

Designing the Net

(bi)gital» (<http://bigital.com/>)

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(This text was translated to German and printed in the book 'Gebrauch und Gebräuchlichkeiten. Vom Umgang mit den Dingen und ihrer Gestalt. Ein Symposium in Rotis.', Munich: Christian Pixis Verlag, 2000.)

What is the Internet

The Internet, as we know it today, is a physical network of computers working together under a standard protocol of communication named TCP/IP (Transfer Control Protocol / Internet Protocol). Under this main scheme there are many different services running that use different protocols. As example, the World Wide Web, one the most used service of the Internet, uses the HTTP (Hyper Text Transfer Protocol), to transfer files between servers and clients the protocol used is FTP (File Transfer Protocol) and for the e-mail services the protocols are POP (Post Office Protocol), SMTP (Send Mail Transfer Protocol) and IMAP (Internet Message Application Protocol). In this main structure client and server machines are constantly interchanging data back and forth.

Why is the Internet so important?

The importance on the Internet is based on several points. First of all is available worldwide (with some exceptions and the fact that up to now only 3% of the global population has access to the net). This makes a big difference with other media. As well, it provides communication on both directions (in that meaning, the sense of "emissary" and "receptor" is more than ever blurred) at an affordable price. It's not so difficult (in practical nor in economic terms) to create and distribute any kind of information instantly and worldwide. The democratisation of the publishing process has already started and today is –more or less- on the same level the information published by CNN and by a school student from South America. All this process of making information available is getting easier, faster and cheaper. On the other hand is changing the economic system of the whole world. E-commerce systems are today at their very beginning and there is much more to come in the near future. In many senses has created a revolution comparable to Gutemberg's printing press, 500 years back in time.

But from a design point of view, to develop the presence of a company or an institution in the Internet is much more complex than just designing a few screens. It involves taking various types of communication, technology and design decisions.

The marketing, systems and design areas should be involved in the creation of a website, as a dynamic interdisciplinary team is required for this type of project.

Objectives

It is advisable to have a clear knowledge of the objectives of a website before start working on the project. This is common to every design process.

Up until some years ago, most of the undertakings –with a few honorable exceptions that became history– had a very diffuse idea of their interests. However, most of the companies, upon seeing their competitors jumping into this new medium, wanted to be a part of it.

To be on the Web was almost the «in» thing to do. Everybody wanted to be on it and nobody knew exactly what for. The catch phrase was «you have to be on the Internet» – and for some it still is.

Nowadays, even though cases like these still exist, most of the companies have realized that the Internet (not only the World Wide Web) is an extremely powerful communication medium that allows for a fluid and bi-directional contact, not only with their clients, but also with the rest of the world. This medium, as such, has its own codes that have to be taken into account from the beginning to define genuine objectives.

The best way to determine the objectives of a hypothetical Internet project (in this case we specifically refuse to use terms such as «website», «web» or «site» as they are neither inclusive nor conclusive) is to start with a series of questions.

What is the mission or purpose of the company?

The objectives of a company or an organization can be varied. Among the most common ones, we can mention the generation of economic resources (in a business company), the propagation of certain ideas (in a political party), the promotion of a branch of culture (a public welfare foundation), etc. It is very important to understand this clearly before the first step is taken in the wrong direction. Therefore it is vital to be in contact with the person who is the actual decision-maker when it comes to defining the position of the company.

It is very common to have Internet projects run from the systems department of an organization, where those in charge are not familiar with the company's main objectives.

What are the short and long term objectives of the project?

The project has to take into account various action time frames because, as opposed to printing projects, once something is posted on the Internet, its objective must remain valid over time. Some possible examples are:

- Establish contact with the users.
- Provide information to current and potential clients.
- Make the company's information systems more dynamic (ticket reservations, purchase of certain products, information on schedules or rates, etc.).
- Provide new services for clients who were difficult to contact because of distance or cost: newsletters, creation of discussion forums, publication of statistics, etc.

What is the target audience?

There will be traditional clients, already familiar with the use of the Internet and the products and services the company provides that find this medium useful. On the other hand, we will have the potential clients that can be captured through an intelligent strategy and correct advertising of the website, generating new interests and future clients. The creation of new niches is an interesting perspective that results from the possibilities of the medium.

