Similar Purposes and Will Not be Used by the Same People

As discussed above, software itself is not a particularized good for the purposes of determining likelihood of confusion. The goods, instead, are defined by the particular type of software. One obvious reason for this is that two different kinds of software are used for different purposes, and therefore, may be unlikely to be utilized by the same individual. In the case of the software at issue in the instant proceeding, in fact, the same individual will not use

both products because, as testified to by Applicant:

A: [T]he individual using RSTUDIO is doing statistical computing and statistical analysis. The individual who is using ER/STUDIO is doing design and architecture of software. Those are two entirely different skill sets, two entirely different problems, and the same person would not use both.

Allaire Testimony at 192:9-15. While some companies are so large and diverse that they may use both products, this is of no moment. For example, a large company like General Motors may be likely to use just about every type of software product available. Allaire Testimony at 193:1-5. But the fact that General Motors or some other company may purchase both RSTUDIO and ER/STUDIO products is not an indication of likelihood of confusion. Rather, “the fact that a large company, which buys a myriad of different products and services may purchase opposer’s and applicant’s services and goods, does not either make the services and goods related or demonstrate that confusion is likely to occur because of the use of similar marks.” *Electronic Data Systems*, 23 USPQ2d at 1465. The issue to be considered by the Board, instead, is whether the respective products will be marketed to people in the same position. *Id.* As demonstrated above, RSTUDIO statistical computing software and ER/STUDIO design and architecture software will not be used by or marketed to the same people within an organization because they complete distinctly different functions calling for highly different skill sets. So whether purchased by an individual user at a company or by a committee as described above, the constituents within an organization acquiring RSTUDIO software are not the same constituents likely to purchase ER/STUDIO products and, ultimately, the products are being purchased for distinctly different users. Therefore, in regard to market interface, the facts favor a finding of no likelihood of confusion.

E. Absence of Actual Confusion

RSTUDIO statistical computing software has been available for use in commerce since February 28, 2011. Applicant has no knowledge of any actual confusion. Allaire Testimony at 194:7-195:2. Additionally, Opposer has not proffered any evidence of actual confusion. This favors a finding of no likelihood of confusion.

F. Any Potential for Likelihood of Confusion is so Minute as to be Nonexistent

An additional factor to consider in analyzing the potential for likelihood of confusion is whether any possible confusion will be *de minimis* or substantial. *Du Pont*, 476 F.2d at 1361. As discussed in detail above, there is virtually no likelihood of confusion between Applicant's RSTUDIO mark and Opposer's ER/STUDIO mark. RSTUDIO is software for statistical computing using the R computing language. Allaire Testimony at 114:9-12. ER/STUDIO products are design and architecture software primarily related to relational databases. Opposer's NOR, Ex. L, p. 1 (excerpt of Opposer's website categorizing ER/STUDIO products as design and architecture tools); Applicant's NOR, Ex. A at 12:3-10 and 14:1-8 (describing ER/STUDIO as a database design and development tool and describing ER/STUDIO Data Architect as Opposer's "flagship" database tool). Despite Opposer's attempt to cast the uses and functions of RSTUDIO software as nebulous or uncertain while broadly overreaching in describing its own ER/STUDIO products as constituting the full scope and breadth of all categories of software, the parties' respective products actually have finite and specific uses and purposes which simply do not overlap. Allaire Testimony at 192:9-15. As such, and taking into account all of the *du Pont* factors analyzed above, this factor weighs substantially in favor of a finding of no likelihood of confusion.

APPLICANT'S MOTION TO AMEND ITS APPLICATIONS

Applicant has filed a motion with the Board to amend its Applications.⁷

Consonant with established Board procedures and as discussed in its moving papers, Applicant moved to amend its Applications in order to provide identifications of goods and services which should entitle Applicant to registrations in the event that the Board determines that the identifications as filed in its Applications do not. Applicant asks that the Board enter the amendments should the Board find them necessary in determining that there is no likelihood of confusion between the parties' respective marks. Opposer incorrectly and self-servingly dismisses Applicant's motion as a mere conditional "bargaining chip" offered to the Board. Opposer's Brief at p. 35. This is incorrect. Applicant carefully considered the benefits which may be achieved by its proposed amendments to the Applications. Allaire Testimony at 151:8-154:15; 154:16-155:22; 156:20-158:15. The TTAB Manual of Procedure clearly and explicitly provides that a defendant in an *inter partes* proceeding before the Board may, by motion, propose amendments which may avoid likelihood of confusion and if "the Board ultimately finds that [Applicant] is entitled to registration even without the proposed restriction, [Applicant] will be allowed time to indicate whether it still wishes to have the restriction entered." TBMP § 514.03. Applicant respectfully requests that the Board evaluate any potential for likelihood of confusion between RSTUDIO and ER/STUDIO taking fully into account the Applications as filed as well as the proposed amendments. In the event that the Board determines that Applicant is entitled to registration of its mark even without the proposed amendments, Applicant respectfully requests that it be allowed to indicate whether it still wished to have the amendments

