e-Tourism: Impact of New Technologies
Some Insights

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Content

- e-Tourism – some facts
- Situation and trends
- Challenges
e-Tourism – Some Facts

- In Europe approx. 18% of travel/tourism sale online, estimate 33% in 2009 (Marcussen)
- In 2005 US Internet sales were approx. 30% of total travel/tourism market (Phocuswright)
- Europe: 80% of hotels have Website (DG Enterprise, 05)
- Austria: above 90% have website, 63% of hotels support online sales, and 73% online requests (ÖHV, 05)
- Travel and tourism among most important application domains in b2c e-commerce
- IT already important in the past (CRS/GDS in the 60s)
- Travel & Tourism industry sees IT as a strategic issue
- International and national (research & innovation) programs, conferences, journals, ...
- Travel & Tourism – in this context – (can) serve as an enabler for SMEs and other sectors

Travel Information Sources / 2005

Source: Global Market Insite (GMI) Survey of 18,000 consumers globally, June 2005.
Market Development: in Few Years
3 Generations

1996 - 1999

Goal: Establish Online Presence
- Air, Hotel, Car
  - Sites launch
  - Online bookings begin (few)
  - Distressed inventory emails start

1999 - 2003

Goal: Customer Acquisition
- Air
  - Personalization
  - Direct booking “hubs” emerge
- Hotel, Car
  - Launch “next generation” sites
- Cruise, Tour
  - Launch info / service sites

2003 -

Goal: Customer Retention
- Air, Hotel, Car
  - Broker portal tenancy deals
  - Improve customer care
- Cruise, Tour
  - Target specific customer segments

General e-commerce Situation
- General B2C rather evolutionary development
- Differences with respect to sectors (Travel & Tourism)
- Smaller companies show a lag – problems: costs and Know How
- Digital Divide
- Lower entry barriers ease entrance of new players, use(d) this for strategic positioning (Expedia, Travelocity, ..)
- Traditional players with “competitive response”, financial and market position in combination with existing distribution channels – multichannel (TUI, ThomasCook, ..)
- Specific position of destinations as aggregator, constrained by certain rules and organisational modes – representative of all tourism (and related sectors) suppliers
Situation – 2

- Mobile applications – missing business model (focused on telcos) and unknown „acceptance“ patterns
- Decreasing prices – only partly (Walden et al., 2002)
- Disintermediation and re-intermediation
- Immediate imitation of business models and technology
- e-commerce favors, in tendency, users – buyers
  individualization / personal prices, personal recommendation, travel blogs – **Web 2.0**
  from *customer focused* to *customer driven* (sites & products)
- (New) market forms – auctions and comparison/forecast shopping

**And …**

- „Informatization“ of entire value chain
- From e-commerce to e-business – Internet based integration of processes – e-commerce transforms industry
- Set of “new” (relationship) models
- Not only *process reengineering*, but also *network engineering*
- Services become commodities – deconstruction of value chain
- In parallel trend towards *concentration*

- **Web: Evolution of order and disorder**
Challenges

- Users
  - Enabling access everywhere anytime
  - Behavior analysis (including “prediction”) and support of tourist decision process
- Supply side
  - Business model (market position, relations) and planning (e.g., products, prices and marketing [SEO or adverts])
  - Support of dynamic networks in a heterogeneous environment – “intelligent” cooperations, including users and user driven content / services
  - Destinations as cooperative networks
- Markets
  - Market design and analysis – dynamic structures and pricing
  - (Automatic) market research – using the Web as image / mirror of real world

Conclusions

- E-commerce – e-business transforms tourism industry
- IT a strategic issue, and T&T industry is a rich field for applications and research
- Tourism industry may act as enabler / catalyst for other areas
- Integration of research and application as well as industrial innovation – with “permanent” innovation
- Increasing complexity (structures, processes and technology)
- Multidisciplinarity major issue

