

Fall 2012

Social Media and Primary Commercial Service Airports

Clayton L. Stambaugh

Southern Illinois University Carbondale, aviator2@siu.edu

Follow this and additional works at: http://opensiuc.lib.siu.edu/gs_rp

Recommended Citation

Stambaugh, Clayton L., "Social Media and Primary Commercial Service Airports" (2012). *Research Papers*. Paper 296.
http://opensiuc.lib.siu.edu/gs_rp/296

This Article is brought to you for free and open access by the Graduate School at OpenSIUC. It has been accepted for inclusion in Research Papers by an authorized administrator of OpenSIUC. For more information, please contact opensiuc@lib.siu.edu.

SOCIAL MEDIA AND PRIMARY COMMERCIAL SERVICE AIRPORTS

by

Clayton Lee Stambaugh

B.S., Southern Illinois University Carbondale, 2010

A Research Paper
Submitted in Partial Fulfillment of the Requirement for the
Masters of Public Administration

Public Administration Program
in the Graduate School
Southern Illinois University Carbondale
November 2012

RESEARCH PAPER APPROVAL

SOCIAL MEDIA AND PRIMARY COMMERCIAL SERVICE AIRPORTS

By

Clayton Lee Stambaugh

A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Masters of Public Administration

in the field of Aviation

Approved by:

Dr. David A. NewMyer, Chair

Dr. Charles Leonard

Gary Shafer

Graduate School
Southern Illinois University Carbondale
7th November, 2012

AN ABSTRACT OF THE RESEARCH PAPER OF

CLAYTON LEE STAMBAUGH, for the Master of Public Administration degree in Aviation Administration, presented on 7th November, 2012, at Southern Illinois University Carbondale.

TITLE: Social media and Primary Commercial Service Airports

MAJOR PROFESSOR: Dr. David A. NewMyer

Throughout the past decade the aviation industry in the United States has continually encountered significant socio-economic burdens. Most notable, the tragic events of September 11th left the industry highly susceptible to economic turmoil, such as the global recession accentuated by record high fuel prices, as well as sociological events like the world pandemic in the form of Severe Acute Respiratory Syndrome (SARS). The nation's airports, the infrastructure supporting this industry, are no exception. In conjunction with these onerous events, continuing cuts in intergovernmental funding sources, as well as weakened revenue streams, have forced airports to utilize contemporary tools, strategies, and techniques to reinforce traditional management functions. Social media platforms such as blogs, Facebook, Twitter, YouTube, and Foursquare, are a growing trend throughout various public and private industries to increase effectiveness, efficiency, and overall yield in regard to marketing and communication strategies. Consistent with New Public Management and the reinvention of government in the 1980s, conducive of cost-efficiency and customer-centric approaches, airports utilize social media to increase self-sufficiency by reducing expenditures associated with traditional marketing and communication modes. In addition, social media technologies enable airports to more effectively target, engage, and foster two-way communication with a multitude of audiences. This study provides an overview of these popular social media services. In addition this study empirically examines, both quantitatively and qualitatively, the current usage of social media

throughout Primary Commercial Service airports. Statistics on airport usage, best practices and case studies are provided, supporting preliminary guidance on the use of social media at airports.

ACKNOWLEDGEMENTS

This research paper was completed in conjunction with the Graduate School of Southern Illinois University Carbondale, in partial fulfillment of the requirements for the Degree of Masters of Public Administration in the field of Aviation, and the Airport Cooperative Research Program (ACRP) - Graduate Research Award Program on Public Sector Aviation Issues Program. Approval was granted by the department, graduate school, and ACRP for this collaboration. As such, a condensed version of this paper was submitted to the ACRP and may potentially be published in an annual volume of the Transportation Research Record; a peer-reviewed journal of the Transportation Research Board (TRB) of the National Academies.

The author would like to thank the ACRP, managed by the TRB of the National Academies, for administering this project. The author would also like to thank Federal Aviation Administration (FAA) and the Department of Transportation (DOT) for sponsoring this project. The author would additionally like to thank Southern Illinois University Carbondale for supporting the affiliation of this project. Finally, the author would like to specially thank Linda Howard, Tom Smith, Michael Drollinger, Dora Asinjo, Matthew Romero, Larry Goldstein, Dr. Charles Leonard, Gary Shafer, and Dr. David NewMyer for their guidance and support.

TABLE OF CONTENTS

ABSTRACT.....	i
ACKNOWLEDGEMENTS.....	iii
LIST OF TABLES.....	vi
LIST OF FIGURES.....	vii
INTRODUCTION.....	1
I) STUDY STRUCTURE.....	3
II) METHODOLOGY.....	4
LITERATURE REVIEW.....	11
I) SIGNIFICANCE OF TOPIC.....	11
II) A HISTORICAL PERSPECTIVE.....	13
ANALYSIS OF SOCIAL MEDIA AT PRIMARY COMMERCIAL SERVICE AIRPORTS.....	19
I) FACEBOOK.....	20
II) TWITTER.....	27
ANALYSIS OF SOCIAL MEDIA POLICY AT PRIMARY COMMERCIAL SERVICE AIRPORTS ..	31
FINDINGS: HOW PRIMARY COMMERCIAL SERVICE AIRPORTS USE SOCIAL MEDIA	33
I) BENEFITS OF USING SOCIAL MEDIA.....	34
II) STRATEGIES IN ADMINISTERING SOCIAL MEDIA.....	35
III) NEGATIVES ASSOCIATED WITH SOCIAL MEDIA.....	37
IV) RETURN ON INVESTMENT (ROI).....	37
V) BEST PRACTICES AND CASE STUDIES.....	38
CONCLUSION AND RECOMMENDATIONS FOR FUTURE STUDY.....	44
I) CONCLUSION.....	44
II) FURTHER STUDY.....	46
REFERENCES.....	48
APPENDICES.....	54

VITA..... 77

LIST OF TABLES

TABLE 1.....	7
TABLE 2.....	20
TABLE 3.....	23
TABLE 4.....	25
TABLE 5.....	29

LIST OF FIGURES

FIGURE 1	15
FIGURE 2	24
FIGURE 3	26
FIGURE 4	29

INTRODUCTION

Since the development of Web 2.0 characteristics in the early 2000s, which transformed the Internet into a network of collaboration and information sharing platforms, rather than a simple service whereby users would simply retrieve information provided to them, the transfer of data digitally has grown exponentially. For example, more data is thought to have been transmitted over the Internet in 2010 than in all previous years combined (Skaugen, 2011). This growth is the result of heightened availability and use of the Internet throughout the world, technological advancements including high-speed capabilities, mobile devices, as well as new services such as Social Media prompted upon Web 2.0 characteristics. Social Media, defined in *TCRP Synthesis 99: Use of Social Media in Public Transportation*, is a group of internet-based applications, or platforms, that seamlessly connect users resulting in timely and relevant interaction with one another (Bregman, 2012). Social networking platforms such as Facebook, Twitter, YouTube, LinkedIn, and Foursquare, which amplify the ability to share information, ideas, messages, and other content such as videos, are being used by a multitude of government entities, including airports, in both marketing and communication functions (Social Media, 2012). The application of social media toward marketing and communication strategies at airports has been shown to supplement and enhance (Bregman, 2012):

- Educational outreach
- Stakeholder and client relations
- Media and community relations
- Emergency and disaster response
- Humanization of an airport brand and voice
- Customer loyalty and creating brand ambassadors

- Co-marketing with airlines and concessions
- And finally, passenger or customer relations

The use of social media for marketing communications does not come without negatives however. Specific areas of concern to public transportation entities such as airports include (Bregman, 2012):

- Content and program management
- Staffing and resource requirements
- Virality of mistakes
- Mitigation of negative and inaccurate content
- Measurement of return on investment (ROI)
- And, inherent risk relative to legal and security concerns

In regard to public policy and customer oriented service delivery, digital technologies such as social media are becoming increasingly significant. Stemming from Executive Order 13571 (Streamlining Service Delivery and Improving Customer Service), requiring various federal departments and agencies to use innovative technologies in delivery of services at lower cost, reduction of service delivery time, and improvement in customer experience, President Barack Obama on May 23, 2012 issued a memorandum on building the 21st Century digitalized government (Obama, 2011). This memorandum seeks to ensure agencies, "use emerging [digital] technologies to serve the public as effectively as possible" (Obama, 2012). The federal government will utilize digital technologies via mechanisms such as websites, mobile applications, and social media, to enable the delivery of high quality digital government information, data, and services anywhere, anytime, and on any device (Executive Office of the President, 2012). The impact of such policy is clear. It is estimated that nearly every federal

agency and department now has at least one, often multiple, official social media accounts (Mergel, 2010). Furthermore, 43 states have confirmed the use of social media throughout their governments (National Association of State Chief Information Officers, 2010).

Newly developed administrative techniques and/or technologies, such as social media at airports, need sufficient education and guidance to reach their greatest potential. Likewise, resources must be made available to new or junior practitioners to minimize costly and/or illegal mistakes. Only recently have airports begun to accept and utilize social media as a legitimate communication and marketing tool (Bates, 2012). As these services continue to become standard with the entire aviation industry, including airports, it is important to understand basic concepts and practices surrounding social media. This study serves to provide overview and guidance about the use of social media at airports. In addition the study provides an April 2012 snapshot of current use of social media among 381 Primary Commercial Service Airports defined and identified in the National Plan of Integrated Airport Systems (NPIAS) compiled by the Federal Aviation Administration (FAA) (Federal Aviation Administration, 2010). Furthermore, common policy items across 30 airports identified as having such policies during the data mining process were examined and outlined. Finally, case studies and best practices were identified by surveying 24 industry leaders in the use of social media at airports identified during the data mining process.

Study Structure

Since this study is the first of its kind, and as a result the scope is rather large, the structure of the project is non-typical in that it resembles a synthesis rather than a traditional applied research project. The study is organized as follows:

- Section 1 introduces the study and describes its methodology

- Section 2 presents a brief literature review stating the significance of the topic and discusses the history of social media up to its current state
- Section 3 quantifies the usage of social media among Commercial Service Airports
- Section 4 explores common external policy items identified throughout the data collection process
- Section 5 presents survey results and identifies how airports are using social media
- Section 6 provides conclusions and suggests recommendations for further study

Methodology

This study aims to answer two research questions:

1. What are the frequencies regarding the use of social media among Primary Commercial Service Airports in the United States?
2. How are Primary Commercial Service Airports in the United States using social media?

A review of relevant literature was conducted to provide the foundation of this study. In addition data mining was conducted across 381 Primary Commercial Service Airports identified in the NPIAS to provide an empirical snapshot in time of current usage of social media among Primary Commercial Service Airports (Federal Aviation Administration, 2010). This snapshot provided the answer to the research question of population size regarding the use of social media among Primary Commercial Service Airports. In addition, the data mining effort identified social media polices to be further analyzed, as well as provided a basis for selecting industry leaders in the use of social media among these airports. Airports identified as industry leaders were then surveyed by email for supplementary information, not publicly accessible, providing the foundation for analytics on usage, case studies, and best practices. Results from this survey

answer the research question of how Primary Commercial Service Airports in the United States use social media.

Literature review. Although elements of social media have existed since the mid-1990s the prevalence of social media platforms, in addition to the application of social media toward marketing and communication, is in its adolescence. Ultimately, practices utilizing social media platforms such as Facebook or Twitter to enhance marketing and communication functions among private, public, as well as nonprofit sectors are less than 5 years old. Relative to airports, Akron-Canton Regional Airport (CAK) is the first airport in the U.S. known to have participated in social media starting with an organizational blog in 2003. CAK became the first airport in the U.S. with an official Facebook page in early 2007. Consequently peer-reviewed academic research is lacking both in regard to social media in general as well as its application towards airports. As a result, much like the Transportation Research Board (TRB) publication TCRP Synthesis 99: Use of Social Media in Public Transportation, emphasis was placed on reviewing relevant literature obtained from books, conferences, magazines, and online sources such as blogs, websites, online articles, and online publications (Bregman, 2012).

Data collection. A database regarding the use of social media at 381 Primary Commercial Service Airports identified in the NPIAS was compiled to provide descriptive statistics on the current usage of social media among these airports. The NPIAS defines Primary Commercial Service Airports as those public airports receiving scheduled passenger service and having more than 10,000 annual passenger enplanements (Federal Aviation Administration, 2010). Passenger enplanements, also known as passenger boardings, are identified by the FAA as, "revenue passenger boarding on an aircraft in service in air commerce whether or not in scheduled service". This definition also includes, "passengers who continue on an aircraft in

international flight that stops at an airport in any of the 50 states for a non-traffic purpose, such as refueling or aircraft maintenance rather than passenger activity" (Federal Aviation Administration, 2010). These airports are grouped into four separate categories which include: large hub, medium hub, small hub, and nonhub airports. Large hubs are those airports that each account for at least 1% of total U.S. passenger enplanements, medium hubs are those airports that account for between 0.25% and 1% of total U.S. passenger enplanements, small hubs describe those airports which account for between 0.05% and 0.25% of total U.S. passenger enplanements, and finally nonhub airports are those airports that account for less than 0.05% of all U.S. passenger enplanements, but still have more than 10,000 annual passenger enplanements (Federal Aviation Administration, 2012).

