EXHIBIT A

Bari Consulting Group™

Expert Report of Jonathan H. Bari

Eolas Technologies Incorporated (Plaintiff)

vs.

Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC (Defendants)

United States District Court for the Eastern District of Texas
Civil Action No. 6:09-cv-446 (October 6, 2009)

July 25, 2011

Table of Contents

Background

On May 25, 2011, Bari Consulting Group was engaged by Eolas Technologies Incorporated (hereinafter also interchangeably referred to as "Eolas" or "Plaintiff"), to prepare this Expert Report ("Plaintiff's Expert Report") in the matter of Eolas Technologies Incorporated (Plaintiff) vs. Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC[1] (Defendants) (collectively, the "Defendants")[2] which arises from the alleged infringement by the Defendants of Eolas's patents, United States Patent No. 5,838,906 ('906 Patent) and United States Patent No. 7,599,985 ('985 Patent) (collectively, "Eolas's Intellectual Property").

Bari Consulting Group was retained with regard to Eolas's patent infringement case regarding Eolas's Intellectual Property which has been represented to address consumer interactivity on e-commerce[3] Web sites[4] including with regard to the following interactive functionalities: 1) product and service images - pan and zoom (sometimes referred to as interactive images), 2) product and service videos and 3) search suggest auto-complete ("Search Suggest"). Specifically, Bari Consulting Group was tasked with providing an independent analysis in the Plaintiff's Expert Report on the qualitative and quantitative drivers that Eolas's Intellectual Property may provide from a macro perspective with regard to potentially increasing e-commerce sales and potentially decreasing e-commerce returns, for example.

For the record, Bari Consulting Group was not tasked with reviewing how Eolas's Intellectual Property is allegedly used and/or infringed by each of the individual or collective Defendants in this matter. As such, Bari Consulting Group concentrated its analysis from a macro perspective and did not develop any patent claims' chart analyses, for example. Additionally, Bari

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[1] Google acquired YouTube in 2006, "Google Closes Acquisition of YouTube ," November 13, 2006, http://www.google.com/intl/en/press/pressrel/youtube.html .

[2] Eolas Technologies Incorporated (Plaintiff) vs. Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC (Defendants); United States District Court for the Eastern District of Texas, Civil Action No. 6:09-cv-446, October 6, 2009 ("Complaint").

[3] E-commerce, sometime referred to as electronic commerce, pertains to the buying and selling of products and/or services over electronic systems and networks such as the Internet. In this Plaintiff's Expert Report, e-commerce generally includes both B2C (business to consumer) and B2B (business to business) sectors. For the purposes of this report, the terms "products" and "services" are generally used interchangeably in terms of what e-commerce retailers are selling on their Web sites with regard to the use of interactive images, videos and search suggest auto-complete.

[4] Note: the term "e-commerce Web site(s) are interchangeably used with similar terms herein such as "e-commerce retailer(s)", e-commerce retailers", "e-commerce sites", "Web retailers", etc. Please note that the use of the terms "e-commerce Web site(s), "e-commerce retailer(s)", e-commerce retailers", "e-commerce sites", and/or "Web retailers" include retailers which are Internet only retailers (i.e., Amazon.com) and brick and mortar retailers with an online retail store (i.e., Staples and Staples.com).

Consulting Group was advised that the Plaintiff had retained an economist to provide a separate expert report with regard to economic analyses and damages estimates.

In order to develop this Plaintiff's Expert Report, Bari Consulting Group has been asked to review and analyze relevant documents including the Complaint, court filings, reports, market research[5] and other information that Bari Consulting Group has deemed appropriate.

Bari Consulting Group's fee for services is based on an hourly rate, plus expenses. My fee for services is $500.00 per hour for all standard work and $600.00 per hour for all deposition and court-related work. Bari Consulting Group charges fees for work done by other Partners ranging from $500.00 to $600.00 per hour, for work done by Associates ranging from $340.00 to $415.00 per hour, and for work done by Assistants ranging from $50.00 to $120.00 per hour.

Payment from Eolas to Bari Consulting Group via The TASA Group for the services Bari Consulting Group has provided is neither dependent upon my findings, nor on the outcome of any legal action, litigation, mediation, arbitration, or the amount or terms of any settlement of the underlying legal cause.[6]

All of the opinions expressed herein are my own. When I refer to Bari Consulting Group, I am referring to the opinions which I am prepared to testify to at deposition or trial.

The following is relevant background information on the Plaintiff:

> **"**Eolas' mission is to pursue a disciplined program of research and
> development in targeted areas in the field of bioinformatics through its
> wholly-owned subsidiary, Iomas Research LLC, leading to the creation of
> innovative technologies of broad applicability in data analysis,
> visualization, collaboration and networking that enhance the quality of life
> for everyone. Eolas seeks to return value to its shareholders by

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[5] In preparing this report, Bari Consulting Group partially relied upon market research conducted and/or provided by third-party companies, some of which are vendors in the e-commerce retailing ecosystem. Based on cursory examinations, these third party vendors do not appear to be associated with Eolas. That said, some of the third party vendors from which data was obtained appear to have a financial interest in the development and deployment of the technology used to facilitate the functionality offered by e-commerce retailers. Such functionality includes product videos, product images (whereby a consumer can pan and zoom) and search suggest auto-completion. Additionally, Bari Consulting Group reviewed market research data on e-commerce functionalities from at least one vendor, Adobe Scene7, which appears to be owned by one of the Defendants, Adobe Systems, Inc., in this matter. Additionally, certain market research, case studies, companies and metrics which are cited in the Plaintiff's Expert Report are used for anecdotal purposes in terms of general e-commerce matters and/or the use and quantifiable and/or qualifiable benefit(s) of specific technologies/functionalities including with interactive product images, product videos and search suggest auto-complete. Bari Consulting Group did not analyze whether these companies cited have infringed on Eolas's Intellectual Property.

[6] Bari Consulting Group's engagement by McKool Smith was facilitated through The TASA (Technical Advisory Service for Attorneys) Group, which is an expert referral service firm based in Blue Bell, Pennsylvania. The TASA Group receives a portion of the payment for Bari Consulting Group's services and expenses in this matter as per The TASA Group's Memorandum of Confirmation with McKool Smith.

commercializing these technologies through strategic alliances, licensing and spin offs."[7]

According to Eolas's Press Release issued on October 6, 2009:

> "The lawsuit, filed in the U.S. District court [sic] for the Eastern District of Texas [Civil Action No. 6:09-cv-446], includes claims related to two Eolas patents, U.S. Patent No. 5,838,906 ('906 Patent) and U.S. Patent No. 7,599,985 ('985 Patent)."

> "The '906 Patent embodies technology first demonstrated publicly in 1993, enabling Web browsers for the first time to act as platforms for fully-interactive embedded applications. This advanced browser technology provides rich interactive online experiences for more than a billion Web users worldwide. The Patent Office granted the '906 Patent in November 1998."

> "The '906 Patent was the subject of prior litigation against Microsoft Corp. that resulted in a 2004 federal judgement of more than $565 million in favor of Eolas. The USPTO has affirmed the validity of the '906 Patent in three separate proceedings, including two patent reexaminations, the most recent of which concluded in February 2009."

> "The '985 Patent is a continuation of the '906 Patent, and allows websites to add fully-interactive embedded applications to their online offerings through the use of plug-in and AJAX (asynchronous JavaScript and XML) web development techniques. The Patent Office issued the '985 Patent in October 2009." [8]

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[7] Eolas, About Us, Web site, http://www.eolas.com/about_us.html , accessed on June 22, 2011.

[8] Eolas Press Release, "Eolas Technologies Files Infringement Lawsuit," October 6, 2009, http://www.eolas.com/eti-10-09-release.html .

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5 of 73

The following is relevant background information on Eolas's Intellectual Property:

1. **United States Patent No. 5,838,906**[9]

   Title
   "Distributed hypermedia method for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document"

   Filing Date
   October 17, 1994

   Date of Patent Issuance
   November 17, 1998

   Abstract – '906 Patent
   "A system allowing a user of a browser program on a computer connected to an open distributed hypermedia system to access and execute an embedded program object. The program object is embedded into a hypermedia document much like data objects. The user may select the program object from the screen. Once selected the program object executes on the user's (client) computer or may execute on a remote server or additional remote computers in a distributed processing arrangement. After launching the program object, the user is able to interact with the object as the invention provides for ongoing interprocess communication between the application object (program) and the browser program. One application of the embedded program object allows a user to view large and complex multi-dimensional objects from within the browser's window. The user can manipulate a control panel to change the viewpoint used to view the image. The invention allows a program to execute on a remote server or other computers to calculate the viewing transformations and send frame data to the client computer thus providing the user of the client computer with interactive features and allowing the user to have access to greater computing power than may be available at the user's client computer." [10]

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[9] United States Patent 5,838,906, "Distributed hypermedia method for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document," November 17, 1998, United States Patent & Trademark Office, Web site, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=419&f=G&l=50&d=PTXT&s1=5,838,906&p=9&OS=5,838,906&RS=5,838,906 , accessed on June 23, 2011 .

[10] United States Patent 5,838,906, "Distributed hypermedia method for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document," November 17, 1998, United States Patent & Trademark Office, Web site, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=419&f=G&l=50&d=PTXT&s1=5,838,906&p=9&OS=5,838,906&RS=5,838,906 , accessed on June 23, 2011 .

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6 of 73

2. United States Patent No. 7,599,985[11]

Title
"Distributed hypermedia method and system for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document"[12]

Date of Filing
August 9, 2002

Date of Patent Issuance
October 6, 2009

Abstract – '985 Patent
"A system allowing a user of a browser program on a computer connected to an open distributed hypermedia system to access and execute an embedded program object. The program object is embedded into a hypermedia document much like data objects. The user may select the program object from the screen. Once selected the program object executes on the user's (client) computer or may execute on a remote server or additional remote computers in a distributed processing arrangement. After launching the program object, the user is able to interact with the object as the invention provides for ongoing interprocess communication between the application object (program) and the browser program. One application of the embedded program object allows a user to view large and complex multi-dimensional objects from within the browser's window. The user can manipulate a control panel to change the viewpoint used to view the image. The invention allows a program to execute on a remote server or other computers to calculate the viewing transformations and send frame data to the client computer thus providing the user of the client computer with interactive features and allowing the user to have access to greater computing power than may be available at the user's client computer."[13]

Market Research
Bari Consulting Group has included detailed references herein to the documents and information which Jonathan Bari, President of Bari Consulting Group, reviewed to formulate his opinions,

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[11] United States Patent 7,599,985, "Distributed hypermedia method and system for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document," October 6, 2009, United States Patent & Trademark Office, Web site, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=105&f=G&l=50&d=PTXT&s1=5,838,906&p=3&OS=5,838,906&RS=5,838,906 .

[12] United States Patent 7,599,985, "Distributed hypermedia method and system for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document," October 6, 2009, United States Patent & Trademark Office, Web site, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=105&f=G&l=50&d=PTXT&s1=5,838,906&p=3&OS=5,838,906&RS=5,838,906 .

[13] United States Patent 7,599,985, "Distributed hypermedia method and system for automatically invoking external application providing interaction and display of embedded objects within a hypermedia document," October 6, 2009, United States Patent & Trademark Office, Web site, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=105&f=G&l=50&d=PTXT&s1=5,838,906&p=3&OS=5,838,906&RS=5,838,906 .

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7 of 73

and these can be found in the footnotes herein in the Plaintiff's Expert Report. With regard to Internet Retailer, one of the industry sources referenced herein, following are some key background data points:

- "Internet Retailer Magazine was launched in March 1999 by Faulkner & Gray, a unit of Thomson Reuters. It was purchased in 2000 by F&G CEO Jack Love and some members of his management team, who left Thomson to form Vertical Web Media [VWM]. Vertical Web Media is a privately held company based in Chicago that focuses on providing business intelligence for the e-commerce market. Starting with one magazine, VWM has since started a dozen other information product [sic] aimed at this market and is now the largest publisher in the e-commerce field."[14]

- "*Internet Retailer Magazine* is the largest monthly magazine in e-retailing with 44,000 subscribers. All articles are staff-written and cover strategies and practices that produce success in e-retailing."[15]

- "Launched in 2000 and completely revamped in 2010, InternetRetailer.com is the most visited informational web site in e-commerce with more than 250,000 unique monthly visitors."[16]

- "In 2009, we [Internet Retailer] introduced the Top500Guide.com, a web-accessed database on e-retailing that allows subscribers to create hundreds of custom reports from the more than 100,000 facts from the Top 500 Guide."[17]

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[14] Internet Retailer, About Us, http://www.internetretailer.com/about/ , accessed on July 12, 2011.

[15] Internet Retailer, About Us, http://www.internetretailer.com/about/ , accessed on July 12, 2011.

[16] Internet Retailer, About Us, http://www.internetretailer.com/about/ , accessed on July 12, 2011.

[17] Internet Retailer, About Us, http://www.internetretailer.com/about/ , accessed on July 12, 2011.

Qualifications and Bases of Opinions

I am the President and Partner in Bari Consulting Group which provides expert witness and consulting services to firms on various matters including identity theft, digital identity, online privacy and security, the Internet, e-commerce, Internet crime, as well as strategic planning, marketing and business development. I have been providing various consulting services to clients since 1999.

I am also an Adjunct Professor of Business at Temple University's Fox School of Business in Philadelphia, Pennsylvania where I have taught strategic planning on a part-time basis since Spring 2004. My next scheduled course is in the Spring 2012 semester.

I earned my BA in 1989 from the University of Pennsylvania in Philadelphia, Pennsylvania, and I earned my MBA in 1997 from Columbia Business School in New York, New York.

My thought leadership and expertise in various matters including identity theft, identity management, digital identity, online privacy, online security, the Internet and e-commerce, have been honed through my work on various matters including through my consulting and expert witness practice and through my former role as the Founder, Chairman and CEO of PINvault.com Inc. d/b/a Catavault, a single sign-on security software firm that aimed to eliminate the need for consumers and businesses to manage and retain multiple and differing authentication credentials such as user names, PINs (personal identification numbers) and passwords (collectively "Authentication Credentials").

Additionally, I am the principal inventor of a United States Patent entitled, "Method and system for secure registration, storage, management and linkage of personal authentication credentials data over a network." United States Patent Number 7,155,739 ("IP"), filed on January 14, 2000. I also invented Patent 7,155,739's corresponding international patent issued in Israel, Patent Number 150728 ("International IP"). Both the IP and the International IP (collectively "IP Portfolio") were acquired by VeriSign.[18]

In the section herein entitled "Biography of Jonathan H. Bari," I have included more detailed descriptions of my academic and professional qualifications, training and experience.

In preparing the Plaintiff's Expert Report, I have relied upon the knowledge and experience that I have gained through my collective work including through management, product and service development, market research, interaction with marketplace participants, as well as through consulting and expert witness engagements. I have also relied on a number of documents and

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[18] Subsequent to VeriSign's acquisition of the IP Portfolio invented by Jonathan Bari, on August 9, 2010, Symantec Corp. (Nasdaq: SYMC) completed its acquisition of VeriSign's identity and authentication business ("VeriSign Authentication Services"). VeriSign Authentication Services provides solutions that allow companies and consumers to engage in communications and commerce online with confidence. With more than one million web servers using VeriSign's SSL certificates, an infrastructure that processes more than two billion certificate checks daily, and a logo that is seen up to 650 million times a day, the VeriSign seal is the most recognized symbol of trust on the Internet. Sources: http://www.verisign.com/corporate/index.html?tid=footer (accessed on June 1, 2011) and http://www.symantec.com/about/news/release/article.jsp?prid=20100809_01 (accessed on June 1, 2011).

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9 of 73

information which Bari Consulting Group reviewed, and these can be found in the detailed footnotes herein in the Plaintiff's Expert Report.

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10 of 73

Summary of Opinions

Overview
Following are the Summary Opinions in the matter of Eolas Technologies Incorporated (Plaintiff) vs. Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC (Defendants).

As e-commerce retailers strive to make their sites more efficient and effective with the goal of generating greater revenues and decreasing costs, there is a significant value proposition associated with the use of interactive functionalities including product images (i.e., pan, zoom), product videos and/or search suggest auto-complete.

I believe that the use by e-commerce retailers of interactive functionalities including product images (i.e., pan, zoom), product videos and/or search suggest auto-complete is becoming ever more commonplace, and consumers expect to find these useful technologies on their favorite Web sites with which they shop and transact sales. Further, e-commerce retailers continually strive to reduce friction in the marketplace in order to boost sales conversion rates [sometimes also referred to as conversion rate or site conversion rate[19]]. For descriptions of Selected Terms & Metrics such as conversion rate, please see Exhibit 1 herein.

In the body of Bari Consulting Group's Expert Report, there is a detailed section entitled "Opinions – General" which offers more in depth analyses and opinions. Numbered opinions are included below (note: the order and numbering of the opinions do not correspond to the order of importance of said opinions):

Sections
1. **Interactive Product Image(s) – Pan & Zoom:** Having product images on an e-commerce Web site that the consumer can interact with in terms of panning and zooming is very important today in order for Web retailers to remain competitive with other retailers, to increase conversion rates and to decrease return rates. The more that an e-commerce Web site can do in terms of overcoming the touch and feel barrier with brick and mortar retailers, the better. Panning and zooming adds value to many B2C (business to consumer) and B2B (business to business) Web retailers for many different types of products ranging from low priced footwear to high priced electronics, for example; many customers now have come to expect a quality online shopping experience with rich media, including interactive photos.

   According to Bari Consulting Group's research, 65 of Internet Retailer's Top 100 e-commerce sites use interactive images with pan and zoom functionality as of June 2011.[20] I

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[19] Site Conversion Rate (also referred to as Conversion Rate) is generally defined as the total number of closed (sale) transactions divided by the total number of user sessions in a given time period.

[20] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the

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11 of 73

believe that going forward more and more retailers will continue to use interactive product images with panning and zooming functionality.

Further, it is my opinion that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding interactive images on their Web sites to sell products and services including the opportunity to (in no order of importance): overcome the touch and feel barrier with brick and mortar retailers (enable the customer to interact with the product), provide enhanced view(s) and vivid imagery, boost conversion rates, increase site stickiness, decrease abandoned shopping carts, attain higher customer satisfaction rates, and decrease customer service costs in terms of pre-sale and post-sale issues including customer returns.

2. **Product & Service Video(s):** Featuring product videos adds value to many B2C (business to consumer) and B2B (business to business) Web retailers for many different types of products ranging from low priced footwear to high priced electronics, for example; many customers now have come to expect a quality online shopping experience with rich media such as product videos.

According to Bari Consulting Group's research, 58 of Internet Retailer's Top 100 e-commerce sites use product videos on their Web site directly as of June 2011, and 84 of the Top 100 e-commerce sites have YouTube channels as of July 2011.[21] I believe that going forward more and more retailers will continue to use product video(s).

Further, it is my opinion that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding videos on their Web sites to sell products and services including the opportunity to (in no order of importance): augment static images, provide enhanced views, see what the product looks like and what it does, overcome the touch and feel barrier with brick and mortar retailers (enable the customer to interact with the product), provide vivid imagery, boost conversion rates, increase site stickiness, decrease abandoned shopping carts, attain higher customer satisfaction rates, decrease customer service costs in terms of pre-sale and post-sale issues including customer returns, and attain better search engine optimization results.

3. **Search Suggest – Auto-Complete:** Search Suggest arguably makes the end user's search queries more effective and efficient for various reasons including that it: i) saves the number

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above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites. In addition, Bari Consulting Group only counted the Web sites which offered pan and zoom interactivity as opposed to just the ability to enlarge a product photo.

[21] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites.

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12 of 73

of keystrokes required to be typed, ii) corrects spelling mistakes in real-time, iii) suggests popular and related search results, and iv) provides deeper and quicker access to specific content pages which appear in and right below the search box and then enabling the consumer to jump to that specific page.

According to Bari Consulting Group's research, 35 of Internet Retailer's "Top 100 E-Commerce Sites" use Search Suggest as of June 2011.[22] Using major search engines and e-commerce sites reveal that Search Suggest is relatively commonplace today, and that going forward, I believe the usage of Search Suggest will continue to grow in terms of the number of e-commerce retailers which are using the functionality.

I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding Search Suggest on their Web sites to sell products and services including the opportunity to (in no order of importance): speed the search process by reducing the number of keystrokes so consumers can more quickly find what they are searching for, correct spelling mistakes to ensure end users find the products that they are seeking, provide search string results from other end users, anticipate similar products which end users may want, boost conversion rates, increase site stickiness, decrease abandoned shopping carts, attain higher customer satisfaction rates, and decrease customer service costs in terms of pre-sale and post-sale issues including customer returns.