Digital Divide
### Market situation in Europe

<table>
<thead>
<tr>
<th>March 2005 – European Top Travel websites</th>
<th>Unique visitors (000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Travel Category visitors</td>
<td>87,581</td>
</tr>
<tr>
<td>1. Expedia Travel</td>
<td>19,682</td>
</tr>
<tr>
<td>2. Viamichelin.com</td>
<td>11,291</td>
</tr>
<tr>
<td>3. TUI Group</td>
<td>10,067</td>
</tr>
<tr>
<td>4. Lastminute.com sites</td>
<td>9,052</td>
</tr>
<tr>
<td>5. SNCF</td>
<td>8,454</td>
</tr>
<tr>
<td>6. Trip Network Inc.</td>
<td>7,817</td>
</tr>
<tr>
<td>7. Deutsche Bahn</td>
<td>7,587</td>
</tr>
<tr>
<td>8. Easyjet.com</td>
<td>6,183</td>
</tr>
<tr>
<td>9. Opodo</td>
<td>5,766</td>
</tr>
<tr>
<td>10. Ryanair</td>
<td>5,586</td>
</tr>
<tr>
<td>11. Hotels.com sites</td>
<td>5,528</td>
</tr>
<tr>
<td>12. Ebookers sites</td>
<td>4,063</td>
</tr>
<tr>
<td>13. Travelocity</td>
<td>4,152</td>
</tr>
<tr>
<td>14. Thomas Cook AG</td>
<td>3,922</td>
</tr>
<tr>
<td>15. Yahoo! Travel</td>
<td>2,467</td>
</tr>
</tbody>
</table>

- Seven of 15 top sites in Europe are US owned


### Online travel agency market

**U.S. Online Agency Market Share 2005**

- Expedia Inc., Sabre Holdings, Cendant and Priceline.com 97% of US online travel agency market

**European Online Agency Market Share 2005**

- In Europe, top 4 more than half

Since 2004:
- Travelocity acquired Lastminutes.com
- Cendant bought Ebookers
User Analysis, „Forecast“ and Support

- Analyze behavior of users and build causal models explaining the behavior (Steinbauer, 2006)
- Models based on several fields of research:
  - theories of consumer behavior
  - models of decision making in tourism and
  - theories of e-shopping acceptance
- Identification of travel personalities
- Relate such personalities with activities / destinations (Gretzel & Fesenmaier, 2006 – authors can identify 10 basic types)

Relationship Personalities (Activities) / Pictures

(Berger et al., 2007)
"Last” step – support individual user

- Trip@vice
  - The system helps the individual user to select products and to bundle personalized travel plans
  - The user is supported by the system, by means of:
    - Recommendations
    - Conversational aspects – query refinement (relaxation & tightening)
    - Bundling
    - Based on AI technology - CBR

Link with mobile application

- The initial list of best candidates
- Details of restaurant
  - User can give feedback on features
- Additional user feedback
VisitEurope and Principles

- Developed by EC3 managed consortia, funded by EU, now operated by ETC (European Travel Commission, 34 countries)
- Maintain autonomy of national/regional sites while enabling joint marketing
- As much content as needed, as little as necessary
- Intelligent linking and customization of services as well as external services / sites
- Additional user driven / intelligent services, linking them with national / regional / businesses content
- Different integration means
  - „aggregated“ content
  - customized services
  - linked services
System Features

- User Interface
  - 6 “classical” languages + now (Chinese, Japanese, Russian)

- Services
  - For the visitor
    - Intelligent (semantic) search
    - Recommendation service
    - Route planner and flight connections – comparison
    - Other portal services such as UNESCO heritage database, European cuisine, weather service
  - For ETC and NTOs
    - Content management system
    - Reporting tool and Intranet communication service
    - Administration tools (users, links,..)

- Semantic web (HARMONISE ontology and mapping) and wrapper technology for content integration / extraction

- Mostly open source