



## **Minimizing Operational Costs: An In-Depth Comparison between Business Travel and the Telecommunication Alternatives of Telepresence and Video Conferencing Systems**

### **Abstract:**

In economic hard times, businesses tend to reevaluate operational budgets to determine the most valuable and cost effective ways to succeed in their industry. One way in which businesses, small and large can cut costs and find value is by reducing business travel budgets and turning to alternatives such as telecommunication systems. This paper presents a study comparing the cost advantages of video conferencing and telepresence implementations over business travel within a five year period.

---

### **BrightCom, Inc.**

5811 McFadden Ave \* Huntington Beach, CA \* 92649

Toll Free: 877.483.9737

Email: [Sales@brightcom.com](mailto:Sales@brightcom.com)

[www.BrightCom.com](http://www.BrightCom.com)

## Introduction

In a struggling economy, it is challenging and expensive for businesses to get their employees in the same room or building. Global workforces, “virtual” workplaces and telecommuters are common cultures for many of today’s enterprises.<sup>1</sup> With the combination of rising inflation and tightening credit conditions, businesses want to ensure that their internal operations are providing the most value for their investment.<sup>2</sup> One way to accomplish this is by reducing internal travel budgets. The difficulty however, is that while proposed to reduce excess costs, budget cuts can also affect the quality of business performed including internal communication and collaboration.

In an effort to provide businesses a justification to enhance the quality of business collaboration, this paper demonstrates a cost analysis between business travel and telecommunication technology specifically, BrightCom telepresence and video conferencing systems. This paper not only shows how telepresence and video conferencing systems provide a way to eliminate travel costs, but also how this technology can provide higher inter-office productivity and a higher quality of business collaboration for a long term investment.

## Business Trends and Recession Cut Backs

A study performed by the Association of Corporate Travel Executives (ACTE) surveyed 131 companies regarding their travel budget and plans for 2009. 31 percent of the companies signified they are cutting back on travel for all areas of their business. 39 percent indicated a reduction in internal meetings.<sup>3</sup> Business travel, both for

internal and client meeting purposes, appears to be one of the main areas businesses are reducing budgets on. However, as businesses cut back on travel costs, they are also potentially hindering the quantity and quality of business collaboration.

According to the Economist Intelligence Unit and their report that surveyed 354 executives in Q4 of 2008 as to their travel plans and budgets for 2009, half of the businesses are planning fewer trips that are shorter in duration and downgraded in quality of hotel and air travel.<sup>4</sup> One concern stated in the Economist report is confirming internet connectivity in lower quality hotels. (4) These cut backs could possibly limit the amount of time for effective internal meetings as well as the ability of the employees to stay connected to their offices, co-workers and managers while traveling abroad. Assuming businesses continue to implement these cost saving strategies for several years, internal operational collaboration as well as communication and productivity may be effected, causing long term operational challenges.

## Video and Data Conferencing: Pushing the Boundaries of Business Communications

As an alternative, and for many companies, a compliment to travel, video conferencing and telepresence systems are gaining acknowledgment for effective business communication. According to Nemertes Research, 37% of companies interviewed in a study have enforced corporate policies that require an employee to justify the need to physically travel as opposed to using their implemented video conferencing system. (1) Gartner research recently proposed that

telepresence systems could replace 2.1 million airline seats by 2010.<sup>5</sup> It is because of video conferencing and telepresence systems that companies and their networks of customers and partners are beginning to understand the value of telecommunications in their corporate culture.

Video conferencing and telepresence systems provide many benefits. Systems set up for conference rooms, full telepresence suites, and desktop conferencing as well as remote mobile devices such as laptops and cell phones connecting via web conferencing allow instant communication and collaboration with interactive data sharing. They provide the ability to view and hear meeting participants with HD or high resolution video and audio. Along side high quality video and audio, participants can interact with collaborative data and media such as Microsoft Office® PowerPoint® presentations, Adobe Acrobat® PDF files and other content-rich documents, videos and images. While these initial benefits can save businesses time and money spent normally on inter-office travel, it also allows them to incorporate telecommunications technology on an everyday level.

