

# Online decision aid in airline industry marketing essay

[Environment](#), [Air](#)



## **1. Online Decision Aids (ODAs)**

The World Wide Web can change human behavior and its communications with the world largely. Online shopping is one major example. Internet is changing day by day the way customers are shopping, buying goods. Many companies started using the Internet with the aim of cutting marketing costs, thereby reducing the price of their products and services.

There are numbers of online shops that do not exist in the real world for e. g. Amazon, eBay, target etc. There is lot of benefit for all those who are sitting at home. Sometimes it may become difficult for a customer to choose a product from such a huge list, but customers always go for quality and Price. Most online retailers provide the customers with some help in the form of online decision aids (ODAs) . Online Decision Aid (ODA) is how customers make purchase on Internet . Customers buying goods on internet is based on the Online decision Aid.

ODA help customers firstly through Information retrieval that is form of searching documents and data within the documents, as well as searching relational databases of documents within the World Wide Web. Whenever user enters a query in search bar, IR scores the query and ranks it according to its value. Secondly, ODAs uses information filtering, through which the system removes unwanted data and brings relevant stuff for customers according to customers need. Filtering tool helps user to locate the most relevant data, so that system take limited time to search for product and valuable documents. Filters used to organize and structure information so

that information displayed in front of customers in sequence. Lastly, ODA use Collaborative Filtering process that displayed in front of customers.

Collaborative filtering (CF) is the process of filtering data or techniques involving collaboration among multiple agents, viewpoints, data sources, etc. CF is applied on many different kinds of data sensing and monitoring data - such as in mineral exploration, environmental sensing over large areas or multiple sensors; financial data - such as financial service institutions that integrate many financial sources; or in electronic commerce and web 2.0 applications where the focus is on user data, etc. Collaborative filtering (CF) algorithm involves Prediction of the item and recommendation of data.

Example of Collaborative filtering (CF):

Figure 1: Result of Google

## **2. Benefits of ODA**

Use of ODA help user to find the product easy and more quickly. The task of ODA is use to compare or filter the data and brings relevant data in front of customers. In practice, ODAs get information from the customers and then based on the input preferences; they filter a massive amount of information and provide the customers with a smaller set of results.

In addition, if there are plenty of customers on one website so in that way retailer have to make combination of ODA according to Customer decision. Customers buying travel tickets online does not have good idea than the customers buying a Product from online stores. If a customer is, buying

ticket online is identified then the website developer have to see how many Combination of ODA can be made according to customer need and bringing accurate result in front of customer.

### **3. Types of ODA**

There are five types of ODA namely:

Recommendation Agent

Personalized Recommendation

Bargain List

Consumer Reviews

Problem Definition

#### **3. 1. Recommendation Agent**

Recommendation agents (RAs) are software agents that bring products according to customer need. If customer is searching for a Product, online software agent brings related products in front of customer to save time. RA sustain and develop the quality of the decisions that customers made when searching for and selecting products online (Xiao. B & Benbasat I, 2007). RA focuses on developing and evaluating different underlying algorithms that generate recommendations (Xiao. B & Benbasat. I, 2007).

RA itself is ODA that produce a list of goods available in the online store and then that list, ranked based on customer preferences. RA generates recommendation in a way to help customers. For example if customer is

buying an Airline Ticket than RA also recommend other airline tickets with cheap prices so that it become easier for customers(Mohajerani . A , 2008).

Figure 2: Process of Recommendation agents (RA)

RAs use in different areas, including E-commerce, education, and organization knowledge management (Xiao. B & Benbasat. I, 2007). In context of E-commerce, RA involved in two Processes:

product brokering

merchant brokering

Product Brokering is the process of finding the best-suited product for customer and merchant brokering is the process of finding the best-suited vendor (Xiao. B & Benbasat. I, 2007). In the project we focus on Product Brokering RA.

A product broker is someone that locates the best possible deals for their customer by using a variety of sources. Some Product brokers have connections with major retail partner stores like Target, Wal-mart, Best Buy, etc that provide customers with the best potential deals.

In Product broker case if customer want to buy product (i. e. Airline ticket) first he have to contact product broker, services of product broker are free. Customer signs up and provides detail to product broker what he is looking for, then product broker direct you to best store for that product. Once customer buys that product through Product broker services then product

broker is pay through partner stores. In this way, it becomes smarter and easier for customer to buy that product rather than searching for that on different websites.

### **3. 2. Personalized Recommendation**

Shopping on the web is more informative rather than shopping in ordinary store. So much information about products may lead overload and that creates less discontentment and confusion in customers. If we create personalized recommender systems, than this problem will overcome as there are different ways to overcome this Problem (Mohajerani . A, 2008).

There are two types of personalized recommender systems (Mohajerani . A, 2008)

First, if customer wants to buy a product. The personal information of a customer is collected and the system reasons about the preferences of the customer by analyzing the available personal information. Then, the history of the products he or she has browsed and the products he or she has purchased in the past would be analyzed. Finally, a profile is created for the customer to be used for further recommendations (Mohajerani . A , 2008) . System then record observation and behavior of customer and build a model according to that observation , once the model is obtained than System Predict other Product according to the behavior of customer in same area .