⁷ Applicant's Motion to Amend and its Reply to Opposer's Opposition are filed as documents 9 and 12 respectively on the docket of the instant proceeding and are incorporated herein by reference. Applicant's Motion to Amend was entered into evidence through trial testimony. Allaire Testimony at 151:8-154:15; 154:16-155:22; 156:20-158:15 and Ex. 3.

entered.

CONCLUSION

The only thing the respective products have in common is that they both happen to be software. As per the Board's holding in *Electronic Data Systems* and *Reynolds*, this is simply not enough to sustain a finding that there is any likelihood of confusion between the two marks. Applicant has demonstrated that the marks in question have different connotations and commercial impressions, are associated with dissimilar goods and services, are purchased carefully by sophisticated consumers, have virtually no market interface, have not actually been confused in the marketplace and are very unlikely as a result to be confused with one another. Simply, there is no likelihood of confusion between Applicant's RSTUDIO mark on the one hand and Opposer's ER/STUDIO mark on the other. Therefore, Applicant respectfully requests that the Board dismiss this Opposition and permit the registration of RSTUDIO in Classes 9, 41, and 42.

Respectfully submitted,

Dated: September 7, 2011

RSTUDIO, INC.

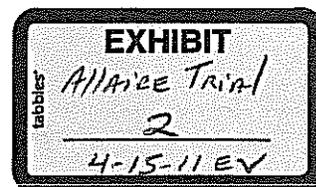
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Appendix A

Joseph Allaire – Background Testimony

My name is Joseph Allaire. I am currently the CEO of RStudio Inc. which is located at 581 Boylston Street, Suite 701, Boston, Massachusetts 02116.



Educational Background

I graduated from Macalester College in St. Paul, Minnesota in 1991 where I majored in economics and political science. After graduating from Macalester I attended the University of Wisconsin to pursue a graduate degree in political science. However, after one semester I decided to discontinue my graduate studies and instead pursue a career in software.

Work History

I have worked full time in the software industry for the past 18 years, have developed several successful software products myself, and am generally knowledgeable about software - including software used for applications development and software used for database design. I began working as an independent contract software programmer in 1993. In 1995, I began work developing ColdFusion, a programming language that I developed and which allows users to write dynamic web applications. My development of ColdFusion eventually led to the formation of Allaire Corp., a software company which produced a variety of software products in addition to ColdFusion, including products called JRun, HomeSite and Spectra. Allaire Corp. went public in January 1999 at which time I was the Chairman and Executive Vice President of Products. Allaire Corp. was acquired in or about 2001 by Macromedia. ColdFusion has since been acquired by Adobe and is still available today. In 2002, I formed a company called Onfolio. Onfolio built tools to help people collect information from the web and publish information to the web. Onfolio was acquired by Microsoft in or around early 2006. After the

acquisition of Onfolio I worked for Microsoft for approximately eighteen (18) months. The Onfolio tools continue to be distributed by Microsoft and are now called Windows Live Writer. I have developed other software products over the years as well. I started RStudio, Inc. in late 2008. I am the sole owner of RStudio, Inc.

RStudio Statistical Computing Software

Since forming RStudio, Inc., I have created a software product called RStudio. RStudio is a set of integrated tools that make it easier and more productive to work with R, which is a computing language used for advanced statistical computing and graphics. RStudio is capable of performing advanced statistical computations such as, for example, linear regressions, on data contained within two dimensional datasets. In addition to the RStudio software, RStudio, Inc. also intends to sell services such as training, hosting, consulting and technical support related to the RStudio product.

Background on Statistical Computing Software

Statistics is the science that deals with the collection, classification, analysis and interpretation of data. Statistical calculations can be carried out without the aid of computer software – for example, determining the average of a set of ten numbers is a rudimentary calculation that can be carried out with pencil and paper. However, statistical analysis of an advanced and complex nature can be carried out more quickly, efficiently and accurately with the help of statistical computing software. Statistical computing software such as RStudio is software that enables the advanced analysis of data sets aimed at carrying out complex calculations such as drawing inferences about a population based on a sample, understanding the correlations between variables, understanding the causes of social and natural phenomena, and

predicting future events based on past data. Some of the analyses that advanced statistical computing may perform are:

- (1) Regression and multiple regression, which attempt to estimate the magnitude of the relationship between a dependent variable and one or more independent variables. It is widely used for prediction and forecasting.
- (2) Analysis of variance or “ANOVA,” which attempts to draw conclusions about whether the variation in one or more variables is attributable to one or more other variables.
- (3) Time series analysis, which consists of analyzing observations collected at some fixed time interval, for example, once a day or once a minute, to understand the characteristics of a variable over time and/or to forecast future events based on past ones.