There is also a push for business to understand how video conferencing technology can save money and enhance internal collaboration long-term. According to a recent study published by Aberdeen, a Harte-Hanks Company, companies have been able to reduce video set up time, increase use of fixed video communication rooms and decreased travel because telecommunication technology has aligned itself properly with

business infrastructure.<sup>6</sup> This alignment also causes a further promotion for the globalized workforce (6). O'Shea comments that because of this alignment as well as reduction in price and increasing system interoperability, companies should now begin to see the long term return on investment provided by these telepresence systems. Furthermore, as businesses leverage these systems on re-occurring bases, their customers and partners become accustomed to it.

One way in which corporations can do this is by implementing fixed video collaboration rooms in which employees can start an instant meeting within their internal work teams. From there, they can share documents, collaborate on presentations and interactively mark up content as part of their weekly or monthly meetings. Employees can also connect to external members of their team in the field or at home, for quick input or decision making. Because of the flexibility of use, these rooms can be extended to provide a myriad of uses for internal departments, customers or partners. Executives can also incorporate elements of telecommunications in their travels. For example, they could connect to their support teams to enhance a presentation for a boardroom level meeting. In addition to uniting the global workforce, and saving on operational costs, this level of daily operation can produce new ways of working with new ideas of collaboration, and allow business to push the boundaries of communication in their industry.(5)

## Analysis: Internal Business Travel versus Video Conferencing

In an effort to display the long term return on investment that video conferencing and telepresence systems provide, it is critical to look at an in-depth travel budget scenario and compare costs of travel versus video conferencing over a five year period. For this analysis, a fictitious business based in Los Angeles, California requires six employees from different departments to conduct 4-8 hour long meetings with co-workers in Manhattan, New York twice a month, each year for five years. Each trip takes 3 days and 2 nights. Each employee needs the following travel expenses found in Table 1. All trips are conducted

separately throughout the month. In comparison, the video conferencing costs include the expenses listed in Table 2 over a five year time period.

Graph 1 displays the contrast between travel costs and video conferencing costs over a five year period. Graph 2 shows the margin of savings provided by a video conferencing solution compared to travel expenses over a five year period. As a result, while the first year cost of video conferencing implementation is slightly higher than travel expenses, the next four years of use shows that a video conferencing system can save a company in this scenario \$43,341 per year: up to \$167,115 in total for five years.

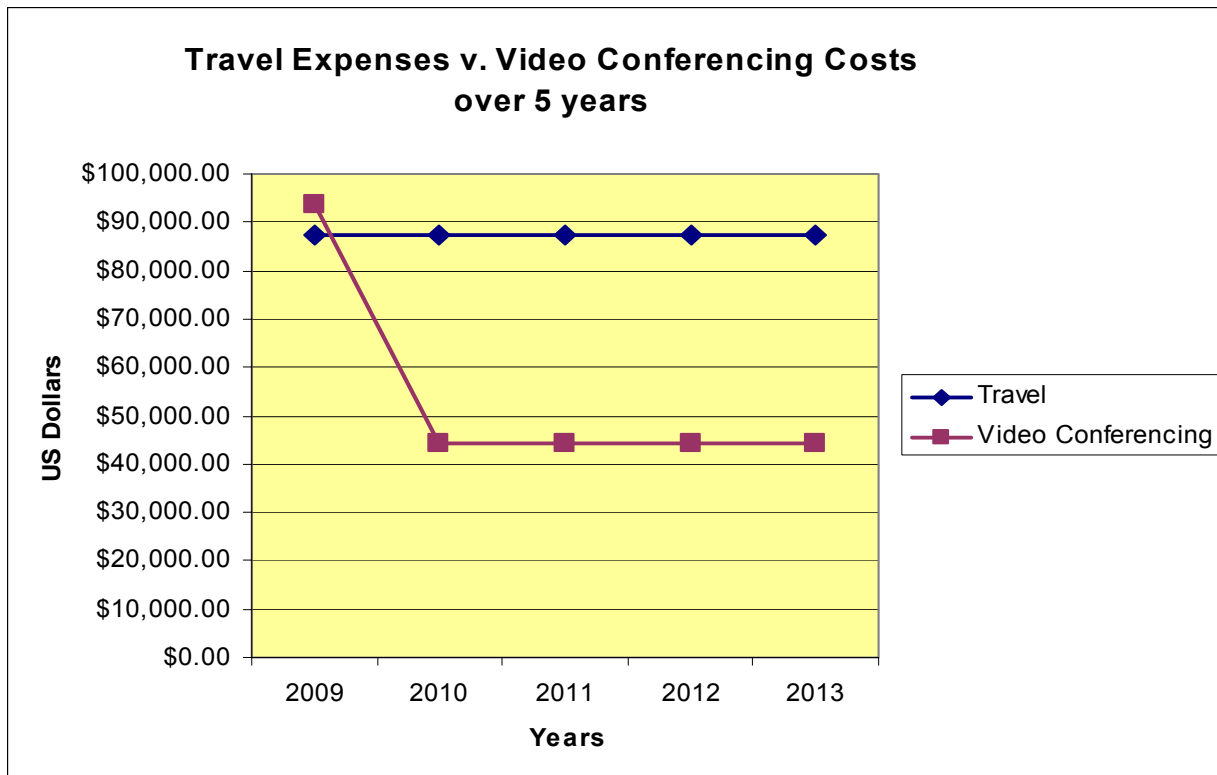
Table 1: Estimated Costs for 6 employees to travel once a month for one year