These data were collected during the time period of April 2, 2012 through April 20, 2012 with respect to variables relative to social media that often change hourly. Overall the data mining process was accomplished via the Internet, on both computers and mobile devices, by analyzing official airport websites, various social media provider websites, and the utilization of Google Search. Prior to this effort no such dataset was available that provided insight into even the most basic descriptive statistics. In all a total of 381 cases were observed, producing data on 36 separate variables which are listed in Table 1. The entirety of this data was not fully utilized due to the scope of this particular project, but will be readily available for future research applications. Only the specific variables used to quantify the use of social media usage among Primary Commercial Service Airports are defined in text. Full definitions on the entirety of data collected can be found in Appendix A.

Table 1

Data Elements Collected

Variable	Sub Variable
Airport Name	
Hub Type	
Passenger Enplanements	
Based Aircraft	
2011-2015 Development	
Costs	
Facebook	Account Type “Like” This Check-ins Likes People Talking About This
Twitter	Tweets Following Followers
YouTube	Total Video Views Videos Subscribers
Foursquare	Total People Total Check-Ins
LinkedIn	Followers
Flickr	
RSS	
Blog	
Google+	
Main Website	Social Media Linked Social Dedicated Page or Tab
Mobile Site	
Klout Score	
Social Media Policy	

Policy analysis. Throughout the data collection process, if an airport was identified as being known to use some form of social media it was then further analyzed to discover if the

airport incorporated, to some extent, a social media policy. The Social Media Policy variable identifies those airports that have a visible external social media policy displayed in some manner on either their website or on one or more of their social media services. Policy in this capacity is in regard to those external guidelines and rules, such as statement of purpose, hours of operation/monitoring, legal disclaimer, censorship, and any other information deemed necessary by the owner and operator of the airport. Cases were coded as:

- 0 - Not Applicable: The airport is not known to utilize social media
- 1 - No: The airport does use social media, but is not known to provide a social media policy.
- 2 - Yes: The airport provides, at some capacity, a social media policy on either its main website or social media platform(s)

This variable does not capture internal policies, such as owner operator restraints on use of social media by public employees, or those policies that may exist but are not easily available and prominent to the public. Of the 381 cases observed, 30 airports were identified to provide, at some capacity, a social media policy on either their main websites or social media platforms. These airports and their policies were further examined to provide a list of common policy items.

Airport social media survey. Survey research was utilized to identify specific information, not easily accessible to the public or able to be collected during the data mining process, regarding how airports use social media. The goal of collecting this information was to facilitate and/or develop case studies, best practices, additional policy information, descriptive statistics, and to overall answer how airports use social media. The survey questionnaire was distributed via email to airports identified during the data mining process as industry leaders.

Industry leaders are those airports that were selected using filters applied during the data mining process, such as:

- Airports among the top 20 total Primary Commercial Service Airports in regard to the number of users that “Like” the airport on Facebook, the number of users that follow the airport on Twitter, and the total number of Check-Ins on the airport’s Foursquare location.
- Airports among hub types other than Large that were among the top in regard to the number of users that “Like” the airport on Facebook, the number of users that follow the airport on Twitter, and the total number of Check-Ins on the airport’s Foursquare location.
- Airports utilizing more than half of the social media platforms (Facebook, Twitter, Flickr, LinkedIn, Foursquare, YouTube, RSS, Blog, Google+).
- Airports identified in the literature review that received mention in media about their use of social media.

After applying these filters, a total of 41 airports were identified as “Industry Leaders” in the use of social media at airports. Email addresses for these airports were obtained either by personal contact, or by public listing on the airport’s website and/or other listing sources. A blind copy format was used so that the full list of recipients was kept confidential. Overall the survey was composed of 20 questions and was constructed as a fillable Portable Document Format (PDF) form. The survey instrument utilized is provided in Appendix B. Four mailings were sent to those contacts who either respond to the survey or return an opt-out message. In all, a total of 41 surveys were distributed among airports identified as industry leaders. The survey was returned with a 58% (24) return rate at a 95% confidence level with a margin of error of

20%. This response rate can be labeled in the good (50%) to very good (60%) range, according to the University of Texas at Austin and their guidance on acceptable response rates for email surveys (University of Texas, 2011). Of the 24 returned surveys 22 airports were represented in total. This is the result of two airports returning two surveys each. The 22 Primary Commercial Service Airports represented include 3 large hub, 6 medium hub, 6 small hub, and 7 nonhub categories.

This survey project was reviewed and approved by the Southern Illinois University Carbondale Human Subjects Committee to conform to the United States Department of Health and Human Services requirement to ensure that the rights, privacy, welfare, and civil liberties of human subjects, or those airport employees taking the survey, were protected.

LITERATURE REVIEW

Significance of Topic – The Social Media Revolution

From humble beginnings the concept of social media has advanced throughout the past decade into a mode of communication both singular, as well as combined with traditional channels like television, that reaches individuals throughout the world on a daily basis. Even individuals not necessarily active on a social media network are still bombarded by countless sources of traditional media, like magazines and radio, now fused with social media elements such as pictures or segments urging the citizenry to, “Please join and continue the conversation (2-way) on the web”.

Modes of media used to share and communicate ideas have been around in numerous formats, such as cave paintings and writing, since the dawn of humanity. Clay Shirky (2009) expressed how social media is changing history in his talk at the TED (Technology, Entertainment and Design) annual conference; a nonprofit organization aimed to build a clearinghouse that spreads ideas and knowledge throughout the world. Mr. Shirky stated that simple forms of communication exchange continued to evolve and become increasingly complex until a significant leap in media, the advent of the printing press, allowed for the mass production of text media (Shirky, 2009). Subsequently, in no particular order, the telegraph, telephone, still photography, recorded sound, and moving pictures allowed for both immediate communication as well as heightened expressivity (Shirky, 2009). Another milestone, radio and television, allowed humanity to send and share information wirelessly through the air, enabling instantaneous communication on a massive scale (Shirky, 2009). Yet as Shirky points out, there is a curious asymmetry, or an underlining hindrance, among these modes (Shirky, 2009). "The media that is good at creating conversations is no good at creating groups. And the media that's

good at creating groups is no good at creating conversations. If you want to have a conversation, you have it with one other person. If you want to address a group, you get the same message and you give it to everybody in the group, whether you're doing that with a broadcasting tower or a printing press" (Shirky, 2009).

This was the case until the late 1980s to early 1990s at which point the Internet, a project by the Department of Defense beginning in the 1960s, became available to the public. Over the course of 20 years the Internet has developed into a massive communication highway which continues to transform society due in part to greater access, strengthened computers, higher speeds, additional technologies like mobile devices, and concepts like Web 2.0. As of April 2012, 82% of all American adults now use the Internet. In fact, 97% of 18-29 year olds in the U.S. use the Internet. Likewise 91% of 30-49 year olds, 77% of 50-64 year olds, and over half (53%) of adults 65 or older use the Internet (Pew Research Center, 2012). Continued advancements, both technological and conceptual, amid this massive growth in the Internet, allow heightened ability for individuals to consume content as well as produce and share content (Shirky, 2009). In addition, the shift of traditional media modes like radio, television, and print toward digitization has enhanced the utility of the Internet. In its origins the Internet merely allowed for sharing of simple text and images among physically connected computers. Today however, almost every communication mode in existence is accessible by a multitude of devices including wireless. Shirky states that this is the core of the social media revolution. "The Internet is the first medium in history that has native support for groups and conversation at the same time. Whereas the phone gave us the one-to-one pattern, and television, radio, magazines, books, gave us the one-to-many pattern, the Internet gives us the many-to-many pattern (Shirky, 2009)." Internet based social media services and applications such as Facebook, Twitter,

YouTube, LinkedIn and Foursquare enable this phenomenon, providing platforms that seamlessly bridge multidirectional and multimodal communication in a single personalized service.

The social media revolution is here. Today it is estimated that 1 in every 7 people is on Facebook, the world's largest social media service (United States Census Bureau, 2012; Facebook, 2012d). Facebook is home to 955 million active users as of the end of June 2012, of which more than 50% (552 million) log on every day (Facebook, 2012d). Overall, it is estimated that two thirds of online adults (66%) in the U.S. use social media platforms (Pew Research Center, 2011). Pertinent to this study over half (52%) of the Primary Commercial Service Airports in the U.S. have a Facebook presence. In general, 54% of the Primary Commercial Service Airports in the U.S. now participate in one or more social media services. In addition a recent 2011 survey, which covered airports across the world representing 43% of total passenger traffic, states that 66% of airports plan to invest in social networking functionality in areas such as: flight information and operational updates, customer relationships, and disruption of services and emergency updates (Société Internationale de Télécommunications Aéronautiques, 2011). The influence of social media on aviation is fully apparent, as recent studies suggest that over 60% of flying travelers worldwide utilize social media travel related sites sharing their travel experience on platforms such as Facebook and Twitter (Awori et al., 2012; Rose, 2011).

A Historical Perspective

The social media blaze we know today, one that has grabbed the attention of nearly every major private organization and has fully engulfed and melded with traditional modes of media, took some time to build. Many argue that the creation of websites in the mid-1990s, such as Geocities and Tripod, which enabled average computer users to effortlessly create their own simplified

webpages, was the primer (Curtis, 2012). It was the first time novice web users could express their identities, providing and sharing whatever information they deemed necessary, in an easy and free format. The advent of Web 2.0 in the early 2000s encouraging multilateral and multidirectional collaboration, discussion, and information sharing among the entirety of users on the Internet. Prior to these advances the Internet was characteristic of one direction communication. Immersed with advances such as ever-increasing Internet speed, expanded Internet access throughout the world, faster computing, smart mobile devices, media sharing sites such as Napster, cloud computing, and early iterations of social platforms like Friendster and MySpace, Social Media was ready to grow.

Rapid growth in social media began after 2004, when Facebook was officially launched and incorporated (Rosen, 2005). In addition to Facebook, other social sites now immensely popular such as YouTube, LinkedIn, and Twitter began to establish themselves as legitimate services. In 2006 Facebook opened its network to everyone age 13 and older with a valid email address (Facebook, 2006; Facebook, 2012a). In 2007, Facebook introduced a multitude of new services allowing artists, public figures, businesses, brands, organizations, and nonprofits a presence on Facebook and quickly reached thirty million monthly active users (Facebook, 2012f; Facebook, 2007). Monthly active users are defined as, "those registered Facebook users who have logged in and visited Facebook through the website or mobile device, or took an action to share content or activity with his or her Facebook friends or connections via a third-party website that is integrated with Facebook, in the last 30 days as of the date of measurement" (United States Securities and Exchange Commission, 2012). Facebook along with social media in general, exploded in 2008 as evident in Figure 1.

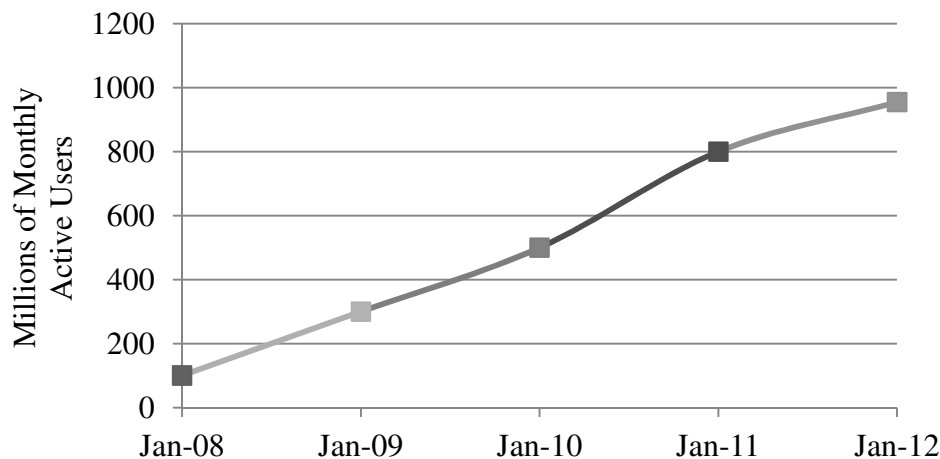


Figure 1. Growth of monthly active users on Facebook from 2008 to 2012 (Facebook, 2008; Facebook, 2007; Facebook, 2010; Ostrow, 2011; Facebook, 2012d).

Twitter evidenced similar growth and now boasts an estimated 170 million active users in July 2012 who log in at least once a month (Lunden, 2012). Additionally, YouTube (2012b) states that they now have over 800 million unique users who visit YouTube each month. Communication and media have been revolutionized upon principles of interconnected and seamless distribution. Ultimately, social media will continue to evolve in years to come as new services are introduced, current services expand, and old services perish as evidenced by the once-popular platform MySpace. The Internet and social media have forever changed the ease with which humans interact and communicate between each other and organizations.