4. **Internet Retailer's Top 100 E-Commerce Sites Using Interactive Functionalities:** Bari Consulting Group analyzed "Internet Retailer's" Top 100 e-commerce Web sites as ranked by 2010 revenues (out of Internet Retailer's Top 500 Web retailers), and thus are considered market leaders in the e-commerce field, to determine the number of Web retailers which use product videos, product images (pan, zoom) and search suggest (auto-complete). It appears to me that more and more e-commerce retailers are utilizing the functionalities such as interactive product images, product videos and Search Suggest for Web sites. Going forward, it is my opinion that more and more of the Top 500 Web retailers and smaller Web retailers alike will adopt these core functionalities as consumers demand these functionalities and expect them.

5. **Value Proposition Derived From a Combination of Interactive Functionalities:** In addition to the value proposition that each functionality – interactive product images, product videos and Search Suggest – provides, I believe that there are certain value propositions of Web site effectiveness, efficiency and synergies that are attained when e-commerce sites combine certain interactive functionalities.

I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from the combination of interactive functionalities on their Web sites to sell products and services including the opportunity to (in no order of importance): increase total sales

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[22] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites.

revenue, enhance likelihood of purchase, increase monetization of e-commerce sites, boost conversion rates, reduce friction in e-commerce, reduce likelihood of product returns, increase site stickiness, encourage return/repeat customers, decrease customer service costs, create better/deeper relationships with brands and manufacturers providing product(s)/service(s), provide holistic approach to help pinpoint search to meet end user's needs, etc.

6. **Internet Advertising Sales:** In the nascent days of the Internet (sometimes referred to in the 1990s as the "information superhighway"), when companies were looking for ways in which to monetize this new medium, the selling of advertising space was viewed by many industry pundits and analysts as one of the integral business models from which companies could derive a return on investment from the start-up and operational costs associated with developing their Web sites (including e-commerce sites). In this advertising sales business model, Web sites monetize their audience/customers (sometimes referred to as eyeballs) and sell advertising space (i.e., banners, pop-ups, videos) to marketers seeking to reach the Web site's audience. This general model is not much different than the advertising sales model used in other forms of traditional media including broadcast, cable, print, outdoor, etc. Today, Internet advertising sales is a $26 billion industry on an annualized basis.[23]

I believe that there are various qualitative and quantitative benefits that online advertising provides including the opportunity to (in no order of importance): target consumers where they are spending their time – online, allow advertisers to target offers, enable enhanced tracking, and monetize eyeballs by selling advertising space on e-commerce sites to develop incremental revenue streams in addition to the sales of goods and services.

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[23] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 4, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

Overview - Historical Context

In 2011, it can be easy to take today's e-commerce industry, including its functionality, for granted as something always having been there, when in fact the Internet and e-commerce are still so new, relatively speaking. To that end, in preparing this Plaintiff's Expert Report and reviewing a general time frame of approximately the mid-1990s to 2011, I believe that it is helpful to provide some historical context to the Internet that shows how the Internet and e-commerce have evolved so quickly and changed so dramatically.

For example, on March 15, 2010, CNN reported,

> "These days, when everyone seems to have a Facebook friend, is LinkedIn or can Google themselves, it's hard to remember the old days, before the dot-com revolution."[24]

Many online consumers and e-commerce managers may find it hard to remember life without Facebook. While Facebook today has over 500 million active users worldwide,[25] back in August 2005, Facebook officially changed its name to Facebook from thefacebook.com, and back in December 2005, Facebook had just 5.5 million active users.[26]

On March 15, 1985, the first dot-com domain name, Symbolics.com, was registered.[27] According to CNN,

> The "first 100 dot-com Web sites took two years to get up and running; report says 99.9 percent of all Internet growth occurred over past 15 years [1995-2000]."[28]

Additionally, of the nearly 250 million Web sites that existed in March 2010, about 80 million were dot coms.[29] In other words, of the 250 million Web sites in March 2010, 80 million had top level domains ending with a dot com (.com); other top level domains include dot net (.net), dot org (.org), dot biz (.biz), dot info (.info), etc.[30]

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[24] "Dot-com marks 25th anniversary," Ed Payne, CNN, March 15, 2010, http://www.cnn.com/2010/TECH/ptech/03/15/internet.anniversery/index.html?hpt=Sbin .

[25] Facebook Corporate Statistics, http://www.facebook.com/press/info.php?statistics, accessed on May 31, 2011.

[26] Facebook Corporate Timeline, http://www.facebook.com/press/info.php?timeline, accessed on May 31, 2011.

[27] http://www.networksolutions.com/whois-search/symbolics.com , accessed on July 25, 2011.

[28] "Dot-com marks 25th anniversary," Ed Payne, CNN, March 15, 2010, http://www.cnn.com/2010/TECH/ptech/03/15/internet.anniversery/index.html?hpt=Sbin .

[29] The Information Technology and Innovation Foundation, "The Internet Economy 25 Years After .com," March 25, 2010, http://www.itif.org/publications/internet-economy-25-years-after-com .

[30] The Information Technology and Innovation Foundation, "The Internet Economy 25 Years After .com," March 25, 2010, http://www.itif.org/files/2010-25-years.pdf .

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15 of 73

As discussed, Eolas's '906 Patent has been represented by Eolas as embodying technology first publicly demonstrated in 1993, enabling Web browsers for the first time to act as platforms for fully-interactive embedded applications.

To provide some further historical context, when one thinks back to how "primitive" the World Wide Web was in the mid- to late-1990s, it is useful to recall a famous memorandum that Bill Gates, Chairman of Microsoft, wrote to his "Executive staff and direct reports" at Microsoft on May 26, 1995, when Mr. Gates was the Chairman and CEO of Microsoft.

Entitled "The Internet Tidal Wave," this memo serves as a useful marker in time when discussing the infancy of the Internet in 1995.[31] For example, Mr. Gates provided his senior Microsoft staff with links to about thirty Web sites including those he described as "Cool Cool Cool," and "Competitors":

> Below is a list "of Internet Web sites [i.e., Adobe Systems, CDnow, MCI, Sony Online, etc.] you might find interesting. I've included it as an embedded .HTM file which should be readable by most Web Browsers. Double click it if you're using a Web Browser like O'Hare or Netscape. A second copy of these links is below as Word HTML links. To use these links, you must be running the Word Internet Assistant, and be connected to the Web."[32]

One of the fascinating parts to Mr. Gates's memo is that it shows how nascent the Internet was to the extent that even Microsoft's Chairman and CEO needed to provide detailed instructions to his senior staff on how they could access Web sites on the World Wide Web in 1995.

When The Internet Tidal Wave memo was written on May 26, 1995, the memo preceded the launch of Microsoft's Internet Explorer 1.0 browser on August 24, 1995 which was launched at the same time when Microsoft launched its Windows 95 Operating System. By way of comparison, in December 1994, Netscape Communications, which was incorporated in November 1994, shipped "the first commercial Internet browser." Sales and Internet usage soared, and Netscape quickly achieved an 80 percent market share, and Netscape zoomed "from one million to fifteen million customers" in just one year.[33]

Another interesting historical point of reference involves Google. On September 4, 1998, Google Inc. was incorporated in California. At that time, Google was comprised of just two

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[31] By way of historical background, "The Internet Tidal Wave" memo was an integral part of the United States Department of Justice's antitrust case against Microsoft in that the memo was viewed as the opening salvo in Mr. Gates's and Microsoft's famous attack on Netscape for its then dominant browser (pre-Microsoft Internet Explorer browser dominance). Source: http://www.justice.gov/atr/cases/exhibits/20.pdf .

[32] "The Internet Tidal Wave Memorandum", May 26, 1995, http://www.justice.gov/atr/cases/exhibits/20.pdf - Note that other than the use of providing some historical context on the nascent nature of the World Wide Web in 1995, there is no other connection between Microsoft and Eolas or the Defendants in this matter that I am making in terms of referencing this historic memo from Mr. Gates.

[33] Auletta, Ken, "World War 3.0, Microsoft and Its Enemies," Random House, 2001, page XII.

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16 of 73

individuals working in a garage in Silicon Valley, California.[34] From 1998 to the present, Google has evolved from a little known company into the world's number one brand according to Millward Brown Optimor's ranking of the top 100 most valuable global brands.[35] In June 2011, it was reported that "Google has reached an unprecedented milestone as the world's first Internet company to claim over 1 billion unique users in a single month on its websites."[36]

Just as the Internet has evolved in terms of connectivity, content, communications, community, and context, e-commerce has also evolved. As is generally understood in the e-commerce industry, frictionless retailing is a journey, not a destination. As such, companies cannot rest on the presumptive longevity that their previous and existing business models and online functionality will be sufficient to stay ahead of the functionality enhancements curve, let alone maintain their current status.

In December 1998, *BusinessWeek* published a cover story on Amazon.com which said, "with a single mouse click, an order can be placed on its Web site, making shopping a friendly, **frictionless**, even fun experience that can take less time than finding a parking space at the mall."[37] (emphasis added)

Fast forward some twelve years to 2010 and the concept of "frictionless retailing" has persisted and evolved. In general, the goal of frictionless retailing is to successfully complete transactions in the most effective and efficient means possible.   On March 22, 2010, *Time* published the "10 Tech Trends for 2010," and number seven was "Frictionless Payments."[38]

In addition to frictionless payments, there are other variables which impact the ever-evolving concept of frictionless retailing. To that end, "[m]ore people are also making their final purchases online. The Pew [Internet & American Life Project] researchers said 52 percent of Americans were purchasing products online as of May 2010, up from 36 percent in May of 2000." [39] Additionally, the Pew Internet & American Life Project researchers found that "more

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[34] Google History, "Our company has packed a lot in to a relatively young life. We've captured some of the key milestones in Google's development." http://www.google.com/corporate/history.html , accessed on June 20, 2011.

[35] Millward Brown, "TECH TRIUMPHS WITH GOOGLE, MICROSOFT, APPLE AND IBM SCORING TOP MARKS IN MILLWARD BROWNS RANKING OF THE WORLDS MOST VALUABLE BRANDS, BrandZ Top 100 worth over $2 trillion, a 40 percent growth over five years, strong brands outperformed the stock market and proved resilient in recession," April 28, 2010, http://www.millwardbrown.com/Libraries/Optimor_BrandZ_Files/2010_BrandZ_Top100_PressRelease.sflb.ashx .

[36] "Google: The First Web Company To Hit 1 Billion Users," Huffpost Tech, June 22, 2011, http://www.huffingtonpost.com/2011/06/22/google-1-billion-users_n_881969.html .

[37] BusinessWeek, December 14, 1998, "Amazon.com: The Wild World of E-Commerce, By pioneering--and damn near perfecting--the art of selling online, Amazon is redefining retailing," http://www.businessweek.com/archives/1998/b3608001.arc.htm .
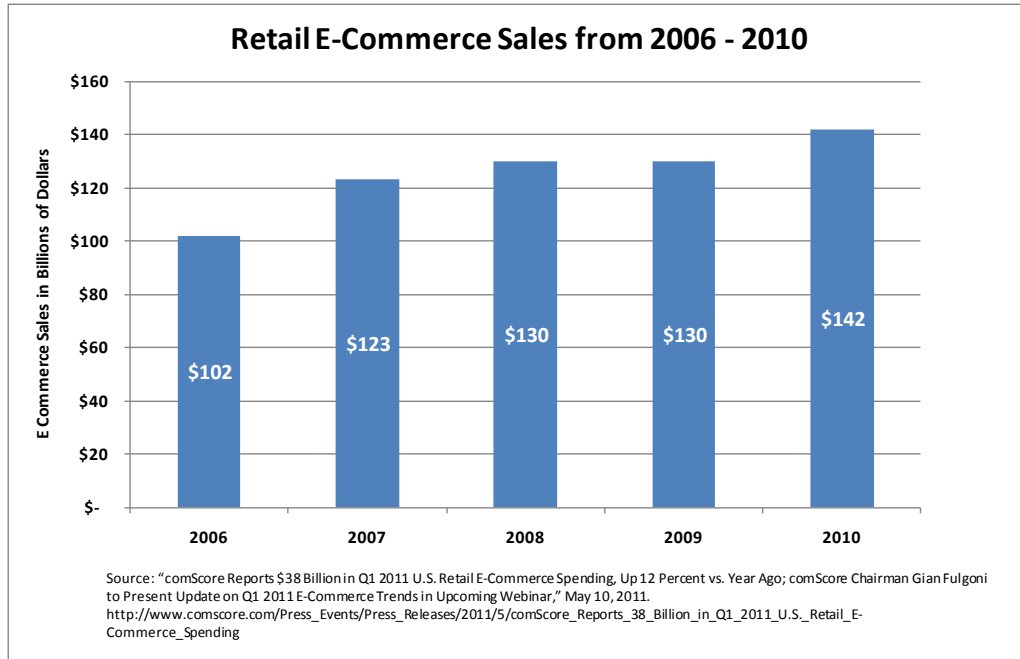
[38] Time, "10 Tech Trends for 2010," March 22, 2010, http://www.time.com/time/specials/packages/article/0,28804,1973759_1973760_1973765,00.html .

[39] "More people grabbing mouse instead of car keys," Allison Linn, msnbc.com, September 29, 2010, http://lifeinc.today.com/_news/2010/09/29/5201985-more-people-grabbing-mouse-instead-of-car-keys .

people are going online first to do things like compare prices or read reviews, even if they end up making the purchase in a brick-and-mortar store."[40]

On May 10, 2011, comScore, Inc. "a leader in measuring the digital world," "released its Q1 2011 U.S. retail e-commerce sales estimates, which showed that online retail spending reached $38.0 billion for the quarter [Q1, 2011], up 12 percent versus year ago. This growth rate represented the sixth consecutive quarter of positive year-over-year growth and second consecutive quarter of double-digit growth rates."[41]

Figure A - Retail E-Commerce (Non-Travel) Growth Rates Excludes Auctions, Autos and Large Corporate Purchases (Total U.S. – Home/Work/University Locations)

Retail E-Commerce Sales from 2006 - 2010

Year	E-Commerce Sales (Billions of Dollars)
2006	$102
2007	$123
2008	$130
2009	$130
2010	$142

Source: "comScore Reports $38 Billion in Q1 2011 U.S. Retail E-Commerce Spending, Up 12 Percent vs. Year Ago; comScore Chairman Gian Fulgoni to Present Update on Q1 2011 E-Commerce Trends in Upcoming Webinar," May 10, 2011. http://www.comscore.com/Press_Events/Press_Releases/2011/5/comScore_Reports_38_Billion_in_Q1_2011_U.S._Retail_E-Commerce_Spending

In Internet Retailer's 2011 Top 500 Guide, the "Top 500 Facts" were reported including:[42]
- 18.0%: The annual growth rate for the 2011 Internet Retailer Top 500
- 7.9%: The percentage that e-commerce represents of all U.S. retail sales [in 2010]
- 39.5%: Amazon's annual growth [rate] in 2010

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[40] "More people grabbing mouse instead of car keys," Allison Linn, msnbc.com, September 29, 2010, http://lifeinc.today.com/_news/2010/09/29/5201985-more-people-grabbing-mouse-instead-of-car-keys .

[41] "comScore Reports $38 Billion in Q1 2011 U.S. Retail E-Commerce Spending, Up 12 Percent vs. Year Ago; comScore Chairman Gian Fulgoni to Present Update on Q1 2011 E-Commerce Trends in Upcoming Webinar," May 10, 2011, http://www.comscore.com/Press_Events/Press_Releases/2011/5/comScore_Reports_38_Billion_in_Q1_2011_U.S._Retail_E-Commerce_Spending .

[42] Internet Retailer, Top 500 Guide, Top 500 Facts, http://www.internetretailer.com/top500/ , accessed on June 24, 2011.

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18 of 73

Additionally, Internet Retailer reported these "key operating statistics" in The Top 500 Guide:

- "Total U.S. e-commerce sales increased year over year 14.8% to $165.4 billion from $144.1 billion, according to the U.S. Department of Commerce."[43]
- "Sales of the Top 500 retailers grew 18% to $150.0 billion in 2010 from $127.1 billion in 2009."[44]
- "In 2010, total U.S. retail sales grew 8.6% to $3.92 trillion from $3.61 trillion in 2009. But the online channel remains the fastest-growing segment in the retailing industry. Top 500 retailers grew their collective sales in the U.S. to $127.1 billion in 2010 from $105.8 billion in 2009, an increase of 20.1%. Last year [2009], the Top 500 retailers and their U.S. sales also accounted for 76.8% of all domestic e-commerce sales compared with 73.4% in 2009."[45]
- "The Top 500 e-retailers account for 76.8% of all U.S. e-commerce sales of $165.4 billion in 2010."[46]
- "In 2010, the Top 500 retail web sites received 2.82 billion average monthly visits. There are 192 million Internet users in the U.S., who visited an average of 14.7 retail sites in 2010."[47]
- "The Top 500 retail sites recorded an estimated 748.2 million separate sales in 2010 with a typical ticket across all merchandising categories of $201.18."[48]
- "Sales conversions based on monthly visits vary widely, ranging from 0.3% to 9.9% for chain retailers, 1[.0]% to 16.9% for catalog/call center operators, 0.3% to 14.9% for web-only merchants, and 0.4% to 5.6% for consumer based manufacturers."[49]
- "The sales of the top 100 retail web sites in 2010 accounted for 90.7% of the Top 500 sales. There were a total of 27 top 100 retailers with annual web sales of $1 billion or higher."[50]
- "The Top 100 [retailers] grew 18.8% to $129.4 billion in 2010 from $108.9 billion in 2009."[51]
- "The e-commerce market is now well into its second generation, but make no mistake: With more new developments such as mobile commerce and social media on the way, the online retail market isn't an evolution – it's a revolution in the way consumers now like to shop."[52]

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[43] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 4.

[44] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 4.

[45] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 4.

[46] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 105.

[47] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 105.

[48] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 105.

[49] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 105.

[50] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 105.

[51] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 4.

[52] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide", 2011 Edition, page 4.

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19 of 73

Internet Retailer also reported the following about Amazon.com,

> "Amazon didn't just put up strong financials in 2010. In baseball parlance, the world's biggest online retailer tore the cover off the ball with a big jump in sales and impressive increase in profits. Net sales were $34.20 billion, a 39.5% increase from $24.51 billion a year earlier… What those figures mean is that Amazon certainly accounted for a big block of online retail sales in the U.S. in 2010… **Amazon.com had the e-retail playing field largely to itself when the company launched online in 1995, but even with the huge amount of competition it faces today, the retailer remains at the head of the pack**. Amazon stays at the top not only because it does so many things well, but because of tactics that other retailers don't even try, says Scot Wingo, CEO of ChannelAdvisor, which helps retailers sell through online marketplaces such as Amazon and eBay. 'Amazon is light years ahead of the competition with its search functionality, selection, shipping offerings, steadfast loyalty to its customers and much more,' he says."[53] (emphasis added)

On January 3, 2011, J.P. Morgan reported the following about Amazon.com,

> "We think the secret of Amazon's success is highly unglamorous: an obsessive focus on execution, pricing, innovation and reducing friction that creates a best-in-class user experience. We think many of the elements of the company's success are creating virtuous circles that will enable above-market growth to continue…"[54]

On January 3, 2011, J.P. Morgan reported the following macro finding about e-commerce,

> "We believe that eCommerce is benefiting from several positive trends, including the continued rollout of broadband, increasing user comfort shopping online and the decline of certain brick-and-mortar retailers. At the same time, as the economic environment appears to be getting at least marginally better, we see an additional tailwind for eCommerce growth. We expect F'11 US and global eCommerce growth of 13.2% and 18.9%, respectively."[55]

In the ever-evolving race to build the better e-commerce Web site, many companies have tried to create more effective and more efficient processes which typically involved ways to more optimally merchandise their products/services and have consumers find what they are looking for

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[53] Internet Retailer, "Top 500 Guide", 2011 Edition, page 106.

[54] J.P. Morgan, "Nothing But Net, 2011 Internet Investment Guide", January 3, 2011, page 13.

[55] J.P. Morgan, "Nothing But Net, 2011 Internet Investment Guide", January 3, 2011, page 12.

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20 of 73

in a timely manner. Top retailers continually strive to improve their retailing experiences, and effective merchandising[56] is one the key drivers of successful retailing companies.

In 2011, the use of product image(s) - pan, zoom, product video(s), and/or search suggest auto-complete by e-commerce sites may all seem relatively commonplace. However, it is important to recognize that what may seem commonplace in 2011 was anything but common years ago. To that end, there is significant value that the functionalities of product videos, interactive product images and search suggest auto-complete have provided along the journey towards greater frictionless retailing. The initial development and use by e-commerce sites of interactive product images, product videos and search suggest auto-complete were novel inventions and evolutionary, individually and also collectively. These functionalities of interactive product images, product videos and search suggest auto-complete represent a growing set of core functionalities, rather than nice to have features, and as such, adoption and usage by e-commerce retailers of these functionalities will continue to increase going forward.

