

The travel industry as part of the National Information Network in Norway

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In 1994 Norway launched an initiative on developing national information networks, NIN, along with similar initiatives in USA and EU. The travel industry was chosen as one of twelve application areas from different sectors of the Norwegian society, and the project "Network for co-operation and marketing in the travel industry" was established. This paper describes our experiences and visions from the first phase of this project, when we developed a demonstrator for WWW called the Norwegian Tourism Guide and started introducing this to the travel industry. The network will support co-operation between actors from different parts of the country and the industry, based on their economical and technical conditions. The paper describes the organisational, economical and technical models we have developed for building such a network in the travel industry. The WWW demonstrator is described to show how the models can be implemented.

1. NIN - National Information Network

The aim of the NIN initiative is to face the number of political choices that arise, concerning the implications of information networks for social development, economic opportunities and the situation for the individual. A number of objectives have been pointed out such as ensuring regional development, improving the environment, increasing economic opportunities for Norwegian trade and industry, improving efficiency in public administration and giving equal and low cost information to all citizens.

The NIN concept defines an information network as a group of people who collaborate and exchange information. The information network includes a technical infrastructure which links a number of users and operators. The technological development leads to a situation where the technical infrastructure is the same for all information networks. In order to handle such an infrastructure significant demands are made on legislation, intellectual property rights and the development of standards. The structure also makes new demands on users/operators with regard to organisation and market orientation, particularly in connection with new opportunities for internationalisation. The NIN initiative will address these issues.

The NIN strategy focuses on creating synergy through coordination and support of current and new activities in the public and private sector, establishing demonstration networks, developing laws and regulations and carrying out research and development. The NIN project includes political steering groups, liaison committees, common activities focused on laws, standards, security etc., and twelve application areas ranging from the petroleum sector and marine navigation to local administrations and the travel industry.

The NIN concept is well suited for the travel industry. A network supporting co-operation and marketing has great potentials for an industry with small and geographically dispersed units working towards an international market. As part of the NIN-project, the travel industry can profit from the common activities concerning standards, security, intellectual property rights, legislation etc. The travel industry will also get access to experiences from other application areas. It is important for the travel industry to be part of an open general network based on international standards and which includes a great number of users. The travel industry needs to interact with other businesses both locally, as part of a local community, and globally, to reach its customers and business partners around the world.

2. Network for co-operation and marketing in the travel industry

Today there is no single network technology which satisfies all the requirements for a national information network. The projects within NIN will therefore work with both general networks, and networks for specific interest groups. There will be research activities working with development and experiments on new networks, but the primary activities will be based on well known technology. The main activities will be development of demonstrators and activities stimulating use of information network in areas of great industrial and public importance.

In the travel project we will start with existing networks and standard tools such as Internet with e-mail, filetransfer, newsgroups, World Wide Web (WWW) etc. We will also work with an other network system developed specifically for the travel business, through projects following the TIM¹ project. This system builds a dedicated network on ISDN and ATM lines, for transfer of multimedia information from destinations to points-of-sales. Our project will also follow closely the development in technology for interactive TV. This technology is particularly interesting

¹ Tourism Information and Marketing, RACE-project R2078

for the tourism business, since it brings information to the consumers at home.

Our focus will be on introducing technology and building the organisational networks needed for co-operation. An important element in the NIN-strategy is to co-ordinate and support existing and new activities in the field. Today we see a lot of activity around networks for tourism, particularly the Internet. The initiatives come both from the travel industry itself, from network operators, suppliers of information/booking systems, marketing companies and new entrants who see business opportunities in this area. Creating a strategy for the travel industry, and co-ordinating activities that fits within the strategy, will be an important part of building the network. The strategy will focus on high quality information, on reuse of information and on the position of small and medium sized tourism businesses.

The activities based on Internet have two focuses. One is the net as a tool for ad hoc communication and co-operation, with standard tools like e-mail, filetransfer, newgroups, WWW etc. The other focus is on the WWW as a marketing tool. We have chosen to start with the last focus because it gives a good platform for establishing a network for co-operating participants.

3. Norwegian Tourism Guide on WWW

The first step in introducing WWW as a tool for marketing, was to build a demonstrator called Norwegian Tourism Guide², and define models for co-operation between participants, for financing the system and for the technical solutions.

3.1 Cooperation in the travel industry

The demonstrator is built as a framework and a structure for information from different actors in the travel business. The objective is to make an interface for travellers who seek various information about Norway. The information comes from a number of sources such as hotels or activity centres, local tourist boards, detination companies, regional tourist boards and the national tourist board NORTRA. NORTRA is the main national body for marketing Norway internationally and plays an important role both as a provider and a distributor of information. A large number of these actors are now producing presentations for WWW or are considering offers from different companies who want to the job. The tourism business is asking for common solutions and strategies for how to exploit this new medium.