In addition, statistical computing software such as RStudio permits the rendering of statistical graphics, which are used to support the analyses described above.

Statistical computing software such as RStudio, much like virtually every other software application, utilizes data. Statistical computing software specifically utilizes data that is organized into two dimensional datasets. A two dimensional dataset is one table, generally read from a text file, which contains multiple rows and columns whereby the columns represent variables and the rows represent observations of those variables. The two dimensional datasets used by statistical computing software are distinct and different from relational databases, which use multiple tables which can be related with one another in order to eliminate redundancy and represent complex relationships.

RStudio and other statistical computing software are tools used for statistical computing and are generally not capable of performing functions which are not related to statistical computing. For example, statistical computing software is not a design tool capable of designing or maintaining a relational database, which requires database design tool software. Database design tools are a completely different kind of software and the advanced statistical calculations which can be carried out with statistical computing software are not required for the design or maintenance of a relational database.

Appendix B

Comparison of statistical packages

From Wikipedia, the free encyclopedia

The following tables compare general and technical information for a number of statistical analysis packages.

Contents

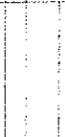
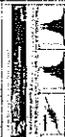
- 1 General information
- 2 Operating system support
- 3 ANOVA
- 4 Regression
- 5 Time series analysis
- 6 Charts and diagrams
- 7 Other abilities
- 8 References
- 9 See also
- 10 Reviews of statistical packages

General information

Basic information about each product (developer, license, user interface etc.). Price note [1] indicates that the price was promotional (so higher prices may apply to current purchases), and note [2] indicates that lower/penetration pricing is offered to academic purchasers (e.g. give-away editions of some products are bundled with some student textbooks on statistics).

Product [2]	Example(s) [2]	Developer [2]	Latest version	Cost (USD) [2]	Open source [3]	Software license [5]	Interface [2]	Written in [2]	Scripting languages [2]
AcuStat		AcuStat							
Adaptive		Adaptive							
Adaptive-H		Adaptive-H							
ASReml		ASReml							
August		August							
Autobox		Autobox							
BioStar		BioStar							
BMPP		BMPP							
BridgeStat		BridgeStat							
Brilliant		Brilliant							
EasyReg		EasyReg							
Epi Info		Epi Info							
EVIEWS		EVIEWS							
GAUSS		GAUSS							
GenStat		GenStat							
Golden Helix		Golden Helix							
GraphPad Prism		GraphPad Software, Inc.							
gretl		The gretl Team							
JMPP		JMPP							
JMPWork		JMPWork							
LimDep		LimDep							
MacAnova		MacAnova							
Maple		Maple							
Mathematics		Mathematics							
MAXLAB		MAXLAB							
MedCalc		MedCalc							
msi/ICEE		msi/ICEE							
MiniTab		MiniTab Inc.							



