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Rosetta Stone v. Google (Joint Appendix)

Research Projects and Empirical Data

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## Vol. IX, Tab 46 - Ex. 37 - Expert Report of Dr. Kent D. Van Liere

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NERA

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IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Alexandria Division

ROSETTA STONE LTD.,

Plaintiff,

-v-

GOOGLE INC.,

Defendant.

Civil Action No. 1:09cv736(GBL/TCB)

EXPERT REPORT OF KENT D. VAN LIERE

## QUALIFICATIONS

1. I am a Vice President at NERA Economic Consulting ("NERA") where I participate in the Intellectual Property, Antitrust, Product Liability, and Securities Practices. My business address is 10955 Westmoor Drive Suite 400, Westminster, Colorado 80021. NERA is a firm providing expert economic, financial, statistical, and survey research analysis.

2. Among my responsibilities, I conduct market analysis, sampling analysis, and survey research on a wide range of topics regarding consumer decision making, consumer choice, and consumer behavior. In the course of my 30 year career I have conducted several hundred studies for leading corporations and government agencies involving studies of employees, consumers and businesses. I have published articles in leading peer-reviewed journals, as well as technical reports in which consumer attitudes, choices, and behavior have been the focus.

3. Prior to joining NERA, I served as a Principal, President, or Director of the market analysis and survey research practice for HBRS and Hagler Bailly for more than 15 years. I also served as President and CEO of Primen, a market intelligence firm that was a joint venture of the Electric Power Research Institute and the Gas Research Institute. Earlier in my career, I was a tenured Associate Professor at the University of Tennessee where I taught undergraduate and graduate level courses in statistics, survey research methods, and social psychology. I also taught as a Visiting Associate Professor at the University of Wisconsin. My courses were regularly cross listed or recommended for students in the business school as well as liberal arts. I hold a Ph.D. from Washington State University.

4. I have substantial experience conducting and using focus groups and surveys to measure consumer opinions and behaviors regarding products and services including purchase processes, branding and positioning, market segmentation, product attributes, new product research, and communications strategies. During my career in academic and commercial research, I personally facilitated hundreds of focus groups and I have designed and analyzed hundreds of surveys focused on these marketing related issues.

5. With respect to litigation, I have designed and reviewed studies on the application of sampling and survey research methods in litigation for a variety of matters including trademark/trade dress infringement, secondary meaning, misrepresentative/deceptive advertising as well as in matters related to antitrust, mass torts, labor disputes and product liability. I have provided deposition testimony and testimony at trial related to issues of sampling, survey research, and statistical analysis. A copy of my current resume showing my publications in the past 10 years and testimony in the prior 4 years is attached as Exhibit A.

6. NERA is being compensated for my services in this matter at my rate of \$495 per hour. Other NERA consultants assisted me in this engagement and are being compensated at rates less than \$495 per hour. No part of NERA's compensation depends on the outcome of this litigation. Throughout this report, I have used the terms "I," and "my" to refer to work performed by me and/or under my direction.

#### DOCUMENTS

7. As part of my work, I relied upon the Complaint filed in this lawsuit and standard treatises on the application of survey research in trademark law, research on consumer search and purchasing behavior on the internet and industry reports on internet searches. A list of the specific materials I relied upon can be found in Exhibit B.

#### ASSIGNMENT AND SUMMARY OF CONCLUSIONS

8. I was retained by counsel to design research to determine whether consumers are confused as to the origin, sponsorship or approval of the "sponsored links" that appear on the search results page after a consumer has conducted a Google search using a Rosetta Stone trademark as a keyword and/or are confused as to the affiliation, endorsement, or association of the websites linked to those "sponsored links" with Rosetta Stone. In preparing this report, I have utilized processes, methodologies, analyses, and principles that I would ordinarily apply in performing research.

9. The study I designed tested for actual confusion regarding the appearance of sponsored links when consumers conducted a Google search for "Rosetta Stone." The study also had a control condition that was used to assess confusion occurring as a result of the non-

infringing elements of a search conducted when using trademarked keywords. As is typically done in these types of studies, a measure of "net confusion" was computed by subtracting the confusion measured in the control condition from the confusion measured in the test condition.

10. Based on the study conducted, I conclude that a significant portion of consumers in the relevant population are likely to be confused as to the origin, sponsorship or approval of the "sponsored links" that appear on the search results page after a consumer has conducted a Google search using a Rosetta Stone trademark as a keyword and/or are likely to be confused as to the affiliation, endorsement, or association of the websites linked to those "sponsored links" with Rosetta Stone.