² <http://www.nr.no/guide>. This adress is used only for the test period.

Our model for co-operation is based on the principle that each participant should own and control the information concerning their own products and regions. This is important to get correct and valid information, and to keep it updated. On the other hand, such a model requires standard tools, formats and guidelines for presentation. A trade-off between local priorities and global availability is necessary.

The demonstrator now contains a set of central pages with menus and search forms. Pointers to local presentations will be accessible from these pages. The search mechanisms require access to some of the information from the local providers. In our model there will be a central actor who maintains the central part of the system and co-ordinates the contributions from local providers. NORTRA is the natural candidate for such a role. The server itself will probably be run by a network operator who takes care of the technical aspects. But it is important that NORTRA, as the central travel organisation in Norway, is responsible for the content, for creating the marketing profile and for ensuring information quality.

The travel business in Norway is organised in six regions. Each region has a company on top, which is responsible for marketing the region internationally. In our model for cooperation these companies will be responsible for all information about their regions. Within each region the responsibility can be distributed to destination companies or local tourist boards, according to the established structures within each region. The providers will connect their presentations to the central pages through the regional actor. We will make solutions for variations of this model where the regional tourist board is unable to take this responsibility, or local providers choose to let other types of actors take care of their presentations.

3.2 Financing the system -business relationships

Our model for financing the system is a mixture of the traditional mechanisms, which is provisions from booking, payment for advertisements and public support to promote a region or a country. We are also looking for solutions which makes it possible for participants to reuse information created for other purposes. Some providers are using electronic archives and databases for information kiosks, for brochure production and for their local tourist offices. This information can be used as basis for Internet presentations. Some providers have electronic information stored at the marketing companies which produce their brochures. Many of these companies are now including Web-presentations in their services and can therefore be regarded as potential partners.

The information structure in the demonstrator is built on a model composed of these mechanisms of financing. The information is divided into three categories. The first is information about a geographical area. The information does not change often and its main purpose is to profile the area. This is often handled by tourist boards on behalf of a number of providers in an area, and financed by a combination of membership fees, public support and advertisements.

The second kind of information is product lists. This is basic information containing name, address, phone- and fax number, type, category etc. The information changes more often than the geographical presentations, and will normally be stored in a database as part of a destination information system (DIS). Financing must be connected to how the database can be used for other purposes.

The third type of information we have included in the demonstrator is presentations of each product. We have classified these as advertisements, and each producer will have to pay for connecting it to the Norwegian Tourism Guide, in the same way they pay for advertising in a traditional brochure or publication. These presentations may be complex, and will have few restrictions on format and layout. Any restrictions will be based on quality requirements. The idea is that a provider can make its own Web-presentation and use it in different contexts. The income from these advertisements will support the production of regional presentations and product lists.

The last mechanism for financing is provisions from sales. This mechanism requires availability of bookable products and connections to booking systems. This mechanism can not be directly applied to financing the main parts of the system, as the central and regional tourist boards normally keep their hands off booking and selling, except for a few niche products. As this is a sensitive area with fine balances between public and commercial interests, we will use this mechanism carefully.

We have also been in touch with companies who sell their information through subscription. They are currently waiting and watching the development of mechanisms for handling payment over the net, particularly transactions involving only small amounts of money.

3.3 Technical solution

The technical solution is developed from a number of different requirements. One set of requirements comes from the travellers. They require a system which is attractive and easy to use. This calls for intuitive user interfaces, advanced search mechanisms, professional layout and a logical information structure based on how travellers search for

information. The Internet also introduces the challenge of making presentations for people all over the world.

An other set of requirements come from the providers of the information. Our solution must give access to high quality information that is easy to maintain. The solution must be based on acceptable financing models. It is also important to remember that Internet and WWW is only one of many tools for marketing tourism products. We must create a solution which reuses information from other systems as far as possible.

Our technical solution and information structure is based on the three types of information we introduced in the last chapter. On top of this we have the front page, the menus and the search mechanisms. The general geographical presentations and the product presentations will normally be texts and pictures. Video clips may also be used in some cases. These presentations are mainly HTML-coded text- and image-files. A number of tools make it easy for "anyone" to create presentations in HTML-code, but professional layout and design requires assistance from marketing people.

Since these presentations can be linked to the main pages through simple links (URL) they can be located on any Internet node or Web-server. This means that each tourism provider can use the local Internet service provider. The owners of the presentations can also choose to maintain and update it whenever they like. Whether they choose to code the presentation in HTML themselves or buy this service, will be a question of economy and competence. The link to the main pages will be through the product-lists which contain the Web-address to the presentations.

