Thanks to HK Poly U for the generous funding and Professor Law for his great support!
Destination Online Competitiveness and Search Engine Marketing

Bing Pan, Ph.D.
Department of Hospitality and Tourism Management, College of Charleston

Zheng Xiang, Ph.D.
School of Merchandising and Hospitality Management, University of North Texas

Daniel R. Fesenmaier, Professor
National Laboratory for Tourism & eCommerce, School of Tourism and Hospitality Management, Temple University

Rob Law, Professor
School of Hospitality and Tourism Management, Hong Kong Polytechnic University

Hong Kong Polytechnic University
July 16, 2009
presentation outline

1. Introduction
2. Background to research
3. Research approach
4. Results of current projects
5. Vision and the future studies
Introduction.

When we were planning this trip to HK...
Many questions - What keywords? For how much? When? Paid or nonpaid? How do you compete?

Google search volume tool

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Volume</th>
<th>Competition</th>
</tr>
</thead>
<tbody>
<tr>
<td>hong kong fire</td>
<td>Not enough data</td>
<td>5,400</td>
</tr>
<tr>
<td>sun hong kong</td>
<td>1,600</td>
<td>5,400</td>
</tr>
<tr>
<td>calling hong kong</td>
<td>2,900</td>
<td>4,400</td>
</tr>
<tr>
<td>hong kong 111</td>
<td>Not enough data</td>
<td>4,400</td>
</tr>
<tr>
<td>repulse bay hong kong</td>
<td>1,000</td>
<td>4,400</td>
</tr>
<tr>
<td>hong kong gardens</td>
<td>1,300</td>
<td>3,600</td>
</tr>
<tr>
<td>hong kong phone number</td>
<td>1,800</td>
<td>3,600</td>
</tr>
<tr>
<td>little hong kong</td>
<td>Not enough data</td>
<td>3,600</td>
</tr>
<tr>
<td>work in hong kong</td>
<td>800</td>
<td>3,600</td>
</tr>
<tr>
<td>852 hong kong</td>
<td>Not enough data</td>
<td>2,900</td>
</tr>
<tr>
<td>dial hong kong</td>
<td>800</td>
<td>2,400</td>
</tr>
<tr>
<td>hong kong 97</td>
<td>1,000</td>
<td>2,400</td>
</tr>
<tr>
<td>hong kong a country</td>
<td>Not enough data</td>
<td>1,900</td>
</tr>
<tr>
<td>hong kong hotel reservation</td>
<td>1,900</td>
<td>1,900</td>
</tr>
<tr>
<td>language in hong kong</td>
<td>Not enough data</td>
<td>1,900</td>
</tr>
<tr>
<td>life in hong kong</td>
<td>400</td>
<td>1,900</td>
</tr>
<tr>
<td>visiting hong kong</td>
<td>880</td>
<td>1,900</td>
</tr>
</tbody>
</table>
Introduction.
The use of the Internet and Search

• In 2006, 55% of online US adults (49 million) who engage in personal travel use search engines to expand their “consideration set” of travel suppliers (Prophis-Research, 2007).

• More than two-thirds of U.S. consumers used search engines as the primary information sources for their summer vacation planning (eMarketer, 2008).

• Advertisers in North America spent US$9.4 billion on search engines, indicating a 62% increase from 2005 and 750% increase from 2002 (Elliot, 2006).
Search engine marketing (SEM) is to improve Website ranking and visibility in search engines through a number of techniques, e.g., search engine optimization, directory listing, and search engine advertising (Moran & Hunt, 2005).
Search engines are the “gateway” to access the online tourism world (Xiang, Wöber, & Fesenmaier, 2008).

Use of search engine can have significant impact on travelers’ impression, perception, and overall evaluation of a DMO website (Kim & Fesenmaier, 2008).

Ranking of search results is widely recognized as the most important factor that impacts user behavior (Pan et al., 2007; Henzinger, 2007; Spink & Jansen, 2004).

DMOs are investing considerably in search engine marketing (SEM) with the aim to improve their online visibility (Google, 2006; Sherman, 2007; TIA, 2008).
Background.

The online search process

- Begin Online Travel Planning
- Online Channel Selection
- Search Engine
- Word(s)
- Search Results
- Selection of search results
- Website Impression
- Website Elaboration
- External Website
- Learning
- Attitude
- Behavior

- Travel Agency
- Travel Mag.
- Virtual Comm.
- Travel Co.
A three stage process model

Stage 1: Search
- Input Search Term
- Return List of Results

Stage 2: Primacy
- Select Webpage
- Form First Impression

Stage 3: Elaboration
- Search within Website
- Learn about destination
Background.