Figure 3: Personalized Recommender Systems

The second type of personalized system are those in which customer do not frequently purchase (Mohajerani . A, 2008). For example if customer is

purchasing an airline ticket on the other hand he is purchasing home appliance, there will be no history maintain for such kind of ODA. For this other recommender system are used In this case, domain experts are required to make recommendations and give suggestion (Mohajerani . A, 2008).

### **3. 3. Bargain List**

Bargain lists are the list of products or services, which sellers offer with lower price or in discount rates. Retailers tend to offer bargains and discounts on special occasions e. g. Christmas, Eid etc (Mohajerani . A, 2008).

Figure 4: List of discounted Items

Sometime customer likes products but they cannot afford in different seasons. Discount rates help customer to buy their favorite goods.

Customers mostly consider price the main factor that draws them to an online retailing Web site. However, although offering low prices on all products is a good way to attract price-sensitive customers (Mohajerani . A, 2008).

Bargain list is useful in two ways (Mohajerani . A , 2008) first customer react towards lower price product and discounted products , second bargain list offer those product which are left few in the stock. Bargain list are those ODA which inform customer about the low prices products (Mohajerani . A, 2008).

### **3. 4. Consumer Reviews**

When customer is shopping online, they face two types of reviews. One is product review which is created by the retailer of the product and the second is a consumer review (CR) which is written by the consumers who have already used the product (Mohajerani . A, 2008). Consumer review is the review of product and suggestion of other products to customer.

Figure 5: Consumer review & Product review

Customer search for opinions from other customer and they mostly rely on experience of other customer then they make final decision whether to purchase or not. Customers can give feedback for that product so that it becomes influence towards other customers.

CRs are presented in a written form, consumers are then able to easily examine and measure positive and negative opinions in terms of quality and quantity (Mohajerani . A, 2008).

### **3. 5. Problem Definition**

Decision making process for customer might become problem sometimes but ODA satisfied the customer through different recommendation systems. ODA develop more practical and convenient Web site for customers.

## **4. Importance of Online Decision Aid in Airline Industry**

Airline industry moves towards saving time of customers. Customer interacts with websites rather than inconveniently interact with an impatient travel agent in search for less Expensive tickets (Rubin E &Mantin B, 2008). In this



Project, we will examine a solution in the context of the travel industry. Customers just have to use internet when they write their query in search engine. Through this process total search cost of customer is reduce. Online decision aid has become an important tool for customer to take decision more quickly and effectively.

In the context of flights, as information about alternative travel combinations is present, Customers can find similar, alternative flights, with lower prices and lower experienced demand. Therefore, depending on their flexibility, customers may end up purchasing less expensive alternatives rather than the more expensive, highly demanded ones (Rubin E &Mantin B, 2008).

When you search for a flight in search engine, you get various results. Some of the e-ticketing websites are Expedia, . ixigo, onetime, . travel-ticker, booking buddy, fare compare etc.

Figure 6: Example of Airfare websites

The main context of this research is to what extent information is provided by a decision aid on a carrier's website affects the results of retailer. More specifically, the major contributions of our research are in (Rubin E &Mantin B, 2008):

Record the previous search by customer, and extend the work and give recommendation of other airfare product through consumer review with discounts.

Improving interaction between decision aids and pricing (Rubin E & Mantin B, 2008).

Improving the processes affecting airfare pricing (Rubin E & Mantin B, 2008).

## **5. Web portal of flights**

Example

Through a research on two web portal Expedia and Sky scanner, we extract few results. We book a round trip from Karachi (KHI) to Dubai (DXB) starting from Dec 31, 2010 to Jan 13, 2011. Both websites gave different consequences with recommendations of different airlines

Figure 7: Sky Scanner and Expedia

Figure 8: Results of Sky scanner

Sky scanner show results with different airline Air blue, Emirates with timing of Departure and Duration with total cost of the flight.

Figure 9: Results of Expedia

Expedia show flights with different airline Gulf Air, Emirates with timing of Departure and Duration with total cost of the flight.

Comparing the entire result, customer will select Airline with less charge and less duration time. In this way, it becomes easier for customer to book flights and ODA recommend so many flights. Sometime on special occasion like

Christmas, Eid etc these retailers give discount on tickets and there are special honeymoon packages for couples.

Figure 10: Bargaining list of travel deals

## **6. Conclusion**

ODA in airline industry is best way to buy ticket online on customer demand with cheap prices . ODA help customer to find best product they need. ODA uses different types of filtering tool, which is use to filter data, bring the most relevant data in front of customer, and give suggestions about other products. Through ODA, Recommendation agents (RAs) bring product according to customer wish and show bargain list of that product to customer. Customer also can buy product through product broker, which is link with some retailers. Customers can give feedback for products on web portal so it becomes helpful and easier for other customer to buy that product.