Pertinent to this study, there are several broad categories of revolutionary social media services that should be identified. Specific social media platforms relative to airports such as Facebook, Twitter, YouTube, and Foursquare, variables explored during data collection, will be defined and explored subsequently. Social media service categories, as prior TRB research has identified, are categorized as follows (Bregman, 2012):

- **Blogs** - A web log that contains an online journal with reflections and comments, which are typically in chronological order, and often hyperlinked (Blog, 2012).

- Organizations like airports use blogs, self-created and hosted or with a third-party application such as Google Blogger, WordPress, or Tumblr, to establish a more personable and interactive news outlet as opposed to the traditional scripted press release. In addition blogs are used as a mode to distribute original content.
- **Social and Professional Networking Sites** - Platforms in this category such as Facebook, LinkedIn, and Google+, utilized by airports reviewed in this study, are characteristic of connecting personal users and organizations in a single unified place (Bregman, 2012). Individuals and organizations can create searchable profiles containing descriptive information. Users have the ability to distribute content throughout their “connections” easily and simultaneously.
 - **Microblogs** - These platforms are based on principles both of blogs and Short Message Service (SMS) of 140 characters or less. Andreas and Michael best describe services in this category, such as Twitter and others, as platforms that "allow individuals and organization's to exchange small elements of content such as short sentences, individual images, or video links" (Andres & Michael, n.d.). The result is a social network that provides content which is easy, simple, and short to consume. Depending on privacy settings, these platforms and their content are searchable by all Internet users.
 - **Media and document sharing sites** - This category encompasses popular sites such as YouTube, used to share video media, and Flickr which is used to share photo media. Users, such as individuals or organizations like airports, can create profiles on respective platforms to distribute these types of media. Depending on privacy

- settings, all Internet users can view, comment, and share provided media (Bregman, 2012).
- **Syndication Applications** - Really Simple Syndication (RSS) is a feed of updates from blogs, headlines, traditional website content, audio, and or video in a standardized and simple format (Haesung & Joonhee, 2008). In essence applications in this category break away clutter from core content, such as advertising, formatting, and graphic page design, into raw text. This simplified format can easily be distributed across multiple platforms. RSS feeds can be transcribed by individuals using reading applications that both decipher and automatically receive content updates (Haesung & Joonhee, 2008).
 - **Location-based Applications** - These mobile GPS based social media applications such as Foursquare, allow individuals to share their location with users within their network and with others as they so desire (Bregman, 2012). Organizations such as airports can establish their official location and ensure information like their physical address, services, and contact information is both to-date and correct. In addition, these applications allow organizations multiple ways to connect to users who have checked-in to their location.
 - **Social Media Management Tools** - With a multitude of social media services, organizations wanting to participate are often overwhelmed with logging in, monitoring, and participating across numerous networks. Social media management tools and applications, which are available both for free and at cost, have been developed to integrate and organize sites such as Facebook, Twitter, LinkedIn, and Foursquare in a single user-friendly interface. One benefit to utilizing these services

is the ability to broadcast, or post, the same message across multiple social media platforms at once. In addition, many of these services allow for measurement and analytical tools that may help quantify return on investment (ROI). Typically all functions available by a particular social media platform are available within the management tool or application. Hootsuite, TweetDeck, Seesmic, Sprout Social, and Wildfire Interactive are among many different social media management tools and applications that each has unique features, interfaces, and services. No social media management tools were analyzed during the data collection process, but they are perceived as necessary tools in using social media at an organization such as airports.

ANALYSIS OF SOCIAL MEDIA AT PRIMARY COMMERCIAL SERVICE AIRPORTS

Primary Commercial Service Airports in the U.S. participate among all categories of social media services as apparent in Table 2. Among the most popular services used by airports is the social network, in which over half (52%) of airports utilize Facebook in addition to three-quarters of airports (39%) use Twitter. Another social network Google+ has only recently allowed organizations to join their network in November of 2011 (Khan, 2011). This may explain why only 8 airports at the time of data collection were identified using the service. In regard to professional social networks, such as LinkedIn, 14% (53 airports) have established a profile.

Relative to media sharing services, 17% of airports were found to have an account on YouTube. Videos on YouTube, uploaded by other organizations and people, often refer to airports but the overwhelming majority (315) of airports have not established their own account. In addition, 7% of airports utilize Flickr to share and discuss photography relative to airport with other users.

Additionally, 17 airports (4%) were identified as having a blog either self-hosted on their own website or provided through a third party service. Finally, 6% (24) of airports support RSS and prominently display it on their website.

Table 2

Social Media Platform Usage Among Primary Commercial Service Airports

	Facebook	Twitter	YouTube	Foursquare	LinkedIn	Flickr	RSS	Blog	Google+
Yes	198	150	66	56	53	25	24	17	8
No	183	231	315	325	328	356	357	364	373
Percentage of Use	52%	39%	17%	15%	14%	7%	6%	4%	2%

Note. Data from April 2, 2012 through April 20, 2012

The following subsections place emphasis on both Facebook and Twitter, which were found to be the most popular platforms used by airports. Brief descriptions of each service are included as well as an exploration into popular metrics of each service. Although secondary data was collected on numerous platforms including LinkedIn, Foursquare, and YouTube, these data have been left out of the following analysis to keep within the limits placed on the overall project. The definitions and extent of these additional secondary data, which are available for future research applications, is available in Appendix B.

Facebook

Founded in 2004, Facebook's mission statement aims to make the world more open and connected. By simplifying the process of human communication, users of Facebook can stay connected with friends and family, discover what's going on throughout the world, and share and express important information (Facebook, 2012d). As identified earlier, Facebook is the most popular social media platform in the world.

ACRP Report 70: Guidebook for Implementing Intelligent Transportation System Elements to Improve Airport Traveler Access Information reports that Facebook, "is used by

many airports as a way to communicate and share news items, air travel delays, status of parking facilities, and photos of airport construction projects; advertise airport products such as parking or the location of a particular airport vendor; and, announce new airlines and flights servicing the airport; among other activities” (Elizer, Squier, Brydia, & Beaty, 2012).

In general, the data collection process supports ACRP prior findings. Airports were found to utilize Facebook in general to engage with their fans, or people who “Like” them, about key information regarding the airport. For instance, airports share information about airport services, projects, and general news. In addition Facebook airports were found to directly answer specific user questions, distribute pertinent updates on weather and delays, as well as display general interesting information relative to the aviation industry. Facebook also allows for contest that spread both brand awareness and recognition. Finally it was noted throughout the data mining process that many airports co-marketing with both airlines and concessionaires, mentioning each other or sponsoring each other, to strengthen and enhance the success of a specific marketing campaign. An example of co-marketing would be an airport sharing information about the airline and/or concessionaire in the form of a direct link to the partners website or Facebook Page, or by creating contests and/or events in with which the airline and/or concessionaire is directly associated.

As stated previously, over half (52%) of the Primary Commercial Service Airports in the U.S. have an account on Facebook. Of these airports several account types exist. The chief account type is “Places”, encompassing 41.5% of the airports on Facebook. In addition 10.2% of airports on Facebook utilize the traditional “Page”. The key difference between Facebook Pages and a Facebook Places is that Places give users the ability to check-in to a location via location-based services. Airports should utilize Facebook Places, rather than Facebook Pages, because

airports have permanent locations that allow for the location-based services, and as a result the word of mouth potential is abundant. For instance, when a user checks-in to a Facebook Place, depending on user settings, it is automatically posted and can potentially be seen by his or her friends. The average Facebook user has around 190 Facebook friends, and even if only 15% of his or her friends see the check-in, an airport's name and brand is seen by approximately 28 unique users (Ugander, Karrer, Backstrom, & Marlow, 2011). Facebook pages however do not allow this function. It was discovered through the data mining process that airports often had both pages and places relating to the airport. Instead of having two separate presences on the network, airports and other organizations with locations are encouraged to consolidate and merge the two profiles. Facebook provides information in their help center for this process (Facebook, 2012b). Also in regard to account types, one airport (.3%) was identified as using a Personal Profile account. It should be noted that any organization or airport using a Profile, which is designated for individual users, instead of a Page or Place is a violation of Facebook's Statement of Rights and Responsibilities (Facebook, 2012a).

Facebook Total Likes, or the number of unique people who "Like" an organizations page and/or place, is a basic measure of understanding the size and performance on the network (Facebook, 2012c). Table 3 represents the Top 20 Primary Commercial Service Airports Utilizing Facebook Relative to Total Likes in April of 2012. In addition, the Range of Total Likes Among Primary Commercial Service Airports Using Facebook is displayed in Figure 2.

Table 3

Top 20 Primary Commercial Service Airports Utilizing Facebook Relative to Total Likes

Official Airport Name		Total Likes
Los Angeles International Airport	LAX	45,958
Cleveland-Hopkins International Airport	CLE	40,709
Akron-Canton Regional Airport	CAK	37,502
Chicago O'Hare International Airport	ORD	25,790
John F. Kennedy International Airport	JFK	22,571
General Edward Lawrence Logan International Airport	BOS	22,285
McCarran International Airport	LAS	18,004
Denver International Airport	DEN	17,107
Dallas/Fort Worth International Airport	DFW	16,605
Metropolitan Oakland International Airport	OAK	16,349
Orlando International Airport	MCO	16,243
San Francisco International Airport	SFO	14,852
General Mitchell International Airport	MKE	11,318
Philadelphia International Airport	PHL	10,769
George Bush Intercontinental Huston Airport	IAH	10,143
Detroit Metropolitan Wayne County Airport	DTW	10,083
Tampa International Airport	TPA	9,640
Yeager Airport	CRW	9,030
Phoenix Sky Harbor International Airport	PHX	8,921
Louis Armstrong New Orleans International Airport	MSY	8,122

Note. Data from April 2, 2012 through April 20, 2012

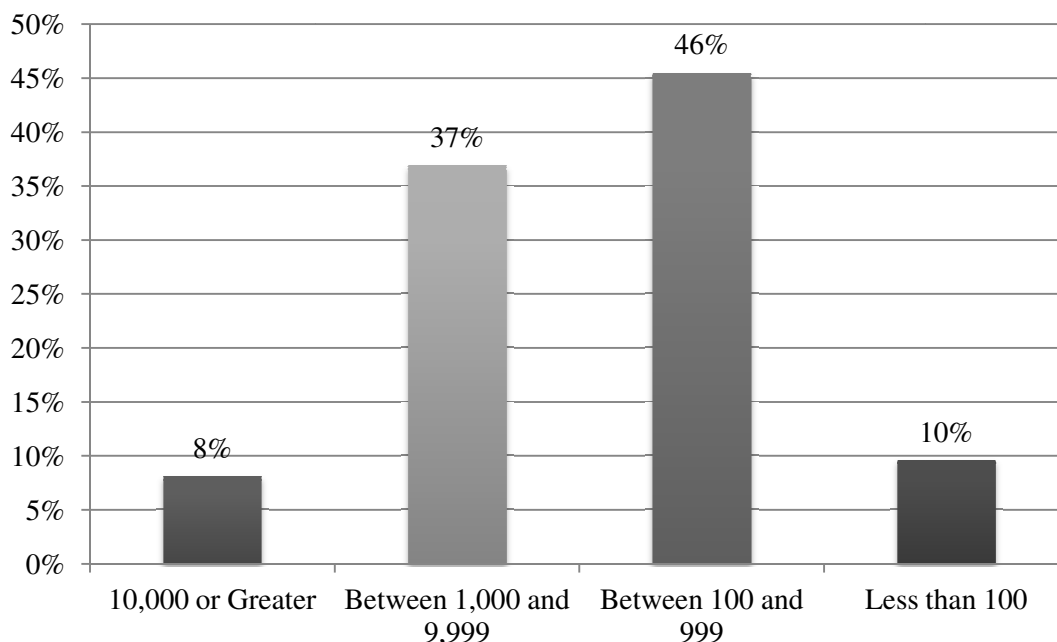


Figure 2. Range of Total Likes Among Primary Commercial Service Airports Using Facebook

Note: Data from April 2, 2012 through April 20, 2012

Interestingly 16 airports out of the Top 20 Primary Commercial Service Airports Utilizing Facebook Relative to Total Likes, of which have greater than 10,000 Total Likes, account for only 8% in the range of Total Likes among commercial services airports who use Facebook. The majority (82%) of Primary Commercial Service Airports using Facebook have less than 10,000 but at or greater than 100 Total Likes. 10% of these airports have less than 100 Total Likes.

In addition to Total Likes, Facebook provides metrics so that organizations such as airports can attempt to quantify the effect of their usage on Facebook. The “People Talking About This” metric refers to the number of unique people who have created a story about a given Page in the last 7 days. Stories are created when users like a page, post to a page’s wall, like content on a page, comment on a page, share a page post, answer a question posted by a page, RSVP to a page event, mention a page in a post, tag a page in a photo, or check-in at a place

(Facebook, 2012c). This metric coupled with Total Likes can be used to understand how popular, active, and engaging the page or place is (Facebook, 2012c). Table 4 represents the Top 10 Primary Commercial Service Airports Utilizing Facebook Relative to “People Talking About This” in April of 2012. In addition, the overall Range of “People Talking About This” among Primary Commercial Service Airports Utilizing Facebook is displayed in Figure 3.