Travel Expenses	Estimated Costs	Comment
Flight Tickets	\$262.60	Direct flights. Priced 7 days before flight <sup>7</sup>
Hotel	\$570.00	Based on GSA Domestic per diem <sup>8</sup>
Transportation to and from LAX	\$60.00	Estimated
Transportation from and to JFK	\$45.00	JFK RT Taxi fare <sup>9</sup>
Meals	\$128	Based on GSA Domestic per diem(8)
Miscellaneous	\$150	Misc. taxi fare and other expenses
<b>Subtotal</b>	<b>\$1,215.60</b>	Total for one employee RT
<b>Year Total – 1 employee</b>	<b>\$14,587.20</b>	One employee travels once a month for one year
<b>Year Total - 6 employees</b>	<b>\$87,523.20</b>	6 employees travel once per month for one year. Price estimated for years 1-5.

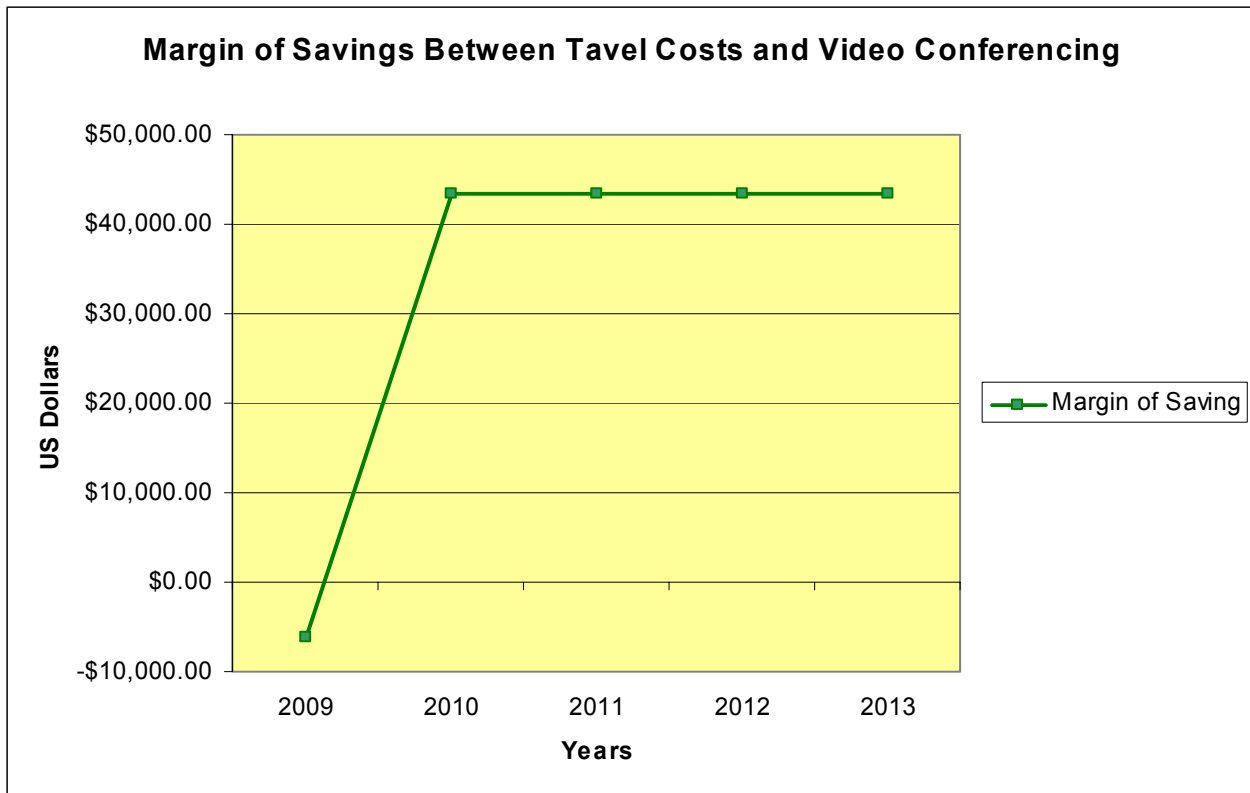
Table 2: Estimated costs for video conferencing system. First year includes initial set up costs.

Video Conferencing Expenses	Estimated Costs	Comment
<b>Year 1 – Start Up Fees</b>		
ClearView 2052C	\$59,990	One time initial start up price for two locations. BrightCom Mobile Conferencing System
Visual Collaboration System (VCS)	\$9,500	One time initial start up cost. Video conferencing infrastructure.
<b>Year 1- Monthly Costs per Year</b>		
T1 Line	\$24,000	Bandwidth. Est. Price for two locations for one year
Power – ClearView 2052C (2x)	\$16.32	One year <sup>10</sup>
Power - VCS	\$266	One year (10)
<b>First Year Total</b>	<b>\$93,772.32</b>	Total first year cost
<b>Year 2 – Annual Fees</b>		
Maintenance – CVC 2052C	\$18,000	Price for two locations for 2 <sup>nd</sup> year of maintenance
Maintenance- VCS	\$1,900	Price for 2 <sup>nd</sup> year of maintenance
<b>Year 2- Monthly Costs per Year</b>		