	MIRDC NCSS Statistical Software Economic Software, Inc, William Greene and David Hensler	January 4, 2008	\$1000/CI -\$399	Proprietary Proprietary Proprietary Proprietary	CLJGUI GUI CLJGUI CLI	JavaScript, HTML	
	CenterSpace Software	May 2008	Proprietary at \$795	Proprietary	CLI		
		November 2009	(\$195)CI	Proprietary	CLI		
	Spilker Financial	October 2009	Lite version (Free), Professional edition (\$300) CI	Proprietary	GUI		
	A. Dean, K. Sullivan, M. Soe	May 20, 2009	Free	GNU GPL	GUI	JavaScript, HTML	
	OriginLab	August 2009	\$999	Proprietary	GUI		
	OxMetrics, J.A. Doornik OxMetrics, L.A. Doornik	August 2009	Free for Academic use \$1805-	Proprietary Proprietary	CLI CLI		
	Parab	June 2007		Proprietary	GUI		
	Primer-E	February 2007	\$500-\$1000	Proprietary	GUI		
	Infinity-OS International	March 2010	\$1495	GNU GPL	CLJGUI	C	Python (Py, Py3), Perl (by Subprocess module)
	R Foundation	October 11, 2004	Free	GNU GPL	CLJGUI	C	
	R Foundation John Fox	April, 2010	Free	GNU GPL	CLJGUI	C	
	Estima	August 1, 2006 October 1, 2007	Free \$900	Proprietary	CLJGUI		
	RStudio Community	February 15, 2007	Free	GNU GPL	GUI		
	ROOT Analysis Framework Alan James Salamon	June 30, 2010	Free	GNU GPL	GUI	C++ C++ Python, SQL, Java, .NET, C++, FORTRAN	
	>100 developers worldwide	February 2007	Free	GNU GPL	GUI		
	SAS Institute	March 2008	Academics and colleges students: free Commercial: ~\$6000 per seat (PC version) / ~\$28k per processor (Windows server) first-year fees for BASE, STAT, GRAPH, and ACCESS modules. Modules are licensed individually. Subsequent year fees are roughly half. ^[1]	Proprietary	CLJGUI		
	Elasia Ltd	July 2007	Pro \$490 / Std. \$390 / Site Lic. / Std. \$1200 / Pro \$1600	Proprietary	CLJGUI		
	SigmaXL Inc.	January 18, 2011	\$249 perpetual license	Proprietary	GUI		
	UCLA	October 28, 2008	Free	LGPL	GUI	Java	
	Grant Paton-Simpson	April 2010	Free	AGPL	GUI		
	International IBM	2005 2007	\$2399/year \$1995CI	Proprietary Proprietary	CLI CLJGUI	Java	Python, SciBasis
	StataCorp	July 2009	academic starting at \$595CI / industry starting at \$1245	Proprietary	CLJGUI	C	ada, mata

Product	Windows	Mac OS	Linux	BSD	Unix
SimplexNearests	Yes	No	No	No	No
SOCR	Yes	Yes	Yes	Yes	Yes
SOFA Statistics	Yes	Yes	Yes	Yes	Yes
SPlus	Yes	No	Yes	No	Yes
SPSS	Yes	Yes	Yes	No	Yes
Stats	Yes	Yes	Yes	No	Yes
Statgraphics	Yes	Yes	No	No	Yes
STATISTICA	Yes	Yes	Yes	No	Yes
Statistik	Yes	No	No	No	No
StatIt	Yes	Yes	No	No	No
STATPac	Yes	No	No	No	No
StatPlus	Yes	Yes	Yes	No	Yes
StatDirect	Yes	Yes	Yes	No	Yes
STATSTAT	Yes	Yes	Yes	No	Yes
Total Access Statistics	Yes	No	No	No	No
TSP	Yes	Yes	Yes	Yes	Yes
UNISTAT	Yes	No	No	No	No
The UserAssembler	Yes	No	No	No	No
VitalStat	Yes	No	No	No	No
Whisperl	Yes	No	No	No	No
WinSPC	Yes	Yes	Yes	No	Yes
XLSTAT	Yes	Yes	Yes	No	Yes
XpStat	Yes	Yes	Yes	No	Yes

ANOVA

Support for various ANOVA methods

Product	One-way	Two-way	MANOVA	GLM	EMM	Profile tests	Latin squares analysis
AcadStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ADAMStat	No	No	No	No	No	No	No
Analyst	Yes	Yes	No	No	Yes	No	No
Argent	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Aerobus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BioStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BMDP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BrigadeStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EasyFit	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Epi Info	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EViews	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GAUSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GenStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Golden Bridge	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GraphPad Prism	Yes	Yes	Yes	Yes	Yes	Yes	Yes
iret	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JMP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LimDep	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mathmanita	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MedCalc	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MiniTab	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NCSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NLapIt	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NMath Stan	Yes	Yes	Yes	Yes	Yes	Yes	Yes
OpenEpi	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Origin	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Parkit	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PSPP	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R Commander	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sege	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SAS	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SHAZAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SigmapXL	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SOCR	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SOFA Statistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stats	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Statgraphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STATISTICA	Yes	Yes	Yes	Yes	Yes	Yes	Yes
StatIt	Yes	Yes	Yes	Yes	Yes	Yes	Yes
StatPlus	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SPlus	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	SPSS	Statistica	SYSTAT	Total Access Statistics	TSP	UNISTAT	The Usernamer	VisualStat	WinPEPI	WinSPC	XLSTAT	Product
One-way	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Latin squares analysis
Two-way	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
MANOVA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
GLM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Factorial tests	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	

Regression

Support for various regression methods.