Table 4

Top 10 Primary Commercial Service Airports Utilizing Facebook Relative to “People Talking About This”

Official Airport Name		People Talking About This
John F. Kennedy International Airport	JFK	22,571
Los Angeles International Airport	LAX	18,007
Chicago O’Hare International Airport	ORD	16,548
San Francisco International Airport	SFO	13,148
Dallas Fort Worth International Airport	DFW	11,316
General Edward Lawrence Logan International Airport	BOS	8,190
Denver International Airport	DEN	8,017
George Bush Intercontinental Houston Airport	IAH	8,007
Philadelphia International Airport	PHL	7,922
McCarran International Airport	LAS	7,031

Note: Data from April 2, 2012 through April 20, 2012

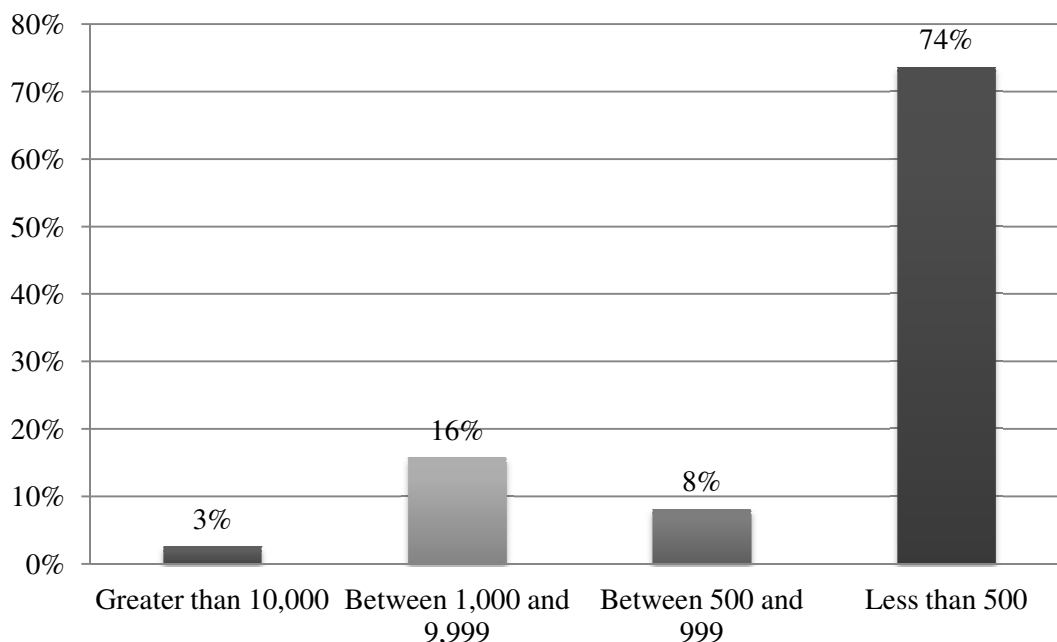


Figure 3. Range of “People Talking About This” among Primary Commercial Service Airports Utilizing Facebook

Note. Data from April 2, 2012 through April 20, 2012

When referencing both Table 3 and Table 4 it should be noted that an airports placement among Total Likes does not reflect the same placement in regard to “People Talking About This”. For instance, Akron-Canton Regional Airport is 34th relative to “People Talking About This” even though it is ranked 3rd in Total Likes. Just because an airport has a significant amount of Total Likes does not mean that an airport will have a significant amount of those users who like them create interact and create content relative to the airport as the “People Talking About This” metric measures. Support for this finding can be derived when referencing Figure 3. The range encompassing less than 1,000 “People Talking About This” accounts for 82% of Primary Commercial Service Airports on Facebook. This coincides with the data referencing Total Likes, of which 56% of Primary Commercial Service Airports on Facebook have less than 1,000 Total Likes.

It should be noted that even having a low amount of “People Talking About This” is still desirable. As previously discussed this metric includes user check-ins, among other things, and when a user creates a certain activity, depending on user settings, it is automatically displayed to that user’s friends. Once again, a single user “Talking About This” has an average around 190 Facebook friends, and even if only 15% of his or her activity like checking-in, an airport’s name and brand is seen by approximately 28 unique users (Ugander, Karrer, Backstrom , & Marlow, 2011). As a result, even minimal “People Talking About This” results in word of mouth marketing and/or communication produced at generally no cost to the airport. The only cost an airport might incur is if they were running a promotion and or contest that created activity (People Talking About This) among users.

Twitter

Twitter describes itself as a real-time information network social media service that connects users to the latest stories, ideas, opinions and news (Twitter, 2012a). Twitter revolves around microblog information called Tweets. Feeding from Short Message Service (SMS) texts, made popular by cellular devices, a single Tweet is no more than 140 characters. Twitter states that they connect businesses and organizations to customers and/or users in real time (Twitter, 2012a). According to Twitter, business and organizations use the platform to quickly share information with people interested in their products and services, gather real-time market intelligence and feedback, and build relationships with customers, partners and influencers (Twitter, 2012a).

ACRP Report 70: Guidebook for Implementing Intelligent Transportation System Elements to Improve Airport Traveler Access Information reports that Twitter, “should be used by airports for disseminating traveler information that changes on a regular basis such as,

security wait times, access route congestions, parking lot garage status, flight status and gate changes, and finally system wide delays (Elizer, Squier, Brydia, & Beaty, 2012).

Like Facebook, the data collection process supports ACRP prior findings in regard to Twitter. Twitter allows airports to easily spread brand awareness and engage with individuals who follow the company. “Followers”, similar to Facebook users who “Like” an organizational page, receive tweets from individuals and organizations they follow on their Twitter homepage. Airports often tweet their followers information regarding the airport such as: available services, delays, emergencies, and weather information. Another valuable feature of Twitter, not present in Facebook, is the ability to search terms showing up within the Twitter network. For example, an airport can search its name and potentially find a passenger who has tweeted about having a poor experience. Airports were found throughout the data collection process to capitalize on this feature and take appropriate action to mitigate public concerns and/or problems. As Morgan Johnston, JetBlue’s social media strategist, states, “Twitter is the canary in the coal mine (Noel, 2012)”. Overall it was noted during the data mining process that Twitter appears most useful when airports want to release timely snippets of information. In addition Twitter is useful in keeping track of their stakeholder, client, media, community, and passenger or customer relations.

A total of 150 (39%) Primary Commercial Service Airports were using Twitter during the month of April, 2012 making it the second most popular social media platform. Much like “Total Likes” on Facebook, “Followers” can be used as a measurement regarding the size and success of a Twitter network. Table 5 displays the Top 10 Primary Commercial Service Airports Utilizing Twitter Relative to Followers in April of 2012. In addition, the overall Range of Followers Among Primary Commercial Service Airports Using Twitter is displayed in Figure 4.

Table 5

Top 10 Primary Commercial Service Airports Utilizing Twitter Relative to Followers

Official Airport Name		Followers
General Edward Lawrence Logan International Airport	BOS	11,111
Richmond International Airport	RIC	10,599
Los Angeles International Airport	LAX	9,537
Hartsfield Jackson International Airport	ATL	7,487
Kansas City International Airport	MCI	7,394
New York Port Authority*		7,128
Dallas Fort Worth International Airport	DFW	6,511
Baltimore Washington International Airport	BWI	6,034
Phoenix Sky Harbor International Airport	PHX	6,030
Indianapolis International Airport	IND	5,645

Note. * New York Port Authority tweets information on the same account regarding Stewart International airport (SWF), La Guardia International Airport (LGA), John F. Kennedy International airport (JFK), and Newark Liberty International Airport (EWR); Data from April 2, 2012 through April 20, 2012

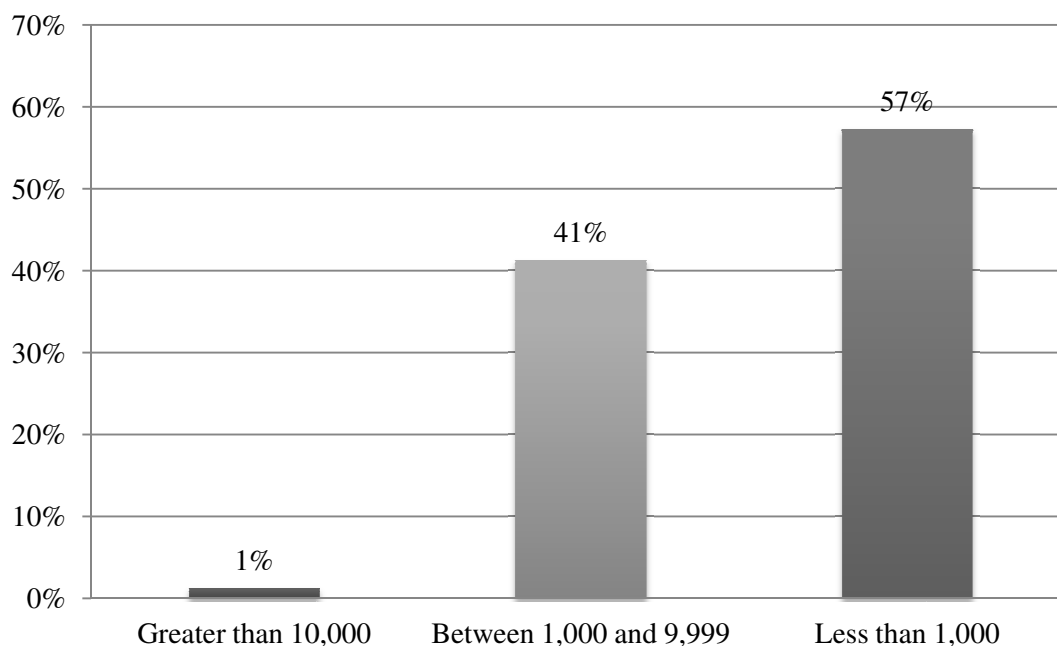


Figure 4. Range of Followers Among Commercial Service Airports Utilizing Twitter
Note. Data from April 2, 2012 through April 20, 2012

Interestingly, over half of the airports (Richmond International, Kansas City International, Hartsfield Jackson International, Baltimore Washington International, and Indianapolis International) included in Table 4, which represents the Top 10 Primary Commercial Service Airports Relative to Twitter Followers, are not apparent in the Top 20 Commercial Airports on Facebook in Regard to Total Likes presented in Table 3. Finally, more than half (57%) of the Primary Commercial Service Airports using Twitter have less than 1,000 followers. Yet, just because an airport does not have a significant amount of Followers does not mean Twitter is irrelevant. Content posted on Twitter, presuming that an airport would use a public account, is searchable and viewable by anyone who has access to the Internet. Just because an individual does not have a Twitter account does not mean he or she is not seeing a given airport's tweets. Finally, regardless of how many followers and airport might have on Twitter, public users on Twitter can still mention other users without having to "Follow" them. This allows a given airport the opportunity to still search any public tweet posted which mentions the airport's name.

ANALYSIS OF SOCIAL MEDIA POLICY AT PRIMARY COMMERCIAL SERVICE AIRPORTS

Exactly 15% of Primary Commercial Service Airports utilizing social media in the U.S. had an external social media policy readily visible in some manner on either their website or on one or more of their social media services. These external type policies, focused primarily on providing information to social media users. External policy should not be confused with internal organizational social media policy which often focuses on employee access, account management, acceptable uses in the workplace, employee conduct, security, and legal issues (Hrdinová, Helbig, & C.S. Peters, 2010). Although several of the policies reviewed contained internally focused elements, the following analysis does not include such policies.

Of the 30 airports identified as having external policies aimed at providing key information to visitors on their social media services, 83% presented official contact information. This information included names, departments, addresses, telephone numbers, and email as both official contact information and contact information regarding inquiries.

Seventy percent (70%) of airports having an external social media policy provide a statement of purpose regarding the use of social media at airports. Typically these statements introduced the overall airport mission statement and described utilizing social media technologies to better present matters of interest to the public and provide an interactive forum for two-way dialogue.

Disclaimers stating posting guidelines and the ability of the airport to remove unwanted or incompliant posts were found in 70% of the reviewed policies. Typically these disclaimers clearly state that posts will be removed which contain profane, graphic, obscene, explicit, or racial comments; solicitation or advertisements; external links which are deemed unacceptable;

repetitive posts; off-topic posts; comments suggesting illegal activities; posts or links containing support for political candidates; and spam among others.

Finally, 57% of airports included some sort of information regarding hours that the social media service is monitored. For instance, this information would include a statement such as: “This page is monitored Monday through Friday between 8 a.m. and 5 p.m., local time. If you have an urgent customer service request, please call 867-5309 to reach the airports Communication Center”.