## BACKGROUND

11. Rosetta Stone is a leading technology-based language learning system. Rosetta Stone has registered a number of trademarks in connection with its brand and the products and services it offers to consumers. These trademarks include: "Rosetta Stone", "Rosetta Stone Language & Learning Success", "RosettaStone.com" and many others.<sup>1</sup>

12. Google's search engine is a widely available internet service which allows consumers to search for information, products, and services. After entering a word or words into the Google search box and then pressing the search button (or the "Enter" key on the keyboard), Google's search engine returns a set of listings or search results. The results include what are referred to as "natural" or "organic links" and may also include "sponsored links".

13. Google represents generally, that sponsored links differ from organic links in that sponsored links appear because a person, company, or organization has successfully bid upon the right to have their link placed on the results page when specific search terms or "keywords" have been entered into the search bar.<sup>2</sup> These sponsored links are labeled as "sponsored links" on the search results page. They appear either horizontally across the top of

<sup>1</sup> *Rosetta Stone, Ltd. v. Google, Inc.*, Complaint (hereafter "Complaint"), p. 6.

<sup>2</sup> Google has stated that the bidding process includes more than a willingness to pay for placement, but also includes a "quality score" derived by Google. See <http://adwords.google.com/support/bin/answer.py?hl=en&answer=49174>.

the search results page above the organic links and/or as a vertical column of links to the right of the organic links.

## METHODOLOGY

14. The design of this research followed generally accepted principles for the design of trademark confusion studies as described in any number of key treatises on the topic.<sup>3</sup> In general, the design of a confusion study requires careful attention to the following key areas:

- The definition of the relevant population;
- The procedures for sampling from the relevant population;
- The survey questions and interviewing procedures;
- The nature of the specific test and control stimuli shown to sampled consumers; and
- The protocol for estimating confusion.

The discussion in this section of the report is organized around these key areas.

### Definition of the Relevant Population

15. In general terms, the relevant population for a trademark infringement case is usually defined as "...that segment of the population whose perceptions and state of mind are relevant to the issues in the case."<sup>4</sup> For this case, the relevant population can reasonably be understood as the group of United States consumers who would potentially use Google's search services to gather information about the purchase of products and services from Rosetta Stone or to purchase products and services from Rosetta Stone. This population can generally be defined by four characteristics:

<sup>3</sup> See Diamond, S. (2000) "Reference Guide on Survey Research" in the *Reference Manual on Scientific Evidence Second Edition*, Federal Judicial Center at: [http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/\\$file/sciman00.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/sciman00.pdf/$file/sciman00.pdf); Federal Judicial Center (2004); *Manual for Complex Litigation, Fourth*. Section 11.493, p. 102; McCarthy, J. Thomas (2006) *McCarthy on Trademarks and Unfair Competition 4<sup>th</sup> Edition*, Chapter 32.

<sup>4</sup> McCarthy at 32:159.

- 1) consumers in the United States who are interested in learning a language;
- 2) who would use the internet in the next 12 months to search for information about learning a language;
- 3) who have heard of Rosetta Stone; and
- 4) who have previously used and believe they would use Google's search engine services.

#### **Sampling of the Relevant Population**

16. Sampling procedures were used that are typical in trademark infringement research and consumers need to be shown visual stimuli. These procedures include conducting interviews at mall facilities in a widely distributed and relevant geographical area and using quota sampling to assure representativeness across a range of demographic groups.<sup>5</sup>

17. I selected eight separate cities representing the major census regions of the United States. Only malls that did not include a Rosetta Stone kiosk or stand-alone cart were included. Each city selected was able to accommodate our research needs.<sup>6</sup> The cities selected were Chicago, IL, Dallas, TX, Denver, CO, Gaithersburg, MD, Miami, FL, San Jose, CA, Seattle, WA and Yorktown Heights, NY. The cities selected are a reasonable representation of the geographies serviced by Rosetta Stone, and therefore are geographies in which the relevant population can be found.

18. After selecting the malls, individual consumers needed to be sampled. Within the malls, sampled consumers were distributed throughout days of the week and across demographic quotas. First, interviews were split between weekday interviewing and weekend interviewing.<sup>7</sup> Interviewers were also instructed to distribute interviewing throughout the day.

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<sup>5</sup> McCarthy at 32:165.

<sup>6</sup> This included the ability to administer the survey using a computer linked to the internet, a room which would allow enough space for the interviewer's computer and a computer for the respondent, and the ability to have staff monitor at least some portion of the interviews.