Additionally, in 2011 and beyond, there is ever-growing demand for always-on, always accessible content, communications, community, commerce, etc. This demand for ubiquity is driven by both consumers and businesses, across devices and platforms, and will continue to positively impact e-commerce; I predict that this will be facilitated and enhanced going forward across devices (so that it is not just limited to or focused on PCs). This will be manifested more going forward with regard to the use of interactive functionalities such as interactive images, videos and search suggest to sell products across various devices.

Defendants' Earliest Web Sites
When U.S. Patent 5,838,906 was filed on October 17, 1994, several Defendants in the matter of Eolas Technologies Incorporated vs. Adobe Systems Inc., et al. had not even registered their domain names yet including Amazon, eBay, Go Daddy, Google and Yahoo!. Please see Exhibit 2 herein which shows the date that each of the Defendants in this matter (which have not settled as of July 22, 2011[57]) first registered its respective domain name (i.e., www.godaddy.com, www.yahoo.com) in relation to the October 17, 1994 filing date of Patent '906.

Moreover, at the time that Patent '906 was filed on October 17, 1994, it was not uncommon for many companies which did have Web sites to have "bareboned" or simplistic non-graphical, non-rich media Web sites that would include simply the basics about the business (i.e., name and contact information) and its products and/or services. For example, as of the filing date of Patent '906 in the fourth quarter of 1994, many Web sites just had static text, some underlined text which served as links, and some sparse static images. Even e-commerce sites were quite rudimentary in the mid-1990s by today's standards. As the Internet has continued to evolve to its present state in July 2011 (and will continue to evolve going forward), the use of interactive

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[56] Merchandising is defined as "the planning and promotion of sales by presenting a product to the right market at the proper time, by carrying out organized, skillful advertising, using attractive displays, etc." Source: Websters.com, http://dictionary.reference.com/browse/merchandising .

[57] As of July 22, 2011, the following Defendants in this matter have settled including: Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., Frito-Lay, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Sun Microsystems Inc. and Texas Instruments Inc.

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21 of 73

product image(s) (i.e., pan, zoom), product video(s), and/or search suggest auto-complete by e-commerce sites may all seem relatively commonplace. However, it is important to reiterate that what may seem commonplace in 2011 was anything but common years ago.

To that end, it is instructive to review what Web sites looked like in the mid-1990s. One such useful tool which allows interested parties to step back in time is the Internet Archive Wayback Machine[58] located at archive.org. The Wayback Machine enables users to "[b]rowse through over 150 billion web pages archived from 1996 to a few months ago."[59] The Wayback Machine has been "crawling the web since 1996, which has resulted in a massive archive."[60]

While a gap in time exists between the filing date of Patent '906 on October 17, 1994 and the start of the Wayback Machine's archive in 1996, it is still useful to review Web sites from the mid-1990s including the Defendants' Web sites on archive.org going forward from 1996. Additionally, while not every Web site ever published on the Internet has been crawled, captured and stored on archive.org, and not every Web site which has been crawled, captured and stored on archive.org works in the same manner as it may have as of the date of the Web site capture (when the Web site was live and hosted on the domain name's production server, for example), there is a vast amount of valuable data on the Wayback Machine from which one can gain a unique glimpse back in time. For example, in 2011, the Wayback Machine touts, "Imagine surfing circa 1999 and looking at all the Y2K hype, or revisiting an older version of your favorite Web site. The Internet Archive Wayback Machine can make all of this possible."[61]

As detailed on archive.org, the range of dates of the earliest Web site captures of the Defendants' Web sites from archive.org starts with yahoo.com on or about October 17, 2006 and spans to rentacenter.com on or about November 1, 2006. Note that the dates of these Web site captures on archive.org occurred after the respective Web site registration dates. The date for each Web site capture also does <u>not</u> indicate when the company launched its Web site and/or added interactive product image(s), product video(s) and search suggest auto-complete – these interactive functionalities occurred at a much later date following registration and launch of the Web retailers, generally speaking.

With regard to the Defendants' earliest Web sites available on archive.org, I observed that there was a range of Web sites in terms of their look and feel, information architecture, content, functionalities, etc. On the simpler side of the spectrum in the mid-1990s were Web sites such as perotsystems.com (from December 11, 1997, that did not even load correctly on archive.org) and blockbuster.com (from October 19, 1996) that only contained text and an image. On the slightly more advanced side for 1996, Web sites like citibank.com (from December 26, 1996) displayed its user interface in a colorful, user-friendly circa 1996 manner. However, most of the Defendants' Web sites were right in the middle of the simple to advanced range for the time period in question. For example, officedepot.com (from December 5, 1998) had text, images,

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[58] The Wayback Machine is an initiative of the Internet Archive, a 501(c)(3) non-profit.

[59] Internet Archive Wayback Machine, http://www.archive.org/web/web.php, accessed on July 13, 2011.

[60] Internet Archive Wayback Machine, http://www.archive.org/about/faqs.php, accessed on July 13, 2011.

[61] Internet Archive Wayback Machine, http://www.archive.org/about/faqs.php, accessed on July 13, 2011.

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22 of 73

hyperlinks and a search option, but little else, which is representative of many of the Defendants' Web sites. Showing a sign of the times in 1996, chase.com (from November 15, 1996) offered the end user a choice between browsers such as Netscape and Internet Explorer, instead of automatically just directing the user to the chase.com Web site content.

Overall, even the Web sites that I observed which were on the advanced side in the mid-1990s pale in comparison to what end users experience on the Web in 2011. For example, a top level review of the Defendants' earliest Web sites' home pages on archive.org appears to indicate that in comparison to 2011, there were no videos, no product images, fewer search capabilities, fewer advertisements, as well as more rudimentary graphic designs, information architecture and user interfaces. There were numerous macro and micro level reasons including that the Internet was so nascent in the mid-1990s, there were technological limitations with regard to hardware, software and connectivity, and that the Web developers had not yet fully realized how to optimize the Web for marketing their goods and services.

One interesting example is with eBay, the online auction house, which would arguably not exist without the Internet. And yet, eBay's former Home Page at ebay.com from June 14, 1997 seems very sparse compared to today's eBay.com since the 1997 Home Page includes just a few lines of text, a few hyperlinks and a couple of graphics. Many of the features on eBay's present day Home Page at ebay.com, including search suggest auto-complete, drop-down menus, clickable graphics, and information on an eBay app for smart-phones, just had not been developed yet in the mid-1990s.

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23 of 73

Opinions - General

Following are the General Opinions in the matter of Eolas Technologies Incorporated (Plaintiff) vs. Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC (Defendants).

Numbered opinions are included below (note: the order and numbering of the opinions do not correspond to the order of importance of said opinions).

1. Interactive Product Image(s) – Pan & Zoom

Overview

Having product images on an e-commerce Web site that the consumer can interact with in terms of panning and zooming, for example, is very important today in order for Web retailers to remain competitive with other retailers, to increase conversion rates and to decrease return rates. The more that an e-commerce Web site can do in terms of overcoming the touch and feel barrier with brick and mortar retailers, the better. Panning and zooming adds value to many B2C (business to consumer) and B2B (business to business) Web retailers for many different types of products ranging from low priced footwear to high priced electronics, for example; many customers now have come to expect a quality online shopping experience with rich media, including interactive photos.

According to Sheila Dahlgren, Senior Vice President of Marketing at Adobe's Scene7, "pictures sell… People do not buy what they cannot see, so the higher the quality and resolution of your imagery, the better your results will be."[62]

Additionally, according to Eoin Townsend, Vice President of Product and Marketing, RichFX,[63]

> "The use of rich media and online visualization is the key to creating the
> comfort level that users traditionally feel in a store environment… This is
> accomplished by giving the control back to the online users and allowing
> them to interact in a way that is driven by their needs and requirements. In

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[62] Practical eCommerce, "Quality Images Boost Sales," Dave Young, March 14, 2007, http://www.practicalecommerce.com/articles/436-Quality-Images-Boost-Sales .

[63] "ChannelAdvisor Announces Acquisition of Richfx, Acquisition Helps Internet Retailers Offer Increased Usability, Improve Conversion Rates with Fewer Clicks via Rich Media Applications," July 16, 2008, http://www.channeladvisor.com/news/press-reader.php?id=48&y=2008 .

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24 of 73

some situations the online channel offers an even more detailed and engaging environment than what users find in stores or via catalogs."[64]

According to Bari Consulting Group's research, 65 of Internet Retailer's Top 100 e-commerce sites use interactive images with pan and zoom functionality as of June 2011.[65] Going forward, I believe that more and more retailers will continue to use interactive product images with panning and zooming functionality, for example.

Value Proposition of Interactive Product/Service Image(s) – Pan & Zoom
I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding interactive images on their Web sites to sell products and services (hereinafter products generally include services for this analysis) including the opportunity to (in no order of importance):

- Provide enhanced view(s) of the product from different perspectives and angles, thereby enabling consumers to see a fuller "picture" of what the product looks like, which increases the possibility of a sale.

- Overcome the touch and feel barrier with brick and mortar retailers and provide consumers with a vivid online experience, which increases the possibility of a sale.

- Reduce friction in e-commerce to have consumers find and see what they want more quickly and help consumers see the product how they want to see it, (instead of being captive to just a text-based description and/or product video's depiction), thereby enabling the consumer to view the product in a timely manner and increasing the possibility of sale.

- Boost conversion rates by converting consumer browsers into buyers.

- Increase site stickiness whereby consumers spend more total time on the e-commerce Web site, with the possibility of purchasing incremental items, thereby potentially increasing the total amount of the transaction.

- Attain higher customer satisfaction rates from buyers who made educated purchases and got what they wanted, thereby decreasing the possibility of a return.

- Leverage broadband connections to provide for rich media storytelling about a product, which increases the possibility of a sale.

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[64] Practical eCommerce, "Quality Images Boost Sales," Dave Young, March 14, 2007, http://www.practicalecommerce.com/articles/436-Quality-Images-Boost-Sales .

[65] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites. In addition, Bari Consulting Group only counted the Web sites which offered pan and zoom interactivity as opposed to just the ability to enlarge a product photo.

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www.BariConsulting.com

25 of 73

- Decrease abandoned shopping carts when consumers are unsure as to finalizing their checkout, which increases the possibility of a sale.

- Decrease an e-commerce Web site's customer service costs whereby the better understanding that the consumer has about the product when ordering, the likelihood of returning the product decreases.

- Lower an e-commerce Web site's pre-sale customer service costs whereby number of customer service calls, chats, emails from consumers asking questions about the product or service will decline when consumers are better educated through interactive imaging.

- Overcome merchandising display space limitations (i.e., square footage, square inches) in brick and mortar retailers whereby there is a finite amount of "shelf-space" (including floor space and counter space, for example) to sell products; in comparison, with a retailer's Web site, there are less merchandising display constraints and a greater depth and breadth of product(s) can be displayed, for example. This helps to increase the possibility of a sale.

- Encourage return/repeat business from satisfied consumers and attain higher lifetime value of customers.

- Attain better Search Engine Optimization that yields higher level search results from third party search providers such as Google and Bing by leveraging rich media content by optimizing images with associated key words, which increases the possibility of a sale.

- Augment static images to bring the products to life and better market the product, which increases the possibility of a sale.

- Leverage the "Ken Burns effect"[66] in video production where panning and zooming can also convey video motion from still imagery and entice consumers to purchase at increased rates over static images.

General Data Points Regarding the Use of Product/Service Image(s)
- "Sixty-nine percent of online consumers prefer rich media interaction while browsing."[67]

- "Web sites that feature 360° product view increase sales when compared to those that do not."[68]

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[66] Ken Burns is an Academy Award-nominated and Emmy winning documentary film director; Wikipedia, http://en.wikipedia.org/wiki/Ken_Burns_effect and http://en.wikipedia.org/wiki/Ken_Burns, accessed on June 24, 2011.

[67] Channel Advisor home page, http://www.channeladvisor.com/rich-media/, accessed on June 23, 2011.

[68] Media Spin 360, Services, http://www.mediaspin360.com/services.php .

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26 of 73

- "According to a 2010 survey from IBM, online shoppers want their shopping experience to be more interactive and highly personalized. Smart consumers are able to utilize their technology to make more informed buying decisions, exchange information and reviews with other online shoppers, and make purchases whenever and wherever life takes them. In the age of digital technology, all e-tailers need to hop on board. In order to succeed in this highly competitive market, websites are going to need to engage in high powered technology that enables the consumer to view a product in high definition, zooming in and out, and at every angle and view possible."[69]

General Data Points on the Use of Rich Media

The following represents some anecdotal case study information from Adobe Scene7[70] regarding how their from e-commerce services add value to their clients regarding the use of Scene7's services including for rich media assets such as product images with pan and zoom functionality:

Adobe Scene7 helps e-commerce companies "grow overall revenues" and "build brand loyalty and repeat business":[71]
- "Increase online revenue by more than 150%"
- "Increase influenced sales in-store by 50%"
- "Improve conversion and response rates by up to 2x"
- "Increase average order size up to 19%..."
- "Reduce return rates by up to 33%, registration increases up to 22%"
- "Increase in online lead generation by up to 270%"
- "Improve overall customer experience and site 'stickiness'"
- "Improved satisfaction rates up to 50%"
- "Increase up to 15% page views/visit & avg. visit lengths up to 32%"[72]

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[69] Media Spin 360, Blog Entry, "What [Online] Shoppers Want", August 6, 2010, http://mediaspin360.com/blog/ .

[70] "Adobe Scene7 is a hosted solution for managing, enhancing, publishing and delivering dynamic marketing assets and rich visual merchandising to Web, mobile, email, Internet-connected displays and print." Source: http://www.scene7.com/about_us/ , accessed on June 21, 2011.

[71] "With Scene7, companies can grow revenues, enhance customer experience and cut production costs via an easy-to-use, Web-based system requiring minimal IT support. There is no other SaaS [software as a service] platform more comprehensive and powerful for automating the management, production and delivery of high-impact data-driven media. Utilizing a set of master assets, Scene7 dynamically generates and delivers unlimited variations of rich content in real-time through its global, scalable, performance-optimized network. Businesses can improve the entire selling and marketing cycle from attracting customers, to guiding them to the right products and services, to successfully converting them into loyal buyers." Source: http://www.scene7.com/about_us/ , accessed on June 21, 2011.

[72] Adobe Scene7, http://www.scene7.com/about_us/ , accessed on June 21, 2011.

Case Studies[73]
Zooming in from the macro perspective on the industry and also from the use of all rich media functionality, it is useful to review the micro perspective with several detailed case studies on the use of interactive product images (pan, zoom):

- **Design Within Reach -** Design Within Reach ("DWR") is a furniture retailer which sells modern furniture online and in its own stores. Scene7 reported that **DWR increased online sales by 45%** by using Scene7's Dynamic Imaging Solution and Product Configurators "to enhance its product presentation **by offering detailed zoom and product options on its website**."[74] (emphasis added)

  According to Vince Barriero, Chief Information Officer, DWR, "The results [with Scene7] have been great for DWR – we were able to add capabilities to our site in a matter of weeks and have seen **sales increase by 45% for products showcased with Scene7's technology**."[75] (emphasis added)

  According to a DWR customer, "The color change feature is cool, working really fast, and improving the time spent at the website. The color changes the look of the furniture so much that a product you ignore with one color can be absolutely attractive with another. Great idea – cool website."[76]

- **B's Purses -** B's Purses sells mid-range, custom handbags for women. Scene 7 reported that after B's Purses implemented Scene7's technology, B's Purses' online sales jumped by more than 10x such that online sales increased from being less than 1.0% of total sales to averaging over 12.0%.[77]

  According to Lisa Henderson, Founder and CEO, B's Purses, "Before Scene7, it was hard to show our custom-made handbags online and customers had to wonder what their bags would look like. Scene7 has eliminated that uncertainty and helped us create a thriving online business."[78]

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[73] Certain market research, case studies, companies and metrics which are cited in the Plaintiff's Expert Report are used for anecdotal purposes in terms of general e-commerce matters and/or the use and quantifiable and/or qualifiable benefit(s) of specific technologies/functionalities including with interactive product images, product videos and search suggest auto-complete. Bari Consulting Group did not analyze whether these companies cited have infringed on Eolas's Intellectual Property.

[74] Adobe Scene7, Design Within Reach, Case Study, http://www.scene7.com/clients/DWR.asp , accessed on June 20, 2011.

[75] Adobe Scene7, Design Within Reach, Case Study, http://www.scene7.com/clients/DWR.asp , accessed on June 20, 2011.

[76] Adobe Scene7, Design Within Reach, Case Study, http://www.scene7.com/clients/DWR.asp , accessed on June 20, 2011.

[77] Adobe Scene7, B's Purses, Case Study, http://www.scene7.com/clients/bspurses.asp, accessed on June 20, 2011.

[78] Adobe Scene7, B's Purses, Case Study, http://www.scene7.com/clients/bspurses.asp, accessed on June 20, 2011.

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28 of 73

- **Beall's Department Stores -** Beall's Department Stores is Florida's leading independently-owned department store and multi-channel retailer.[79] By using rich media, Scene7 reported that Beall's attained:
  - **20% increase in conversions with just dynamic zoom**[80] (emphasis added)
  - Enhanced shopping experience

  According to Kim Siefke, eCommerce Manager for BeallsFlorida.com,

  > "We wanted to give our customers access to all of the products available in our stores through the Internet, and be able to offer them an enhanced shopping experience. Scene7's platform and flexible deployment options provided us the ideal solution to do this."[81]

- **BareNecessities.com -** BareNecessities.com is an Internet retailer for women's brand name intimate apparel. "Scene7's **zoom & pan**, customized with the Bare Necessities branding, provides customers the ability to inspect product details and to make purchases with confidence."[82] (emphasis added)

- **Debenhams -** Debenhams is a leading department store operator in the United Kingdom, which according to Scene7, benefited from Scene7's technology with a "double-digit increase in sales" and "increased customer satisfaction."[83]

  According to Brett Bennett, Senior Web Manager at Debenhams,

  > "Customer satisfaction with the new site is up and we've had feedback that users love the new ability to zoom in on products and get a much better feel for what they are buying prior to purchase. Our aim is to increase satisfaction and make our online experience as good as it can be. Scene7 technology is essential to making that happen."[84]

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[79] Adobe Scene7, Beall's Department Store, Case Study, http://www.scene7.com/clients/bealls.asp, accessed on June 20, 2011.

[80] Adobe Scene7, Beall's Department Store, Case Study, http://www.scene7.com/clients/bealls.asp, accessed on June 20, 2011.

[81] Adobe Scene7, Beall's Department Store, Case Study, http://www.scene7.com/clients/bealls.asp, accessed on June 20, 2011.

[82] Adobe Scene7, Clients, http://www.scene7.com/clients/ , accessed on June 20, 2011.

[83] Adobe Scene7, Clients, http://www.scene7.com/clients/ , accessed on June 20, 2011.

[84] Adobe Scene7, Debenhams, Case Study, http://www.scene7.com/clients/debenhams.asp, accessed on June 20, 2011.

- **Hammacher Schlemmer -** Hammacher Schlemmer is one of the oldest retail catalogers and offers a vast array of products.

  Hammacher Schlemmer utilizes Scene7 On-Demand (S7OD), "a hosted self-serve rich media platform, **to drive revenues by adding dynamic sizing, zoom and online catalogs to its e-commerce site**."[85] (emphasis added) Additionally, according to Scene7, Hammacher Schlemmer claimed the following results from the use of its technology and services: "Drive significant conversions". [86]

  According to Scene7,

  > "Dynamic sizing uses URL calls to convert on-the-fly master imagery into the right format, size or crop, enabling Hammacher Schlemmer's web team to achieve consistent, high quality imaging across its website based on established standards. Image production is dramatically streamlined as new product imagery is added to the site or web pages are redesigned."[87]

  Additionally, according to Dayna Bateman, Director, Internet Marketing, Hammacher Schlemmer,

  > "As America's longest running cataloger, the online version is important from a brand standpoint. Our customers love the flash-based interactivity – as evidenced by **stronger conversion rates** versus regular site shoppers. With Scene7, we are now able to create an online version for every print catalog issue, increasing our output by 300%, by creating our own e-catalogs in-house."[88] (emphasis added)

- **Puma North America -** Puma North America ("Puma") is an athletic and fashion retailer. "Puma uses Scene7 **to add zoom** to its ecommerce site and to streamline production, automating what was once a manual process." According to Scene7, **Puma "increased online sales."**[89] (emphasis added)

  According to Greg Pulsifer, Puma Store Manager,

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[85] Adobe Scene7, Hammacher Schlemmer, Case Study, http://www.scene7.com/clients/hammacher.asp , accessed on June 20, 2011.

[86] Adobe Scene7, Hammacher Schlemmer, Case Study, http://www.scene7.com/clients/ , accessed on June 20, 2011.

[87] Adobe Scene7, Hammacher Schlemmer, Case Study, http://www.scene7.com/clients/hammacher.asp , accessed on June 20, 2011.