The point of view of the consumer –in general– is to obtain information quickly and easily. It is proven that a negative reaction occurs when the data is badly arranged and the user gets lost because he gets frustrated and confused and, finally, angry. There are different types of users. Those who know exactly what they want, know the section names of the site, and can rapidly get in and out; those who have a vague idea of what they are looking for and do not know the sections; and those who, when browsing, learn by chance about the existence of products or services that they had not previously considered.

Why will people visit a website (the most visible face of the project)?

A number of factors have to coincide for somebody to visit a hypothetical website, namely:

1. That it offers something the visitor is looking for.
2. That it offers an otherwise not available service.
3. That the name of the company be known in the market.
4. That the visitor knows the address.

For an Internet proposal to be accessible to the public, it is necessary to support and promote it both through the traditional and the new communications media.

It is important that all the addresses be included in all of the company's stationary (e-mail, web, news, etc.) and, if possible, in all other printed matter (ads, brochures, press releases, etc.). It is also important to publish the addresses in the main search engines or directories (Yahoo, Lycos, Altavista, etc.) and, if the budget allows for it, to advertise in the Internet websites known to be visited by the target users.

Why will people revisit the site?

Once a user has found the address and visited it, what will make him return? Something has to be offered to him.

In today's Internet, where so much is offered, projects that give information sparingly or are not constantly updated, are doomed to failure.

There are known cases of newspapers and magazines, famous all over the world, which tried to sell their Web contents through subscriptions and failed (or did not have the expected success). Why would somebody pay to read the New York Times Magazine when the Salon Magazine is available for free...? In short, for somebody to return, something has to be offered. For example:

1. Updated contents.
2. Services.
3. Community type activities.
4. Prizes for operating through the Internet, special purchase offers, gifts, discounts.

Defining the audience

Once the basic objectives of the project are clearly understood, it is vital to start with the definition of the possible visitors.

Some people think –erroneously– that an audience is defined by the technology it uses to access the net. That the users connect to the net at this or that speed or with this or that browser is only a part of the definition of the audience. To really define a user, one must

know how he or she consumes and obtains the services or products the company offers. For example, it will be useful for those who are designing the architecture of a website that sells household appliances to see how the clients buy these articles in a real store.

In many cases, an internal department in a company takes the initiative to develop a website (and here we do use this term, as usually they have forgotten to include a strategy of electronic mail, ftp services, etc. in their planning) and it ends up being a project focused on that specific department's needs and vision, ignoring the overall vision of other areas of the company. A website is a very particular communication piece and its form and contents should be reviewed by all the departments in the company, or at least by all those involved in communicating with the client.

A proposed exercise to define the user could include a brainstorming session focused on the target audience, asking questions such as:

- Is there any sector of the audience to which we are assigning undue importance (the competition, employees, etc.)?
- Is there any difference between the main audience and the one that will use the website with greater frequency?
- What will motivate the audience to visit the site? And to revisit it?
- Rank the audience in order of importance.
- Identify the three information requirements of each audience that the website should include.

It is also advisable to generate a table with this information and distribute it among the team members. This will also help to document the process.

Contents

Once the objectives and the audience are defined, it is time to establish the structure and the organization of the contents. The definition of the elements shaping the contents of the website and the way in which they will function are fundamental.

It is useful to create a list of the contents and another of the technical functional requirements, in order to organize all the ideas on how the website should work.

The types of contents can be divided into:

- static contents: explanatory texts on the company, regulations, copyright notes, etc.;
- contents formed by variables and data that is updated regularly, such as weather tables, product catalogues, etc.;
- functional contents: forms to update information, data searches, etc.;
- transactional contents: all those related to on-line operations that will be performed by the users (purchase forms, subscription orders, product registration, etc.).

Ideally, these lists should be circulated among everybody in the company involved in the website development, so as to create an inventory of contents that will serve to define the requirements and to confront them with the technological and economic possibilities.

Site structure

A well organized site, in which the consumer does not get frustrated on his search, represents a great advantage for the company; and, in the case of an internal network (intranet), the employees will feel comfortable working with it and will not lose time trying to understand how it works. Comparing a website with another tangible object will help us to understand how to determine the objectives of any project: if we compare it to a house, the number of rooms, the layout, and the building materials. All design decisions are linked to their future use. Many houses and buildings turn out badly because their designers do not live in them and do not understand their objective, or because they respond to interests unrelated to those of the inhabitants of the house.