<sup>7</sup> Weekdays were defined as Monday morning through Friday afternoon and weekends were defined as Friday evening through Sunday evening.

Second, quotas based on demographic characteristics were used to assure a reasonable representation of the diversity of consumers in the relevant population. Based on discussions with Rosetta Stone, I determined that a reasonable demographic distribution would be to split the interviews equally between men and women. In addition, in discussions with Rosetta Stone, it was determined that the age distribution for purchasers of language learning software tend to roughly group into about 50 percent between 18 and 35 years of age, about 20 percent between 35 and 44 years of age, and about 30 percent for those 45 years of age or older. These proportions were used in the quotas assigned in each mall. Each interviewing facility was instructed to complete a minimum number of interviews in each of the age and gender quota cells to achieve approximately the desired proportions.

19. To ensure that respondents were part of the relevant population as defined for this case, a series of screening questions was asked. Copies of the screening and main questionnaire, as well as instructions provided to the facilities, are attached as Exhibit C.

20. Specifically potential respondents were asked a series of questions about their purchasing behaviors and their use of search engines. Respondents were considered qualified for the interview if they:<sup>8</sup>

- 1) were interested in learning a language;
- 2) would use the internet in the next 12 months to look for information about learning a language;
- 3) had heard of Rosetta Stone; and
- 4) had both used Google as a search engine in the past 12 months and would be willing to use Google as a search engine in the next 12 months.

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<sup>8</sup> As is generally standard practice in these types of studies, potential respondents were screened out of the study if they worked in market research or for a store in the mall. I also screened out those who worked for an internet search company, or a company making products for learning foreign languages as these respondents would potentially have knowledge of the litigation at issue.

21. The screener also ensured that individuals who needed glasses or contact lenses to read had them available for the interview and were willing to wear them. All qualified respondents had to be willing to provide a name and contact telephone number so that the interview could later be validated.

#### **Survey Questions and Interviewing Procedures**

22. The studies described in this report are based on completed interviews with 379 respondents who met the screening criteria. These 379 respondents were randomly assigned to one of two conditions described below. The test condition had a total of 188 completed interviews and the control condition had a total of 191 completed interviews. The final interviews were divided between eight cities (approximately 50 respondents per city) and across the demographic categorization (by gender and age) as described previously.

23. Once the interviewer determined that the respondent was qualified, he or she was brought to the interviewing facility. Respondents were taken to a room with two computers. One computer was for the respondent to use and one for the interviewer to use to record respondents' responses. The interviewer and the respondent were stationed such that the interviewer could see the respondent's computer screen but the respondent could not see the interviewer's screen. As a first step, respondents were re-screened to ensure that the responses to the screening questions were accurately recorded and that only qualified respondents were included in the study. Any respondent whose answers to the re-screening made them ineligible were screened out and not asked the main survey questions.

24. The interviewer then began the main survey process. The test or control condition to be seen by the respondent was selected randomly by the CAPI program on the interviewer's computer.<sup>9</sup> The interviewer instructed the respondent to open the appropriately numbered Internet Explorer icon on the desktop of the respondent's computer based on which condition was randomly selected (either condition 1 or condition 2). Once opened, a start page

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<sup>9</sup> CAPI stands for "Computer Assisted Personal Interviewing" system.

appeared and the respondent was asked to read the number appearing on the page. This allowed for an independent verification that the respondent was viewing the intended condition.

25. The computer screen then showed the basic Google home search page with an empty search box. Respondents were shown a card with the words "Rosetta Stone" on it and were asked to type those words into the Google search box. The respondent initiated the search by either clicking on the search button or hitting the enter button. The search results then came up on the screen. The search results were screenshots<sup>10</sup> of Google search results that were shown to respondents on a computer as though they had just conducted a search using the trademark "Rosetta Stone."

26. While looking at the search results, the respondent was first asked to indicate "which link or links, if any, do you think sells Rosetta Stone language software products?" No distinction was made between sponsored and organic listings and respondents were not given any guidance other than to look at the search results as they "normally would". Respondents were permitted to identify the links however they felt appropriate. This could include reading the title of the link, the text of the link, the url of the link or some combination thereof.

27. Next, the respondent was asked to consider the links that had just been mentioned and to indicate "which link or links, if any, are a Rosetta Stone company website?" Again, no distinction was made between sponsored and organic listings and respondents could indicate as many or as few of the links as they felt were appropriate.