	OLS	WLS	ISLS	NLS	Logistic	GLM	LAD	Steph	Quantile regression	Probit	Poisson	MLR
ArxStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ADARSoft	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Analytic-it	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Augment	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Autobox	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BlueStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BMDP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BrigitStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BayReg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Epi Info	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
EViews	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GAUSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geostat	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Golden Hill	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
GraphPad Prism	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
gretl	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
JMP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
LimDep	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mathematica	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MedCalc	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
MiniTab	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NCSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NLreg	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Nonlin Stats	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Origin	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Parrrk	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PSPP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R Commander	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
BATS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Sage	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SAS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SHAZAM	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SigmaXL	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SimplexNumerica	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SOCH	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SPSS	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Statistica	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Statgraphics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
STATISTICA	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Statit	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
StatPlus	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
StatDirect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Statlinks	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SYSTAT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Total Access Statistics	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TSP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
UNISTAT	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
The Usernamer	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
VisualStat	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Winappt	XLSTAT	Product	OLS	WLS	ISLS	NLS	Logistic	GLM	LAD	Stepwise	Quantile regression	Probit	Poisson	MLR
			Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Time series analysis

Support for various time series analysis methods.

Product	ARIMA	GARCH	Unit root test	Cointegration test	VAR	Multivariate GARCH
AcasStat						
Analyse-it						
Angari					Yes	
Autobox						
BIASStat						
BNBP	Yes	Yes	Yes	Yes	Yes	Yes
EasyReg	Yes	Yes	Yes	Yes	Yes	Yes
EViews	Yes	Yes	Yes	Yes	Yes	Yes
GAUSS						
GraphPad Prism						
Grell	Yes	Yes	Yes	Yes	Yes	Yes
JMP	Yes	Yes	Yes	Yes	Yes	Yes
LinDp	Yes	Yes	Yes	Yes	Yes	Yes
Mathematics	Yes	Yes	Yes	Yes	Yes	Yes
MedCalc	Yes	Yes	Yes	Yes	Yes	Yes
Minitab	Yes	Yes	Yes	Yes	Yes	Yes
NCSS	Yes	Yes	Yes	Yes	Yes	Yes
NLogit	Yes	Yes	Yes	Yes	Yes	Yes
NumXL	Yes	Yes	Yes	Yes	Yes	Yes
NMAmb Stats						
Origin						
PSPP						
R	Yes	Yes	Yes	Yes	Yes	Yes
R Commander()						
RATS	Yes	Yes	Yes	Yes	Yes	Yes
Sage	Yes	Yes	Yes	Yes	Yes	Yes
SAS	Yes	Yes	Yes	Yes	Yes	Yes
SHAZAM	Yes	Yes	Yes	Yes	Yes	Yes
SimplexNumerics						
SOCR	Yes	Yes	Yes	Yes	Yes	Yes
Stata	Yes	Yes	Yes	Yes	Yes	Yes
Statgraphics	Yes	Yes	Yes	Yes	Yes	Yes
STATISTICA	Yes	Yes	Yes	Yes	Yes	Yes
StatCrunch						
StatPlus	Yes	Yes	Yes	Yes	Yes	Yes
SPSS	Yes	Yes	Yes	Yes	Yes	Yes
StatDirect						
Statistica						
SYSTAT	Yes	Yes	Yes	Yes	Yes	Yes
Total Access Statistiles						
TSP	Yes	Yes	Yes	Yes	Yes	Yes
UNISTAT	Yes	Yes	Yes	Yes	Yes	Yes
VinitStat						
Winappt						
XLSTAT						
Product	ARIMA	GARCH	Unit root test	Cointegration test	VAR	Multivariate GARCH

Charts and diagrams

Support for various statistical charts and diagrams.

Chart	Bar chart	Box plot	Correlogram	Histogram	Line chart	Scatterplot
AcasStat	Yes	Yes	Yes	Yes	Yes	Yes
ADAMSStat						
Analyse-it	Yes	Yes	Yes	Yes	Yes	Yes
Angari	Yes	Yes	Yes	Yes	Yes	Yes
Autobox	Yes	Yes	Yes	Yes	Yes	Yes
BNBP	Yes	Yes	Yes	Yes	Yes	Yes
BHDP	Yes	Yes	Yes	Yes	Yes	Yes
BribsStat	Yes	Yes	Yes	Yes	Yes	Yes
EasyReg	Yes	Yes	Yes	Yes	Yes	Yes
Epi Info	Yes	Yes	Yes	Yes	Yes	Yes