Structuring the information plays a very important role in the development of projects for the Web.

It can be summarized by its three main aspects:

- classification,
- labeling, and
- surfing.

A good outline will help to meet the previously agreed upon objectives as these are closely related to the user. This holds true for any data-handling project. We have already mentioned how frustrating is to get lost in the Web without finding whatever we are looking for. Every project should have its own method, which takes into account the ways in which the information may be looked up: if we know somebody's surname, the telephone directory is useful because it is organized alphabetically; on the other hand, if we are looking for a plumber, a listing sorted by category will be much more useful.

A preliminary classification could be

- alphabetical,
- chronological,
- geographic,
- ambiguous,
- by category,
- by task,
- by audience type,
- metaphorical.

The labeling of the sections and parts is a matter of the utmost importance. It is the way of representing a concept, an idea or a group of data; it constitutes an action of human thought. For example, a section named «contact» includes a name, an address, telephone and fax numbers, e-mail address, etc. The label «contact» is sufficiently trustworthy to efficiently represent the contents of the section. It is also compact, so it does not take up much space in the surfing menu.

This labeling could be divided into two categories: textual and iconic. In the first case, some conventional titles have become popular and are familiar to many users:

- homepage, home, main page.
- search, find, surf, site map.

- contents, table of contents, index.
- contact, contact us, write to us, e-mail, who we are.

Many of these labels are partially or fully written in English, because it is the predominant language in the Internet. But with Spanish sites becoming more common, Spanish words are becoming a part of this cyber language.

Icons can represent information as well as, or even better, than texts, always provided they correspond closely to the concept.

In many cases, they make surfing easier or work well in combination with textual labels. We can well imagine a site on animals, where the main sections are represented by icons, such as dogs, cats, birds and fish and the subsections are represented by texts such as breeds, care, feeding.

Labels influence the users greatly and they must reflect the website's spirit. The language to be used to name the sections must be in accordance with the tone of the communication and must be related to the previously defined audience. The use of metaphors is also an interesting system for labeling sections. It works especially well in entertainment, music and child websites.

Surfing determines the possible paths that can be taken to look for information. It is self-defining once the structure is determined.

By now, we have already defined how the users will use the site, and we also have the list of contents that determine the main sections, how the different subsections will unfold and how they interrelate.

We should not fail to include the availability of a surfing menu in all the site pages. In the same way as a footnote guides us when reading a magazine, the surfing menu gives us the freedom to move about the site without having to worry about not being able to return to the page we have visited five minutes ago. (Browsers have their own surfing system to go backward or forward, or to return to previously visited pages, but they do not serve the same function as a good surfing menu, and it is also not convenient to assume that everybody uses the software in the same way.) Besides the surfing menu, it is possible to add links in various parts of the text that point to pages that include related information. In these cases, it is useful to make clear where the user will be taken if he clicks on the link. When this is not self-evident, explanations of the type: «see programming», «click here for other options», «application form», etc. are useful.

Surfing bars have become very popular in websites as they summarize the main sections, while appearing in all the pages as a fixed reference. They also link to other known interfaces, such as personal computer operating systems (Macintosh or Windows). A system of frames can also be used whereby the page is divided into sectors that load information independently. This system allows for the creation of a fixed frame that includes the menu (which can be changed if necessary), that activates another dynamic frame, the contents sector. Pull-down menus are very useful when there are many options to choose from, for example choosing a destination in an airline website. «Remote systems» are another option,

where a smaller window appears within the main one. They are metaphors, analogous to TV sets or electronic equipment remote controls. Finally, we can mention «guided tours» or «site maps» that include graphics showing the structure of the complete website and allowing the user to link directly to any place he wants to visit, while displaying a global picture of the contents.

Surfing systems can be combined and used alternatively in all sections.

Behind the «visible» structure described so far, the «non-visible» structure of the website deals with correct file organization, file names and classification, database usage, image preparation and knowledge of the technical resources that will optimize the operation and ease the job of the designer, who will not be obliged to perform tedious tasks that a computer can execute in a more economical and efficient way. The user is generally oblivious to all this organization, except when things do not work properly.