The search routines we have developed are based on the product lists. The routines will be located at the central server. They require access to information from each regional provider. This can be solved in different ways depending on the regional provider. The solution we are implementing for the demonstrator is a set of cgi³-scripts which will search regional databases over the net. This requires accessible regional databases on web-servers, and a standard set of minimum information in each database. In the demonstrator we link one of the regional databases in this way. A long term goal for the project is to establish regional databases in all the regions and connect them the same way. An intermediary solution is copying information from the regional databases to a central database. The central database will only be updated through information from the regions, thus keeping the responsibility for the information at the local level.

³ common gateway interface

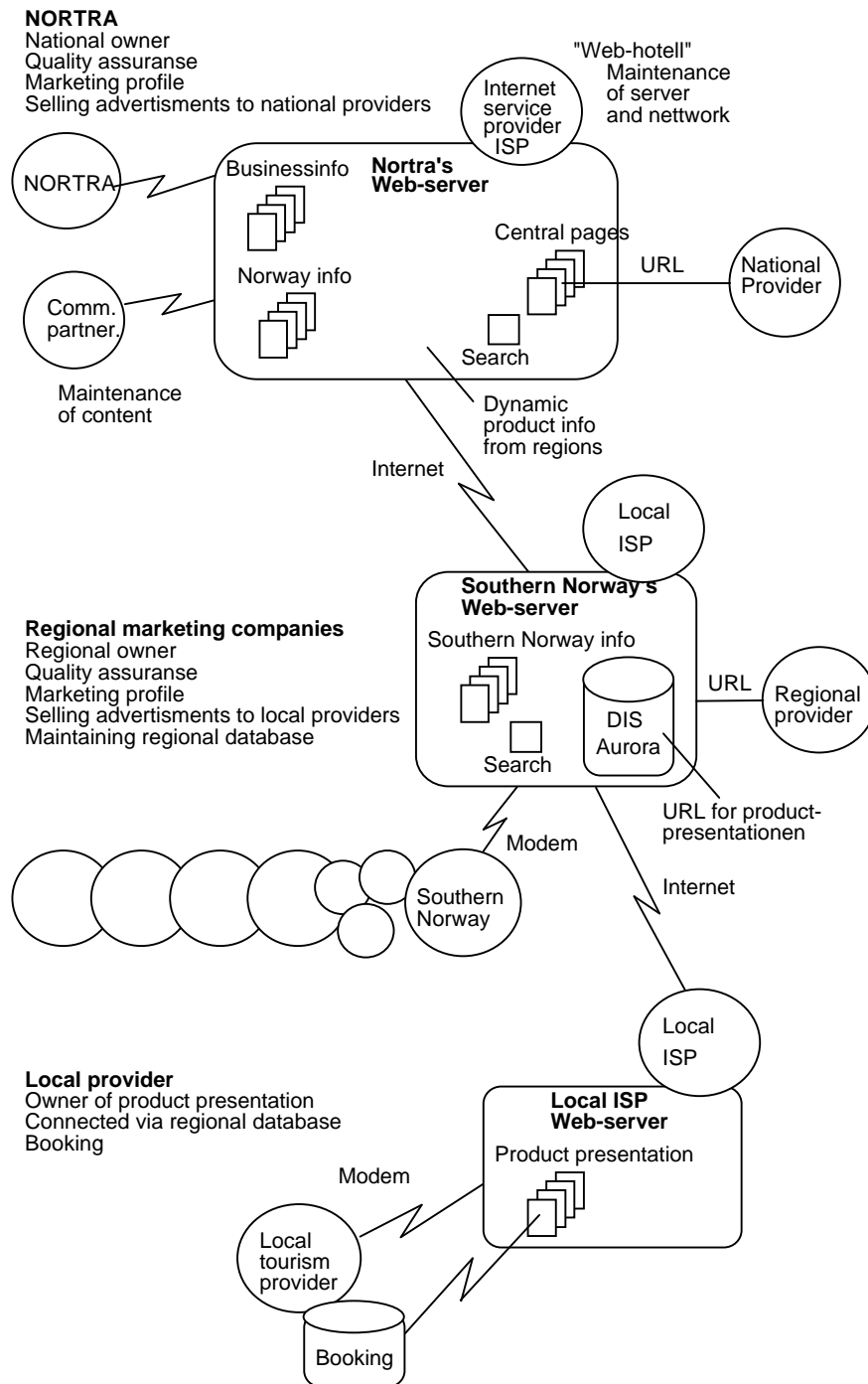


Figure 1. Basic model

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