[88] Adobe Scene7, Hammacher Schlemmer, Case Study, http://www.scene7.com/clients/hammacher.asp , accessed on June 20, 2011.

[89] Adobe Scene7, Clients, http://www.scene7.com/clients/ , accessed on June 20, 2011.

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30 of 73

"We knew we wanted zoom…but we needed a **solution that was easy to implement**…with no hidden development costs due to integration issues or complex coding work. **Even previously dreaded tasks**, such as our monthly update of the hundreds of product images**, are incredibly easy**."[90] (emphasis found in original quote)

According to Craig Davidson, Controller, Puma North America,

> "**It took one day to implement, one day to customize, and one day to start seeing the ROI**. There are very few other technologies that can make this claim and keep it."[91] (emphasis found in original quote)

Company-Specific Data Points

- **L.L. Bean** (apparel, outdoor and home furnishing specialty retailer) - According to Internet Retailer, "L.L. Bean's web sales grew by 29% in 2010, when Internet orders topped catalog orders for the first time."[92] Internet Retailer also reported that "[a web page was] developed for the **2009 holiday season that enabled site visitors to drag products into a personalized page where they could zoom into images and send product information to friends**."[93] (emphasis added)

- **Eddie Bauer** (clothing accessories and outdoor gear specialty retailer) – According to Internet Retailer, "EddieBauer.com has been updated with 25% bigger graphics, top of the page navigation and more mouseover technology. The product pages… feature more images of the same product, **zoom capability**, the ability to change colors and recommended products."[94] (emphasis added)

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[90] Adobe Scene7, Clients, http://www.scene7.com/clients/ , accessed on June 20, 2011.

[91] Adobe Scene7, Clients, http://www.scene7.com/clients/ , accessed on June 20, 2011.

[92] Internet Retailer, "Top 500 Guide", 2011 Edition, page 129.

[93] Internet Retailer, "Top 500 Guide", 2011 Edition, page 129.

[94] Internet Retailer, "Top 500 Guide", 2011 Edition, page 200.

2. Product & Service Video(s)

Overview

ComScore reported that at the end of 2009, approximately 85% of the US online audience viewed online video in some manner.[95] "With so much video being consumed online, ecommerce marketers should be asking whether or not video content could have a positive effect on clicks and conversions. The answer seems to be a resounding yes."[96]

According to Shop.org, in the 2009 State of Retailing Online Merchandising Report, approximately one third of retailers surveyed have used streaming video on their site, and, of those, one third deemed using video as "very effective."[97] Today, online merchandising for many types of products and services (hereinafter products generally include services for this analysis) across B2C and B2B Web sites are enhanced with videos.

Featuring product videos adds value to many B2C (business to consumer) and B2B (business to business) Web retailers for many different types of products ranging from low priced footwear to high priced electronics, for example; many customers now have come to expect a quality online shopping experience with rich media such as product videos.

According to Bari Consulting Group's research, 58 of Internet Retailer's Top 100 e-commerce sites use product videos on their Web site directly as of June 2011, and 84 of the Top 100 e-commerce sites have YouTube channels as of July 2011.[98] I believe that going forward, more and more retailers will continue to use product and service video(s), both on their own sites and on third party sites such as YouTube.

Value Proposition of Product & Service Video(s)

I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding videos on their Web sites to sell products and services including the opportunity to (in no order of importance):

- Augment static images by providing enhanced imagery, which increases the possibility of a sale.

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[95] Invodo White Paper. "Watch This! The Online Retailer's Guide to Video Merchandising Success," April 2010.

[96] Practical Ecommerce Insights for Online Merchants, June 13, 2011, http://www.forum.practicalecommerce.com/articles/2845-4-Ways-Video-Can-Drive-Traffic-and-Conversions .

[97] "Consumer Use of Online Video for Shopping," Fiona Swerdlow, Head of Research, Shop.org, August 7, 2009, http://blog.shop.org/2009/08/07/consumer-use-of-online-video-for-shopping/ .

[98] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites.

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32 of 73

- Provide enhanced view(s) of the product from different perspectives and angles, thereby enabling consumers to see a fuller "picture" of what the product looks like as well as what the product does, which increases the possibility of a sale.

- Provide means for better online storytelling (i.e., with a live person talking about the product in terms of demonstration, recommendation, referral, etc.). This helps to increase the possibility of an online sale by overcoming the brick and mortar salesperson expert barrier whereby knowledgeable salespeople in real-world retail environments can often sway purchase decisions.

- Be able to quickly view the product in use, thereby enabling the consumer to view the product in a more timely manner and increasing the possibility of sale.

- Leverage broadband connections to provide for rich media storytelling about a product, which increases the possibility of a sale.

- Overcome the touch and feel barrier with brick and mortar retailers and provide consumers with a vivid online experience, which increases the possibility of a sale.

- Reduce friction in e-commerce to have consumers find and see what they want more quickly, which increases the possibility of a sale.

- Boost conversion rates by converting consumer browsers into buyers.

- Increase site stickiness whereby consumers spend more total time on the e-commerce Web site, with the possibility of purchasing incremental items, thereby potentially increasing the total amount of the transaction.

- Attain higher customer satisfaction rates from buyers who made educated purchases and got what they wanted.

- Encourage return/repeat business from satisfied consumers and attain higher lifetime value of the customer.

- Decrease abandoned shopping carts when consumers are unsure as to finalizing their checkout, which increases the possibility of a sale.

- Decrease an e-commerce Web site's customer service costs whereby the better understanding that the consumer has about the product when ordering, the likelihood of returning the product decreases.

- Overcome merchandising display space (i.e., square footage, square inches) limitations in brick and mortar retailers whereby there is a finite amount of "shelf-space", counter space or floor space to sell products; in comparison, with a retailer's Web site, there are less merchandising display constraints and a greater depth and breadth of product(s) can be displayed, for example, which increases the possibility of a sale.

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33 of 73

- Lower an e-commerce Web site's customer service costs whereby number of pre-sale customer service calls, chats and emails from consumers asking questions about the product will decline when consumers are better educated through product video(s).

- Attain better Search Engine Optimization for an e-commerce Web site that yields higher level search results from third party search providers such as Google and Bing, which increases the possibility of a sale. This is attained by leveraging rich media content such as videos, which can be optimized by including keywords into video file names, descriptions, and tags, as well as posting on YouTube, developing a video library on a Web site, etc. (as discussed in greater detail herein in this "Product & Service Video(s)" section under the heading, "General Data Points").

Amazon.com's Use of Videos
In addition to Amazon.com being the top ranked e-commerce Web site by sales in 2010 totaling $34,200,000,000.00, Amazon.com was also the #1 ranked company when it came to videos posted online with 185,339 videos.[99]

Generally speaking, I think that the following statement seems to apply here regarding video usage by e-commerce sites – "as goes Amazon.com, so goes the industry." Amazon.com has also been called "the gold standard against which all dotcoms are judged."[100] According to Lee Lohse, Research Director of the Wharton Forum on Electronic Commerce, "You have to look on Amazon as the bell-weather for all dotcoms." [101] Along those lines, according to *BusinessWeek* in 2000, "The only certainty: In its short life as a public company, Amazon's experience has often set the rules under which e-commerce companies operate. Survive or stumble, that will continue to be the case."[102]

Under the heading "Amazon.com (No. 1)", Internet Retailer stated, "**If the online retail market isn't quite Amazon and everyone else, it can be argued that it is heading in that direction**. Overall, Amazon grew sales to $34.20 billion in 2010, a 39.5% increase from $24.51 billion in 2009."[103] (emphasis added) With regard to video usage, according to SundaySky,[104] "Many online retailers are incorporating video in a big way.

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[99] SundaySky. State of Video in E-commerce, Quarterly Research Report, Q4 2010, page 5.

[100] "Can Amazon Survive," Knowledge @Wharton, The Wharton School, University of Pennsylvania, August 30, 2000, http://knowledge.wharton.upenn.edu/article.cfm?articleid=238 .

[101] "Can Amazon Survive," Knowledge @Wharton, The Wharton School, University of Pennsylvania, August 30, 2000, http://knowledge.wharton.upenn.edu/article.cfm?articleid=238 .

[102] "Can Amazon Make It? Some investors are wondering if the e-tailer will ever turn a profit," Robert Hof, Debra Sparks, Ellen Neuborne, and Wendy Zellner, BusinessWeek, July 10, 2000, http://www.businessweek.com/2000/00_28/b3689002.htm .

[103] Internet Retailer, "The Top 500: Key operating statistics," "Top 500 Guide," 2011 Edition, page 4.

[104] "SundaySky is the leader in dynamically generated video, enabling e-commerce businesses to reinforce their brands and drive website traffic by creating limitless, high-quality, always up-to-date videos to showcase products and services. SundaySky's Software-as-a-Service (SaaS)-based video generation platform extracts the content from any Web site, molding it into high-quality, professional video clips." Source: http://www.sundaysky.com/about/about.html , accessed on July 19, 2011.

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34 of 73

Figure B - Top 10 Online Retailers (Ranked by Number of Videos) [105]

Video Rank	Retailer	Estimated Number of Videos	Internet Retailer 2010 Rank
1	Amazon.com	185,339	1
2	Overstock	46,198	28
3	HSN	29,620	25
4	QVC	17,822	11
5	Buy.com	9,304	32
6	Target	8,657	21
7	Walmart	4,178	6
8	Nike	3,700	48
9	Systemax	3,397	22
10	Cabela's	2,529	35

Of the top 50 e-commerce sites, 16 e-commerce sites offered more than 1,000 videos on their respective sites in Q1, 2011 which represented an increase from 13 sites six months previously.
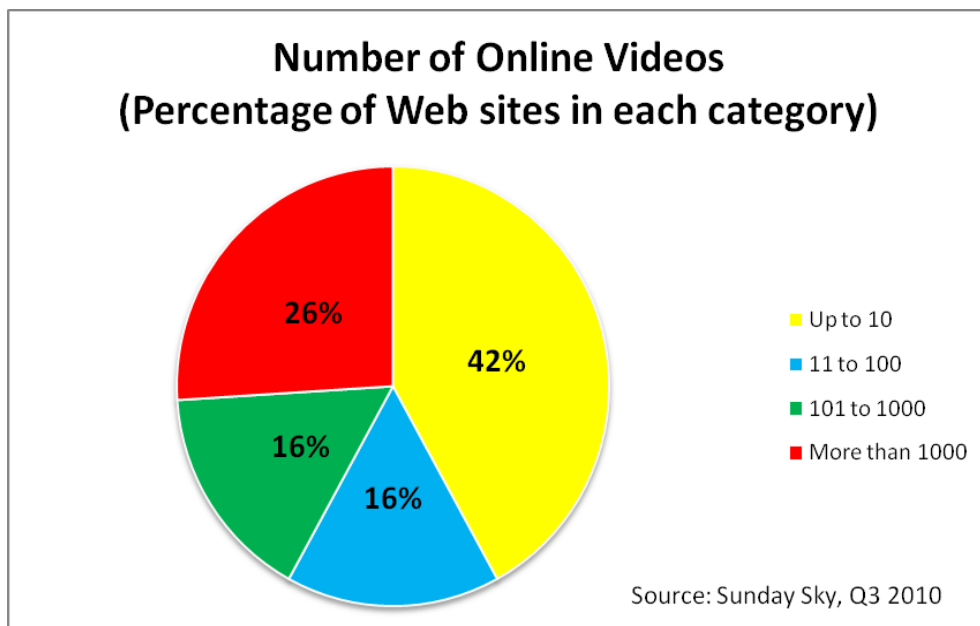
Figure C – Video Use by Top 50 E-Retail Sites
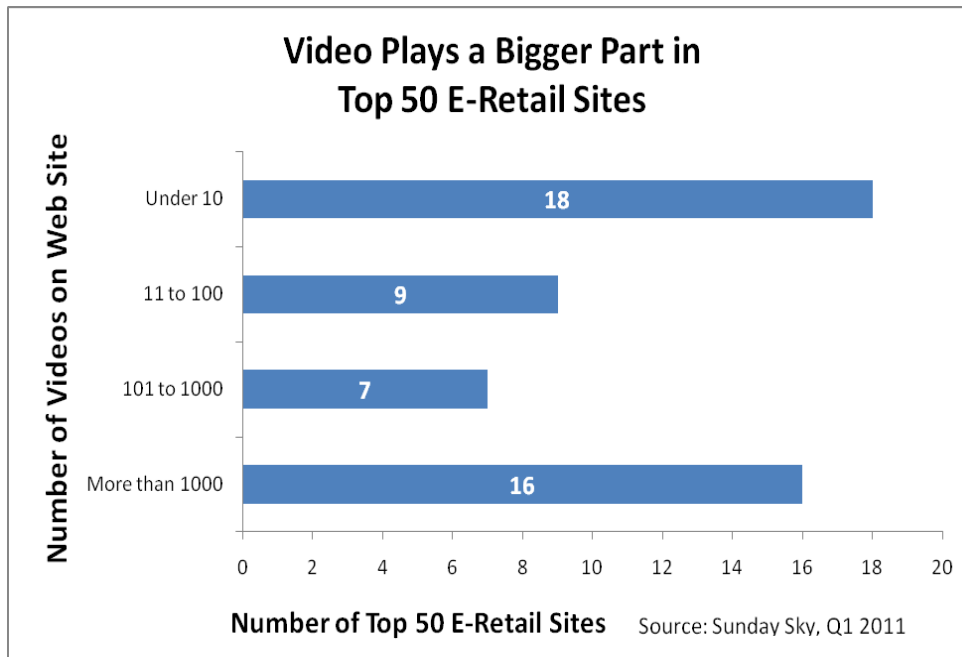
Sunday Sky also reported that the majority of Web sites with videos posted had between 1 to 100 videos.

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[105] SundaySky. State of Video in E-commerce, Quarterly Research Report, Q4 2010, page 5.

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35 of 73

Figure D – Number of Online Videos Posted By Percentage of Web Sites Offering Videos[106]

Number of Online Videos
(Percentage of Web sites in each category)

42% — Up to 10
26% — More than 1000
16% — 11 to 100
16% — 101 to 1000

Legend:
- Up to 10
- 11 to 100
- 101 to 1000
- More than 1000

Source: Sunday Sky, Q3 2010

Case Studies[107]
Zooming in from the macro perspective on the industry, it is useful to review the micro perspective with several detailed case studies on the use of product videos:

- **eBags -** eBags is the largest online retailer of bags and accessories.[108]

  "With site traffic exceeding 100,000 visitors on some days, eBags recognized that if it could increase the site's conversion rate even by small increments, it would be able to drive tremendous sales growth. 'We see conversion rate as the least expensive way to grow sales,' says [Peter] Cobb [Co-founder and SVP, Marketing, eBags], 'and become a more effective, better online retailer.'"[109]

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[106] "Number of Online Videos (percentage of web sites in each category) - Online retailers turn up the video content," Internet Retailer, Data Source: SundaySky, Q3, 2010, http://www.internetretailer.com/trends/web-technology/ .

[107] Certain market research, case studies, companies and metrics which are cited in the Plaintiff's Expert Report are used for anecdotal purposes in terms of general e-commerce matters and/or the use and quantifiable and/or qualifiable benefit(s) of specific technologies/functionalities including with interactive product images, product videos and search suggest auto-complete. Bari Consulting Group did not analyze whether these companies cited have infringed on Eolas's Intellectual Property.

[108] About eBags, http://www.ebags.com/about/index.cfm?Fuseaction=about , accessed on June 24, 2011.

[109] eBags Case Study, "Online Innovation Converts Clicks into Sales," Endeca, http://www.endeca.com/content/dam/endeca/Resource%20Center/case%20studies/eBags%20CS-Final%206.11.pdf .

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36 of 73

According to Mr. Cobb, "The key for online stores is to bump up conversion rates by delivering the product to consumers in as few clicks as possible."[110]

Additionally, according to eBags's Mr. Cobb, "…our conversion rates have doubled since we launched Endeca [which provides search and navigation of products and customer reviews and a wide variety of videos]."[111]

Mr. Cobb also provided some interesting statistics from when eBags ran a market test with 25,000 product pages served with video and 25,000 product pages without video. eBags found that those who viewed video had higher conversion rate.[112]

Figure E – eBags's Conversion Lift on Product Pages[113]

	Group A – No Video	Group B – With Video
# Product Pages Served	25,000	25,000
Conversion Rate (Did Not View Video)	6.63%	10.00%
Conversion Rate (Viewed Video)	6.63%	15.84%
Conversion Rate Increase (Did Not View Video)	N/A	50.10%
Conversion Rate Increase (Viewed Video)	N/A	138.90%

Note: when referring to eBags's enhanced search capabilities, Mr. Cobb referred to the overall importance of effective and efficient searching, "We know how our customers buy and that people who use the top search bar are seven times more likely to convert into a purchase,…"[114] While Mr. Cobb was not referring to search suggest auto-complete, Mr. Cobb's comments do appear to indicate how important search is overall to eBags's success. As of June 23, 2011, eBags does use search suggest auto complete on its Web site at eBags.com.

- **Shoeline.com -** Shoeline.com is a quality footwear retailer. According to Frank Malsbenden, vice president and general manager of Vision Retailing Inc. (which operates Shoeline.com

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[110] eBags Case Study, "Online Innovation Converts Clicks into Sales," Endeca, http://www.endeca.com/content/dam/endeca/Resource%20Center/case%20studies/eBags%20CS-Final%206.11.pdf .

[111] eBags Case Study, "Online Innovation Converts Clicks into Sales," Endeca, http://www.endeca.com/content/dam/endeca/Resource%20Center/case%20studies/eBags%20CS-Final%206.11.pdf .

[112] eBags Video Program, eTail 2009, Peter Cobb, Co-founder and SVP, Marketing, eBags, February 2009, http://www.slideshare.net/xcasanova/ebags-video-commerce-by-peter-cobb .

[113] eBags Video Program, eTail 2009, Peter Cobb, Co-founder and SVP, Marketing, eBags, February 2009, http://www.slideshare.net/xcasanova/ebags-video-commerce-by-peter-cobb .

[114] eBags Case Study, "Online Innovation Converts Clicks into Sales," Endeca, http://www.endeca.com/content/dam/endeca/Resource%20Center/case%20studies/eBags%20CS-Final%206.11.pdf .

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37 of 73

and three other e-commerce sites), the conversion rate goes up 44% on product pages that have video.[115]

According to Internet Retailer's interview with Mr. Malsbenden, "The main reason Shoeline.com added product videos to its site last year was to improve conversion rates on product pages. But it's also [been] found that the videos can bring new traffic to the site when they are posted to online social networking sites YouTube and Facebook."[116]

In January 2009, according to Pedro Santos, chief strategist for e-commerce at Akamai Technologies,[117] many retailers, including Shoeline.com have added video to their e-commerce sites in recent years. Mr. Santos said that in 2004, the average size of a page on a retail Web site was about 150 kilobytes with virtually no video content, but that in 2009, the average size of a on an e-commerce Web site is 350 kilobytes with the average retailer featuring 2-3 videos."[118]

Company-Specific Data Points

- **Zappos** (online shoe retailer acquired by Amazon.com in November 2009) – "Zappos enjoyed at least a 6 percent increase in conversions for products with video."[119]

- **Golfsmith** (golfing products retailer) – According to Craig Wax, CEO, Invodo,[120] "Golfsmith recently measured a **64% lift in sales** for products associated with Invodo video."[121] (emphasis found in original document)

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[115] "Shoeline.com's videos pay dividends on and off its site," Internet Retailer, Paul Demery, January 15, 2009, http://www.internetretailer.com/2009/01/15/shoeline-com-s-videos-pay-dividends-on-and-off-its-site .

[116] "Shoeline.com's videos pay dividends on and off its site," Internet Retailer, Paul Demery, January 15, 2009, http://www.internetretailer.com/2009/01/15/shoeline-com-s-videos-pay-dividends-on-and-off-its-site .

[117] "Akamai provides market-leading, cloud-based services for optimizing Web and mobile content and applications, online HD video, and secure commerce. Combining highly-distributed, energy-efficient computing with intelligent software, Akamai's global platform is transforming the cloud into a more viable place to inform, entertain, advertise, transact and collaborate." Source: http://www.akamai.com/html/about/press/releases/2011/press_072011.html , accessed on July 20, 2011.

[118] "Shoeline.com's videos pay dividends on and off its site," Internet retailer, Paul Demery, January 15, 2009, http://www.internetretailer.com/2009/01/15/shoeline-com-s-videos-pay-dividends-on-and-off-its-site .

[119] Practical Ecommerce Insights for Online Merchants, June 13, 2011, http://www.forum.practicalecommerce.com/articles/2845-4-Ways-Video-Can-Drive-Traffic-and-Conversions .