T1 Line	\$24,000	Bandwidth. Est. Price for two locations for one year
Power – ClearView 2052C (2x)	\$16.32	One year (10)
Power - VCS	\$266	One year (10)
<b>Second Year Total</b>	<b>\$44,182</b>	Price estimated for years 2-5

Graph 1: Travel expenses versus video conferencing costs over 5 years. Second year of video conferencing implementation shows an estimated 50% savings in travel budget.



Graph 2: Margin of Savings between travel costs and video conferencing.



Graphs 3 and 4 show a second scenario analyzing the productivity cost per employee traveling versus the productivity cost per employee utilizing a video conferencing system. In this scenario three different salary levels are studied: \$80k, \$120K and \$200k. Each employee needs to conduct an 8 hour long meetings with co-workers in Manhattan, New York. It takes an estimated 32 hours to travel to and from New York for all employees. Each ‘per hour salary’ was calculated using a 240 day work year. Table 3 depicts the estimated hours per travel versus the estimated hours of using a video conferencing

system. Graph 4 displays the cost of each employee traveling and meeting for 32 hours, versus meeting for 8 hours using a video conferencing system at their office. This graph highlights the cost spent for an employee to be out of the office, risking a lower rate of productivity for a longer period of time. On the other hand, video conferencing allows the employee to conduct the meeting at their offices in Los Angeles, providing an equal amount of meeting time, without excess travel time and therefore providing more employee productivity.