Product	SW type	Basic stats	Normality test	CTA	Nonparametric comparison	ANOVA	Quality control	Survival analysis	Cluster analysis	Discriminant analysis	Data processing
EVView		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GAUSS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GenStat		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Golden Helix		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GraphPad Prism		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eret		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JMP		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LumDip		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MathModelica		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MedCalc		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MiniTab		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NCS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NLogit		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NVivoStats		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Origin		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Paritak		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
PSPP		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
R		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
IT CommaSoft		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Sage		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SAS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SHAZAM		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SigmaXL		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SimpliNumerica		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SOCR		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Stat		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Statgraphics		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
STATISTICA		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Statistica		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
StatPlus		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SPSS		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
StatDirect		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Statistica		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
SYSTAT		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Total Access Statistics		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
TSP		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
UNISTAT		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
The Userambler		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
VistaStat		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
WinPepi		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
XLSSTAT		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Chart		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Bar chart		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Box plot		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Correlogram		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Histogram		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Line chart		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Scatterplot		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

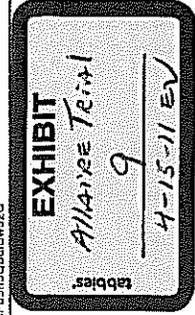
Other abilities

Product	SW type	Descriptive statistics	Basic stats	Normality test	CTA	Nonparametric comparison	ANOVA	Quality control	Survival analysis	Cluster analysis	Discriminant analysis	Data processing
GenStat	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Analysis-It	X	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Angerl	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BioStat	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
BMMP		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Biogician		Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Eng Reg	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Epi Info	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Gauss	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GenStat	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Golden Helix	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
GraphPad Prism	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
JMP	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
LumDip	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MathModelica	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MedCalc	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
MiniTab	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NCS	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NLogit	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
NVivoStats	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
OpenEpi	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Origin	S	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Appendix C

