

DOCUMENT RESUME

ED 411 831

IR 056 658

AUTHOR Barbera, Jose
 TITLE The Intranet: A New Concept for Corporate Information Handling.
 PUB DATE 1996-00-00
 NOTE 9p.; In: Online Information 96. Proceedings of the International Online Information Meeting (20th, Olympia 2, London, England, United Kingdom, December 3-5, 1996); see IR 056 631.
 PUB TYPE Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
 EDRS PRICE MF01/PC01 Plus Postage.
 DESCRIPTORS *Business; *Computer Mediated Communication; *Computer Networks; Databases; Electronic Text; Foreign Countries; *Information Networks; Information Technology; Internet; Multimedia Materials; *Organizations (Groups); Productivity; World Wide Web
 IDENTIFIERS Client Server Computing Systems; Groupware; *Intranets; Spain

ABSTRACT

The World Wide Web model has evolved within companies from a repository for notice boards to a new tool that can improve work productivity. Intranets, the internal or corporate internets, are likely to be the key information technology revolution for the remainder of this century. The intranet concept is derived from the present Internet as a natural step in its own evolution. The same TCP/IP communication protocols and applications are used, in particular the Web server/client model. This paper gives first the rationale for setting up corporate intranets, providing the main reasons why the Internet technologies are having such a remarkable impact on the scope of business networking applications and why intranets are becoming so popular among a broad variety of companies. Secondly, the key distinctive functional features of internets are presented. A discussion on typical intranet applications follows: the new functionality offered to business people and other non-typical information technology users is stressed, and significant differences with existing groupware solutions are discussed. The paper concludes by outlining a practical ongoing project to digitize documents (thus reducing the need for printed materials and allowing the inclusion of multimedia contents) which can be delivered to each desktop and accessed by all individuals of an organization in a cost-effective, flexible and friendly way through an intranet Web interface. (Author)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *



The Intranet: A New Concept for Corporate Information Handling

By:

Jose Barbera

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

B. P. Jeapes

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

72056658





The intranet: a new concept for corporate information handling

José Barberá

Fundesco, Spain

Abstract: In the last year the World Wide Web model has evolved within companies from a repository for notice boards to a new tool that can improve work productivity. Intranets, the internal or corporate internets, are likely to be the key information technology revolution for the remainder of this century. The intranet concept is derived from the present Internet as a natural step in its own evolution. The same TCP/IP communication protocols and applications are used, in particular the Web server/client model. This paper gives first the rationale for setting up corporate intranets, providing the main reasons why the Internet technologies are having such a remarkable impact on the scope of business networking applications and why intranets are becoming so popular among a broad variety of companies. Secondly, the key distinctive functional features of intranets are presented. A discussion on typical intranet applications follows: the new functionality offered to business people and other non-typical IT users is stressed, and significant differences with existing groupware solutions are discussed. The paper ends up outlining a practical ongoing project to digitise documents (thus reducing the need for printed materials and allowing the inclusion of multimedia contents) which can be delivered to each desktop and accessed by all individuals of an organisation in a cost-effective, flexible and friendly way through an intranet Web interface.

Keywords: database, client/server, groupware, distributed information, multimedia information, Internet, Intranet, TCP/IP, WWW, World Wide Web

1. Rationale

The Internet boom, and especially the World Wide Web (WWW) fever, has spread out in the last two years among a variety of organisations of different size and scope. Today companies have learnt that a connection to the Internet means worldwide access to many information sources — often valuable information — which may be useful for the organisation. On the other hand, publishing information and keeping in touch with customers and suppliers through the Net are new possibilities which companies see now as additional marketing channels.

In that situation, many organisations ask themselves: if the Internet is based on an open, proven and reliable technology, if there is a broad range of applications and services, and if the WWW has become a *de facto* standard to access and disseminate information world wide, why not take advantage of all that potential in order to implement internal information procedures? The intranet concept springs up thus as the evident answer to that question. Put simply, 'intranet' is the descriptive term associated with internal corporate networks which are implemented using the Internet technology and services, in particular the WWW system, but adapted to the specific physical boundaries and internal procedures of each organisation, so that certain information is available only to its employees and not to the public Internet. Implementing internal publishing procedures and other collaborative tasks on the Web via so-called intranets is proving to be simpler and more efficient, at the same time allowing easier communication with third parties.