Evolving uses, users and applications: Web 2.0
Background.
The Search Triad

- Search Engine
- Online Tourism Domain
- Information Searchers

Arrows indicate the flow of interaction between the components of the search triad.
1. How do travelers use the Internet and search engines?

2. What keywords do travelers use when searching for destinations?

3. How does the tourism industry compete?

4. How do we measure and benchmark visibility of destinations on search engines?
1. National surveys on the usage of the Internet and the search engines
2. Travelers search for cities in the U.S.
3. Assessing the competitiveness of DMOs in online environment
4. The size of the tourism domain
5. The dynamics of search engines results rankings
Study 1a.
National survey on the use of the Internet for travel planning

Approach/methods:
• 4,337 American adults - Online panel from SSI
• Conducted – January, 2009 - On-going study with TIA

Goal of Survey:
Document use of the Internet by American travelers

Survey:
• 45 Questions
• Range from use of technology, information search, types of website activities, booking, impact of behavior, SES
Study 1a.
National survey the use of the Internet for travel planning

Focus on American travelers that use the Internet

- Approx. 80% used the Internet to plan travel
- Primary Info. Sources: Internet -73%, Prior exp. - 52%, WOM - 45%
- Types of websites: Online travel – 61%, company sites – 58%, search engines 59%, destination sites – 40%
- Search: Info. about place – 73%, airline - 65%, hotel - 68%
- Primary facets of travel: routes to take, where to stay, attractions to visit
- Impact of internet: Increase # of places considered, # of info. sources used, sharing of experiences
- Impact of internet: Decrease likelihood of calling travel agency/airline, making hotel reservation, calling car rental agency
Study 1b.
National survey on the use of search engines

Approach/methods:

• 2,7227 American adults - Online panel from SSI
• Conducted – January, 2009 - On-going study with TIA

Goal of Survey:

Document use of the Internet by American travelers

Survey:

• 45 Questions
• Range from use of technology, information search, types of search activities, booking, search strategies, trust in search results, link to travel planning activities, SES
Study 1b.
National survey on the use of search engines

Focus on American travelers that use the Internet

- Approx. 86% used at least one search engine to plan travel
- Google – 72%, Yahoo! 43.8%
- Approx. 45% used a travel-specific search engine: Travel Yahoo, Sidestep
- Primary uses: Maps and/or directions, Info. about a destination, hotel prices or places to stay
- Search strategy: General idea of what to look for – 59%; Name (all or part) of a destination – 55%
- # of search results: First 3 search results – 26%; 1st page 20%; 1st 2 pages 18%
- 86% some/extremely satisfied with results
- 40% believe SE provide fair and unbiased results
Study 2: Search queries on cities

• Goal:
  – to identify demand of tourism in search engines

• Methods:
  – Selection of 18 US destinations with diverse geographic locations, including 6 large cities, 6 mid-size cities, and 6 small cities based upon 2002 census population.
  – Identify search queries relate to the 18 cities using Google Adwords Keywords Tool
## Results (1).

### Volumes of search on cities

<table>
<thead>
<tr>
<th>City</th>
<th>Monthly Search Volume</th>
<th>Travel related query only</th>
<th>Potential travel related query</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Monthly Search Volume</td>
<td>Travel related query only</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Las Vegas</td>
<td>72599890</td>
<td>27287690</td>
<td>37.60%</td>
</tr>
<tr>
<td>Chicago</td>
<td>57985600</td>
<td>3604830</td>
<td>6.20%</td>
</tr>
<tr>
<td>Orlando</td>
<td>38751200</td>
<td>11121000</td>
<td>28.70%</td>
</tr>
<tr>
<td>Dallas</td>
<td>38447200</td>
<td>3818000</td>
<td>9.90%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>30698690</td>
<td>5937090</td>
<td>19.30%</td>
</tr>
<tr>
<td>Baltimore</td>
<td>17339530</td>
<td>2020090</td>
<td>11.70%</td>
</tr>
<tr>
<td>Indianapolis</td>
<td>14642010</td>
<td>1904129</td>
<td>13.00%</td>
</tr>
<tr>
<td>San Jose</td>
<td>14445160</td>
<td>2003740</td>
<td>13.90%</td>
</tr>
<tr>
<td>New York City</td>
<td>12609380</td>
<td>3976580</td>
<td>31.50%</td>
</tr>
<tr>
<td>Memphis</td>
<td>11993010</td>
<td>1426540</td>
<td>11.90%</td>
</tr>
<tr>
<td>Myrtle Beach</td>
<td>10994330</td>
<td>3604830</td>
<td>32.80%</td>
</tr>
<tr>
<td>Fort Worth</td>
<td>9055420</td>
<td>1079110</td>
<td>11.90%</td>
</tr>
<tr>
<td>Champaign</td>
<td>4345390</td>
<td>553259</td>
<td>12.70%</td>
</tr>
<tr>
<td>Bradenton</td>
<td>2372786</td>
<td>337401</td>
<td>14.20%</td>
</tr>
<tr>
<td>Champaign</td>
<td>2184390</td>
<td>65230</td>
<td>3.00%</td>
</tr>
<tr>
<td>Pueblo</td>
<td>2094690</td>
<td>357480</td>
<td>17.10%</td>
</tr>
<tr>
<td>Aiken</td>
<td>1884492</td>
<td>208549</td>
<td>11.10%</td>
</tr>
<tr>
<td>Americus</td>
<td>218750</td>
<td>20560</td>
<td>9.40%</td>
</tr>
<tr>
<td><strong>Total/average</strong></td>
<td><strong>342,661,918</strong></td>
<td><strong>69,326,108</strong></td>
<td><strong>20.20%</strong></td>
</tr>
</tbody>
</table>
Results (2).
Distribution of volume of search queries on cities