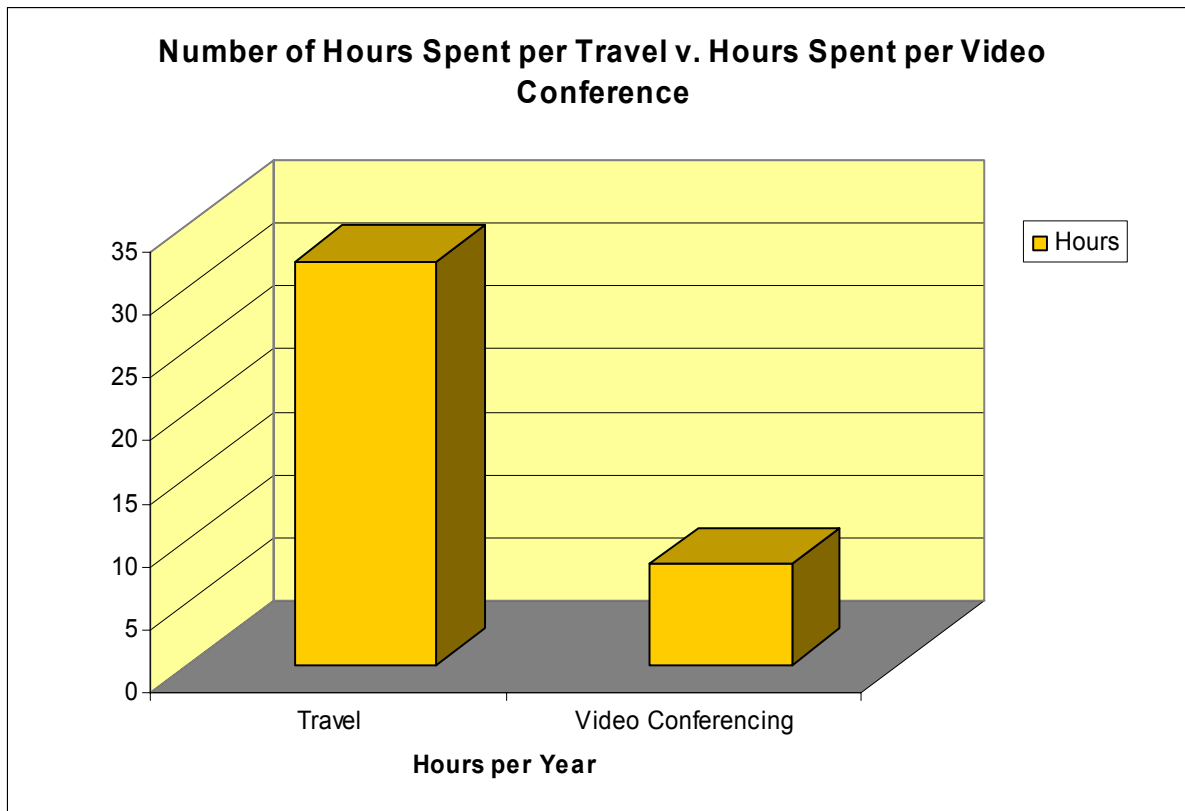
Table 3: Total estimated hours for one complete business trip for one employee

Stage of Travel	Est. Time (hours)	Comment
Transportation to LAX	2	Est. with traffic
Pre-Flight Check In	2.5	45 min minimum baggage check
LAX to JFK	5	Direct flight
Post Flight	0.5	Baggage claim and transportation set up
JFK to Manhattan	1	Est. with traffic <sup>11</sup> – Google Maps
Meeting	8	Scenario estimated hours
Manhattan to JFK	1	Est. with traffic – Google Maps
Pre-Flight Check In	2.5	45 min minimum baggage check
JFK to LAX	6	Direct flight
Post Flight	0.5	Baggage claim and transportation set up
Transportation from LAX	2	Est. with traffic
Travel Expense Reporting	1	Post trip corporate policies
<b>Total Estimated Hours</b>	<b>32</b>	<b>One complete trip for one employee</b>