Technical, Programming and Database Products with STUDIO Formative Names

Product Name	Company Name	Description	URL
1 ActivePerl Pro Studio	ActiveState Software	Perl Development Kit and Komodo IDE	http://www.activestate.com/activestate-pro-studio
2 ActiveTcl Pro Studio	ActiveState Software	IDE for Tcl	http://www.activestate.com/activestate-pro-studio
3 Aptana Studio	Aptana, Inc.	IDE for Ruby, Rails, JavaScript, CSS, and HTML	http://www.aplana.com/
4 Aqua Data Studio	AquaField, Inc.	IDE for SQ...	http://www.aquafield.com/
5 AVR Studio	Atmel Corporation	IDE for developing AVR applications	http://www.atmel.com/vpn/products/tools_card.asp?tool_id=2725
6 Cobol Studio	ATX Technologies	IDE for Cobol	http://www.atxtechnologies.ca/uv
7 CodeCharge Studio	YesSoftware	IDE to build database-driven Web applications	http://www.yessoftware.com/products/product_detail.php?product_id=1
8 CPLEX Optimization Studio	IBM Corporation	IDE for modeling and testing	http://www-01.ibm.com/software/integration/optimization/cplex-optimization-studio/
9 C Developer Studio	Datafeed Studio	Professional interactive voice response system	http://www-01.ibm.com/software/integration/optimization/cplex-optimization-studio/
10 Datafeed Studio	Devant	product database and database management	http://www.lyrsoft.com/tc-developer-studio.htm
11 deForge Studio	Devant	professional interactive voice response system	http://datafeedstudio.com/
12 Developer Studio	Software FX, Inc.	Development tool for .NET, COM and Java platforms	http://www.devant.com/ide/myasp/studio/
13 DiagramStudio	Gadwin Systems, Inc.	Organizational diagrams and flow charts	http://www.softwarefx.com/devstudio/
14 EffitStudio	Effit Software	IDE for Effit	http://www.gadwin.com/read_programs.htm
15 GRAT Programming Studio	AdasCore	IDE for software design	http://libra.adascore.com/libra/tools/gps/
16 Green Building Studio	Autodesk, Inc.	Web-Based Energy Analysis Software	http://usa.autodesk.com/askserver/vp/index?id=11179608&siteID=123112
17 GTK Studio	Geonext, Inc.	Rapid Application Development (RAD) tool for GTK+	http://www.ohloh.net/projects/gtkstudio
18 IBM Data Studio	IBM Corporation	database development and administration	http://www-01.ibm.com/software/data/optimization-studio/
19 Intel Parallel Studio	Intel Corporation	tools for Visual Studio and C/C++	http://software.intel.com/en-us/intel-parallel-studio-home
20 IronPython Studio	Microsoft	IDE for Python	http://codepythonsstudio.codeplex.com/
21 JBoss Developer Studio	Red Hat, Inc.	development tool to build Web applications	http://www.redhat.com/developer_studio/
22 JIRA Studio	Atlassian Software Systems	Issue tracking product	http://confluence.atlassian.com/display/JIRA/STUDIO
23 KDE Studio	theCompany.com	IDE for K Desktop Environment (KDE)	http://www.thecompany.com/projects/kdestudio/
24 Liquid XML Studio	Liquid Technologies Limited	IDE for XML	http://www.liquid-technologies.com/
25 Lsp Studio	Urasoft	IDE for Lisp	http://www.urasoft.com/lisp/
26 Lua Studio	Michal Krcovak	IDE for Lua	http://lua-studio.luaforge.net/
27 Migrator Studio	EnterpriseDB	automated migration of databases	http://www.enterprise-db.com/products/postgres_plus_asoverview.do#tabOverview
28 Omnis Studio	TigerLogic Corp.	Rapid Application Development (RAD) tool	http://www.omnis.net/products/studio/index.html#detail-overview
29 Optim Development Studio	IBM Corporation	database development software	http://www-01.ibm.com/software/data/optim/development-studio/
30 Oracle Solaris Studio	Oracle	Tools for C, C++, and Fortran languages	http://www.oracle.com/technetwork/server-storage/solarisstudio/overview/index.html
31 Oracle Developer Studio	Devant	tools for working with Oracle, SQL, PL/SQL	http://www.devant.com/ide/oraclestudio/
32 Perl Studio	Cayoren Software	IDE for Perl	http://www.cayoren.com/Perl-Studio/
33 PHP Studio	Cayoren Software	Development tool for PHP	http://www.cayoren.com/PHP-Studio/
34 C++ Studio	Alter Ego Services	software system to maintain diary and calendar web pages	http://www.opstudio.net/documentation.htm
35 REAL Studio	REAL Software, Inc.	IDE to build native applications	http://www.realssoftware.com/realstudio/
36 Report Studio	Cognos Inc.	dashboard and monitoring tools	http://www-304.ibm.com/cgi-bin/ITZ/services/learning/files.wss?url=en?pageType=course_description&courseCode=B2425
37 Robotics Developer Studio	Microsoft	IDE to create robotics applications	http://www.microsoft.com/robotics/
38 RobotStudio	ABB	simulation programming software	http://www.abb.com/products/robotics/32770bb236ca07e0594de12597e002a892c.aspx
39 SAS/IML Studio	SAS Institute Inc.	software for statistical programming	http://support.sas.com/midapp/studio/studio.html
40 Server Studio	IBM Corporation	tools for database management	http://www-01.ibm.com/software/data/infoml/serverstudio/
41 SMS Studio	Synergy Systems Limited	IDE for Smalltalk	http://www.sysnyz.com/Products/STStudio/index.html
42 SMS Studio	Code Segment	communication through Short Message Service	http://www.codesegment.com/products.htm
43 SQL Studio	Tangora Inc.	data conversion utility for SQL Server databases	http://www.sqlstudio.com/
44 SQL Studio for Oracle	EMS Database Management Solutions	Oracle database administration and development	http://www.emsdb.com/
45 SUSE Studio	Novell, Inc.	tools to build customized software appliances	http://www.susestudio.com/
46 TCL Developer Studio	http://kakimin.chai.ru/	IDE for Tcl	http://kakimin.chai.ru/tcldev/
47 UML Studio	Pragsant Corporation	UML documentation and modeling tool	http://www.pragsoft.com/
48 Visual Studio	Microsoft	IDE for various programming languages	http://www-01.ibm.com/software/integration/VisualStudio/
49 WebSphere Studio	IBM Corporation	web and Java IT tools	http://shop.zend.com/zenit-studio-for-eclipse.html?gclid=CJAFucua8aMCE6n5QodISw920
50 Zend Studio	Zend Technologies Ltd.	IDE for PHP and web development	