Visual design

Once the objectives, the users, the structure and the contents have been decided, it is time to develop the graphic interface of our project. This is where graphic design gives the project its visual and communication style. Many projects are criticized for reducing the Internet to a common medium where everything is thrown into the same bag. A serious mistake, indeed. The Internet is just a communication medium. The World Wide Web is no more than one of its aspects. The way in which this medium is used depends on the type of discourse desired, the stipulated objectives; on who is talking and to whom the talk is addressed. Again, the same as for all design projects.

The www is not only for «fireworks».

The technology to be used should be selected carefully from all the available options. We do not think that a magazine should use flash animation just because it is possible, or that a company whose objective is to publicize and promote its products or services should to embellish its homepage with animation and signs with moving typography. To use all the available technology (or, what is even worse, all the technology the producer of the website has learned) is counter-productive. It is «overdesigning».

A case of study:

the website for the Akademie Schloss Solitude (<http://www.akademie-solitude.de/>)

Since it was created ten years ago, the Akademie Schloss Solitude has been connecting people together. Artists and coordinators, fellows or guests as well as jurors and trustees became and are still becoming part of this network of people. This fact of «connected people» can be easily understood by seeing the history of the Akademie and the people involved on it.

Being fellows (1998–1999) gave us the understanding of this reality from inside, so the idea of reflecting this network of people to a network of information and publish it on the network of networks came up naturally.

Working together with the staff of the Akademie we grouped the information in five main categories that will give the name to the different sections of the website:

- Fellows,
- Agenda,
- Edition Solitude,
- News and Press, and
- Institutional information.

From the beginning we stated that all the information should be published in German and English, and that the visitor should have the possibility of switching the language at any time.

Once the content and the relations between the parts were defined, the need of an updating system to keep the website fresh was a priority.

The visual design concept of the project was focused on the functional and consistent design of the information. It was clear for us that the content should shine for itself and because this was one of the objectives, we gave the graphical interface a quiet role, keeping it as simple and clean as possible. This meant as well, staying away from today's common web artifacts. We absolutely believe that less is more; that form follows function.

The color program consists of a set of five different and powerful colors applied to each one of the main sections to facilitate navigation and comprehension, as well as a set of softer colors for the visited links. Sections like «contact», «search», «internet projects», and the «gallery» were treated with a non-chromatic criteria.

The texts are handled using a sans serif typography, Verdana (designed in 1997 especially for the screen) and a serif, the classical Times New Roman, for the long texts. One consideration we had in the typographical decision was that almost all the text of the website should be editable by the Akademie's updating system; so we used the normal html text and selected the typography from the system fonts for Macintosh and Windows operating systems.

A set of icons with a maximum size of 9 by 9 pixels was developed specially for the project. The icons were selected to enhance the interface but not to disturb, and created taking conventional multimedia symbols like the arrows, the hand, the envelope and the bullets.

The photos on the website appear randomly as the user request the pages, taken from a library of photos defined for the different sections. The idea of the photos is to reflect the life and events at Solitude and to add something more about the information the user is watching.

The whole process of design started in November 1998, when we presented the idea to the Akademie. We made a first version that we tested online and started working in the database conception, connections and structure. For the Sommerfest 1999 we presented a work in progress. This first internal release was a test to measure the user's reaction and acceptability, as well as the technical aspects. The development was done together with the Akademie, deciding the content for the different sections, the labeling of them, the set of

pictures, the graphical look. The official release on the web was in the beginning of September 1999. The updating system was probably one of the most difficult parts of the development process, as the only way of testing its functionality and performance is by using it. Was also created according to the Akademie's needs and wishes, and although it can be improved, is nowadays a powerful tool to promote and speak on a daily basis to the public visiting Solitude on the www. This part of the project is password protected and not visible for the normal users.

When we finished with our participation on this development, in October 1999, we left the keys and tools of it to the Akademie. They are using it as a communication media on a daily basis. We hope that this project will be like a snowball running down the hill: growing.

Conclusions

The Internet is a medium recently developed and undergoing constant change; therefore the only way to remain updated is to use it every day. As designers it is our duty and responsibility to work with it in the way we believe is the best one for the development of our information societies.