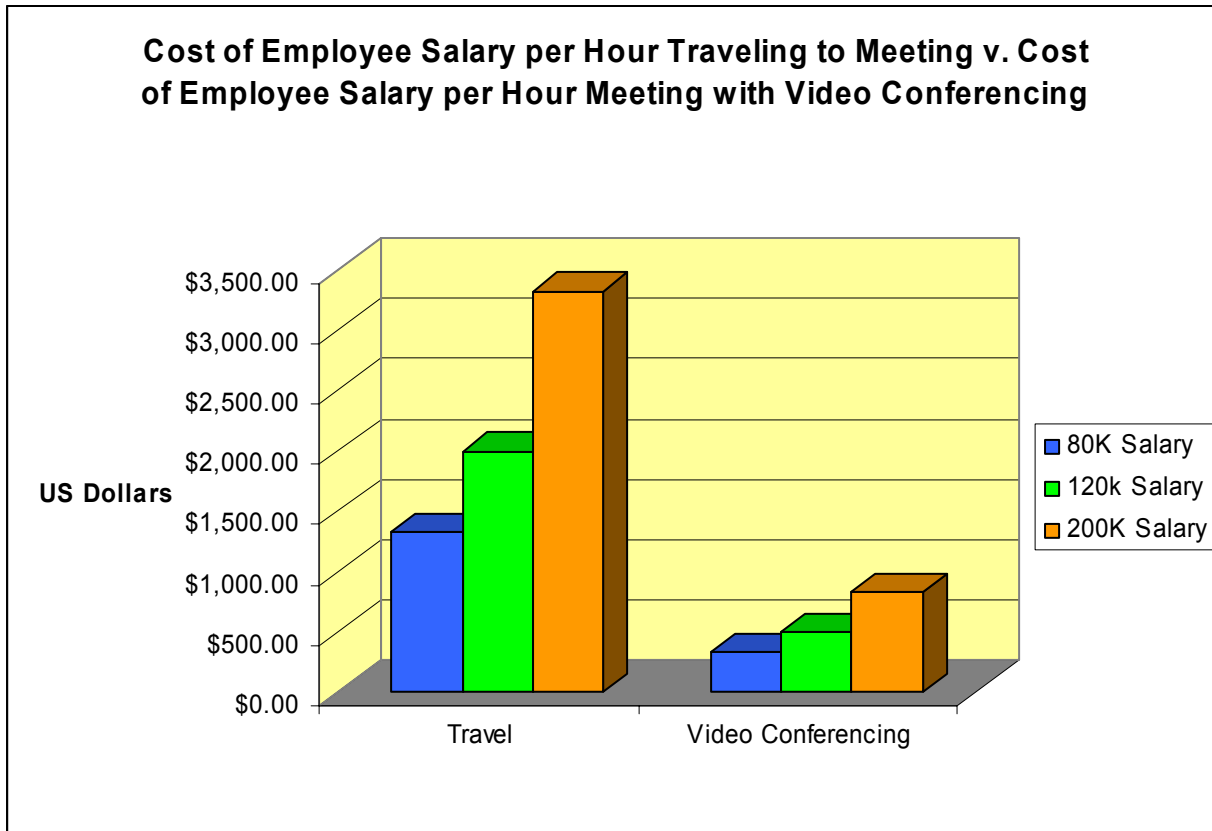
Table 4: Total estimated hours for one meeting using video conferencing including system power up.

Stage of Video Conferencing	Est. Time (hours)	Comment
Meeting	8	Est. meeting time including system power up
<b>Total Estimated Hours</b>	<b>8</b>	

Graph 3: Amount of hours it takes during a meeting on location versus hours a video conference in analysis scenario.



Graph 4: Cost of employee salary per hour traveling and meeting versus cost of employee salary per hour using video conferencing. Estimates show greater cost for a higher risk of lower productivity.