2. Functionality of the intranet

From a functional point of view an intranet allows the immense amount of informational resources that flow within an organisation to be transported and delivered to each individual's desktop with minimal time, cost and effort. Consider this scenario. A company has 20 sites and 3000 employees who need timely access to corporate information such as company news, policy changes, training manuals, organisational procedures and the like: even to simple but crucial documents such as telephone books, pricing information and product specifications. Individual workgroups and departments require secure and limited access to confidential data. Each branch, possibly in different geographical areas, very often has its own database containing reports and data that must be shared with the head office (Refs 1, 2).

So far the normal procedure is the hard copy production and physical distribution of printed material such as

handbooks, lists, guides, etc. The production of this printed material is not only expensive and time-consuming but also highly inefficient as it needs frequent updates. And how does one guarantee that all the offices receive the information on time, quite often before it becomes obsolete? How can one ensure that people know important policy details or other relevant information that have recently changed? The straightforward answer is that with the existing technology one cannot. Nevertheless it is a proven fact that information must be kept as accurate as possible and flow rapidly in a business world which is more and more dynamic and competitive.

The answer to those problems is the Intranet for it is a solution that (Ref 1):

- (a) allows the delivery of information upon demand, and when needed;
- (b) can guarantee that the information is accurate and up to date;
- (c) ensures that the information can be kept in a single source (although it is not necessary that source to be the only source of *all* information);
- (d) allows the information to be maintained by those individuals and groups that produced it originally.

Today those problems can be solved using the generic Internet technologies which are giving rise to drastic changes: a true revolution for the information systems of the business world within the further revolution of the Internet. An intranet lowers the cost and shortens the time of distributing information. Instead of producing hard copies and delivering them by ordinary mail, documents such as newsletters, minutes, policy procedures, projects and other collaborative tasks can be stored on internal Web pages and shared by people who will peruse them at the right moment as long as they have access to the corporate intranet.

In addition to that, the intranet allows the external information existing on the World Wide Web to be organised according to the company's needs. On the internal Web server there may be links to relevant online reports and publications existing in public Web servers: for instance information about competing organisations. In summary, the intranet is becoming so popular among companies in fields so diverse as publishing, finances, insurance, healthcare, software and so on because it allows to save costs and time, to centralise information, to share internal information and to organise the information via Web pages.

3. Distinctive features of the intranet (Ref 3)

One of the key aspects of the Internet is the use of the well-known TCP/IP protocol suite to communicate between heterogeneous computer systems connected to at least one of the almost 100 000 networks that make up this worldwide information infrastructure. A similar situation can be seen, in a smaller scale, within corporate organisations: there is a great diversity of hardware and software computer resources, usually interconnected via local area networks: diversity which is also reflected on the human users and their functions.

The challenge of the Information Systems Department is to develop common platforms for the whole organisation, keeping in mind as a main goal the improvement of the company's overall productivity. The intranet concept can play an important role here as it will allow to build a powerful, flexible and portable platform for all the employees and the work functions they perform: for instance not only document search and filing but also placing orders, scheduling meetings or even keeping track of working hours.

The core of an intranet is the Web system but with additional control features to limit its use internally. The Web, though, is not the only element in an intranet: there are quite a few Internet applications based on the same technology but with peculiar aspects matched to the corporate environment. Quite often, rather than proprietary network protocols (IPX, AppleTalk, SNA, etc.) corporate LANs use the Internet IP protocol, either as the single one or co-existing with some of the others. In fact, the choice of the IP protocol in the Internet has been one of the main reasons for the success of this seamless network of networks. On top of TCP/IP one finds the traditional applications such as SMTP mail, telnet remote login, FTP file transfer, News, etc., initially Unix-based but also running on multiple platforms (DOS, MS Windows, Apple Macintosh . . .). In addition to them there are now other applications for accessing distributed multimedia information (usually based on the client/server model), the star of them being the WWW based on open standards such as the hyper-text transfer protocol (HTTP) and the hyper-text mark-up language (HTML).