[120] "As a full-service eCommerce video solution, Invodo creates highly effective product video at scale and provides a leading platform and player to influence consumers at the point of purchase. Invodo videos increase sales conversion rates, attract traffic through SEO and social networks, and reduce returns for customers including Internet 500 retailers and major brands." Source: http://www.invodo.com/html/about/ , accessed on July 20, 2011.

[121] Shopatron On Target 2011, "Tools That Improve Conversion: Product Video," Craig Wax, CEO, Invodo, http://ecommerce2.shopatron.com/l/964/2011-05-10/P68BX/964/107523/eCommerce_Video_Solution .

- **Verizon** (Telecommunications provider) **–** According to Craig Wax, CEO, Invodo, "HTC Droid Incredible video generated 500,000 views on YouTube in 2 weeks and become Verizon's best-ever pre-order phone."[122]

- **Swimwearboutique.com** (online swimming and resort apparel retailer) – According to Craig Wax, CEO, Invodo**,** "91% rated the videos 3-4 stars out of 4 stars in terms of aiding purchase." A **swimwearboutique.com** customer was quoted by Mr. Wax, "The video shopping was great! **It made me go from not sure if I wanted the suit to absolutely wanting it!**"[123] (emphasis in original document)

- **Stacks and Stacks** (retailer of organizational products) – According to Craig Wax, CEO, Invodo**,** "<u>video viewers were 144% more likely to purchase than non-viewers</u>."[124] (emphasis in original document)

- **HSN** (Home Shopping Network cable TV network) – According to Mindy Grossman, CEO, of HSN, "HSN has made its e-commerce site "very content-pervasive." [125] In addition to more than 14,000 videos on product pages… the web site features new interactive tools… 'We're trying to create longer engagement…The longer the engagement, the higher the opportunity for conversion' [said Ms. Grossman]."[126]

- **Eastern Mountain Sports** (outdoor gear retailer) – "The retailer [Eastern Mountain Sports] in November 2010 launched a video series highlighting staff members and products."[127]

- **Sephora** (perfume and cosmetics retailer) – "Sephora… in October 2010 launched an iPhone app that includes features such as bar code scanning and video. The app lets shoppers buy products, see the latest products, check out Sephora how-to and product video clips…"[128]

- **Panasonic** (consumer electronics manufacturer) – "Panasonic in November 2010 debuted LIHD Celebrity Hookup, a television-style online program featuring an inside look at how some celebrities, athletes and entertainers use the latest in consumer electronics to enhance their lives… A new webisode is released monthly."[129]

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[122] Shopatron On Target 2011, "Tools That Improve Conversion: Product Video," Craig Wax, CEO, Invodo, http://ecommerce2.shopatron.com/l/964/2011-05-10/P68BX/964/107523/eCommerce_Video_Solution .

[123] Shopatron On Target 2011, "Tools That Improve Conversion: Product Video," Craig Wax, CEO, Invodo, http://ecommerce2.shopatron.com/l/964/2011-05-10/P68BX/964/107523/eCommerce_Video_Solution .

[124] Shopatron On Target 2011, "Tools That Improve Conversion: Product Video," Craig Wax, CEO, Invodo, http://ecommerce2.shopatron.com/l/964/2011-05-10/P68BX/964/107523/eCommerce_Video_Solution .

[125] Internet Retailer, "Top 500 Guide", 2011 Edition, page 134.

[126] Internet Retailer, "Top 500 Guide", 2011 Edition, page 134.

[127] Internet Retailer, "Top 500 Guide", 2011 Edition, page 370.

[128] Internet Retailer, "Top 500 Guide", 2011 Edition, page 216.

[129] Internet Retailer, "Top 500 Guide", 2011 Edition, page 248.

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39 of 73

- **Bluefly.com** (designer brands and fashion trends online discount retailer) – According to Bari Consulting Group's research, some sites that use product videos allow shoppers to share the video(s) on various social networking sites (also referred to as social media or social networks) such as Facebook and Twitter. For example, consider this video from Bluefly.com: http://www.bluefly.com/closets/giuliana_rancic . The consumer can share the video posted on Bluefly.com with his/her friends on Facebook, Twitter, Blogger or Tumblr, for example.

General Data Points Regarding the Use of Video by E-Commerce Sites

- "Adding video produces three measureable outcomes: 1. Longer site view times, 2. Increased value of sale and 3. Improved conversion rates. A micro site with video for children's play sets on the retailer's site resulted in a 400X increase in total sales conversions."[130]

- "Retailers are turning to video commerce for 3 main reasons: increasing order values, improving conversion rates, and lowering return rates. (Source: Forrester Research, Online Retailers' Adoption of Online Video Content is Ahead of Consumers' Preferences, November 2009.) Video has the power to influence these metrics more than any other type of online content because it provides detail-hungry shoppers with a unique 360 product view and requires a higher level of customer engagement. Online video can close the gap between the 'touch and feel" experience of being in a physical store."[131]

- "The older the consumer, the more likely he or she is to turn to online video to understand product features and/or how the product works…"[132]

- Video views on retail sites have increased 40% since 2009 (source: comScore 2010)[133]

- "…online video in some cases appears to influence purchases offline as well (i.e. in a brick and mortar store). For example, one fifth of men surveyed noted that online video had directly influenced their decision to buy a specific product offline. Multi-channel marketing and merchandising at work." [134]

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[130] Akamai White Paper, "Online Video: The New Merchandising," September 2008.

[131] Endeca White Paper. "Video Commerce: 4 Tips to Fast Forward to More Revenue," Page 1.

[132] "Consumer Use of Online Video for Shopping," Fiona Swerdlow, Head of Research, Shop.org, August 7, 2009, http://blog.shop.org/2009/08/07/consumer-use-of-online-video-for-shopping/ .

[133] Shopatron On Target 2011, "Tools That Improve Conversion: Product Video," Craig Wax, CEO, Invodo, http://ecommerce2.shopatron.com/l/964/2011-05-10/P68BX/964/107523/eCommerce_Video_Solution .

[134] "Consumer Use of Online Video for Shopping," Fiona Swerdlow, Head of Research, Shop.org, August 7, 2009, http://blog.shop.org/2009/08/07/consumer-use-of-online-video-for-shopping/ .

- "Internet Retailer and eMarketer surveys both report that many online retailers are adding video to their websites, with video being one of the top two priorities. Reduced returns, reduced cart abandons, and increased sales are the clear benefits."[135]

- "The Increase in sales [due to video] is especially compelling since numerous sources [e-commerce sites] have documented conversion rate increases of 30% or more."[136]

- "In the July 2009 American Pulse survey, conducted by BIGresearch on behalf of Shop.org, we asked consumers, 'How often do you use online video when researching or buying products online?' Certainly, video for shopping purposes online appears to be as-yet nascent: just 12.1% of all adults (18+ years of age) surveyed indicated that they 'regularly' use online video for shopping purposes. That said, however, another 46% said that they use online video 'occasionally' for online shopping purposes."[137]

- "…it looks like video is quickly becoming a de rigueur site feature in consumers' eyes. Half of consumers surveyed agreed with the statements, 'Online videos produced by manufacturers are helpful in explaining product features and how the product works' and 'I have watched online videos for products that I purchased online'. One quarter said they had watched online videos for products that they researched (though not necessarily purchased) online. Unlike the case for customer ratings and reviews, there appears to be some caution about consumer-generated product videos – less than one fifth of consumers professed to trust those."[138]

- According to Forrester Research, the addition of videos to an e-commerce web site can enhance Search Engine Optimization and yield higher level search results from third party search providers such as Google and Bing, for example, by leveraging rich media content.[139]

  For example, Forrester Research found, "'Blended search,' the practice in which search engines display videos, images, news stories, maps, and other types of results alongside their standard search results, has become increasingly common on major search engines. And

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[135] eMarketer, Video Usage in eCommerce: The Best is Yet to Come, January 2009 (as referenced in Invodo White Paper. "Watch This! The Online Retailer's Guide to Video Merchandising Success," page 2, April 2010).

[136] Practical eCommerce, "Video Boosts Online Sales, Merchants Confirm," November 2008 and Internet Retailer, Shoeline.com's Videos Pay Dividends On and Off Its Site, January 2009 (as referenced in Invodo White Paper. "Watch This! The Online Retailer's Guide to Video Merchandising Success," page 2, April 2010).

[137] "Consumer Use of Online Video for Shopping," Fiona Swerdlow, Head of Research, Shop.org, August 7, 2009, http://blog.shop.org/2009/08/07/consumer-use-of-online-video-for-shopping/ .

[138] "Consumer Use of Online Video for Shopping," Fiona Swerdlow, Head of Research, Shop.org, August 7, 2009, http://blog.shop.org/2009/08/07/consumer-use-of-online-video-for-shopping/ .

[139] Forrester Research, "The Easiest Way to a First Page Ranking on Google," Nate Elliott, Principal Analyst, Forrester Research, January 8, 2009, http://blogs.forrester.com/interactive_marketing/2009/01/the-easiest-way.html .

optimizing video content to take advantage of blended search is by far the easiest way to get a first-page organic ranking on Google."[140]

"Not only are video results increasingly common in Google's search results, but your videos stand a much better chance than your text pages of being shown on the first results page. On the keywords for which Google offers video results, we found an average of 16,000 videos vying to appear on results pages containing an average of 1.5 video results -- giving each video about an 11,000-to-1 chance of making it onto the first page of results. By comparison, there were an average of 4.7 million text pages competing for a place on results pages with an average of just 9.4 text results -- giving each text page about a 500,000-to-1 chance of appearing on the first page of results. Now that's a lot of math, but here's what it means: on the keywords for which Google offers video results, any given video in the index stands about a 50 times better chance of appearing on the first page of results than any given text page in the index. Those are some attractive odds."[141]

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[140] Forrester Research, "The Easiest Way to a First Page Ranking on Google," Nate Elliott, Principal Analyst, Forrester Research, January 8, 2009, http://blogs.forrester.com/interactive_marketing/2009/01/the-easiest-way.html .

[141] Forrester Research, "The Easiest Way to a First Page Ranking on Google," Nate Elliott, Principal Analyst, Forrester Research, http://blogs.forrester.com/interactive_marketing/2009/01/the-easiest-way.html , January 8, 2009.

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42 of 73

3. Search Suggest – Auto-Complete

Overview

As the Internet has grown over time, there has been an explosion in terms of the number of Web sites and the amount of data and information available online, including by way of example, with text, documents, photos, videos, games, databases, applications, etc. Consumers and businesses alike can be overwhelmed by the amount of data and information online, and this can prove challenging when it comes to searching the Internet and finding the results that one wants in a timely manner.

Many different companies have attempted to build the better mousetrap in terms of search engines and algorithms powering those search engines. To that end, Larry Page and Sergey Brin, the founders of Google, decided to change their search engine's original name from "BackRub" to Google in 1997. Google was a pun using the word "googol," a mathematical term for the number represented by the numeral 1 followed by 100 zeros. "The use of the term [Google] reflects their [Messrs. Page's and Brin's] mission to organize a seemingly infinite amount of information on the web."[142]

There have been many advancements in terms of search engine functionality since BackRub was founded in 1996. One such example is with Search Suggest Auto-Complete ("Search Suggest"). Search Suggest is a technical feature that automatically prompts users with suggested search queries as they type (enter) search term(s) in a data entry box. The Search Suggest functionality is relatively new and increasing in usage by various Web sites including search engines and e-commerce Web retailers as well as by their respective end user consumers. Search Suggest arguably makes the end user's search queries more effective and efficient for various reasons including that it: i) saves the number of keystrokes required to be typed, ii) corrects spelling mistakes in real-time, iii) suggests popular and related search results, and iv) provides deeper and quicker access to specific content pages which appear in and right below the search box and then enables the consumer to jump to that specific page.

For example, the auto-completion algorithm powering Google Suggest offers searches that may be similar to what an end user has typed. For example, if an end user starts to type [los angeles] -- even just ["los a"] -- search result options appear for Los Angeles, Los Angeles Dodgers, Los Angeles Times, Los Angeles Fire, Los Angeles Lakers, etc. Google has explained how Google Suggest auto-complete works as follows,

> "As you type, Google's algorithm predicts and displays search queries
> based on other users' search activities. In addition, if you're signed in to
> your Google Account and have Web History enabled, you may see search
> queries from relevant searches that you've done in the past. All of the

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[142] "Google History," http://www.google.com/about/corporate/company/history.html, accessed on June 30, 2011.

predicted queries that are shown in the drop-down list have been typed previously by Google users."[143]

"For certain queries, Google will show separate predictions for just the last few words. Below the word that you're typing in the search box, you'll see a smaller drop-down list containing predictions based only on the last words of your query. While each prediction shown in the drop-down list has been typed before by Google users, the combination of your primary text along with the completion may be unique." [144]

"[Google's] Predicted queries are algorithmically determined based on a number of purely objective factors (including popularity of search terms) without human intervention. The autocomplete data is updated frequently to offer fresh and rising search queries."[145]

E-Commerce & Search Suggest
As it pertains to e-commerce, Search Suggest enhances a consumer's search queries and related results through greater speed, relevancy and context. Specifically, the use of Search Suggest functionality by an e-commerce Web site helps to mitigate the misspellings by consumers, and Search Suggest also empowers consumers to type shorter search queries. In other words, when consumers spend less time thinking about how or what to search for, this enables consumers to spend more time with the search results, and arguably this provides less friction in the e-commerce browsing and buying processes. Thus, sales can be increased due to Search Suggest.

According to Practical eCommerce's research[146] in October 2010, the Top 10 converting Web sites (i.e., Schwan's, ProFlowers, Land's End, QVC, etc.) have three common strategies in common including: 1) "A Customer Is for Life," 2) "**Superior Site Search, and Selection**" and 3) "Remarketing."[147] (emphasis added)

According to Hadley Reynolds, Senior Analyst with IDC, "The industry leaders in commerce site search and navigation have offered increasingly sophisticated merchandiser dashboards and

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[143] Google Web Search, Help articles, Autocomplete, http://www.google.com/support/websearch/bin/static.py?hl=en&page=guide.cs&guide=1186810&answer=106230&rd=1 , accessed on June 21, 2011.

[144] Google Web Search, Help articles, Autocomplete, http://www.google.com/support/websearch/bin/static.py?hl=en&page=guide.cs&guide=1186810&answer=106230&rd=1 , accessed on June 21, 2011.

[145] Google Web Search, Help articles, Autocomplete, http://www.google.com/support/websearch/bin/static.py?hl=en&page=guide.cs&guide=1186810&answer=106230&rd=1 , accessed on June 21, 2011.

[146] Practical eCommerce provides market research, articles and analysis to online merchants. Source: http://www.practicalecommerce.com/about , accessed on July 20, 2011.

[147] "Top 10 Converting Websites: The 3 Common Strategies," Practical eCommerce for Online Merchants, Charles Nicholls, October 7, 2010, http://www.practicalecommerce.com/articles/2298-Top-10-Converting-Websites-The-3-Common-Strategies- .

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44 of 73

faceted navigation for years."[148] The practice of using Search Suggest on search engines began to commercially appear in the marketplace in the 2007-2008 time period. E-commerce sites then started using Search Suggest thereafter, and more and more e-commerce sites are now offering Search Suggest. According to Bari Consulting Group's research, 35 of Internet Retailer's "Top 100 E-Commerce Sites" use Search Suggest as of June 2011.[149] Using major search engines and e-commerce sites reveal that Search Suggest is relatively commonplace today.

By way of background, on December 10, 2004, Google announced that it had launched a Search Suggest feature called Google Suggest which was touted as a "new Labs project."[150] In Summer 2007, Yahoo introduced a new feature that produced a drop-down menu with recommendations as a user inputted a search term.[151] On August 25, 2008, Google Suggest was ready for its prime time commercial launch when Google announced, "After being in testing for literally years, Google Suggest is finally coming to Google.com."[152] Less than one year later, on March 31, 2009, Google announced the international launch of Google Suggest.[153]

Google Search Suggest is a powerful tool whereby an end user can navigate to google.com, for example, and Google can provide an end user with search results that provide direct deep links to one or more Web sites (i.e., Web retailers such as Amazon.com). Search Suggest (powered by Google or other similar search suggest methodologies) is also a powerful tool for Web retailers to use on their own Web sites (i.e., Staples.com) to enable end users to find the product/service (hereinafter products generally include services for this analysis) that they are searching for on a particular Web retailer's site. The Internet provides multiple pathways for shoppers to connect to and/or within online stores. The bottom line is that Search Suggest is a valuable functionality regardless of whether an end user is searching across the breadth of the Internet on a search engine or within the depth of a particular Web retailer (powered by Google Commerce Search or other similar search suggest methodologies).

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[148] "Google steps up its game in site search," Internet Retailer, Paul Demery, June 17, 2010, http://www.internetretailer.com/2010/06/17/google-steps-its-game-site-search .

[149] Web site sales and rankings were from Internet Retailer "Top 500 Guide 2011"; All other data from Bari Consulting Group Analysis compiled June 20-23, 2011 and July 21, 2011. This analysis detailed various uses of the above described functionality(ies), as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites.

[150] "I've got a suggestion," Google Blog, December 10, 2004, http://googleblog.blogspot.com/2004/12/ive-got-suggestion.html .

[151] "Yahoo Search Gets Major Overhaul," *Website Magazine*, August 2007, http://www.websitemagazine.com/content/blogs/posts/archive/2007/10/02/Yahoo-Search-Gets-Major-Overhaul.aspx and Yahoo! Search Blog, "May I Suggest," July 11, 2007, http://www.ysearchblog.com/2007/07/11/may-i-suggest/ .

[152] "Google.com Finally Gets Google Suggest Feature," August 25, 2008, http://searchengineland.com/googlecom-finally-gets-google-suggest-feature-14626 .

[153] "Local flavor for Google Suggest," Google Blog, March 31, 2009, http://googleblog.blogspot.com/2009/03/local-flavor-for-google-suggest.html .

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45 of 73

Value Proposition of Search Suggest Auto-Complete

I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from adding Search Suggest on their Web sites to sell products and services (hereinafter products generally include services for this analysis) including the opportunity to (in no order of importance):

- Speed the search process by reducing the number of keystrokes (clicks) needed by consumers and in turn linking consumers more immediately to the product page that they are seeking, which increases the possibility of a sale.

- Correct spelling mistakes of end users in real-time to help end users find what they are searching for while minimizing clicks, which increases the possibility of a sale.

- Provide detailed search suggestions with brands, products, models, styles, parts, etc., which increases the possibility of a sale and generates goodwill from brands and manufacturers.

- Remind end users of previous search items for various products, which increases the possibility of a sale.

- Suggest popular search strings of other end users for products since people like to purchase popular products – a positive feedback loop whereby the more users get the product, the more products that there are out in the marketplace, and the more products that there are out in the marketplace, the more users want that product.

- Reduce friction in e-commerce to have consumers find what they want more quickly before the consumer bounces from the Web retailer to another retailer, online or brick and mortar, which increases the possibility of a sale.

- Reduce an end user's effort of finding desired products, therefore making it more likely that the end user will reach the desired product's page, which increases the possibility of a sale.

- Anticipate similar products which the end users may want, thereby encouraging potential and actual customers to look at different products, which increases the possibility of a sale.

- Provide breadth of links and/or direct deep links to various levels of the Web retailer's site structure, which increases the possibility of a sale.

- Boost conversion rates by converting end user browsers into buyers.

- Increase site stickiness whereby end users spend more total time on the e-commerce Web site(s), with the possibility of making incremental purchases, thereby possibly increasing the total amount of the transaction.

- Attain higher end user satisfaction rates from buyers who made more pinpointed and educated purchases and received what they wanted.

- Encourage return/repeat business from satisfied end users and attain higher lifetime value of the customer.

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46 of 73

- Lower an e-commerce Web site's customer service costs whereby number of pre-sale customer service calls, chats, and emails from end users asking questions about the product or service may likely decline when consumers are given pinpointed search results.

Additional Background on Google Search: Google [Search] Suggest, Google Instant and Google Universal

According to comScore, "Google Sites led the U.S. explicit core search market in May [2011] with 65.5 percent market share (up 0.1 percentage points), followed by Yahoo! Sites with 15.9 percent and Microsoft Sites with 14.1 percent. Ask Network accounted for 2.9 percent of explicit core searches, followed by AOL, Inc. with 1.5 percent."[154]

Similar to Amazon.com being the "gold standard" of e-commerce sites, Google is the gold standard of the search industry. Given Google's market leadership in search and its direct and indirect role in shaping Search Suggest for the e-commerce industry, it is relevant to look at some additional background and development of Google's [Search] Suggest, Google Instant, and Google Universal.