28. Finally, respondents were asked to look at the remaining search links and indicate "which link or links, if any, do you think are endorsed by the Rosetta Stone company?" As with the prior questions, no guidance was given with respect to whether the respondent should look at organic or sponsored links.

<sup>10</sup> The screenshots used were coded from the original Google results pages using html codes. The final screenshots did not contain live links to actual websites. The screenshots were provided by Rosetta Stone through its infringement monitoring program.

29. As a follow up, the respondent was asked to explain why for each of the named links he/she thought it was a Rosetta Stone company website or why he/she thought the link was endorsed by Rosetta Stone. The follow up questions about each link the respondent identified were asked in the order the links had been originally mentioned.

30. At the conclusion of the questions, respondents were thanked for their time and were asked to provide their contact details.<sup>11</sup>

31. The interviews were conducted as double-blind studies; that is, neither the interviewers nor the respondents were aware of the purpose of the research. Special care was used in writing the survey instructions so that interviewers and respondents were led to believe that other respondents were doing other searches on other products.

32. All completed interviews were called to validate their participation in the interview. Any interviews that did not validate were excluded from the final data.

#### The Test Stimuli

33. In the study conducted, there were two screenshots used (see Exhibit D for the copies of the screenshots). The test screenshot was a copy of an actual search results page with sponsored links appearing horizontally at the top of the page and in a vertical column on the right side of the organic links.<sup>12</sup> The test screenshot included not only the actual text and words of the sponsored links themselves but also the appearance of the links on the page, the label "sponsored links," the color blocking and the order and placement of the links in the visual space on the page.

34. As noted above, the screenshot for the test condition is a copy of an actual screenshot obtained from a search done on the trademarked keywords "Rosetta Stone."<sup>13</sup> The

<sup>11</sup> The names and phone numbers of all respondents were used for validation purposes and were not ever part of the record seen by me or my staff.

<sup>12</sup> For the purposes of this study the official Rosetta Stone sponsored link was removed from the series of horizontal sponsored links.

<sup>13</sup> For the purposes of this study the official Rosetta Stone sponsored link was removed from the series of horizontal sponsored links.

(continued...)

screenshot has two horizontal sponsored links and four sponsored links running vertically down the right hand side. All of the sponsored links contain some variant of the Rosetta Stone trademark.

35. The screenshot also included a series of organic links. The first of these links (including a number of sublinks) is the authorized and official Rosetta Stone company link.

#### The Control Stimuli

36. The possible existence of "background noise" (that is confusion caused by elements of the test that do not constitute infringement) or demand effects may threaten the validity of the confusion estimate found in the test condition. As a consequence, most likelihood of confusion studies also measure confusion in a control group to assess the level of confusion due to background noise.

37. In general, the control group stimulus should be designed such that the control stimulus "... shares as many characteristics with the experimental stimulus as possible, with the key exception of the characteristic whose influence is being assessed."<sup>14</sup> Therefore, the design of the control stimuli for the foregoing test conditions is relatively straightforward. A search using the trademark "Rosetta Stone" which generates only organic listings would be the non-infringing alternative to the test stimuli because it would not include any allegedly infringing sponsored links. Thus, the appropriate control for this case is to use a screenshot that is identical to the test screenshot in every way except that it does not show any sponsored links (or any of the other features of the Google search page that are used to distinguish the sponsored links such as the headings "sponsored links" or shade colors for the sponsored links area on the page).

38. The control screenshot therefore shows the same set of organic links used in the test screenshot (see Exhibit D for the control screenshots). In total there are 11 organic listings

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(...continued)

<sup>14</sup> Diamond, "Reference Guide" p. 258.

on the control screenshot. One of the organic links (with a number of sublinks) is the Rosetta Stone company link. Nine of the organic listings on the control page are not the Rosetta Stone company websites and are also not endorsed by Rosetta Stone. One of the organic listings is endorsed by Rosetta Stone but is not the Rosetta Stone company website (the Wikipedia link – “Rosetta Stone (software) – Wikipedia, the free encyclopedia”).

#### **Measures of Confusion in the Test and Control Conditions**

39. The following protocol was used to estimate the levels of actual confusion in the test condition. As explained above, respondents were asked to look at the test stimuli and then identify the link or links, if any, that were a Rosetta Stone company website and then to identify the link or links not already mentioned, if any, that were endorsed by Rosetta Stone. A respondent was counted as confused if he/she identified any sponsored links in response to these two questions.

