

Analysis of Agricultural Business-to-Consumer Web Sites with different Data Maintenance Concepts - two E-commerce Case Studies

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Abstract

This paper illustrates different data-servicing concepts of two existing agricultural business-to-consumer (B2C) web sites. One case study analyzes the biggest tourism web sites for Austrian farmhouse holidays (www.farmholidays.com) the other analyzes the data-servicing concept of a virtual farmers market, the Austrian Country Market (www.bauernmarkt.at). Online databases with password protection offer the possibility for decentralized data maintenance concepts. By use of these databases farmers can directly be involved into data maintenance of their own web pages and online shops. But technology alone is not enough. Without local support, provided by Tele-houses, it would be impossible to run this kind of data maintenance systems.

Problem description

One of the most crucial success factors for E-commerce projects is *the content* of the web site (Zerdick et al., 1998; White, 1996; Wigand, 1997). To guarantee interesting, entertaining and actual content is a time consuming and cost intensive effort. The target of the paper is to describe in which ways the previously mentioned Business-to-Consumer web sites try to ensure accurate and extensive content.

Description of different data maintenance concepts

There are separate possible solutions to the imposed problem. Common to all of them is the use of a decentralized data maintenance structure. The difference between them lies in the following: **who** makes the data maintenance and **how** is it done. In our case studies three different groups do data maintenance:

- 1.) the web master
- 2.) the intermediate content providers
- 3.) the farmers

There are two different ways web sites could be updated:

- 1.) by use of ftp and HTML programming (i.e. file transfer protocol and hyper text markup language; December and Randall, 1995, 19pp)
- 2.) by use of online-databases (so called editorial systems)

Each of the different methods has its advantages and drawbacks. The drawback of a **web master** is that in many cases he is a technician who doesn't have access to the relevant information. The advantage of a web master is that generally he is a professional web designer and provides easy-to-use web sites with a consistent look and feel (Ellsworth and Ellsworth, 1995).

If an intermediate **content provider** services a web site, he would get the necessary information directly from the farmers. The drawbacks of this method are:

- 1.) Data maintenance can get very expensive depending on the frequency of changes
- 2.) The time lag between provision of information by the farmers and implementation on the web site can get to big when many farmers wish changes at the same time.

On the other hand if the **participating farmers** get direct access to their web pages via ftp, they need to know HTML-programming. And more important they will consciously or unconsciously destroy the corporate design of the web site by changing main web design options like navigational buttons, text formats or colors.

A solution of these drawbacks is decentralized data input, where all groups have access to different parts of a web site, using different methods of data maintenance. The web master concentrates on the look and feel of the web site and the navigational concept. Content providers update online-databases and farmers service their own homepages or online shops by use of predefined input masks for which the knowledge of HTML programming is not mandatory.

The main advantage of online databases is that web design is predefined and the look and feel of the web pages cannot be changed. The disadvantage of online them is that an initial investment in the online-database is necessary. The occurring costs for this investment are in most cases prohibitive for single farmers or cooperations.

Data maintenance concept of a farmhouse holidays web site

Austrian farms offering holidays accommodation have been able to make use of a new kind of marketing resource following the implementation of an internet project in Autumn 1998. The farmhouse holidays web site works with TIS-Cover, an international internet-based (holiday) booking systems. A database approach allows site visitors to search for holiday accommodation by name, region, town/village or accommodation features (such as child-friendly or disabled-friendly farms). 2,500 farmers now have an online web presence featuring photos and descriptions of their farms (Haas, 1999).

Content updates are handled by the regional farmhouse holidays associations by use of an editorial system. They get informed from their members (i.e. farmers offering accommodations) about changes in the number of free beds, special offerings like family-weeks etc. What are the experiences with that system?

A past member-survey (Haas, 1999) showed that many farmers are unsatisfied with the data maintenance. Around 20% of them were unsatisfied with the actuality of their own web site. The main reason was the long time lag between informing the content provider and implementation on the web site. Many farmers complained that they had to call their regional association several times until changes on their homepage like e.g. the number of free beds were online. In other words every fifth farmer was unsatisfied with the data maintenance service offered by the regional farmhouse association.

So far experience has shown that the critical success factor of this system is the performance of the intermediate content provider in our case the regional farmhouse association.