FINDINGS: HOW PRIMARY COMMERCIAL SERVICE AIRPORTS USE SOCIAL MEDIA

Of the 22 Primary Commercial Service Airports represented in the survey nearly half (40.9%) were operated by an airport district or authority. Other operating entities of airports found in the survey population were cities (22.7%), counties (18.2%), commissions (9.1%), one state (4.5%), and one port district or authority (4.5%). Relative to operating entities, only one airport operated by a state, expressed that its operator had made it difficult for the airport to use social media. 95.5% of airport's operating entities identified in the survey had not made it difficult for the airport to use social media.

Social media being used at these airports included services of all categories of social media. Among the most popular was Facebook in which 100% of surveyed airports used. Additionally, 82% of these airports used Twitter. Another popular service was YouTube in which 52% of surveyed airports were active on. 32% of surveyed airports used Foursquare and 27% utilized blogging services. Additionally, LinkedIn was used by 23% of airports surveyed. Finally, 18% of surveyed airports used Google+, 9% used Flickr, and one airport (5% of surveyed airports) used RSS. The majority of airports have been active on social media for greater than 1 year. 40.9% of the surveyed airports had participated on one or more of these social media services for 4 years or greater while an additional 40.9% of airports had participated in social media for 2 to 3 years. Only 18% of surveyed airports stated they had only recently begun the use of social media and had 1 year or less on a given service.

In regard to administering these social media services, 54.5% of surveyed airports utilized exactly 2 staff members. 36.4% of surveyed airports had only one staff member administer social media. Finally, 3 or more staff members to administer social media accounted

for 9.1% of surveyed airports. The majority (54.4%) of surveyed airports stated that there was zero monetary cost administering social media. Of this majority, 31.8% of surveyed airports responded that the time associated in administration by staff members is the only “cost” in using social media. Moreover, 22.7% of the surveyed airports stated that zero cost was associated with the administration of social media. As for the remainder of airports included in the survey, a yearly cost of \$500 dollars or less was found at 22.7% of airports surveyed. 9.1% of airports stated that their yearly cost to administer social media was greater than \$500 dollars but less than \$1,000. Additionally, 4.5% stated their cost at greater than \$1,000 dollars but less than \$10,000. Finally, 9.1% of airports included in the survey stated their yearly cost associated with social media exceeded \$10,000 per year.

Benefits of Using Social Media

The survey asked Primary Commercial Service Airports to describe the benefits of using social media at the airport. Responses were reviewed and analyzed to identify common themes and keywords. These benefits of social media also reveal how airports use social media. Among 24 surveyed social media administrators from 22 airports, the two greatest perceived benefits of social media used at airports was customer/passenger, stakeholder, public, and/or media communication (75%) and customer/passenger, stakeholder, public, and/or media communication engagement (67%).

“Communication” refers to the ability of airports using social media to easily and effectively distribute one way content such as notice of public hearing for airport planning projects. “Engagement” refers to the ability of airports using social media to have two-way communication among users on social networks. An example of engagement would be an airport asking users on its social network a question such as what they think of additional airline

service to a new destination. By both monitoring and responding to comments, the airport can gauge the two-way conversation and make conclusions if customer/passenger, stakeholder, public, and/or media are content with the potential new service.

Other important themes and keywords found throughout multiple survey responses were found regarding the application of social media toward customer service and the ability to create brand ambassadors. In addition, airports expressed humanization of the organization, crisis communications, co-marketing with airlines and concessioners, and educational outreach as benefits or uses of using social media. Finally, several airports discussed the ability that social media provides to get accurate information to the media. One airport expressed that social media is aimed toward media outlets to provide an official voice of the airport; unfiltered by mass media such as local news agencies.

Strategies in Administering Social Media

The survey asked Primary Commercial Service Airports to provide key elements of their social media strategy. Responses were reviewed and analyzed to identify common themes and keywords. These popular strategies help quantify techniques airports utilize when participating on social media services. Among 24 surveyed social media administrators from 22 airports, the two greatest strategies in administering social media were to post general interest content (58% of surveyed airports) and to distribute important airport specific information (54%).

General interest content refers to information, photos, or other media that might be of interest to any customer, passenger, surrounding community, stakeholder, and media outlet of any age and capacity. For example, many airports share photos or information relating to the history of the airport. These posts spark general interest, including commentary and questions, among users in the social network. Important information refers to details, often time sensitive,

that pertains to a specific audience such as airline passengers, or multiple audiences such as the surrounding community and airport stakeholders. For instance, posting a suggestion to airline passengers that they arrive even earlier than the 1-hour recommendation due to heavy congestion on the roadways, is one example of distributing important information aimed at a single audience. Furthermore, posting information about an upcoming airshow at the airport will simultaneously reach multiple audiences in the network. These audiences can include the local community, airport partners, or airport stakeholders who might need to make special accommodations for the upcoming event.

Another important strategy in administering social media at the airport, found in multiple survey responses, was engaging in two-way communication with individual users (42% of surveyed airports). When individuals check-in to an airport or tag the airport in their posts, airports sometimes directly comment on the activity and thank the user for using their airport. In addition, responding to questions that individuals may pose is another way many airports facilitate two-way dialogue. Answering user questions, which not all airports participate in, is viewed as a form of customer/passenger service. Two-way communication with individuals helps transform the airport as a faceless bureaucracy into a service oriented organization.

Other important themes and keywords found throughout multiple survey responses relative to strategy conducted at airports in administering social media include communicating and responding timely, being fun and less formal in the airports voice on social media, and making sure to listen or monitor current dialogue on social networks. Twitter suggests being fun and less formal in their guidebook in which they state, “Too often, business and organizations are overly formal on Twitter. Tweets should reflect an organizations personality. People respond best to friendly, conversational Tweets (Twitter, 2012b)”. In regard to monitoring and

listening, occurring in 17% of survey responses, Twitter's search ability mentioned previously allows airports the ability to find possible customer/passenger service inquiries that might normally go unheard.

Negatives Associated with Social Media

The survey obtained 19 responses to a question asking if any negatives were associated with the use of social media at airports. 79% (15 of 19 airports) stated that yes, there are negatives associated with using social media. Of these 15 airports, 60% stated that one negative is the burden to monitor and respond quickly and appropriately to the 24-hour medium.

External policy is suggested to contend with this negative relative to a staffing and resource problem. As some airports were identified in the policy analysis, it may be helpful to provide a statement to users regarding hours of monitoring and service. In addition to a general statement, contact information should be provided for urgent or emergency matters and concerns.

Several other themes and keywords including virality of mistakes, negative comments and inaccurate posts by users, time and commitment to post regular content, and inherent risk relative to legal and security concerns were included in responses. Once again as the data collection process revealed, creating policy relating to these negatives creates defined approaches on each area of concern. For example, policy can be created that both defines negative and inaccurate post by users and how the airport plans on contending with the issue.

Finally, another negative expressed in a single survey response was difficulty of quantifying a (ROI). This specific negative is addressed in the following section.

Return on Investment

Eighteen airports responded to the survey question that asked how they measure ROI. 94% of responding airports stated that they use platform-based metrics such as "likes", "followers", and

“check-ins” among others to measure return. Other metrics mentioned by multiple airports included gauging the tone of conversations on social networks, using third party analytical tools and metrics, web based analytics, measuring ticket sales direct or referred from a given social media platform, and measuring the decrease in phone, or in-person, inquiries.

Only two airports included in the survey identified any measurement in terms of enplaned passengers, sales, or monetary value. These airports were able to measure tickets for airlines being sold directly through Facebook, or by measuring click-throughs of referral link from Facebook which resulted in airline ticket sales. It should be noted that the direct ticket sale provided no immediate revenue toward the airport and it is not known exactly how those airports utilized this information in regard to actual return.

Best Practices and Case Studies

Airports were asked to provide recent success stories relating to the use of social media at the airport, in addition to submitting any additional information that they considered important to the study. Sixteen airport responses were reviewed and analyzed to identify common themes and keywords. These responses were compared with other themes and keywords across the survey, in addition to data collect throughout the data mining process, to come up with the following best practices and case studies.

Creating value and enhancing the airport brand with contest and/or promotions.

Contests and/or promotions can be used to activate and engage existing users on social media as well as increase an airports network by increasing their “Likes”, “Check-ins”, “Shares”, “Re-tweets” or “Followers”. By increasing these platform-based metrics, the airport can spread awareness and impact of their unique brand. In return these campaigns provide and reward some value to the social community that is connected with the airport. There are numerous ways these

campaigns can be conducted. For example many airports were identified during the study to hand out free luggage tags to any person who checked in to the airport on a social media service such as Facebook or Foursquare. Additionally, additional cases of airports using contests or promotions include:

- One airport expressed having a huge, and unexpected surge, in their activity due to foam airplane giveaway. The airplane, which was given a name, was handed out to children throughout the terminal. Airport users began posting comments, video, and pictures of children obtaining and playing with the airplane. This “activity” created by unique social media users can be expected to be seen by that users’ own network. As a result, the airport’s brand was spread. Travelers now come asking about getting the foam airplane for their children.
- Several airports have created campaigns requiring a user to “like” their page to then qualify them for a random drawing of a trip to a city that the airport serves or free airfare to any serviced city on a particular airline. This strategy rewards users as well as helps the airport increase Total Likes.

Posting photos, videos, and links. Repeatedly when analyzing survey data, airports alluded to the fact that posts on social networks that include links, pictures, or video saw far greater engagement than posts containing just simple text. In fact Facebook states that, “Posts including a photo album, picture, or video generate about 180%, 120%, and 100% more engagement than the average post, respectively” (Facebook, 2012e).

- An airport described how featuring pictures and video of specific aircraft the airport supports gains a decent number of Facebook messages and comments back. The airport stated that the strategy maintained interest in the Airport. This interest was

particular important considering the airport has much less activity than many other airports in the area.

- Airports were found to often promote new routes by posting pictures and video of the new destination. This provides notice of the new route as well as sparks interest toward the new destination.
- Airports were also found to promote new concessionaires by posting pictures and video of the new service. This provides notice and interest toward the new concessionaire.

Emergencies, disasters, and irregular operations. Of the 22 airports surveyed, 90% stated that they use social media to inform the public and media on disasters, irregular operations, and/or emergencies. Social media provides a platform to distribute information regarding events to a multitude of audience at once such as customers, passengers, surrounding communities, stakeholders, and the media.

- Airports find that social media is the fastest way to get this information out, especially when events are extremely time sensitive.
- One airport received national press during a regional jet overrun (Snyder, 2010). The airport provided accurate information about the incident immediately. The airport also posted updates to keep their targeted audience up to date on the situation. As was reported, “That helps dispel any rumors of airplanes plunging off cliffs or dire injuries or fatalities. They also posted contact information for media” (Snyder, 2010).
- Airports often rely on social media to distribute information regarding a presidential visit. Information regarding service delays, airspace restrictions, and other changes in normal operations is posted.

Keeping accounts tidy. The social media landscape allows for individuals to create content, pages, or profiles freely with little structure or oversight. As a result there is little uniformity across airports in their naming of social media pages and/or profiles. In addition, regular users can create multiple airport accounts both mistakenly when trying to check-in, or, with the intent to impersonate the organization. Several best practices were identified throughout the entirety of this project relating to this issue.

- Airports should remain active in monitoring additional and false accounts representing the organization. The various platforms have numerous instructions on how to mitigate this issue.
- Airports should try at best to utilize the official airport name, or the widely accepted name. Some airports were extremely hard to track down during the data collection process when they used obscure titles or nicknames. Facebook has recently added a feature to change the name of the page. This option was not available in the past.
- Particular to Facebook, if an airport has both a Page and Place it should take the appropriate actions found in the help center to consolidate and merge the two pages.

Enhancement of customer service. Social media provides a unique opportunity for users to ask questions, address concerns, and in general complain toward the airport. Although this could be viewed as a disadvantage, airports addressing these questions, concerns, and complaints often received praise.

- One airport shared a successful story of a passenger that complained about a lack of paper towels in the bathroom. The airport responded to the customer and immediately had the problem fixed. The passenger thanked the airport in return for their customer service.

- One airport had a passenger had tweeted a negative experience with the Transportation Safety Administration (TSA) and included the airports name. The airport identified the problem by searching it's name on Twitter. The airport then contacted TSA, explained the situation, and apologized for the experience. The passenger who was not expecting a response, let alone from the airport, thanked the airport for their exceptional customer service.

Co-marketing, branding, or promotion with airlines, concessions, or industry partners. Airports were found to take advantages of co-marketing and branding with industry partners also on a given social network. As discussed earlier, one such example is running a contest with a specific airline in which the winner receives free airfare. Simply tagging and coordinating posts with airport partners was often witnessed throughout the data collection process.

- One airport posted a very low fare from an airline servicing the airport to their social media services. The sale proved very successful for engaging the community that is connected with the airport on social media. The sale proved very successful for the airline as well. For example, 10,000 of the airports current 39,000 fans on Facebook saw it. Of those fans 650 unique people clicked over to the airlines website from a single post.