K1, 58.9%
K2, 68.4%
K3, 74.9%
K4, 78.9%
K5, 81.7%
K6, 83.7%
### Results (3).

**Distribution of potential travel-related search queries**

<table>
<thead>
<tr>
<th>Type of query</th>
<th>Search volume</th>
<th>Percentage</th>
<th>Cumulative percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>City name</td>
<td>207732900</td>
<td>67.6%</td>
<td>67.6%</td>
</tr>
<tr>
<td>City name with state name</td>
<td>47683784</td>
<td>15.5%</td>
<td>83.1%</td>
</tr>
<tr>
<td>Hotel/hotels/Accom.</td>
<td>27836419</td>
<td>9.1%</td>
<td>92.1%</td>
</tr>
<tr>
<td>Attraction</td>
<td>7339412</td>
<td>2.4%</td>
<td>94.5%</td>
</tr>
<tr>
<td>Deal</td>
<td>3596210</td>
<td>1.2%</td>
<td>95.7%</td>
</tr>
<tr>
<td>Transportation</td>
<td>3183430</td>
<td>1.0%</td>
<td>96.7%</td>
</tr>
<tr>
<td>Restaurant</td>
<td>1824460</td>
<td>0.6%</td>
<td>97.3%</td>
</tr>
<tr>
<td>Activity</td>
<td>1816555</td>
<td>0.6%</td>
<td>97.9%</td>
</tr>
<tr>
<td>Entertainment</td>
<td>843019</td>
<td>0.3%</td>
<td>98.2%</td>
</tr>
<tr>
<td>Rental</td>
<td>813080</td>
<td>0.3%</td>
<td>98.4%</td>
</tr>
<tr>
<td>Event</td>
<td>806811</td>
<td>0.3%</td>
<td>98.7%</td>
</tr>
<tr>
<td>Map</td>
<td>683197</td>
<td>0.2%</td>
<td>99.2%</td>
</tr>
<tr>
<td>Dining</td>
<td>610519</td>
<td>0.2%</td>
<td>99.4%</td>
</tr>
<tr>
<td>Travel info</td>
<td>468800</td>
<td>0.2%</td>
<td>99.5%</td>
</tr>
<tr>
<td>Shopping</td>
<td>394643</td>
<td>0.1%</td>
<td>99.7%</td>
</tr>
<tr>
<td>Convention</td>
<td>291740</td>
<td>0.1%</td>
<td>99.8%</td>
</tr>
<tr>
<td>Ticket</td>
<td>233440</td>
<td>0.1%</td>
<td>99.8%</td>
</tr>
<tr>
<td>Photos</td>
<td>142816</td>
<td>0.0%</td>
<td>99.9%</td>
</tr>
<tr>
<td>Culture</td>
<td>126070</td>
<td>0.0%</td>
<td>99.9%</td>
</tr>
<tr>
<td>Review</td>
<td>122500</td>
<td>0.0%</td>
<td>99.9%</td>
</tr>
</tbody>
</table>
Study 2.
Conclusions

• Search volumes are huge
• Travel queries represent a considerable amount (approx. 20%), reflecting the “touristic level” of individual cities.
• A handful of keywords represent the majority of searches on cities.
• This indicates the main areas of search from a consumer standpoint.
Study 3.
Assessing Competitiveness of American DMOs

• Goals:
  – To develop a process to assess the visibility of DMO Websites in Google.
  – To benchmark the visibility of DMO Websites of a set of US cities in Google, i.e., how do these destinations compare with each other?
  – To offer insights into SEM as a strategy for DMOs.