On May 16, 2007, Marissa Mayer, VP Search Products & User Experience, Google, announced that,

> "We're making that first step available on google.com by launching the new architecture and using it to blend content from Images, Maps, Books, Video, and News into our web results. With universal search, we're attempting to break down the walls that traditionally separated our various search properties and integrate the vast amounts of information available into one simple set of search results."[155]

On May 16, 2007, Google corporate announced the following about Google Universal,

> "The ultimate goal of universal search is to break down the silos of information that exist on the web and provide the very best answer every time a user enters a query. While we still have a long way to go, today's announcements are a big step in that direction."[156]

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[154] "comScore Releases May 2011 U.S. Search Engine Rankings," June 10, 2011, http://www.comscore.com/Press_Events/Press_Releases/2011/6/comScore_Releases_May_2011_U.S._Search_Engine_Rankings .

[155] "Universal search: The best answer is still the best answer," Marissa Mayer, VP Search Products & User Experience, May 16, 2007, http://googleblog.blogspot.com/2007/05/universal-search-best-answer-is-still.html .

[156] Google Press Release, "Google Begins Move to Universal Search; Google Introduces New Search Features and Unveils New Homepage Design" May 16, 2007, http://www.google.com/intl/en/press/pressrel/universalsearch_20070516.html .

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47 of 73

> "Google's vision for universal search is to ultimately search across all its content sources, compare and rank all the information in real time, and deliver a single, integrated set of search results that offers users precisely what they are looking for."[157]

On May 20, 2009, Google announced that more features have been added to Google Suggest "…to help you make your searches even faster…Suggestions on the results page…Personalized suggestions…Navigational suggestions… Sponsored links in suggestions."[158]

On September 8, 2010, Google unveiled Google Instant. "Google Instant is search-before-you-type. Instant takes what you have typed already, predicts the most likely completion and streams results in real-time for those predictions- yielding a smarter and faster search…"[159] "Google Instant is part of an ongoing transition Google has been making toward localization and personalization of search results."[160]

The primary focus of Google Instant [Search] is that it will speed up the search experience for end users and provide better results.[161] In terms of productivity and making the search process quicker, Google announced, "Before Google Instant, the typical searcher took more than 9 seconds to enter a search term, and we saw many examples of searches that took 30-90 seconds to type. Using Google Instant can save 2-5 seconds per search. If everyone uses Google Instant globally, we estimate this will save more than 3.5 billion seconds a day. That's 11 hours saved every second."[162]

On June 17, 2010, Google announced the release of Google Commerce Search 2.2 (see description below) and stated, "Shoppers, meanwhile, can now take advantage of a query auto-completion feature in [Google Commerce Search] version 2.0 that lists suggested search terms in a drop-down menu as soon as a shopper enters the initial letters of a keyword." [163]

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[157] Google Press Release, "Google Begins Move to Universal Search; Google Introduces New Search Features and Unveils New Homepage Design" May 16, 2007, http://www.google.com/intl/en/press/pressrel/universalsearch_20070516.html .

[158] "Faster is better on Google Suggest," Google Blog, May 20, 2009, http://googleblog.blogspot.com/2009/05/faster-is-better-on-google-suggest.html .

[159] "Search: now faster than the speed of type," Google Blog, September 8, 2010, http://googleblog.blogspot.com/2010/09/search-now-faster-than-speed-of-type.html .

[160] "Google Instant Search: The Impact for Ecommerce Site Owners," Michael Stearns, Practical eCommerce, Insight for Online Merchants, September 9, 2010, http://www.practicalecommerce.com/articles/2233-Google-Instant-Search-The-Impact-for-Ecommerce-Site-Owners.

[161] "Google Instant Search: The Impact for Ecommerce Site Owners," Michael Stearns, Practical eCommerce, Insight for Online Merchants, September 9, 2010, http://www.practicalecommerce.com/articles/2233-Google-Instant-Search-The-Impact-for-Ecommerce-Site-Owners.

[162] "About Google Instant," http://www.google.com/instant/ , accessed on June 22, 2011.

[163] "Google steps up its game in site search," Internet Retailer, Paul Demery, June 17, 2010, http://www.internetretailer.com/2010/06/17/google-steps-its-game-site-search .

On April 20, 2011, Google announced that, "We've been looking for ways to provide predictions for even more queries. <u>Today we're improving the predictive powers of autocomplete</u>, helping you search for things even when no one else in the world has."[164] (emphasis added)

Google Commerce Search
Google Commerce Search is a search service that Google licenses for a fee to third party Web retailers.[165] Google Commerce Search includes the search suggest auto-complete functionality, and Google Commerce Search is described as follows:

"Google Commerce Search is a hosted search service for your online store that brings the power and scale of Google's cloud computing platform to online retailers. Drawing on the speed and relevance of Google's search technology, Google Commerce Search increases online sales and usability by allowing customers to quickly and easily find exactly what they're looking for. Robust features include **<u>auto-completions</u>**, synonyms, advanced spelling, targeted promotions, and multiple customization options that make for a streamlined yet powerful online retail experience. Simple deployment and scaling, user-friendly analytic and tracking components, and enterprise-class support mean you can optimize your online product search experience and give customers the information they need to make purchases online."[166] (emphasis added)

"With Google Commerce Search, you can power your online retail experience with fast, trusted Google search technology."[167]

"Google Commerce Search 3.0 is a powerful search solution designed specifically with online and multi-channel retailers in mind.
- Improve your shopping experience with fast, intuitive Google search technology.
- Engage visitors and help them find the right products
- Power browse and navigation modes on your website
- Easily implement merchandising strategies
- Set product boosts and promotions with no custom coding
- Display local inventory availability with your results
- Deploy search solution in days, and scale effortlessly
- Customize, track, and optimize performance"[168]

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[164] "More predictions in autocomplete," Google Blog, April 20, 2011, http://googleblog.blogspot.com/2011/04/more-predictions-in-autocomplete.html .

[165] According to Google Commerce Search, "[t]he pricing model for Google Commerce Search is based on the number of products/items (SKUs) in your catalog and the number of search queries entered on your site each year. Pricing starts at $25,000 per year." Source: http://www.google.com/commercesearch/# , accessed on July 25, 2011.

[166] Google Case Study, Google Commerce Search, "Woodcraft.com increases search revenue 34% with Google Commerce Search". http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/en/us/commercesearch/pdf/woodcraft_supply_cs.pdf , accessed on July 25, 2011.

[167] Google Commerce Search 3.0, http://www.google.com/commercesearch/ , accessed on July 25, 2011.

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49 of 73

"Benefits: Search is a critical part of the shopping experience; in fact, 71% of online shoppers use keyword searches to find products (eTailing Group). Google Commerce Search addresses this need by offering an easy-to-deploy solution with Google speed and relevancy."[169]

With Google Commerce Search, "Increase your website conversions -- and sales: The average conversion rates of retail sites is barely 3% (Forrester). Yet, with effective tactics, retailers can achieve a much higher conversion rate. For instance, the top 10 visitor-to-buyer conversion rates ranged from 16% to 45% (Nielsen Online). Effective search can bridge this gap considerably: customers who use the search box on e-commerce sites convert at nearly three times the rate of general browsers (MarketingSherpa)."[170]

With Google Commerce Search, "Increase customer lifetime value: Forrester projects that 47% of online retailer revenue comes from repeat shoppers. By enhancing shopper experience, Google Commerce Search can improve customer loyalty, and ultimately increase customer lifetime value."[171]

Google Product Search
Google Product Search is another tool which Google leverages to connect shoppers with stores with the aim of converting browsers into buyers. According to Internet Retailer, 374 of the Top 500 e-commerce retailers used Google Product Search in 2010.[172]

"Google Product Search helps shoppers find and buy products across the web. As a seller, you can submit your products to Google Product Search, allowing shoppers to quickly and easily find your site."[173]

Google touts the following benefits of Google Product Search:
- "Increase traffic and sales - Product Search connects your products to the shoppers searching for them, helping you drive traffic and sales to your store. Your products will appear on Google Product Search and may even be displayed on Google.com, depending on your items' relevance."[174]
- "Submit products for free - Inclusion of your products is completely free. There are no charges for uploading your items or the additional traffic you receive."[175]

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[168] Google Commerce Search 3.0, http://www.google.com/commercesearch/ , accessed on July 25, 2011.

[169] Google Commerce Search 3.0, http://www.google.com/commercesearch/ , accessed on July 25, 2011.

[170] Google Commerce Search 3.0, http://www.google.com/commercesearch/ , accessed on July 25, 2011.

[171] Google Commerce Search 3.0, http://www.google.com/commercesearch/ , accessed on July 25, 2011.

[172] Internet Retailer, "Top 500 Guide", 2011 Edition, page 54.

[173] Google Product Search, http://www.google.com/intl/en/products/submit.html , accessed on July 12, 2011.

[174] Google Product Search, http://www.google.com/intl/en/products/submit.html , accessed on July 12, 2011.

[175] Google Product Search, http://www.google.com/intl/en/products/submit.html , accessed on July 12, 2011.

- "Reach qualified shoppers - Reach shoppers precisely when they are searching for items to buy on Google."[176]

Case Studies[177]
The following represent some anecdotal case study information from e-commerce sites regarding their use of Search Suggest Auto-Complete:

- **Treadmill Doctor -** According to Clark Stevenson, President of Treadmill Doctor, an online retailer of repair and replacement parts for home exercise equipment, Treadmill Doctor has improved its conversion rate by 10% since it implemented new site search technology in September 2010. According to Internet Retailer, "An auto-complete feature, with product images, speeds up searching and finding" at Treadmill Doctor.[178]

- **BrickHouse Security -** According to Ryan Urban, Manager of Customer Acquisition and Analytics at BrickHouse Security, a retailer of security and surveillance products, when BrickHouse Security added an automated drop-down menu of textual results that appear when shoppers enter terms into its site search window, conversion rates increased.[179] According to Internet Retailer, "But adding product images to the menu broke open the bank,.."[180] Internet Retailer also reported that according to Mr. Urban, "With the product images in the site search drop-down window, we [BrickHouse Security] get a 100% lift in conversion rate among shoppers who use site search,…"[181] Additionally, Internet Retailer reported "that the conversion rate among site search users increased by 10% when BrickHouse first introduced an earlier version of the automated drop-down menu that only showed text-based product listings. The new version shows an image of the product alongside a text description."[182]

  In Internet Retailer's 2011 "Top 500 Guide," it was reported that, "BrickHouse security… in 2010 boosted conversions with an automated drop-down menu of textual results that appear

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[176] Google Product Search, http://www.google.com/intl/en/products/submit.html , accessed on July 12, 2011.

[177] Certain market research, case studies, companies and metrics which are cited in the Plaintiff's Expert Report are used for anecdotal purposes in terms of general e-commerce matters and/or the use and quantifiable and/or qualifiable benefit(s) of specific technologies/functionalities including with interactive product images, product videos and search suggest auto-complete. Bari Consulting Group did not analyze whether these companies cited have infringed on Eolas's Intellectual Property.

[178] "New site search treatment for Treadmill Doctor boosts conversion 10%," Internet Retailer, Mary Wagner, October 14, 2010, http://www.internetretailer.com/2010/10/14/new-site-search-treadmill-doctor-boosts-conversions.

[179] "Product images in site search window boosts conversions for BrickHouse," Internet Retailer, April 29, 2010, http://www.internetretailer.com/2010/04/29/product-images-site-search-window-boosts-conversions .

[180] "Product images in site search window boosts conversions for BrickHouse," Internet Retailer, April 29, 2010, http://www.internetretailer.com/2010/04/29/product-images-site-search-window-boosts-conversions .

[181] "Product images in site search window boosts conversions for BrickHouse," Internet Retailer, April 29, 2010, http://www.internetretailer.com/2010/04/29/product-images-site-search-window-boosts-conversions .

[182] "Product images in site search window boosts conversions for BrickHouse," Internet Retailer, April 29, 2010, http://www.internetretailer.com/2010/04/29/product-images-site-search-window-boosts-conversions .

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51 of 73

when shoppers enter terms into its site search window. The retailer also added product images to the menu, further boosting conversions. About 8% of buyers use site search, and 25% of that group click on the image-based search results." [183]

- **Williams Sonoma -** According to Patrick Connolly, Chief Marketing Officer of Williams Sonoma, the home furnishings retailer, as reported by Internet Retailer, "Williams-Sonoma will be making several features and functions changes to its e-commerce sites, including adding better site search and rolling out a series of tools and specialized templates that will enhance product details and navigation on its merchandising pages."[184]

- **Amazon.com -** On August 10, 2006, Amazon.com, the online mass merchandiser, announced a new feature that was called "Search Suggestions". Search Suggestions are "user-submitted recommendations for connecting a product to specific keywords, as well as an explanation of why the connection is relevant." This new feature enables various end users (i.e., customers, sellers, authors, and other members of the Amazon.com community) with a more relevant way to find what they are searching for. "Once a Search Suggestion is approved, the product along with its relevancy explanation appears in search results the next time a customer searches using those keywords. Anyone can submit a Search Suggestion directly from the detail page for a product and there is no charge."[185] According to Matt Round, Director of Software Development, Amazon.com, "Amazon.com is all about helping customers find whatever they are looking to buy online."[186]

  In 2011, Amazon.com uses the Search Suggest Auto-Complete functionality. It is unknown when Amazon.com first introduced Search Suggest Auto-Complete. That said, Amazon.com's use of its end users' "search suggestions" could be argued to be a likely predecessor to Search Suggest Auto-Complete whereby keywords submitted by end users combined with sophisticated algorithms could likely power the results that end users receive with Search Suggest Auto-Complete on Amazon.com today.

- **Woodcraft.com** (online retailer selling woodworking tools and supplies) – According to Nancy Miller, Vice President of Internet Sales and Development, Woodcraft Supply, "Site visitors using Google's search [powered by Google Commerce Search] convert to paying customers at a 27.7% higher rate, and contribute 34% in additional revenue." Woodcraft.com also reported the following statistics on using Google Commerce Search: "Increased search

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[183] Internet Retailer, "Top 500 Guide", 2011 Edition, page 374.

[184] Internet Retailer, "Top 500 Guide", 2011 Edition, page 133. Note that while Internet Retailer's quote about Williams Sonoma "adding better site search" did not specifically reference Search Suggest, Williams Sonoma does in fact use Search Suggest on its Web site as of June 24, 2011.

[185] Amazon.com News Release, "New 'Search Suggestions' Feature Enables Amazon.com Community to Help Customers Find What They're Looking For," August 10, 2006, http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=894684&highlight=search .

[186] Amazon.com News Release, "New 'Search Suggestions' Feature Enables Amazon.com Community to Help Customers Find What They're Looking For," August 10, 2006, http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=894684&highlight=search .

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52 of 73

revenues 34%" and "Increased online conversions 27.7%."[187]

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[187] Google Case Study, Google Commerce Search, "Woodcraft.com increases search revenue 34% with Google Commerce Search".
http://static.googleusercontent.com/external_content/untrusted_dlcp/www.google.com/en/us/commercesearch/pdf/woodcraft_supply_cs.pdf , accessed on July 25, 2011.

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53 of 73

4. Internet Retailer's Top 100 E-Commerce Sites Using Interactive Functionalities

Bari Consulting Group analyzed "Internet Retailer's" Top 100 e-commerce Web sites as ranked by 2010 revenues (out of Internet Retailer's Top 500 Web retailers), and thus are considered market leaders in the industry, to determine the number of Web sites which use product videos, product images (pan, zoom) and search suggest (auto-complete).

Figure F – Interactive Functionalities Offered by Top E-Retail Sites[188]
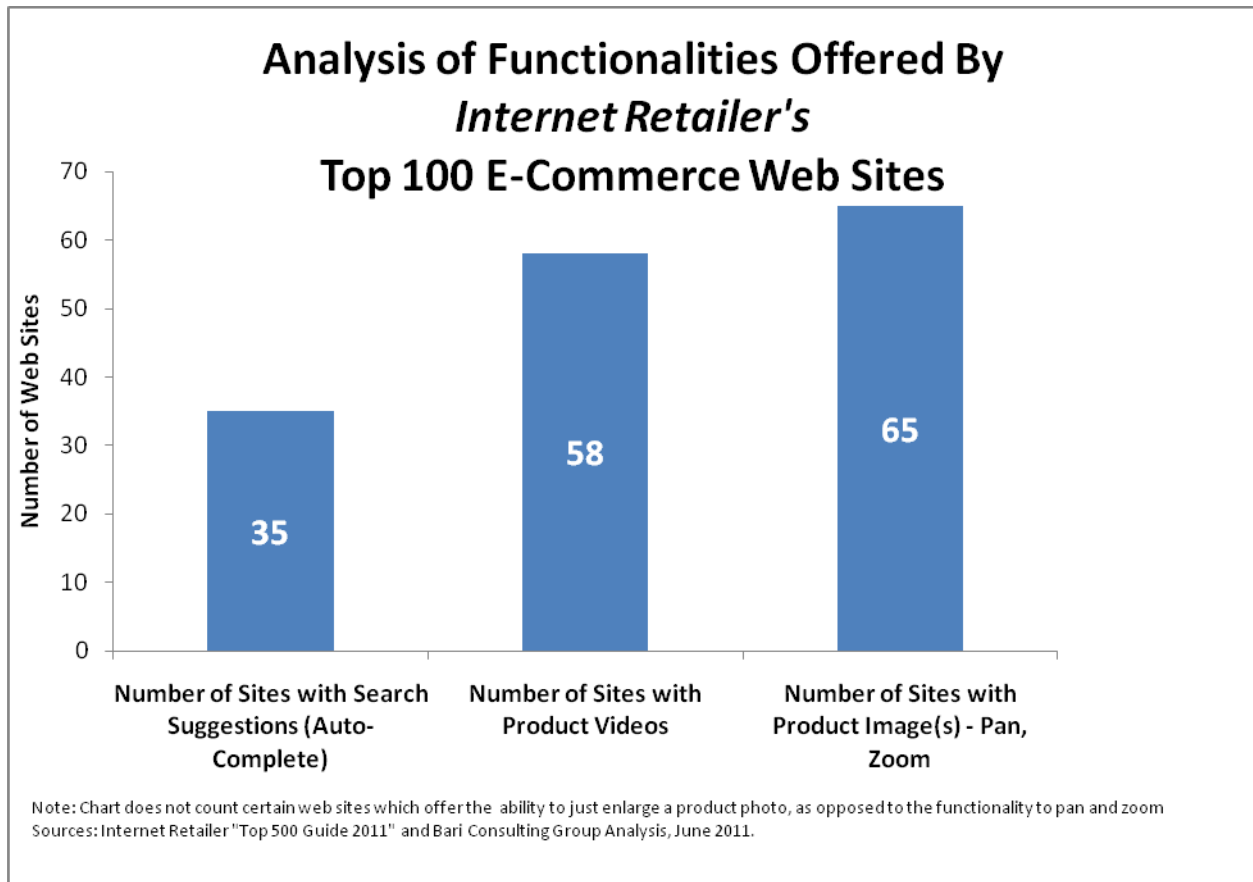
I believe that more and more e-commerce retailers are utlizing the functionalities such as interactive product images, product videos and Search Suggest for Web sites. Going forward, it
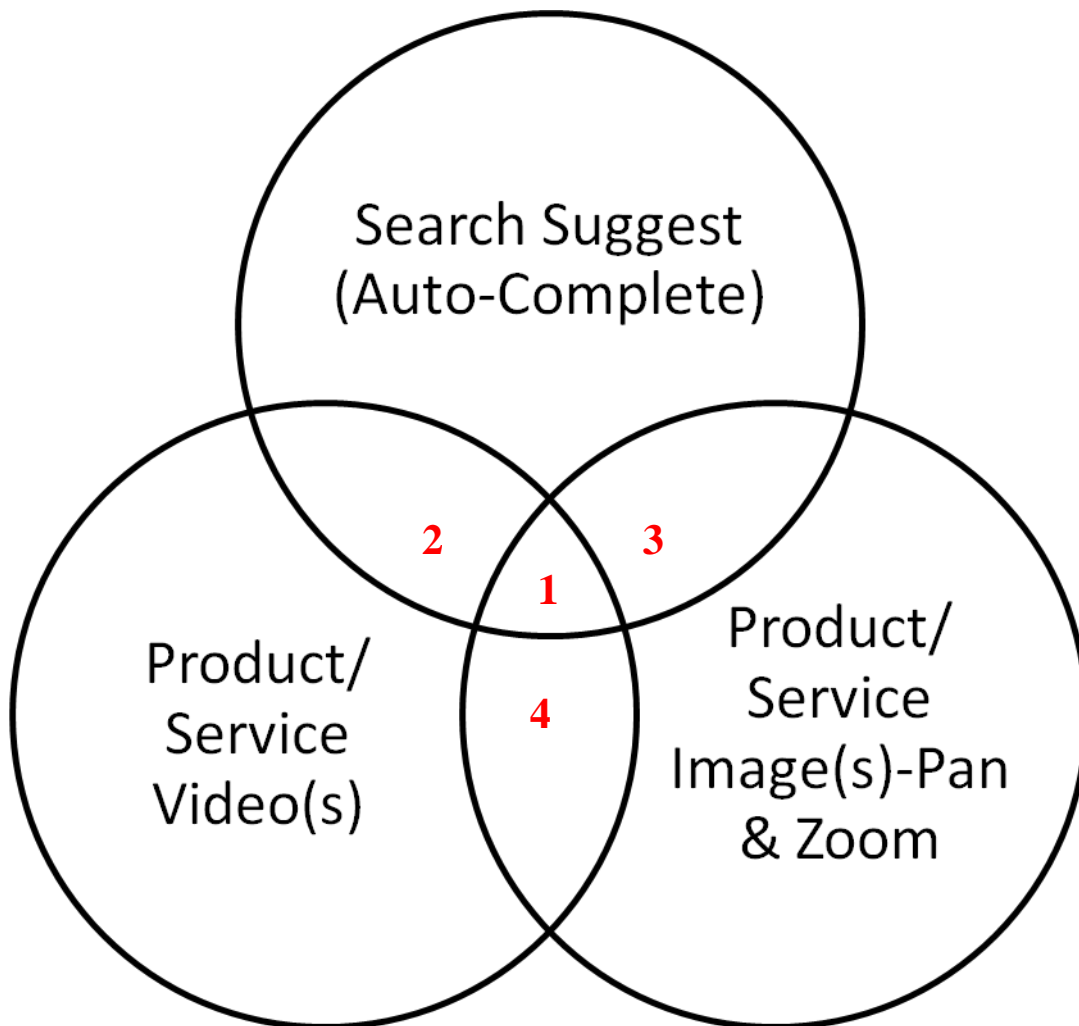
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[188] Web site sales and rankings data were from Internet Retailer "Top 500 Guide 2011". All other data was from Bari Consulting Group's analysis compiled June 20-23, 2011 and July 21, 2011. This analysis details various uses of the above described functionalities, as used with various products and areas within a retailer's Web site. The research for this analysis was non-exhaustive and intended solely for illustrative purposes. Therefore, the absence of certain retailers from this list does not necessarily mean that the Web site does not offer the functionality or that the Web site has not offered this functionality since every product and page was not fully searched on the retailers' Web sites. In addition, the data for Web sites offering "Product Previews (pan, zoom)" did not include certain Web sites which offer the ability to just enlarge a product photo, as opposed to the functionality panning and zooming.