Public relations outlet. Airports use social media as a public relations tool. Various media modes such as local news stations follow activity from organizations on social networks to keep track on the latest information. Airports can easily create content regarding airport specific news and simultaneously distribute this information to multiple audiences rather than using the traditional press release. For example, instead of contacting various news outlets about running a

story about the airport, this study reveals that often times local news stations will pick up the story based on given social media activity. In addition, airports were found to use social media as a forum to allow the public to ask questions and discuss matters pertaining to a given topic.

- One airport shared that after several posts were published via social networks about an inaugural flight to a new destination all local news stations picked up the story. The airport said the event ended up being a great public relations piece for them as well as for the new carrier and destination city.
- During a recent event involving a wildlife strike at an airport, the Facebook page became a platform for public comments on the matter. The airport allowed the discussion to take place and monitored for any vulgar or inappropriate activity or comments. The platform was used to allow the public and third parties to address their concerns. Facebook was also used to affirm the position of the airport, airline, and the FAA regarding passenger safety concerns and environmental impact issues.
- One airport has leveraged the public relations aspect of social media to their advantage. The airport consistently posts about the many services and amenities the airport offers. As users interact and share these posts the airport has effectively changed the community perception of the airport and has helped market the airport against their biggest competitor.

CONCLUSION AND RECOMMENDATIONS FOR FURTHER STUDY

Conclusion

As of April 2012, 54% of Primary Commercial Service Airports participate in one or more social media services; merely five years after the first airport in the United States would join Facebook. At the time this project becomes publicly available that number will have grown, and even more airports will have established themselves on social media services. As such, the practice of utilizing social media for airport communications, public relations, and marketing appears to quickly becoming an industry standard. Several conclusions identified in this research effort suggest why airports, including the entire aviation industry, will continue to expand usage of social media.

A multitude of benefits have been actualized in using social networking platforms such as Facebook, Twitter, YouTube, LinkedIn, and Foursquare for airports. Supporting prior research, social media services have been identified to supplement and enhance traditional airport objectives such as promoting educational outreach, stakeholder and client relations, media and community relations, emergency and disaster response, humanization of an airport brand and voice, customer loyalty and creating brand ambassadors, co-marketing with airlines and concessions, and finally, passenger or customer relations (Bregman, 2012). The research suggest that these benefits come at little to no cost, as supported by the finding that over half of the surveyed airports (54%) stated zero monetary cost in the administration of social media at airports. The survey did find that some airports (31.8%) considered that cost could be associated with employee time utilized in administering social media. However when weighing usage of staff time with the various benefits of social media the cost seems minimal, as 90% of surveyed airports expressed that they use at most 2 staff members or less.

In addition to a significant amount of benefits that can be acquired at little to no cost, social media and commercial service airports in particular are highly compatible considering the vast amount of people who travel via the airport on a daily basis. With Internet compatible mobile technologies on the rise, more and more people are using their down time, for instance waiting for an airplane to board at a gate, to connect to social media and accomplish tasks online. An airport connects the public to people, organizations, and places. The goal of social media is to connect people, organizations, and places. Strategies should be developed to exploit this relationship.

Although social media is shown to enhance the efficiency and effectiveness of many traditional airport communications, marketing, and public relation goals, some negatives were identified in the usage of social media at airports. Overall, 79% of surveyed airports stated that yes, there are negatives associated with using social media. The research concludes that of perhaps the biggest difficulty, expressed by 60% of surveyed airports, is in relation to content and program management of a 24-hour medium. Additionally in support of prior findings, staffing and resource requirements, virility of mistakes, mitigating negative and inaccurate content, difficulty in measuring ROI, and inherent risk relative to legal and security concerns were identified in the research as being areas of concern. As the use of social media continues to grow among airports, these difficulties may be addressed by a continuation of research. In particular, additional study should focus on creating strategies, policies, and plans to mitigate any associated negatives.

Of additional significance, the research revealed that that there is no one size fits all approach toward an airport using social media. Much like how airports are all unique both in physical conditions and in ownership and operation, techniques and strategies used at airports

regarding social media is a wide-ranging area. Airports considering using social media, as well as those currently using social media services, are strongly recommended to watch what others are doing and learn what works best for a particular situation. It is acceptable to discover and recreate those techniques and strategies that other organizations such as airports are successful with. Future research and guidance is needed to help airports chose the best particular strategy for their unique situation.

In all, as the world becomes a more socially connected place and before the usage of social media at airports becomes industry standard, the nation's private, academic, and not for profit research organizations need to further study and research the practice. This effort will help ensure airports use social media in the most efficient, effective, and accountable means possible. In addition, the continuation of study, research, and practice will strengthen the numerous benefits, as well as help mitigate any negatives, identified in this project relative to the utilization of social media for airport communications, public relations, and marketing.

Further Study

To further strengthen the success in using social media at airports there are several key emphasis areas that industry should explore to provide insight to practitioners. The following list briefly describes these areas:

- External and internal policy implications regarding the use of social media at airports.
- Correlation with additional aviation/airport data. For example, it is believed that the "People Talking About This" metric might have correlation with total yearly passenger enplanements at an airport. Are there any relationships between traditional airport measurements such as yearly passenger enplanements and the successfulness of social media?

- Strategies in exploiting the amount of people who travel through airports. Emphasis should be placed on the amount time spent waiting and sitting at airports.
- Formal guidance, in the form of a guidebook or synthesis, on creating and managing social media at airports.
- Social media usage for other aviation trends and topics. For instance the use of social media for Safety Management Systems (SMS) or the airport master planning process.
- Exploring traditional and contemporary means of measuring ROI in regard to social media.
- Future data collection which would compare the data mined for this project with data 5 to 10 years out.

REFERENCES

- Andreas M., K., & Michael, H. (n.d). The early bird catches the news: Nine things you should know about micro-blogging. *Business Horizons*, 54105-113.
doi:10.1016/j.bushor.2010.09.004
- Awori, K., Clark, E., Gonçalves, A., Effner, T., Yang, J., Oakley, I., & Nunes, N. (2012). Flytalk: social media to meet the needs of air travelers. In *Proceedings of the 2012 ACM annual conference extended abstracts on Human Factors in Computing Systems Extended Abstracts*. Retrieved from <http://doi.acm.org/10.1145/2223656.2223707>
- Bates, J. (2012, March). Social Climbers. *Passenger Terminal World*. 28-34
- Blog. (2012). In *Encyclopedia Britannica Online*. Retrieved from <http://www.britannica.com/EBchecked/topic/869092/blog>
- Bregman, S. (2012). *TCRP Synthesis of Transit Practice 99: Uses of Social Media in Public Transportation*. Transportation Research Board of the National Academies, Washington, D.C. Retrieved from http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_syn_99.pdf.
- Curtis, A. (2012). *The Brief History of Social Media*. Resources for Courses, Mass Communication Department, University of North Carolina at Pembroke. Retrieved from <http://www.uncp.edu/home/acurtis/NewMedia/SocialMedia/SocialMediaHistory.html>
- Digital government [electronic resource] : building a 21st century platform to better serve the American people*. (2012). [Washington, D.C. : Executive Office of the President, 2012].
- Elizer, M., Squier, D., Brydia, R., & Beaty, C. (2012). *ACRP Report 70: Guidebook for Implementing Intelligent Transportation Systems Elements to Improve Airport Traveler Access Information*. Transportation Research Board of the National Academies,

Washington, D.C. Retrieved from

http://onlinepubs.trb.org/onlinepubs/acrp/acrp_rpt_070.pdf

Facebook. (2006, September 26). *The Facebook Blog: Welcome to Facebook, Everyone.*

Retrieved from <https://blog.facebook.com/blog.php?post=2210227130>

Facebook. (2007, July 10). *The Facebook Blog: Thirty Million on Facebook.* Retrieved from

<https://blog.facebook.com/blog.php?post=2557152130>.

Facebook. (2008, August 26). *The Facebook Blog: Our First 100 Million.* Retrieved from

<https://blog.facebook.com/blog.php?post=28111272130>

Facebook. (2010, July 21). *The Facebook Blog: 500 Million Stories.* Retrieved from

<https://blog.facebook.com/blog.php?post=409753352130>

Facebook. (2012a) *Statement of Rights and Responsibilities.* Retrieved from

<https://www.facebook.com/legal/terms>.

Facebook. (2012b). *Facebook Help Center: I have two Facebook Pages for the same thing. Can*

I merge them?. Retrieved from <https://www.facebook.com/help/?faq=249601088403018>

Facebook. (2012c). *Facebook Page Insights: Product Guide for Facebook Page Owners.*

Retrieved from <http://ads.ak.facebook.com/ads/creative/insights/page-insights-guide.pdf>

Facebook. (2012d). *Newsroom - Key Facts.* Retrieved from

<http://newsroom.fb.com/content/default.aspx?NewsAreaId=22>

Facebook. (2012e). *Page Publishing Best Practices.* Retrieved from

<http://ads.ak.facebook.com/ads/creative/Page-Publishing-Best-Practices-FS-2.pdf>

Facebook. (2012f). *Products - Facebook Newsroom: Pages.* Retrieved from

<http://newsroom.fb.com/content/default.aspx?NewsAreaId=19>

- Federal Aviation Administration. (2010). *Report to Congress: National Plan of Integrated Airport Systems 2011-2015*. Retrieved from http://www.faa.gov/airports/planning_capacity/npias/reports/media/2011/npias_2011_narrative.pdf
- Federal Aviation Administration. (2012). *Airport Categories: Definition of Airport Categories*. Retrieved from http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/categories/
- Flickr. (2012). About. Retrieved from <http://www.flickr.com/about/>
- Foursquare. (2012). About. Retrieved from <https://foursquare.com/about/>
- Google. (2012). Learn more about google plus. Retrieved from <http://www.google.com/+learnmore/>
- Haesung, L., & Joonhee, K. (2008). Personalized RSS Search Service Using RSS Characteristics and User Context. *International Multiconference Of Engineers & Computer Scientists 2008*, 761-765.
- Hrdinová, J., N. Helbig, & C.S. Peters. (2010). *Designing Social Media Policy for Governments: Eight Essential Elements*. Center for Technology in Government, University at Albany SUNY, Albany, N.Y., : 21 pp.
- Khan, A. (2011). Google Launches Business Pages. *SocialTimes*. Retrieved from http://socialtimes.com/google-launches-business-pages_b83409
- LinkedIn. (2012). Learning center. Retrieved from <http://learn.linkedin.com/>
- Lunden, I. (2012). *Twitter May Have 500M+ Users But Only 170M are Active*. Tech Crunch. Retrieved from <http://techcrunch.com/2012/07/31/twitter-may-have-500m-users-but-only-170m-are-active-75-on-twiters-own-clients/>

- Mashable. (2012). Klout. Retrieved from <http://mashable.com/follow/topics/klout/>
- Mergel, I. (2010). Gov 2.0 Revisited: Social Media Strategies in the Public Sector. *PA Times*, 33(3), 7.
- Schaefer, M. (2012, May 8). 10 things you didn't know about klout. Retrieved from <http://mashable.com/2012/05/08/klout-joe-fernandez-business/>
- National Association of State Chief Information Officers. (2010). *A National Survey of Social Media Use in State Government: Friends, Followers, and Feeds*. Retrieved from <http://www.nascio.org/publications/documents/NASCIO-SocialMedia.pdf>
- Noel, J. (2012). *Tweets vs. Phone Calls*. The Chicago Tribune. Retrieved from http://articles.chicagotribune.com/2012-05-22/travel/sc-trav-0522-travel-mechanic-20120522_1_twitter-feed-social-media-twitter-coverage
- Obama, B. (2011). Executive Order 13571--Streamlining Service Delivery and Improving Customer Service. *Daily Compilation Of Presidential Documents*, 1.
- Obama, B. (2012). Memorandum on Building a 21st Century Digital Government. *Daily Compilation Of Presidential Documents*, 1.
- Ostrow, A. (2011). *Facebook Now Has 800 Million Users*. Mashable. Retrieved from <http://mashable.com/2011/09/22/facebook-800-million-users/>
- Pew Research Center. (2011). *Why Americans Use Social Media*. Pew Research Center's Internet and American Life Project. Retrieved from <http://pewinternet.org/Reports/2011/Why-Americans-Use-Social-Media.aspx>
- Pew Research Center. (2012). *Demographics of Internet Users*. Pew Research Center's Internet and American Life Project. Retrieved from <http://www.pewinternet.org/Static-Pages/Trend-Data-%28Adults%29/Whos-Online.aspx>

Rose, N. (2011). *Navigating The Airport of Tomorrow*. Travel Tech Consulting Inc., Belmont, Ca.

Rosen, E. (2005). *Student's Start-Up Draws Attention and \$13 Million*. The New York Times.

Retrieved from

http://www.nytimes.com/2005/05/26/business/26sbiz.html?_r=2&scp=1&sq=thefacebook+parker&st=nyt. Accessed July 2, 2012.