Data maintenance concept of the Austrian Country Market

Launched in April 1996, the ACM is best described as an electronic Shopping Mall for food specialties and food related services. It contains more than 50 agricultural cooperations or single farmers each offering products or services direct to the (predominately) urban consumer (Haas, 1997).

The main products available through the ACM are innovative food and drink specialties like gift baskets, 'welfare-friendly' meat, mare horse milk, goat cheese, pumpkinseed oil or beer made of hemp.

The three core contents of the site are:

- 1.) 'Business': The products and services sold.

- 2.) 'Information': Information related to agriculture and nutrition, including recent research results, address lists for organic farmers selling direct to the public, recipes and monthly discussion themes related to 'hot' topics (e.g. mad cow disease).
- 3.) 'Entertainment': The core element used for branding the ACM. An intellectual chicken called Lisa directs people through the site. She tells stories about farming, ecology or her friend Mona (a cow). There is a monthly contest, a guestbook and a chat forum.

To update these core contents the ACM uses the combined data maintenance concept previously described. First there is the web master of the ACM. His task is to update all parts related to information and entertainment by use of ftp and HTML. Second there are content providers like regional agricultural cooperatives. Their major task is the update of an address- and product database which includes information about their farm members (i.e. information section). Third there are the participating farmers. They are responsible for updating their homepage and their online shop (i.e. business section).

To be able to fulfill these specific tasks online-databases with password protection were installed and an obligatory intensive training course for the participating farmers were offered in collaboration with regional "Tele-house"-initiatives. "Tele-houses" were founded in Austria in the beginning of the nineties (Lanner, 1991) with the main goal to offer telecommunication infrastructure and services for rural areas. They provide seminar rooms with PC and internet access and a lot of different telecommunication services. Without their ongoing technical support it would not be possible to run a data maintenance system like in the ACM.

The online-databases used in the ACM are:

- 1.) Address- and product-database
- 2.) E-commerce database with shopping-cart functionality
- 3.) An editorial system to maintain the farmers homepages

The *address- and product-database* offers a user-friendly search by name, region, town/village or products (ranging from food to non-food products) through more than 500 farmers from regions in Lower Austrian and Styria. Main goal of the database is to inform consumers who want to buy directly on the farm (in Austria exists a relatively large proportion of farmers selling food specialties directly to the consumer; estimates are around 10%). A special button offers the possibility to search for farmers with online-shops (see figure 1).

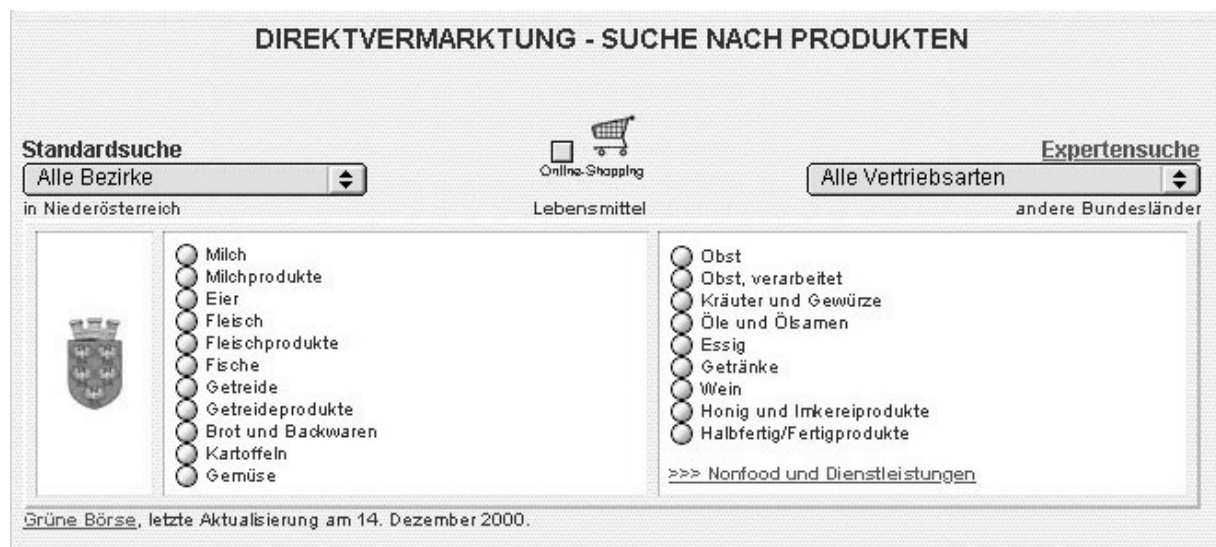


Figure 1: Address- and product database

The *e-commerce database* provides the farmer with the possibility to easily administrate his product lists, prices, article numbers and delivery conditions (see figure 2). Time-consuming updates to price lists, for example, are now done by the suppliers themselves, without having them to understand the complexities of HTML programming.