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54 of 73

is my opinion that more and more of the Top 500 Web retailers and smaller Web retailers alike will adopt these core functionalities as consumers demand these functionalities and expect them.

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55 of 73

5. Value Proposition Derived From a Combination of Interactive Functionalities

In addition to the value proposition that each functionality – interactive product images, product videos and Search Suggest – provides, I believe that there are certain value propositions of Web site effectiveness, efficiency and synergies that are attained when e-commerce sites combine certain functionalities. I have chosen to analyze the combination of these functionalities using a Venn Diagram. This graphical illustration below and analysis related thereto are subjective representations that depict the various benefits derived from a combination of technical functionalities. Absent having definitive statistically relevant research data on the economic impact attained by Web sites in general or specific Web sites through using each functionality such as interactive product images, product videos and Search Suggest, it is useful to analyze these functionalities from a subjective standpoint to show how the combination of these functionalities can generate synergistic value. While the shapes and intersections below appear to be similar in size, each functionality and/or combination thereof is not necessarily equal to one another in terms of providing end user utility and/or generating value.

Figure G – Value Proposition of Site Effectiveness and Efficiency Derived From a Combination of Functionalities

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56 of 73

Key to intersection of various functionalities in the Venn Diagram (Figure G)

I believe that there are various qualitative and quantitative benefits that e-commerce retailers derive from the combination of interactive functionalities on their Web sites to sell products and services including the opportunity to (in no order of importance):

Number 1
- Increase total sales revenue
- Enhance likelihood of purchase
- Increase monetization of e-commerce site(s)
- Boost conversion rates
- Attain higher customer satisfaction
- Reduce friction in e-commerce
- Reduce likelihood of product returns
- Increase site stickiness
- Encourage return/repeat customers
- Decrease customer service costs
- Create better/deeper relationships with brands providing product(s)/service(s)
- Increase lifetime value of the customer
- Provide holistic approach to help pinpoint search to meet end user's needs

Number 2
- Reduce effort required by customer to find what he/she is looking for
- Make shopping experience easier
- Encourage return/repeat customers
- Improve search engine optimization results

Number 3
- Facilitate quicker browsing
- Offer pinpointed product depth and breadth to customers

Number 4
- Overcome touch and feel barrier with brick and mortar retailers
- Overcome salesperson barrier with brick and mortar retailers
- Examine product in detail
- Understand product better
- Develop more vivid image
- Decrease likelihood of returned product
- Decrease likelihood of abandoned shopping carts

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57 of 73

6. Internet Advertising Sales

Overview
In the nascent days of the Internet (sometimes referred to in the 1990s as the "information superhighway"), when companies were looking for ways in which to monetize this new medium, the selling of advertising space was viewed by many industry pundits and analysts as one of the integral business models from which companies could derive a return on investment from the start-up and operational costs associated with developing their Web sites (including e-commerce sites). In this advertising sales business model, Web sites monetize their audience/customers (sometimes referred to as eyeballs) and sell advertising space (i.e., banner ads, sponsorships) to marketers seeking to reach the Web site's audience. This general model is not much different in comparison to the advertising sales model used in other forms of traditional media including broadcast, cable, print, outdoor, etc. Today, Internet advertising sales has developed considerably in many facets since the mid-1990s, and it is a $26 billion industry on an annualized basis.[189]

Value Proposition of Online Advertising
I believe that there are various qualitative and quantitative benefits that online advertising provides for the sale of products and services (hereinafter products generally include services for this analysis) including the opportunity to (in no order of importance):

- Allow advertisers to target offers on specific products or services to qualified consumers who are the most likely to buy.

- Target consumers where they are spending their time – online.

- Leverage broadband capabilities with product videos to sell more goods and services.

- Enable enhanced tracking (i.e., how many people see it, how many people clicked on it, how many sales on the advertiser's Web site are generated through the ad).

- Provide greater range to reach audience(s) across boundaries (i.e. geographic, demographic, socioeconomic) that might be too expensive with traditional media.

- Monetize eyeballs on e-commerce sites by selling advertising space in addition to selling goods and services.

- Provide lower entry level costs for advertising in comparison to traditional media.

General Data Points Regarding the Online Advertising Sales
- According to David Silverman, Partner, PricewaterhouseCoopers ("PwC"), "With a strong rebound from 2009, the $26 billion spent on Internet advertising points to a continued focus on digital media ad spend, with dollars catching up to the eyeballs. More time spent online,

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[189] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 4, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

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58 of 73

especially with increases in digital video and social media, has certainly helped to fuel the continued growth."[190]

- According to Randall Rothenberg, President and CEO, Interactive Advertising Bureau ("IAB"), "As the latest IAB Internet Advertising Revenue Report concludes, online advertising is growing. These results show that many advertisers and marketers take digital media into consideration and more are using online advertising as part of their campaigns. Consumers are shifting more of their time to digital media, watching television shows and movies online, and advertisers recognize the opportunities to reach their targets through this medium."[191]

- "Retail advertisers continue to represent the largest category of Internet ad spending, accounting for 21% of 2010, or $5.5 billion, up from 20% ($4.5 billion) reported in 2009."[192]

- According to the Interactive Advertising Bureau,[193] "2010 annual revenues increased on a year-over-year percentage and dollar basis, after revenues dropped in 2009, impacted primarily by the economic recession."[194]

- According to J.P. Morgan, "Graphical [Internet] advertising, also known as display advertising, includes all forms of advertising excluding search. Thus a range of advertisements from traditional banner ads to video and lead generation are included in this category."[195]

- "Rich media – <u>advertisements with which users can interact</u> (as opposed to solely animation) in a web page format. These advertisements can be used either singularly or in combination with various technologies, including but not limited to sound, <u>video</u>, or Flash, and with programming languages such as Java, Javascript, and DHTML. These Guidelines cover standard Web applications including e-mail, static (e.g. html) and dynamic (e.g. asp) Web

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[190] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 4, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[191] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 4, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[192] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 16, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[193] "The Interactive Advertising Bureau (IAB) is comprised of more than 500 leading media and technology companies who are responsible for selling 86% of online advertising in the United States." Source: http://www.iab.net/about_the_iab , accessed on July 19, 2011.

[194] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[195] J.P. Morgan, "Nothing But Net, 2011 Internet Investment Guide", January 3, 2011, page 28.

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59 of 73

pages, and may appear in ad formats such as banners and buttons as well as transitionals and various over-the-page units such as floating ads, page take-overs, and tear-backs."[196] (emphasis added)

- "Search Continues to Lead, followed by Display Banners and Classifieds - Search revenue accounted for 46 percent of 2010 [Internet advertising] revenues, down slightly from the 47 percent reported in 2009. Display advertising showed solid growth, accounting for 38 percent of 2010 revenue up from 35 percent in 2009. Digital video, which is a component of display advertising, increased 40 percent from 2009 to 2010."[197] (emphasis added)

It is instructive to review how Internet advertising revenues have increased in terms of historical annual revenue trends.

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[196] Interactive Advertising Bureau, Glossary of Interactive Advertising Terms v. 2.0,

[197] IAB Internet Advertising Revenue Report, 2010 Full Year Results, April 2011,

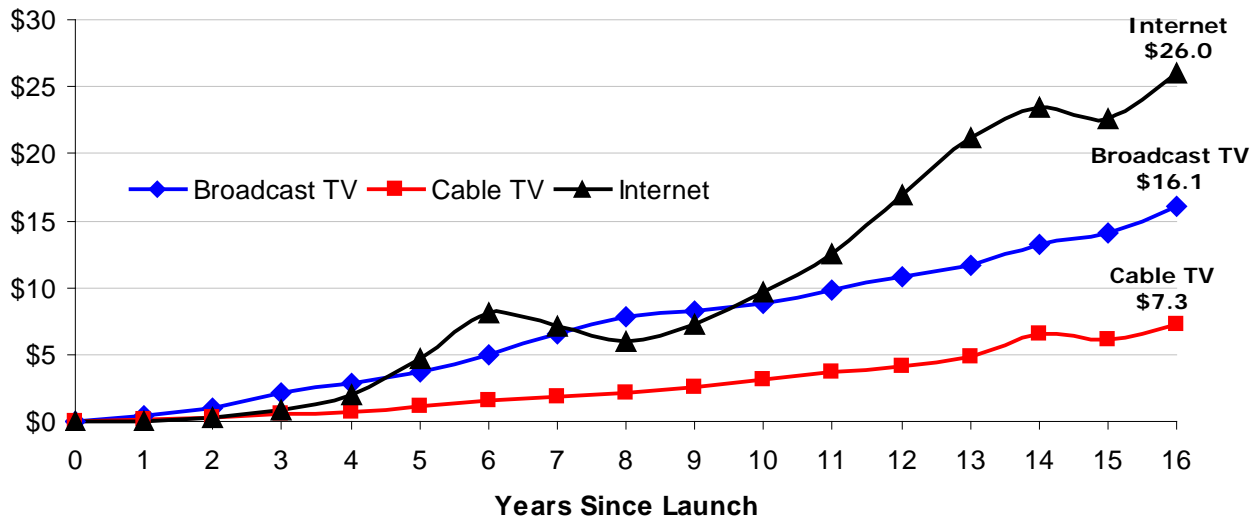**Figure I – Internet Advertising Annual Revenue, In Billions (U.S. $)**[198]
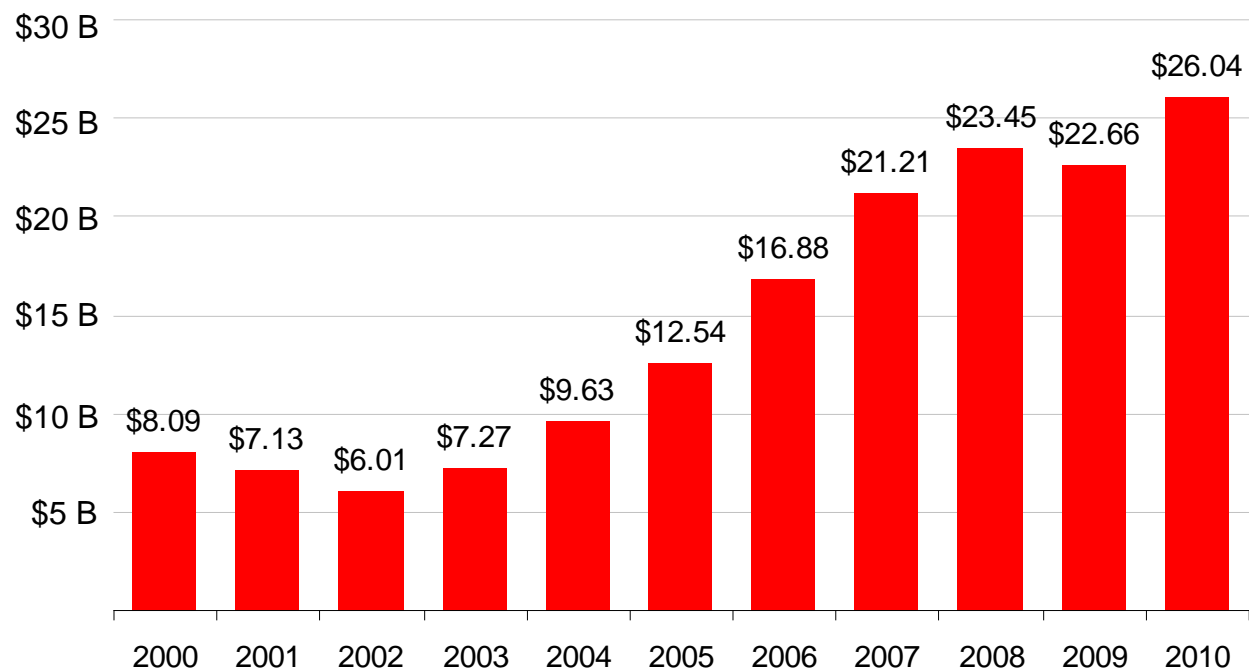
While Internet advertising has had some ups and downs over the years, Internet advertising over the long-run has grown consistently, and moreover, it has far outpaced initial growth of other rival media when analyzing data across these platforms: Internet vs. Broadcast TV & Cable TV. According to the 2010 Interactive Advertising Bureau (IAB) Internet Advertising Revenue Report, Internet advertising revenue outperformed other advertising platforms during their respective initial 16 years (presented in current inflation-adjusted dollars):[199]

- Internet Advertising (1995-2010)
- Broadcast Television (1949-1964)
- Cable Television (1980-1995)

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[198] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[199] Source, Years 1-15: IAB (Interactive Advertising Bureau) Internet Ad Revenue Report; Pricewaterhouse Coopers LLP as published in IAB Internet Advertising Revenue Report, An Industry Survey Conducted by PricewaterhouseCoopers and Sponsored by the Interactive Advertising Bureau (IAB), 2009 Full Year Results, April 2010. http://www.iab.net/media/file/IAB-Ad-Revenue-Full-Year-2009.pdf ; Source, Year 16: PwC, Universal McCann as published in IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011. http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

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61 of 73

Figure J – Annual Advertising Revenue By Media – First 16 Years (In Billions, U.S. $)

Another interesting statistic is that in 2010, Internet advertising revenues surpassed newspaper advertising revenues. According to the IAB, the "Internet has continued to grow in significance when compared to other ad-supported media. In 2010, Internet Advertising surpassed advertising revenues in Newspapers."[200]

Figure K - U.S. Advertising Market By Media Revenue - 2010 (In Billions, U.S. $)[201]

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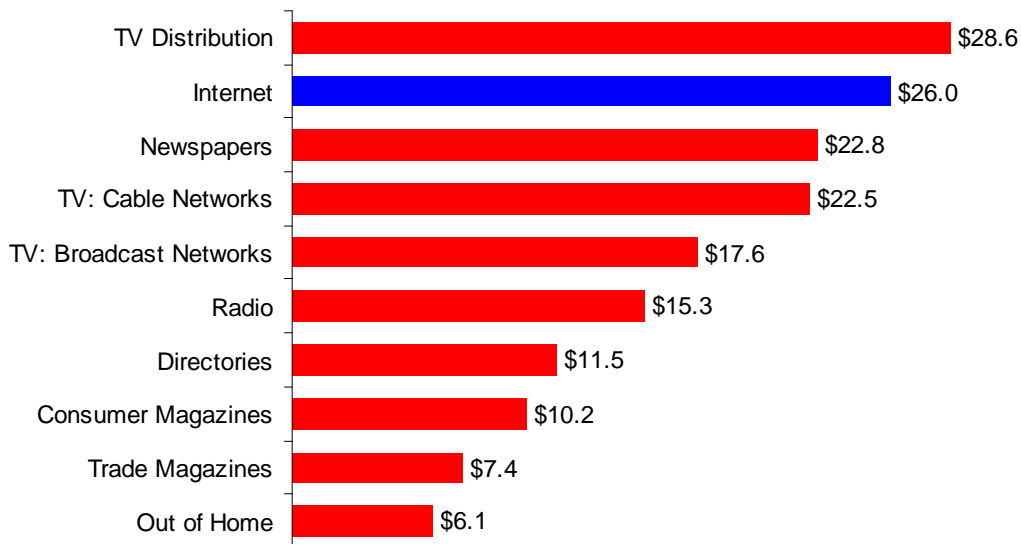
[200] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 20, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[201] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 20, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

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62 of 73

Notes: 1) "The total U.S. advertising market includes other segments not charted here." 2) "'TV Distribution' includes national and local TV station ads as well as multichannel system ads."[202]

Case Study

- Amazon.com - "Eric Bradlow, professor of marketing and statistics at Wharton, notes that selling products is not Amazon's only game. **The company can also sell advertising space on its site. To make this pay, Amazon must be able to provide advertisers with large numbers of potential customers.** At the same time the company must minimize its own cost of obtaining these so-called eyeballs. But the key to this is, again, creating customer loyalty – getting people to come back again and again on their own. So far, Bradlow says, it's not clear that any website can achieve such customer "stickiness" without continually spending enormous sums on marketing and promotion."[203] (emphasis added)

  In 2011, Amazon Services which is an Amazon.com company, sells advertising space on Amazon.com. Amazon Services promotes that Amazon Product Ads "drive traffic to your website", "reach tens of millions of shoppers", and offer "highly targeted placements".[204]

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[202] Source: IAB (Interactive Advertising Bureau) Internet Advertising Revenue Report, An Industry Survey Conducted by PwC and Sponsored by the Interactive Advertising Bureau (IAB), 2010 Full Year Results, April 2011, page 20, http://www.iab.net/media/file/IAB_Full_year_2010_0413_Final.pdf .

[203] "Can Amazon Survive," Knowledge @Wharton, The Wharton School, University of Pennsylvania, August 30, 2000, http://knowledge.wharton.upenn.edu/article.cfm?articleid=238 .

[204] Amazon Services, http://www.amazonservices.com/content/product-ads-on-amazon.htm?ld=AZPADSFooter#how-it-works , accessed on July 21, 2011.

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63 of 73

Biography of Jonathan H. Bari

Jonathan (Jon) H. Bari is President of Bari Enterprises, Inc. d/b/a Bari Consulting Group which provides expert witness and consulting services to firms on: identity theft, digital identity, online privacy and security matters, the Internet as well as strategic planning, marketing and business development.

Jon has also served as the Founder and President of The Constitutional Walking Tour of Philadelphia since 2003. Additionally, Jon serves as an Adjunct Professor of Business at Temple University's Fox School of Business where he has taught strategic planning on a part-time basis since Spring 2004.

Jon's thought leadership and expertise in identity theft, identity management, digital identity, online privacy, online security, the Internet and e-commerce have been honed through his work on various matters including:

- Invented United States Patent entitled, "Method and system for secure registration, storage, management and linkage of personal authentication credentials data over a network." United States Patent Number 7,155,739, filed on January 14, 2000 and issued on December 26, 2006 (principal inventor of U.S. Patent 7,155,739, and corresponding international patent issued in Israel, Patent #150728). Sold IP Portfolio to VeriSign.[205] Provided consulting services to VeriSign regarding its IP Portfolio acquisition and VeriSign's online identification and authentication cloud initiative.
- Served as one of the contributing authors to the first Specifications produced by the Liberty Alliance, the global identity consortium (which initially involved 42 companies including Mr. Bari's firm, Catavault, as well as American Express, AOL and Sun Microsystems) working to build a more trusted Internet for consumers, governments and businesses worldwide.
- Authored "Preventing Risk From Becoming Reality," June 2010.
- Invited to testify in front of the United States Senate Judiciary Committee on online identification and authentication as well as Internet competition in September 2001.
- Served as Founder, Chairman & CEO of PINvault.com Inc. d/b/a Catavault, a single sign-on security software firm that eliminated the need for multiple authentication credentials such as user names, PINs and passwords (Time Warner Cable was its largest client). Catavault was developed as an online "Fort Knox" that was never unlawfully and fully penetrated by any hackers, and Catavault protected its users' personal data with Secure Sockets Layer (SSL) technology which encrypted all communications between a user's Web browser and Catavault's servers. Errors and Omissions insurance was underwritten through a special policy with Lloyd's of London syndicates that utilized IBM Internet Emergency Response

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[205] Subsequent to VeriSign's acquisition of the IP Portfolio invented by Jonathan Bari, on August 9, 2010, Symantec Corp. (Nasdaq: SYMC) completed its acquisition of VeriSign's identity and authentication business ("VeriSign Authentication Services"). VeriSign Authentication Services provides solutions that allow companies and consumers to engage in communications and commerce online with confidence. With more than one million web servers using VeriSign's SSL certificates, an infrastructure that processes more than two billion certificate checks daily, and a logo that is seen up to 650 million times a day, the VeriSign seal is the most recognized symbol of trust on the Internet. Sources: http://www.verisign.com/corporate/index.html?tid=footer (accessed on June 1, 2011) and http://www.symantec.com/about/news/release/article.jsp?prid=20100809_01 (accessed on June 1, 2011).