• Methods:
  – Extract search results by crawling Google based upon queries identified in Study 2.
  – Analyze /benchmark visibility of DMO Websites of these 18 cities based on the Google search results
Results (1). Visibility of DMO Websites related to type of search queries (First 3 pages)
Results (2).
DMO Website occurrences in Google SERPs
Results (3). DMO Website occurrences weighted by search volume (impressions)
Overall, some DMOs are relatively effective for being “seen” by Google as the portal to destination related information.

However, variations exist among destinations possibly due to the competitiveness in the domain as well as DMOs’ marketing efforts.

It seems there are discrepancies between DMO Website occurrences and search volume for the same query categories, indicating DMOs may need to re-think the areas of their SEM investment.
Focus: Charleston, S. Carolina

- Custom-built computer program
- Query Google twice a day
- Five queries, 433 days
- Computer glitches
<table>
<thead>
<tr>
<th>Query</th>
<th>Starting Time</th>
<th>Ending Time</th>
<th>Total Number of Days</th>
<th>Times per Day</th>
<th>Average Results Captured per Day</th>
<th>Missed Times</th>
</tr>
</thead>
<tbody>
<tr>
<td>charleston sc</td>
<td>January 19, 2008</td>
<td>March 16, 2009</td>
<td>422</td>
<td>2</td>
<td>399</td>
<td>43</td>
</tr>
<tr>
<td>travel charleston</td>
<td>January 19, 2008</td>
<td>March 5, 2009</td>
<td>411</td>
<td>2</td>
<td>282</td>
<td>34</td>
</tr>
<tr>
<td>charleston tourism</td>
<td>January 20, 2008</td>
<td>December 21, 2008</td>
<td>336</td>
<td>3</td>
<td>247</td>
<td>165</td>
</tr>
<tr>
<td>charleston hotels</td>
<td>January 19, 2008</td>
<td>March 8, 2009</td>
<td>414</td>
<td>4</td>
<td>303</td>
<td>326</td>
</tr>
<tr>
<td>charleston</td>
<td>January 19, 2008</td>
<td>March 8, 2009</td>
<td>414</td>
<td>2</td>
<td>261</td>
<td>37</td>
</tr>
</tbody>
</table>
Study 4 Results.
The size of the tourism domain...
Study 4 Results.
The relative sizes of different domains...

<table>
<thead>
<tr>
<th>Statistics</th>
<th>charleston sc</th>
<th>travel charleston</th>
<th>charleston tourism</th>
<th>charleston hotels</th>
<th>charleston restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>422</td>
<td>301</td>
<td>285</td>
<td>340</td>
<td>286</td>
</tr>
<tr>
<td>Mean</td>
<td>8,960</td>
<td>578</td>
<td>243</td>
<td>1,062</td>
<td>361</td>
</tr>
<tr>
<td>Median</td>
<td>10,700</td>
<td>350</td>
<td>198</td>
<td>689</td>
<td>330</td>
</tr>
<tr>
<td>Mode</td>
<td>12,400</td>
<td>348</td>
<td>156</td>
<td>1,070</td>
<td>340</td>
</tr>
</tbody>
</table>

Daily Estimated Number of Results in Google for Five Queries (in Thousands)
Study 5 Results.
Daily drops/adds on the top 100 results on Google...
Study 5 Results.
Changes on the top performers on Google...
Studies 4 and 5.
Conclusions

- Google rankings are very dynamic and changing hourly;
- More competition and faster changes for large tourism domain;
- Many factors influence the rankings: changes of the web pages, Google algorithm updates, Google database glitches, other competitors, and changing user behavior;
- DMOs needs to monitor and track their rankings closely: not only own rankings, but competitors, changing search engine algorithms and updates.
Model Development

- Online search behavior
- Model the dialectic structure
- The size and growth of the online tourism domain
- The dynamics of the rankings
- Assess the competitiveness of DMOs with the tourism domain
- The development of SEVIS: how and why?
Strategy Development

- Roads ahead and positive research
- Advertising strategy
- Longtail strategy
- Dynamic information display on search results
- Index/benchmarking/monitoring/warning
Thank you and questions?