Appendix D

Examples of ER Used as Abbreviation for ENTITY RELATIONSHIP

29	Search for "ER" in Wikipedia leads to "Entity-relationship model" under technology section	Wikipedia	Has section heading labeled "ER diagramming tools"	http://en.wikipedia.org/wiki/Entity-relationship_model#ER_diagramming_tools
30	Article: Relationships, Entities and Database Design - Entity Relationship Modeling Examples	Dovstropet Shed	"... how to design a database and understand an Entity Relationship (ER) diagram."	http://www.codewalkers.com/codewalkers/Database-Code/Relationships-Entities-and-Database-Design/
31	Book: Entity-Relationship Approach - ER '93: 12th International Conference on the Entity-Relationship Approach	Springer	Title: "Entity-Relationship Approach - ER '93: 12th International Conference on the Entity-Relationship Approach"	http://www.amazon.com/dp/0544056217?
32	Book: Database Design Using Entity-Relationship Diagrams	Sikha Baghel and Richard Eard	Summary: "Entity-relationship (E-R) diagrams are time-tested models..."	http://www.crcpress.com/product/isbn/97800849315480
33	Tutorials	SmartDraw	ER Defined: "Entity-Relationship Diagrams (ERDs) illustrate the logical structure of databases."	http://www.smartdraw.com/resources/shibboleth/entity-relationship-diagram/
34	Classroom material: NCGIA Core Curriculum in Geographic Information Science	Thomas H. Meyer	Section 3: "The Entity-Relationship (ER) model is generally attributed to Chen (1976)."	http://www.noglia.uscb.edu/iscz/unit/045/045.html
35	Definition for Entity Relationship	TechDictionary	search for "Entity Relationship" returns: "Entity-Relationship modeling: A Discipline for examining and representing the components and interrelationships in a database system. Also known as ER modeling, this discipline factors a database system into entities, attributes, and relationships."	http://www.techdictionary.com/search_action.asp
36	Definition: Entity Relation Model	Toolbox.com	"We use an Entity Relation Model (ERM) to create a data model of a system..."	http://itoolbox.com/wiki/index.php/Entity_Relationship_Diagram
37	Definition: Entity Relationship Diagram	Toolbox.com	"An Entity Relationship Diagram (ERD) is a snapshot of data structures."	http://itoolbox.com/wiki/index.php/Entity_Relationship_Diagram
38	Definition: ER	computeruser.com	Search for "ER": first result returns: "(Entity Relationship Model) ER model is a conceptual data model that views..."	http://www.computeruser.com/dictionary/
39	Dictionary	dictionary.com	Compiling Dictionary Definition: "ER-Relationship"	http://dictionary.reference.com/browse/ER
40	ERD Example	Visual Paradigm	Image description: "The Entity Relationship Diagram (ERD) illustrates the logical structure of the databases"	http://www.visual-paradigm.com/vp/Gallery/dataModeling/EntityRelationshipDiagram.html
41	Journal	appapers.com	Discussing ERD: "That is where an entity-relationship diagram (ERD) comes in."	http://www.appapers.com/assets/journal-Entry-Reversal-Entity-Relationship-Diagram/66308
42	Online notes	ComputingStudents.com	Title: "Entities and Entity-Relationship (ER) Modeling"	http://www.computingstudents.com/notes/database_systems/entities_entity_relationship_er_modeling.php
43	Product description: Client EDR Software	EdrawSoft	Description: "Draw entity relationship diagrams (ER diagrams) easily with Edraw!"	http://www.edrawsoft.com/whchh-erd.php
44	Product description: Design for Databases	Datamatic	Product description: "The software uses entity relationship diagrams (ERDs) to graphically design databases..."	http://www.datamatic.com/dazq/index.html
45	Question and Answer Forum	TechTarget Greatnet	Title: "Data modeling: Entity relationship (E-R) vs. dimensional data models"	http://searcharm.techtarget.com/answer/Data-modeling-Dimensional-vs-E-R
46	Web and XML Glossary	Greatnet	Entity: "ER (Entity-Relationship Model)"	http://oral.nyu.edu/glossary/
47			First paragraph: "One of the most misinterpreted terms in the software industry is actually one we know very well: entity relationship (ER). That's because we often lack a common definition that is understood by all members of the development team. We assume that everyone on the team shares the same clear understanding of the methodology, syntax, and mechanics associated with ER and ER modeling."	http://www.ibm.com/cognitive/networks/relationsallibrary/content/03July250027052705_unit.pdf
48	Published Document: Entity Relationship Modeling with UML	IBM Corporation		http://itil.csc.tsu.edu/~chen/yd/chen_Pioneers.pdf
49	Research Paper: "Entity-Relationship Modeling: Historical Events, Future Trends, and Lessons Learned"	Peter Chan	Defines ER in first sentence of paper: "Entity-Relationship (ER) modeling is..."	http://www.school.uio.no/infocenter/sony/publication/erp_1-er-and-pdf
50	Analysis of Entity-Relationship Diagrams	Evans, Park, and Song	First sentence: "The purpose of this article is to collect widely used entity-relationship diagram (ERD) notations..."	http://www.school.uio.no/infocenter/sony/publication/erp_1-er-and-pdf
50	Tool description	AquaField, Inc.	Tool description: "Tools - Entity Relationship Tool (ER) Diagram Generator"	http://www.aquafield.com/docs/er-diagram.html