Shirky, C. (2009). *How Social Media Can Make History*.

http://www.ted.com/talks/clay_shirky_how_cellphones_twitter_facebook_can_make_history.html

Skaugen, K. (2011). High Order Bit. *Intel Web 2.0 Summit 2011*. Retrieved from

<http://www.youtube.com/watch?v=vWub4zcTyfs>

Snyder, B. (2010). *Charleston Yeager Airport Expertly Uses Social Media During Recent*

Aircraft Incident. CBS News. Retrieved from http://www.cbsnews.com/8301-505123_162-43641438/charleston-yeager-airport-expertly-uses-social-media-during-recent-aircraft-incident/

Social Media. (2012). In *Merriam-Webster Online Dictionary*. Retrieved from

<http://www.merriam-webster.com/dictionary/social%20media>

Société Internationale de Télécommunications Aéronautiques. (2011). *Airport IT Trends Survey*

2011. Retrieved from <http://www.sita.aero/content/airport-it-trends-survey-2011>

Twitter. (2012a). *About*. Retrieved from <https://twitter.com/about/>

Twitter. (2012b). *Twitter for Small Business*. Retrieved from

https://business.twitter.com/smallbiz_guide/?ref=tw-btc-smallbiz

Ugander, K., Karrer, B., Backstrom, L., & Marlow, C. (2011). *The Anatomy of the Facebook Social Graph*. Cornell University. Retrieved from <http://arxiv.org/abs/1111.4503>

United States Census Bureau. (2012). *World Population Clock*. United States Department of Commerce. Retrieved from <http://www.census.gov/population/popclockworld.html>

United States Securities and Exchange Commission. (2012). *Form S-1 Registration Statement: Facebook, Inc.* Retrieved from

<http://sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm>

University of Texas at Austin. (2011). *Response Rates*. Retrieved from

<http://www.utexas.edu/academic/ctl/assessment/iar/teaching/gather/method/survey-Response.php?task=research>

Woodrow, M. (2012, January 25). 9 tips for integrating social media on your website. Retrieved from <http://www.socialmediaexaminer.com/9-tips-for-integrating-social-media-on-your-website/>

YouTube. (2012a). About YouTube. Retrieved from http://www.youtube.com/t/about_youtube

YouTube. (2012b). *Pressroom: Statistics*. Retrieved from

http://www.youtube.com/t/press_statistics/

APPENDICES

APPENDIX A – DATA ELEMENTS DEFINED

Data elements:

- i. Airport State
 - a. State the airport resides in
- ii. Airport City
 - a. City associated with the airport
- iii. Airport Name
 - a. Official name of the airport
- iv. Airport ID
 - a. Unique identifier for the airport
- v. NPIAS Number
 - a. Number the airport is associated with in the NPIAS (Federal Aviation Administration, 2010)
- vi. Ownership
 - a. PU Public
 - b. PR Private
 - c. M Military
 - d. NA Native American
- vii. Hub Type
 - a. The term “hub” is used by FAA to identify very busy commercial service airports as measured by passenger enplanements. Primary commercial service airports are grouped into four categories. Large hubs are those airports that each account for at least one percent of total U.S. passenger enplanements; medium hubs for

between 0.25 percent and one percent, small hubs for between 0.05 percent and 0.25 percent, and non-hubs for less than 0.05 percent of all enplanements, but more than 10,000 annual enplanements (Federal Aviation Administration, 2010).

- i. L Large Hub
- ii. M Medium Hub
- iii. S Small Hub
- iv. N Non-Hub

viii. Service Level

- a. One of the four basic airport service levels defined by the NPIAS (Federal Aviation Administration, 2010):

- i. P Commercial Service – Primary
- ii. CS Commercial Service – Non Primary
- iii. R Reliever Airport
- iv. GA General Aviation Airport

ix. Current Aircraft Enplaned

- a. The number of revenue passengers forecast to board aircraft at the airport during the fifth year of the 5-year planning period (Federal Aviation Administration, 2010).

x. Current Based Aircraft

- a. The number of locally owned aircraft hangared or based at the airport. Included in these counts are single-engine; multi-engine; jets; and helicopters as reported by the airport and verified by the N number registry. Not included in these totals

are: military aircraft; ultra-lights, gliders, and balloons (Federal Aviation Administration, 2010).

xi. 2011-2015 Development Cost

- a. The estimated 5-year costs for airport improvements that are eligible for Federal development grants under the Airport Improvement Program. The costs identified are for development only; approximately \$775 million in planning costs are excluded from the development estimates. Planning costs have increased 137 percent from the last report (\$448 million) (Federal Aviation Administration, 2010).

xii. Facebook

- a. Founded in 2004, Facebook's mission as a social media service is to make the world more open and connected. Facebook simplifies the process of human exchange. People use Facebook to stay connected with friends and family, to discover what's going on in the world, and to share and express what matters to them (Facebook, 2012d).

If the airports webpage did not link directly to Facebook, Google Search as well as Facebook search, was utilized to determine if:

- i. No: The airport is not known to participate actively on Facebook.
Airports may currently exist as a community page, place, or group but the owner/operator has not claimed the page
- ii. Yes: The airport has an official and dedicated page, place, group, or profile

xiii. Twitter

- a. Twitter is a real-time information network social media service that connects you to the latest stories, ideas, opinions and news about what you find interesting. Twitter revolves around microblogs of information called Tweets. Feeding from Short Message Service (SMS) texts, which were made popular by cellular devices, a single Tweet is no more than 140 characters. In addition a recent update to the service allows users to see photos, videos and conversations directly in Tweets to get the whole story at a glance, and all in one place (Twitter, 2012a).

Twitter connects businesses and organizations to customers and/or users in real time. Twitter is used to quickly share information with people interested in their products and services, gather real-time market intelligence and feedback, and build relationships with customers, partners and influencers. From strengthening a brand, to customer service, and also to direct sales, Twitter offers businesses and organizations an easy way to reach multiple audiences (Twitter, 2012a).

If the airports website did not link directly to Twitter, Google Search as well as Twitter search, was used to determine:

- i. No: The airport has no known official twitter account. Phantom accounts, which are those who use an airports name but have no association with the owner/operator were not included
- ii. Yes: The airport has an official twitter account

xiv. Flickr

- a. Flickr, a social media service by Yahoo, is an online photo management and sharing application with two primary goals: Helping people make their photos

available to the people who matter to them; and, enable new ways of organizing photos and video (Flickr, 2012).

If the airports website did not link directly to Flickr, Google Search as well as Flickr search, was used to determine:

- i. No: The airport has no known Flickr account. Even if the airport appeared in photos created by unique members, they were not counted for this study
- ii. Yes: The airport has a Flickr account either as a group or person (organization)

xv. LinkedIn

- a. LinkedIn is a social media service geared toward professional networking for both individuals and organizations. The service works as a digital rolodex in which individuals can make connections with those they choose to on a professional level. In addition organizations, or companies, can post updates, services offered, jobs, as well as search for potential candidates (LinkedIn, 2012).

If the airports website did not link directly to LinkedIn, Google Search as well as LinkedIn search, was used to determine:

- i. No: The airport has no known LinkedIn company profile. Even if the airport is listed as an employer of unique users, they were not counted for this study
- ii. Yes: The airport has a company profile on LinkedIn

xvi. Foursquare

- a. Foursquare is a location based social media service that enables users “check in” to venues they are currently at. By checking in users have the ability to see where their nearby friends are, discover what businesses and/or attractions are nearby and their pertinent information, and finally save money and unlock special deals. Foursquare provides these organizations like airports with tools to engage with your customers and fans. In addition organizations, like airports, have the ability to create special deals for unique users that check in (Foursquare, 2012).

If the airports website did not link directly to the foursquare location, Google Search as well as foursquare search, was used to determine:

- i. No: The airport may have a foursquare location, but has not claimed it, and thus was not included in this study
- ii. Yes: The airport has claimed their location on foursquare

xvii. YouTube

- a. Founded in February 2005, YouTube allows users to discover, watch and share originally-created and various other videos. YouTube provides a forum, utilizing a traditional commenting system, for people to connect, inform, and inspire others across the globe and acts as a distribution platform for original content creators and advertisers large and small. Organizations and businesses can utilize YouTube to upload their unique videos and easily distribute them across multiple channels, including other social media platforms, throughout the internet (YouTube, 2012a).

If the airports website did not link directly to YouTube, Google Search as well as YouTube search, was used to determine:

- i. No: The airport has no known official channel, even if they're name is associated with numerous videos from unique users
- ii. Yes: The airport has an official channel

xviii. RSS

- a. Really Simple Syndication (RSS) is a feed of updates from blogs, headlines, traditional website content, audio, and or video in a standardized and simple format. In essence it breaks away the clutter from traditional updates, such as advertising, formatting, and graphic page design into simply the content or post being updated. This simplified format can easily be distributed across multiple platforms by the publisher. In addition RSS feed readers are used by individuals, called subscribers, that want this information deciphered and automatically sent to them in a timely and simple format.

A search was completed visually and internally of the website to determine:

- i. No: The airport website does not use, or properly link, its RSS feed.
- ii. Yes: The airport website does support RSS and properly displays its link

xix. Blog

- a. A web log that contains an online journal with reflections, comments, which are typically in chronological order, and often hyperlinked. Organizations like airports use this format of content updating to make for a more interactive news channel, rather than the traditional scripted press release, and also as a mode to distribute original content (Blog, 2012).

If the airports website did not contain or link directly to a blog, Google Search was used to determine:

- i. No: The airport has no known blog
- ii. Yes: The airport has a blog

xx. Google+

- a. Google+ is a social networking service that is maintained and operated by Google Inc. Relatively new, becoming available for everyone 18 years of age or older on September 20, 2011, Google+ has struggled to maintain relevance among its greatest competitor and most similar service, Facebook. As of November 7, 2011, Brands and organizations such as airports can now create pages which allow connectivity to users similar to Facebook pages (Google, 2012).

If the airports website did not contain a direct link to their Google+ page, Google+ search, and the traditional Google search, was used to determine:

- i. No: The airport has no known page on Google+
- ii. Yes: The airport has a page on Google+

xxi. Main Website

- a. Organizations, especially airports, this day in age almost unanimously have some level of presence on the internet which usually comes in the form of a dedicated website with a unique domain identifier. Depending on the owner/operator of the airport, for instance a county government or port authority, some airports will not have their own dedicated page but content on the owner/operator website. Google Search of the official airport name, and similar forms of identification, was utilized to determine if:

- i. No: The airport does not have a webpage or any associated content on the owner or operators website
- ii. Yes: The airport has a website with a unique domain specifically dedicated for the airport
- iii. Other: The airport has relevant content on the owner/operator of the airport dedicated for the airport

xxii. Linked with Main Website

- a. Visible Social Media Buttons act as direct links to a brand or organizations social media pages and accounts. These buttons act direct normal website traffic to accounts and can result in additional engagement. Typically these buttons are displayed on the top, bottom, or along the side of a brand or organizations home page (Woodrow, 2012).

A visual search of the airport website was used to determine if:

- i. Not Applicable: The airport has no known social media presence and thus social media buttons are not necessary
- ii. No: Although the airport is engaged in social media they do not use social media buttons
- iii. Yes Social Media Buttons are present on the airports Website

xxiii. Social Page or Tab

- a. Several brands, organizations, and airports have a specific page or tab, associated with their website where all social media content is solely available. Although the

success of such strategy cannot be actualized, it is thought to provide a unique experience for users.

A visual search of the airport website was used to determine if:

- i. Not Applicable: The airport has no known social media presence and thus social tabs or pages are not necessary
- ii. No: Although the airport is engaged in social media they do not use social tabs or a page
- iii. Yes The airport does use a social media tab or page

xxiv. Mobile Site

- a. Mobile devices with internet capabilities are becoming increasingly popular throughout the world. The traditional webpage viewed on a mobile device is both heavy on data usage and is highly impractical in terms of ease of use. For this reason, mobile versions of traditional websites and associated content have been created. A mobile site provides only pertinent content through a simple user interface that is optimized for small mobile devices. This lessens data usage and makes the content extremely easy to navigate.

A mobile site should be differentiated from a mobile application. Mobile applications, commonly referred to as apps, provide far more content with advanced user interfaces. Although some airports have created specific applications for their airport it is believed that many third party developers have already created such applications, so why then recreate the wheel; especially on taxpayer dollars. In addition travelers at an airport are only there for a short while

and then the application becomes irrelevant. For this reason this study did not collect any relative data regarding mobile applications.