40. The following protocol was used to estimate the levels of actual confusion in the control condition. Any respondent in the control group that mentioned one of the nine organic links, meaning the first Wikipedia link, the “Story” link, the “The Rosetta Stone” link, the “Rosetta Stone for Unix” link, the “Rosetta Stone – Crystalinks” link, the “Ancient Egyptian Culture” link, the “Pharaohs Exhibition” link, the “Mr. Dowling’s Rosetta Stone Page” or the links inclusive of “Book results for Rosetta Stone”, as a link that was the Rosetta Stone company website was counted as confused. Respondents who did not mention one of these nine links in the first question, but who did say that any of the eight links, (with the exception of the Wikipedia entry about the Rosetta Stone language learning software), were links endorsed by Rosetta Stone were also counted as confused. The actual confusion measured in the control condition is the background level of confusion caused by elements of the Google search that are non-infringing and irrelevant to this case.

#### **RESULTS**

41. For the test condition, there were a total of 188 completed interviews of which 47 percent were confused.

42. For the control condition, 30 percent of the 191 respondents were confused as to elements of the search results that are not at issue in this case. This is the overall rate of generalized confusion or the measure of "background noise" for the study. The data for both studies are attached as Exhibit E.

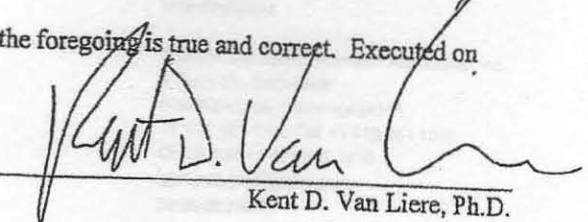
43. The net confusion rate is typically calculated by subtracting the confusion rate found in the control condition from the gross confusion rate found in the test condition. This yields a net confusion rate of 17 percent.

### CONCLUSIONS

44. The study conducted was carefully designed to determine whether consumers are confused as to the origin, sponsorship or approval of the "sponsored links" that appear on the search results page after a consumer has conducted a Google search using a Rosetta Stone trademark as a keyword and/or are confused as to the affiliation, endorsement, or association of the websites linked to those "sponsored links" with Rosetta Stone. The study included an appropriate control to "net" out confusion caused by factors associated with a Google search that are non-infringing to this case. After applying these controls, the study concluded that 17 percent of consumers demonstrate actual confusion. Based on these results and the procedures used to conduct these studies, I conclude that there is reliable evidence that a significant portion of the relevant population is likely to be confused as to the origin, sponsorship or approval of the "sponsored links" that appear on the search results page after a consumer has conducted a Google search using a Rosetta Stone trademark as a keyword and/or are confused as to the affiliation, endorsement, or association of the websites linked to those "sponsored links" with Rosetta Stone.

45. My opinions and conclusions as expressed in this report are to a reasonable degree of professional certainty. My work is ongoing and my opinions will continue to be informed by any additional material that becomes available to me. As of the date of this report, Google has not produced any documents in connection with this litigation. Therefore, the opinions expressed in this report are subject to change based on pending discovery of Google.

I declare under penalty of perjury that the foregoing is true and correct. Executed on  
December 14, 2009.



Kent D. Van Liere, Ph.D.

KENT D. VAN LIERE, Ph.D.  
Vice President

Dr. Van Liere is a Vice President at EPA who specializes in survey research, sampling methods, risk analysis and toxicology. He has testified in trial and in deposition on the application of statistical methods involving observational studies, and the use of surveys.

Dr. Van Liere's testimony will cover a wide range of topics including sampling, survey methods, design of admissible and reliable surveys, and the use of survey data products in risk assessment, exposure analysis, and other scientific analyses (e.g., health data) in a number of areas.

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Intellectual Property

- Product Risk Information: Design, analysis, and critique of complex and surveys used to measure consumer behavior, including sampling and interview techniques, management issues.
- Data and Application Assessments: Design, analysis, and critique of computer and surveys used to measure consumer behavior, including a final response to advertising studies.
- Copyright and Infringement: Analysis and critique of the review of infringing material by populations of short-term consumers (e.g., through websites or other sharing medium).
- Risk Assessment: Design, analysis and surveys to establish rates of whole life cycling material risks in populations of potential or actual use of materials in product new populations.

Trade Tools and Other Actions

- Product Liability and Consumer Defect: Analysis of statistical samples of products and products use to find and predict performance issues, statistical evaluation equations of product failure, and analysis of product liability and constitutional defect class action litigation. Analysis of consumer behavior and legal rules. Products have included a wide range of consumer and high-use products.