**Conclusion**

This analysis shows that by reducing travel expenses with travel alternatives such as video conferencing and telepresence solutions, businesses can reduce internal operational costs as well as increase productivity costs. The study also demonstrates that the value of this type of travel alternative is in its long term investment. The results show that video conferencing solutions save an estimated 50% for the second year of implementation, and an estimated 38% of their original travel cost for the entire five year period. In addition to the savings, employee productivity is higher with video conferencing and telepresence systems, allowing employees to conduct the same

if not more effective meetings without undergoing the estimated 32 hours of travel.

As many industry analysts are saying, video conferencing and telepresence solutions could be one of the long term solutions for businesses that are re-evaluating their long term operational costs. The telecommunication industry has aligned itself for enterprise business, making it an opportune time for companies to invest in telepresence and video conferencing. Most importantly, it is also the right time to begin to push the boundaries for enterprise communication and collaboration.

To learn more about video conferencing and telepresence systems provided by BrightCom please visit: [www.BrightCom.com](http://www.BrightCom.com)

- 
- <sup>1</sup> Lazar, Iwin, Nemertes Research, Seeing through the recession with video conferencing, 2009, [http://www.nemertes.com/webinars/nemertes\\_demand\\_webinar\\_video\\_conferencing](http://www.nemertes.com/webinars/nemertes_demand_webinar_video_conferencing)
- <sup>2</sup> McGill, Keith, Economic headwinds will slow 2008 US domestic travel to 1.99 billion person-trips, 2008, <http://www.globalinsight.com/PressRelease/PressReleaseDetail14680.htm>
- <sup>3</sup> Botelho, Bridget Tech companies rethink travel budgets, meeting options, 2008, Mass High Tech, [http://www.skillsoft.com/infocenter/documents/2008\\_1024\\_MHT.pdf](http://www.skillsoft.com/infocenter/documents/2008_1024_MHT.pdf)
- <sup>4</sup> Nielsen Business Media, Inc., Reports show execs expect business travel cutbacks and downgrades, 2009, [http://www.btonline.com/businesstravelnews/headlines/article\\_display.jsp?vnu\\_content\\_id=1003939877](http://www.btonline.com/businesstravelnews/headlines/article_display.jsp?vnu_content_id=1003939877)
- <sup>5</sup> O'Shea, Daniel, FierceTelecom, Time to make telepresence stick, 2009, <http://www.fiercetelecom.com/story/time-make-telepresence-stick/2009-02-08>
- <sup>6</sup> Park, Hyoun, Aberdeen Harte-Hanks, Marketwire, Videoconferencing reduces travel costs and improves business operations, 2009 <http://www.marketwire.com/press-release/Aberdeen-Group-NYSE-HHS-947778.html>
- <sup>7</sup> Expedia. February 11, 2009. [www.expedia.com](http://www.expedia.com).
- <sup>8</sup> United States General Service Administration. February 10, 2009 [http://www.gsa.gov/Portal/gsa/ep/contentView.do?queryYear=2009&contentType=GSA\\_BASIC&contentId=17943&queryState=New+York&noc=T](http://www.gsa.gov/Portal/gsa/ep/contentView.do?queryYear=2009&contentType=GSA_BASIC&contentId=17943&queryState=New+York&noc=T).
- <sup>9</sup> New York City Taxi and Limousine Commission. February 10, 2009. [http://www.nyc.gov/html/tlc/html/passenger/faq\\_pass.shtml](http://www.nyc.gov/html/tlc/html/passenger/faq_pass.shtml)
- <sup>10</sup> Southern California Edison. Small to medium business rate summary. February 5, 2009. <http://www.sce.com/CustomerService/rates/business/medium-business.htm>
- <sup>11</sup> Google Maps. February 6, 2009. [www.maps.google.com](http://www.maps.google.com)



5811 McFadden Ave \* Huntington Beach, CA \*92649

Toll Free: 877-483-9737

Email: [Sales@brightcom.com](mailto:Sales@brightcom.com)

[www.brightcom.com](http://www.brightcom.com)