To determine if an airports website included a mobile site, as search on a mobile device was conducted of the airport's main webpage to see if the mobile site automatically redirected a given user to their mobile page. In several cases, airports had mobile sites but were only accessible through a link provided on the traditional page. In these instances, these airports were not included in having a mobile site because of the difficulty to access. These parameters were used to determine:

- i. No: The Airport does not have a known mobile website, or the page was not automatically generated
- ii. Yes: The airport does have a mobile website and is automatically directed to the user when trying to access the traditional website

xxv. Facebook Details: Account Type

- a. Facebook throughout its evolution, starting originally with only personal profiles, has added additional ways for individuals and organizations to claim their presence on the social site. The chief account types that users and individuals can claim and/or manage are Pages, which are for organizations, Places, also for organizations which allow individuals to check in via location based services, and finally the traditional personal account. It should be noted that any organization or airport using a Profile, instead of a Page, Place, Person, or Group, is violating Facebook Terms and Conditions (Facebook, 2012a).

Upon discovering the official airport Facebook presence, a review of content and layout was used to determine if the airport utilized:

- i. Not Applicable: The airport has no known official presence
- ii. Page: The airport utilizes Pages
- iii. Place: The airport utilizes Places
- iv. Person: The airport utilizes a Personal Profile

xxvi. Facebook Details: “Like” This

- a. The Facebook “Like” function was introduced in February 2009 enabling people to connect with the things they care about both on and off Facebook. From simply connecting with another individual’s or organization’s status updates, to showing your full support of a Facebook page for everyone to see, the “Like” button continues to grow and spread across multiple modes of media. The “Like” button works by letting a user share your content with friends on Facebook. When the user clicks the Like button on your site, a story appears in that user's friends' News Feed with a link back to your website or Facebook Page. This allows the potential for someone being liked to multiply its reach. Once individuals like a page they will receive updates concerning that individual or organization. A Facebook page displays Total Likes as a metric to show how popular a particular page is (Facebook, 2012f).

Upon discovering the official airport Facebook presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Facebook
- ii. Numerical Value: Total number of likes

xxvii. Facebook Details: “Check Ins”

- a. Facebook Places was introduced by Facebook in 2010 as a location based service which allows individuals to post where they’ve been, where they’re headed, and where they are currently. Organizations like airports can create a places profile to allow people to check into their venue (Facebook, 2012f).

Upon discovering the official airport Facebook presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Facebook
- ii. Numerical Value: Total number of check ins

xxviii. Facebook Details: “Likes”

- a. Just as individuals can like organizations, Facebook allows brands and company pages the option to “Like” other organizations with pages they want to connect with.

Upon discovering the official airport Facebook presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Facebook
- ii. Numerical Value: Total number of pages the airport has liked

xxix. Facebook Details: “Talking About This”

- a. Facebook has taken upon itself to provide metrics so that organizations like airports may begin to quantify the effect of their usage on Facebook. The “Talking About This” metric refers to the number of unique people who have created a story about a given Page in the last 7 days. Stories can be created by: liking a page; posting to a page’s wall; liking, commenting, or sharing a page

post; answering a question posted; RSVPing to a page event; mentioning a page in a post, tagging a page in a photo; or checking in at a place. This metric coupled with Total Likes, which is visible to anyone visiting the page, can be used to understand how popular, active and engaging the page is (Facebook, 2011c).

Upon discovering the official airport Facebook presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Facebook
- ii. Numerical Value: Total number of People Talking About This

xxx. Twitter Details: “Tweets”

- a. A tweet is a text-based post, up to 140 characters long, used for updates and timely information by individuals and organizations on the social networking service twitter (Twitter, 2012a).

Upon discovering the official airport Twitter presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Twitter
- ii. Numerical Value: Total number of Tweets

xxxi. Twitter Details: “Following”

- a. The social networking service Twitter allows individuals and organizations to follow and receive tweets from other individuals and organizations on their timeline. The timeline is a feed of all accounts a user is subscribed to (Twitter, 2012a).

Upon discovering the official airport Twitter presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Twitter
- ii. Numerical Value Total number of individuals and organizations the airport follows

xxxii. Twitter Details: “ Followers”

- a. Followers on Twitter make up the users who have subscribed to your messages by following your account. These individuals receive every single tweet in their timeline (Twitter, 2012a).

Upon discovering the official airport Twitter presence, a review of content and layout was used to determine:

- i. Not Applicable: The airport has no known presence on Twitter
- ii. Numerical Value Total number of users that follow the airport and receive tweets

xxxiii. YouTube Details: Total Video Views

- a. This measurement located on YouTube Member Channels identifies the total Video Views a certain channel has across all uploaded videos.

Upon discovering the official airport YouTube presence, a review of the channel profile was used to determine:

- i. Not Applicable: The airport has no known presence on YouTube
- ii. Numerical Value Total number of Video Views across all uploaded videos uploaded by the account

xxxiv. YouTube Details: Videos

- a. This number found on a YouTube member's channel represents the total amount of videos uploaded by that unique member.

Upon discovering the official airport YouTube presence, a review of the channel profile was used to determine:

- i. Not Applicable: The airport has no known presence on YouTube
- ii. Numerical Value Total number of uploaded video by account

xxxv. YouTube Details: Subscribers

- a. Individuals on YouTube can subscribe, receiving notices of new content and changes, to member channels.

Upon discovering the official airport YouTube presence, a review of the channel profile was used to determine:

- i. Not Applicable: The airport has no known presence on YouTube
- ii. Numerical Value Total number of subscribers to a unique account

xxxvi. Foursquare Details: Total People

- a. Foursquare captures several different types of data. The Total People element describes the total amount of unique individuals who has ever checked into a particular venue.

Upon discovering an airport Foursquare page that was claimed, a review of the venue profile was used to determine:

- i. Not Applicable: The airport venue may be on Foursquare but the owner operator is not known to actively manage and monitor the account

ii. Numerical Value: Total number of unique individuals to ever check in

xxxvii. Foursquare Details: Total Check-Ins

- a. Foursquare in addition to tracking the total unique individuals to ever check into a particular venue also tracks the total check-ins to ever occur at a venue. This differs from Total People in that a single user may check into an establishment multiple times.

Upon discovering an airport Foursquare page that was claimed, a review of the venue profile was used to determine:

i. Not Applicable: The airport venue may be on Foursquare but the owner operator is not known to actively manage and monitor the account

ii. Numerical Value: Total number of check ins for a venue

xxxviii. LinkedIn Details: Followers:

- a. LinkedIn allows their users to follow companies who participate on the network. These individuals will receive timely updates whenever a company creates new content such as job postings, updates, edits to information, and products.

Upon discovering an airport with a LinkedIn company profile, a review of the profile was used to determine:

i. Not Applicable: The airport has no known presence on LinkedIn

ii. Numerical Value: The total number of unique followers

xxxix. Klout Score:

- a. Klout provides a unique score feeding from social media analytics that seek to measure influence, on a scale from 1 to 100, online and across multiple social

media platforms. Mashable (2012) states data regarding size of network, content created, and interaction with that content is thrown into an algorithm to create each individual's score.

Currently Twitter users, even if they do not take part in the service, have a unique score created for them. Although the verdict is still out on the service, with many users questioning both the validity and point of such a score, Klout is becoming increasingly popular. For instance, "With tens of billions of hits in a month, Klout has at least 50 times more traffic than its nearest competitor, Peerindex" (Schaefer, 2012).

Many businesses offer "Perks", for instance a half off coupon, to individuals that are influential in specific categories. This is beneficial to the business because they are rewarding individuals who are almost guaranteed to create positive content relative to that business and/or service. It's a way to increase word of mouth advertising using social media.

Although this particular score has yet to be proven to actually measure influence across social media, it is an easily accessible data point which provides some insight in range across users, and thus should at the least be included and explored.

The Klout website was used to determine:

- i. Not Applicable: If an airport does not have a Twitter account, there is not current way to establish a score
- ii. Klout Score: A score from 1 – 100 that seeks to measure online influence based on social media networks

xl. Social Media Policy

- a. This data element describes those airports that have a visible external social media policy displayed in some manner on their social media services. For example airports described as having a social media policy, in this instance, provide information regarding material posted by the public that can and will be removed by the airport, monitoring hours, and various other materials deemed necessary by the owner and operator of the airport.

This element does not capture internal policies, such as owner/operator restraints on use of social media by public employees, or, those policies which may exist but are not easily available and prominent to all users.

- i. Not Applicable: The airport is not known to utilize social media
- ii. No: The airport does not provide an external social media policy
- iii. Yes: On one or all of the social media channels, or on their main website, the airport provides an external social media policy

APPENDIX B – SURVEY INSTRUMENT

This survey is being administered by Clayton Stambaugh, student and graduate assistant at Southern Illinois University Carbondale, in association with the Transportation Research Board (TRB) of the National Academies of Sciences - Airport Cooperative Research Program (ACRP). This survey is a key piece in a larger project researching Social Media and the Nation's Airports Relative to Their Communication and Marketing Strategies. The purpose of this survey research is to identify specific information, not easily accessible to the public, regarding the use of social media at airports. This survey information will be used to develop case studies, best practices, and descriptive statistics among airport industry leaders.

Your airport has been selected as an industry leader in social media based on descriptive statistics, derived from public information, previously collected and analyzed during this project. As such you were selected as a subject for this study.

Your email address was obtained by either previous personal contact, or by public listing on the Airports Website and/or other listing sources. A blind copy format will be used so that the list of recipients will not appear in the header.

Please fill out the attached survey composed of 20 questions. Completion of this survey should take between 25 and 30 minutes. All your responses will be kept confidential within reasonable limits. Only people directly involved with this project will have access to the survey.

If you wish to not participate in this survey and want to remove your name from any future mailings please send a replied response stating "Opt out". Otherwise, if you do not respond to this survey, or return an opt-out message, you will be contacted again with this request 3 times during the next 3 weeks.

Completion and return of this survey indicates voluntary consent to participate in this study. If you wish for your airports information regarding the use of social media to remain confidential, please state this in the comments section so that your confidentiality may remain protected.

For additional information or answers to questions concerning the research please contact either:

Clayton Stambaugh
Graduate Student
Aviation Management and Flight
Southern Illinois University Carbondale
College of Applied Sciences and Arts
1365 Douglas Drive - Mailcode 6623
Carbondale, Illinois 62901
Phone: (309) 221 0076
Email: aviator2@siu.edu

Dr. David A. NewMyer
Chair - Research Advisor
Aviation Management and Flight
Southern Illinois University Carbondale
College of Applied Sciences and Arts
1365 Douglas Drive - Mailcode 6623
Carbondale, Illinois 62901
Phone: (618) 453 8898
Email: dnewmyer@aviation.siu.edu

This project has been reviewed and approved by the SIUC Human Subjects Committee. Questions concerning your rights as a participant in this research may be addressed to the Committee Chairperson, Office of Sponsored Projects Administration, Southern Illinois University, Carbondale, IL 62901-4709. Phone (618) 453 4533. Email siuhsc@siu.edu

Airport Social Media Survey

1. What is your job title?

2. What is the operating entity of the airport? (check one that applies)

- City
 County
 Port District or Authority
 Airport District or Authority
 State
 Other, please specify:

3. Has the operating entity of the airport made it difficult for the airport to begin using social media? (check one that applies)

- Yes
 No

4. What is the perceived benefit of the use of social media at the airport?

5. What primary social media services does the airport take in? (check those that apply)

- Facebook Twitter Flickr LinkedIn Foursquare
 YouTube RSS Blog Google+ Other(s)

6. Please list the top three social media services the airport focuses on:

7. How many years has the airport participated in social media?

8. Was the use of social media at the airport developed internally, externally (meaning consulted), or a mixture of both? (check one that applies)

Internally

Externally

Both

Other, please specify:

9. What are some key elements to the airports social media strategy?

10. Does the airport use social media to inform the public and media on disasters, irregular operations, and/or emergencies? (check one that applies)

Yes

No

11. What department is in charge of social media at the airport?

12. Approximately how many staff members are used to administer social media at the airport?

13. Does the airport assign specific staff to specific social media platforms? (check one that applies)

Yes

No

14. Approximately how much money is spent to administer social media on a yearly basis?

15. Does the airport, or its owner/operator, have a social media policy in place? (check one that applies)

Yes

No

16. If yes, what are a few elements of the said social media policy?

17. In what ways does the airport measure return on investment (ROI) in regard to the use of social media?

18. Are there any negatives to using social media at an airport that you might like to express?

19. Can you provide a recent success story of the airports social media campaign?

20. Please provide any additional comments regarding the use of social media at airports, or this survey in general, that you might want to be considered in this study:

Thank you for taking the time to complete this survey and assisting me in my research.

You can either send this PDF back to me manually or use the button provided below.

Submit by Email

VITA

Graduate School
Southern Illinois University Carbondale

Clayton Lee Stambaugh

Date of Birth: April 19, 1988

1007 Autumn Ridge Rd, Carbondale, Illinois 62902

RR 3 Box 52, Rushville, Illinois 62681

claytonstambaugh@gmail.com

Southern Illinois University Carbondale
Associate of Applied Science, Aviation Flight

Southern Illinois University Carbondale
Bachelor of Science, Aviation Management

Research Paper Title:

Social Media and Primary Commercial Service Airports

Major Professor: Dr. David A. NewMyer