Artikel editieren:	
Artikelnummer:	<input type="text" value="134"/>
Gruppe:	<input type="text" value="Weihnachtsüberraschungen"/>
Artikelbezeichnung:	<input type="text" value="Steirisches Herbstpackerl"/>
Detailbeschreibung:	<input type="text" value="Ein besonderes Schmankerl aus der Süd-Ost-Region der Steiermark - nicht nur für kleine Maschkatzen."/> <input type="text" value="1 Glas hausgemachtes Apfelgelee mit Zimt 190 ml"/> <input type="text" value="1 Glas Haselnussbonnacreme 250 g"/>
Bild anzeigen wenn vorhanden?	<input checked="" type="radio"/> Ja <input type="radio"/> Nein
Preis inkl. MwSt.:	<input type="text" value="124"/> , <input type="text" value="00"/> ATS
MwSt.:	<input type="text" value="10"/> %
<input type="button" value="zurück"/> <input type="button" value="editierten Artikel sichern"/> <input type="button" value="editierten Artikel duplizieren"/>	

Figure 2: Input mask from an E-commerce database

The *editorial system* for the update of the homepages provides each farmer with the access to standardized page elements like headlines, text fields, upload of images etc. Through use of this editorial system it is guaranteed that the web design remains consistent with the overall corporate design of whole the shopping mall.

Interviews with farmers participating in the ACM showed that they are very satisfied with the use of the online databases. One of the main reasons is the cooperation with the Tele-houses. Without a technical and more important **local support** it would never be possible to run a system with farmers so strongly involved into data maintenance.

Summary

To provide web sites with interesting, entertaining and accurate content is a time consuming and cost intensive effort. Nevertheless it is a crucial factor for success of any kind of web site. New technologies like online databases with password protection offer the possibility for decentralized data maintenance concepts. By use of online databases farmers can directly be involved into data maintenance of their own web pages and online shops. But technology alone is not enough. Without technical support of local service firms (i.e. Tele-houses) it would be impossible to run this kind of data maintenance systems.

References

December, J. and Randall, N. (1994): The World Wide Web Unleashed. Indianapolis (USA): Sams Publishing.

Ellsworth, J. H. and Ellsworth, M. V. (1995): Marketing on the Internet. Multimedia Strategies for the World Wide Web. New York: John Wiley & Sons.

Haas, R. (1997): The Austrian Country Market: Experiences with Marketing Regional Products and Services on the WWW. In: Proceedings of the 2nd International Conference on Telecommunication and Information Markets (COTIM 97), Brüssel, 1997, 307- 312.

Haas, Rainer (1999): Austrian Farm Holidays in the World Wide Web (www.farmholidays.com) Experiences and Satisfaction of the Participating Farmers with the New Media. In: Role and Potential of IT, Intranet and Internet for Advisory Advices. Rickert, U.; Helbig R. and Schiefer, G., Proceedings of the 2nd European Conference of the European Federation for Information Technology in Agriculture, Food and the Environment. September 27-30, 1999, Bonn, 43-45.

Lanner, S. (1991): Tele-Visionen: eine Initiative des Europarates, realisiert vom Österreichischen Nationalkomitee Kampagne für den ländlichen Raum. Wien, 111

Zerdick, A., Picot, A., Schrape, K., Artopé, A. Goldhammer, K. und Lange, U. (1998): Die Internet-Ökonomie. Strategien für die digitale Wirtschaft. Berlin: Springer.

White, G. K. (1996): Factors Influencing Consumers' Likelihood of Purchasing Specialty Food and Drink Products On-line: Results of Consumer Reviews of 12 Selected Sites. Journal of Food Distribution Research, XXVII (3), 31-40.

Wigand, R. T. (1997): Electronic Commerce: Definition, Theory, and Context. The Information Society 13 (1), 1-16.