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64 of 73

Service to audit the security of the Catavault network. Privacy certification was audited and certified by both BBBOnLine and TRUSTe. Catavault also employed a multiple-tiered architecture with redundant firewalls that prevented unlawful penetration by outside parties. Recruited and chaired a world-class Board of Directors including the: Former Chief Marketing Officer of The Coca-Cola Company; Retired President and CEO of Philip Morris USA; EVP & CFO of Cott Corp.; and Former Chairman and CEO of Razorfish.

- Met with officials of the U.S. Government's E-Authentication Gateway Team on several occasions about their common authentication service and single sign-on capability initiatives across all Federal e-Government services; responded to the United States General Services Administration's ("GSA") E-Authentication Initiative, Request for Information dated July 12, 2002, GSA RFI Number T02-ALD-001.

- Served as a member of the Computer & Communications Industry Association (CCIA), the leading industry advocate in promoting open, barrier-free competition in the offering of computer and communications products and services worldwide. Provided expert analysis on online identification and authentication and digital identity, specifically pertaining to industry and corporate strategies, software applications as well as privacy and security implications.

- Authored various work product documents and White Papers on Digital Identity including "Open Sesame White Paper - Online Identification & Authentication Federations" and "Catavault Technical White Paper".

- Authored one of the 47 Tunney Act comments regarding the United States v. Microsoft Antitrust Settlement; Catavault's Comments were deemed as "major" by the United States Department of Justice. In total, there were 34,000 comments filed, but less than 0.1% were deemed as major.

- Authored Catavault's Comments to the Federal Trade Commission "In the Matter of Microsoft Corporation on the Agreement Containing the Consent Order."

- Retained by Yodlee, one of the world's leading providers of trusted data aggregation solutions specializing in the financial services industry to develop new business opportunities with the U.S. Government.

- Served as Director, Business Development for Time Warner's Road Runner High Speed Online and served as an Analyst for Comcast Online Communications during the nascent days of the Internet revolution in the mid-late 1990s with regard to developing and marketing connectivity augmented by Content, Commerce, Communications and Community. Helped develop Road Runner v.2.0 in terms of user interface, content acquisition and licensing from best of breed content providers, advertising sales business model, e-commence deals with third party companies seeking to leverage broadband capabilities, etc.

- Received media coverage for his work and/or provided commentary in various media properties including: ABC Radio Networks, BusinessWeek, CNN Headline News, FOX News, Los Angeles Times, The New York Times, The Philadelphia Inquirer, Philadelphia Business Journal, 6ABC (Philadelphia), KYW Newsradio (Philadelphia), The San Jose Mercury News, The Seattle Times, USA Today, The Wall Street Journal, etc.

- Provided business consulting services to Five Below, a start-up retail concept that grew from one initial location to over 100 stores in sixteen states; Five Below offers thousands of trend-right products for teens, as well as pre-teens and other value-minded, trend-conscious consumers, all of which are priced from $1.00 to $5.00. Developed Web site, grand opening marketing model including grand opening merchandising marketing materials that could be used to facilitate rapid growth of Five Below store locations across many states.

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65 of 73

- Provided business consulting services to DoctorQuality, an online healthcare company, after its servers and its clients' personal data were breached.
- Provides business consulting services to Universal Atlantic Systems, Inc. d/b/a UAS, a national provider of integrated security services which serves a diverse client base including food service providers, convenience stores and retailers.
- Provided consulting services to: Bain & Company (tourism and hospitality non-profit – business development), Capsicum Group (legal services - business development), Comcast High Speed Internet - Comcast@Home (broadband Internet Service Provider - strategic planning, business development, content licensing, advertising sales), DoctorQuality (healthcare software - privacy and security, marketing), Eastern National (tourism and hospitality non-profit – business development), Five Below (retail – business development, marketing), The Franklin Institute Science Museum (museum – IT, business development, marketing – with LinuxForce), Independence Blue Cross (healthcare insurance – digital identity, single sign-on across applications – with LinuxForce), LinuxForce (IT services – marketing and business development), MostlyWeb (Web developer and graphic design – business development, marketing) , Solution Media (Web site and application developer - strategic planning, marketing, business development), UAS (security services – strategic planning, business development, marketing), and Yodlee (software application provider – marketing and business development).

Previously, Jon worked with various high profile companies in the following roles:
- Chairman & CEO - Catavault, a single sign-on security software firm that eliminated the need for multiple authentication credentials such as user names, PINs and passwords (Time Warner Cable was its largest client) – see above for additional information.
- Vice President, Business Development - MoreCom, a cable TV software concern in the IPTV arena (acquired by Liberate Technologies for approximately $561 million).
- Director, Business Development - Time Warner's Road Runner High Speed Online (Road Runner was spun off as a separate entity after receiving hundreds of millions of dollars in equity stake investments from the likes of Compaq).
- Analyst and Business Development Consultant - Comcast Online Communications launch team (started when Comcast had 48 trial homes in Montgomery County, Pennsylvania, which evolved into Comcast High-Speed Internet and the nation's largest broadband provider with over 11 million subscribers).
- Account Executive - EZ Communications/WIOQ-FM (Q102) in Philadelphia (clients included Anheuser-Busch, Coca-Cola and Sears).

In 2005, Jon received the Philadelphia Business Journal's "40 Under 40" award which recognized Jon's labor of love with The Constitutional Walking Tour and honored "proven performers in their respective industries and communities."

Jon has served as Peer Chair to Anti-Defamation League's Glass Leadership Institute in Philadelphia. Jon also serves on the Advisory Board of Solution Media. Jon has also served as a Fellow of the Irwin L. Gross eBusiness Institute at Temple's Fox School of Business. Additionally, Jon previously served on the National Advisory Board of DoctorQuality; it was subsequently acquired by Quantros in 2003.

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66 of 73

Sample Speaking Engagements
- Columbia Business School
- Temple University's Fox School of Business
- University of Pennsylvania's Wharton School - Leadership in the Business World
- eTV World
- Friends of Independence National Historical Park
- Anti-Defamation League's Board of Directors, Philadelphia
- The Constitutional Walking Tour of Philadelphia's "Modern Day Constitutional Conventions"

Education
- BA, University of Pennsylvania
- MBA, Columbia Business School

Personal
- Jon works and lives in Center City Philadelphia along with his wife, Leslie, and their daughter, Lexi.

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67 of 73

Exhibit 1 – Selected Terms & Metrics

In addition to measuring top line revenue growth with regard to analyzing the success or value of various Web site features or functionalities (i.e., interactive product images, product videos and search suggest auto-complete), there are other useful metrics and terminology that may come into play. Given the wide array of Defendants in this matter and the wide array of industry terminology, this section should be viewed as illustrative and non-exhaustive.

Abandonment Rate (also referred to as abandonment or shopping cart abandonment rate)
When a user leaves a shopping cart with something in it prior to completing the transaction.[206]

Bounce Rate
According to Google Analytics, bounce rate is "The percentage of single-page visits (i.e. visits in which the person left your site from the entrance page)."[207]

Bounce rate "measures the percentage of people who come to your website and leave 'instantly'".[208] According to Avinash Kaushik, Analytics Evangelist for Google, bounce rate is the "sexiest metric ever" and that "[i]f you could only choose one metric to look at, Bounce Rate might be your best choice."[209]

According to Inc. Magazine, "[b]ounce rate, simply put, is the measure of how many visitors come to a page on your site and leave without viewing any other pages… As a rule of thumb, a 50 percent bounce rate is average. If you surpass 60 percent, you should be concerned. If you're in excess of 80 percent, you've got a major problem."[210]

Conversion Rate (also referred to as conversions and site conversion rate)
Conversion Rate = Buying Sessions / Total Sessions
Stated another way, the conversion rate is the total number of closed transactions divided by the total number of user sessions in a given time period.[211]

According to Google Analytics, "A conversion is said to occur when a visitor reaches a *goal* - a page that is specified in the Goal Settings section of each profile. This goal page could be a

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[206] Interactive Advertising Bureau, Glossary,
http://www.iab.net/media/file/GlossaryofInteractivAdvertisingTerms.pdf .

[207] Google Analytics, Metrics Definitions, http://www.google.com/support/analytics/bin/answer.py?answer=99118, accessed on July 22, 2011.

[208] "Bounce Rate: Sexiest Web Metric Ever?" http://www.mpdailyfix.com/bounce-rate-sexiest-web-metric-ever/ , accessed on July 21, 2011.

[209] http://www.youtube.com/watch?v=ppgfjo6IIf4&feature=relmfu , accessed on July 22, 2011.

[210] Inc., "How to Reduce Your Website's Bounce Rate",
website-bounce-rate.htmlhttp://www.inc.com/guides/2011/01/how-to-reduce-your-website-bounce-rate.html .

[211] Fiona Swerdlow, Head of Research, Shop.org, voicemail on 7/11/11.

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68 of 73

purchase confirmation page, a 'thank you for registering' page, a download page or an online presentation. Optionally, goals may be combined with a defined Funnel - a series of pages through which the user must navigate in order to reach a goal." [212]

Customer Usability

The International Organization for Standardization defines usability as "The extent to which a product can be used by specified users to achieve specified goals with effectiveness, efficiency, and satisfaction in a specified context of use."[213] Usability is a qualitative attribute that assesses how easy user interfaces are to use.

Customer usability of a Web site can be viewed as being attained where function meets form and substance meets style. Designing a nice looking Web site is only part of the solution needed to attain customer usability, since the Web site must meet functional needs and specifications as well. In terms of addressing this concept of customer usability of a Web site, some questions come to mind: What will the Web site do? Who will use it and how? How does the Web site work? What will it look like? In other words, what will the information architecture look like, how will the customer interact with the site, and what will the user interface design look like?

Internal Search/Internal Site Search

According to Google Analytics, internal site search helps Web site operators "Understand visitor intent, find out what your customers are really looking for and speed up time to conversion."[214]

According to Google Conversion University,

> "Providing a search box on your site and tracking how people use it can provide you important insights into visitor intent. A search box is a goldmine of information for you the site owner, because each time visitors search your site, they tell you in their own words what they are looking for. This article shows you five key ways you can use the data in your Google Analytics Site Search reports to understand visitor intent.
> - How frequently do visitors use my search box and what are they looking for?
> - Where do searches begin and end?
> - Are visitors satisfied with what they find?
> - How do different groups of visitors search my site?
> - What business outcomes result from visitors searching my site?"[215]

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[212] Google Analytics, Glossary, http://www.google.com/support/analytics/bin/answer.py?hl=en-GB&answer=32988, accessed on July 22, 2011.

[213] http://en.wikipedia.org/wiki/Usability , accessed on July 22, 2011.

[214] Google Analytics, http://www.google.com/analytics/features.html , accessed on July 22, 2011.

[215] Google.com, Conversion University, "Five Questions To Ask of Your Site Search Data", http://www.google.com/support/conversionuniversity/bin/answer.py?answer=82020 , accessed on July 22, 2011.

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69 of 73

According to ClickTracks, "If your web site offers an internal search feature, you might be surprised that it can reveal a wealth of information about your visitor's intents and expectations. Knowing what visitors are searching on is valuable insight toward web content, site design and merchandising decisions... Internal search relates to the keywords that people use while exploring your site."[216]

Page Display
According to the Interactive Advertising Bureau, page display is defined as, "when a page is successfully displayed on the user's computer screen."[217]

Page Views
According to Google Analytics, "A page view is an instance of a page being loaded by a browser."[218]

Pay-Per-Click
"[A]n advertising pricing model in which advertisers pay agencies and/or media companies based on how many users clicked on an online ad or e-mail message."[219]

ROI
ROI stands for Return on Investment. According to Google Analytics, ROI is defined as, "(Revenue - Cost) / Cost, expressed as a percentage. For example, if an investment of $150 was made for advertising and led to $500 in sales, the ROI would be:
($500 - $150) / $150 = 2.33 or 233%"[220]

Time on Page
According to Google Analytics, time on page is defined as, "[t]his field indicates how long a visitor spent on a particular page or set of pages. It is calculated by subtracting the initial view time for a particular page from the initial view time for a subsequent page. Thus, this metric does not apply to exit pages for your site."[221]

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[216] ClickTracks, Knowledge Base, Internal Search, http://support.clicktracks.com/clicktracks/article.php?id=106 , accessed on July 22, 2011.

[217] http://www.iab.net/media/file/GlossaryofInteractivAdvertisingTerms.pdf , accessed on July 22, 2011.

[218] Google Analytics, Glossary, http://www.google.com/support/analytics/bin/answer.py?hl=en-GB&answer=33050 , accessed on July 22, 2011.

[219] Interactive Advertising Bureau, Glossary,
http://www.iab.net/media/file/GlossaryofInteractivAdvertisingTerms.pdf .

[220] Google Analytics, Glossary, http://www.google.com/support/analytics/bin/answer.py?hl=en-GB&answer=33060 , accessed on July 22, 2011.

[221] Google Analytics, Metrics Definitions, http://www.google.com/support/analytics/bin/answer.py?answer=99118 , accessed on July 22, 2011.

Time on Site

According to Google Analytics, time on site is defined as "[t]he time a visitor spends on your site."[222]

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[222] Google Analytics, Metrics Definitions, http://www.google.com/support/analytics/bin/answer.py?answer=99118 , accessed on July 22, 2011.

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71 of 73

Exhibit 2
July 25, 2011

Timeline of Defendants' Web Site Domain Names – Creation/Registration Date
Eolas Technologies Incorporated vs. Adobe Systems, Inc., et al.

U.S. Patent: #5,838,906
Filing Date: 10/17/1994

ebaY
[ebay.com]
8/3/1995

STAPLES
[staples.com]
3/5/1995

citi
[citibank.com]
2/2/1991

jcpenney
[jcpenney.com]
10/13/1993

amazon.com
[amazon.com]
11/1/1994

Google
[google.com]
9/15/1997

[godaddy.com]
3/2/1999

Pre-1991:

Post-2002:

1991   1992   1993   1994   1995   1996   1997   1998   1999

[adobe.com]
11/17/1986

CDW
[cdw.com]
10/18/1994

YAHOO!
[yahoo.com]
1/18/1995

You Tube
[youtube.com]
2/14/2005
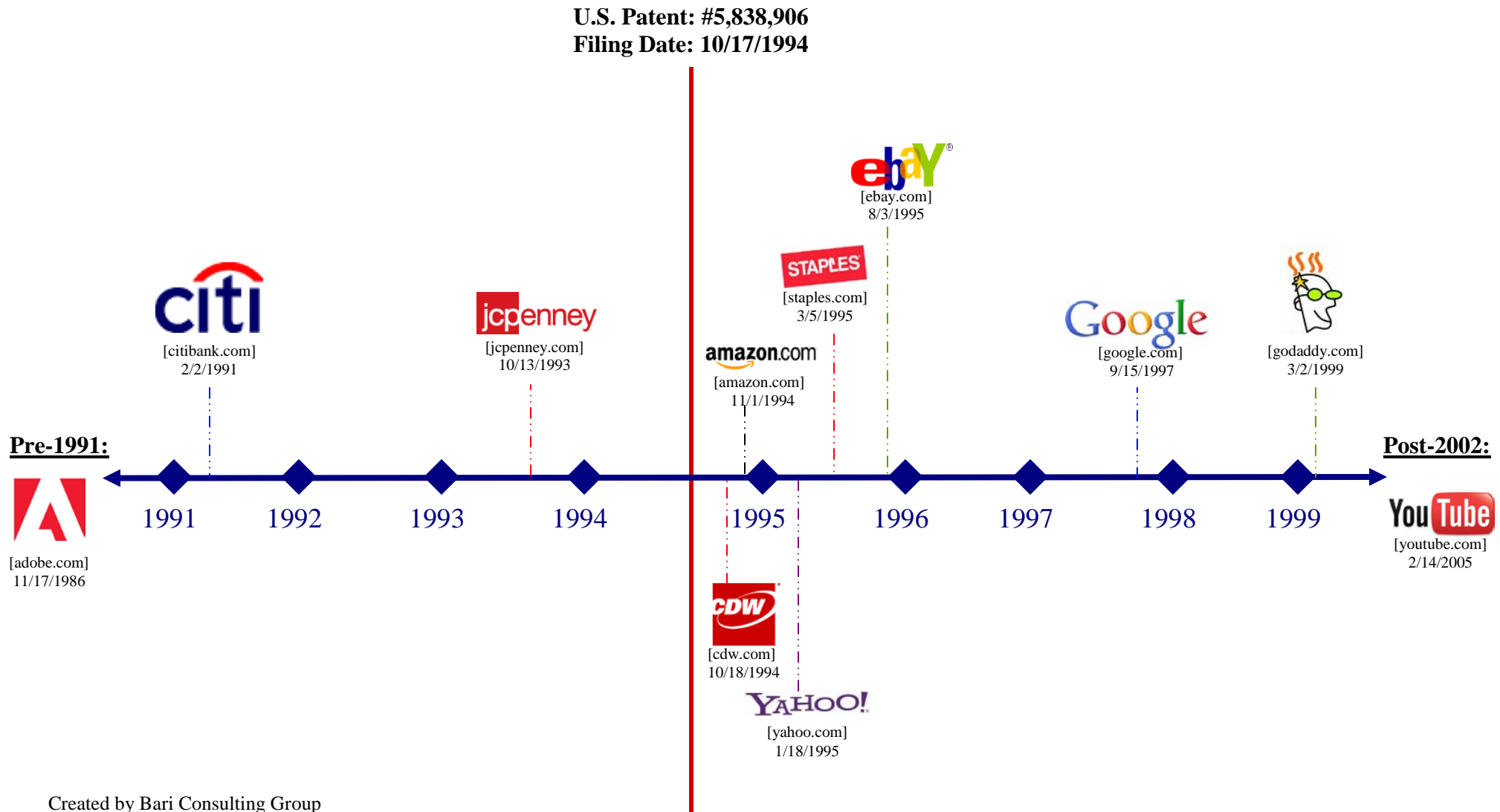
Created by Bari Consulting Group
Sources for Dates Created/Registered are "Whois" results on Network Solutions, http://www.networksolutions.com/whois/index.jsp and
http://www.google.com/search?q=whois+adobe.com&sourceid=ie7&rls=com.microsoft:en-us:IE-SearchBox&ie=&oe=

Notes: The date shown for each company represents the date when the company first registered its respective domain name as detailed above. The date does <u>not</u> indicate when the company launched its Web site and/or added search suggest auto-complete, videos and interactive product images – these interactive functionalities occurred at a much later date, generally speaking. There is no significance to whether the company's name and logo appear above or below the timeline. Defendants which have settled in this matter as of July 21, 2011 have been excluded from this graphic.

Epilogue

In the intellectual property case of Eolas Technologies Incorporated (Plaintiff) vs. Adobe Systems Inc., Amazon.com, Inc., Apple Inc., Argosy Publishing, Inc., Blockbuster Inc., CDW Corp., Citigroup Inc., eBay Inc., Frito-Lay, Inc., The Go Daddy Group, Inc., Google Inc., J.C. Penney Company, Inc., JPMorgan, Chase & Co., New Frontier Media, Inc., Office Depot, Inc., Perot Systems Corp., Playboy Enterprises International, Inc., Rent-A-Center, Inc., Staples, Inc., Sun Microsystems Inc., Texas Instruments Inc., Yahoo! Inc., and YouTube, LLC (Defendants), this Plaintiff's Expert Report was prepared after my review of various information and documents as detailed herein that pertain to the business of Eolas, e-commerce, the Internet and some of the Defendants. If and when additional information or documents that are related thereto become available, I may re-analyze the information collectively and develop new opinions and conclusions.

I, Jonathan H. Bari, completed the preparation of this evaluation report on July 25, 2011, at the request of Eolas Technologies Incorporated.

_____
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73 of 73