In the intranet we encounter the same protocols and applications restricted to local environments. Since the available bandwidth is much greater now, a faster time delay than those usually experienced (suffered) in the global Internet is perceived and, as a consequence, the overall productivity is increased. Instead of the unbearable waiting times to fill up the screen with image-rich Web pages from remote servers, in the intranet this takes place almost instantaneously. With the same Web interface, in addition to accessing to diverse multimedia information, users can transfer files, login into databases, send e-mail messages, fill out electronic forms or participate in group discussions.

The usual case is a corporation with a head office and several local branches located in different geographical zones. The alternatives to link the various LANs are: dedicated leased lines, public data networks and the Internet. The first option is straightforward and the most secure but may be too expensive to be afforded by medium- or small-size organisations. These would rather use public data networks; Frame Relay is the obvious technical option for the network layer, as the application services are based on the Internet's TCP/IP protocol suite but without any connection to that open network (in this case the IP addresses need not be official Internet addresses).

The communication option in a corporate intranet is precisely the Internet (Figure 1). LANs are then linked via Internet Service Providers (ISP); in fact there could be more than one, even in several countries or regions. The



idea then is building private IP 'tunnels' over the global IP infrastructure of the Internet, adding the necessary security elements such as *firewalls* to isolate the internal Web server from the World Wide Web and preventing unauthorised accesses from the external world. In this way any intranet user in any corporate office throughout the world can access any corporate Web server as long as he or she has the necessary access privileges.

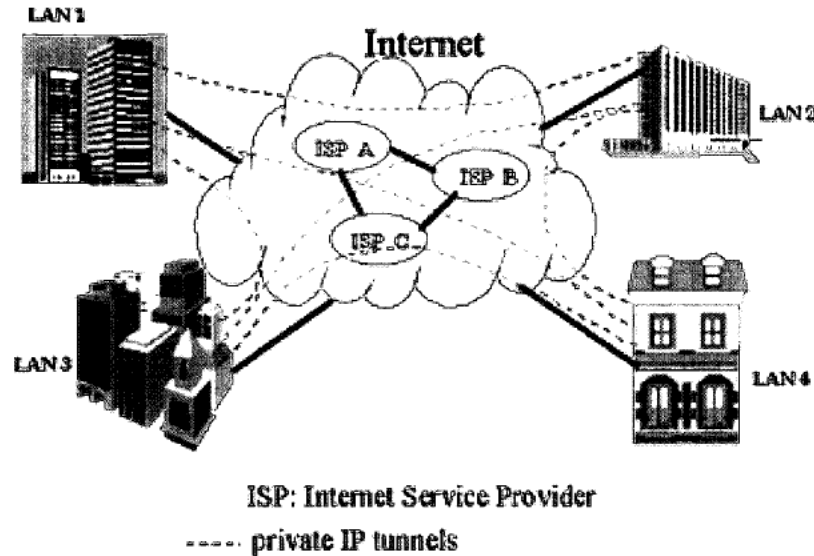


Figure 1: ISP: Internet Service Provider — private INPUT tunnels.

The last (but not least) distinctive feature of the intranet is management. That intranets use the same Internet protocols and standards does not mean that they have to follow the same (supposedly) 'chaotic' rules. In addition to security this aspect is of utmost importance for organisations that aim at building a network system to support the overall productivity, bearing in mind the annual balance sheet. According to that, access privileges of each individual and group should be carefully considered in relation to the specific jobs. Free navigation through WWW servers that hold leisure or little relevant information for the company's activities should probably be avoided by the intranet managers. Also, proxy servers and cache space should be set up in order to increase efficiency when accessing external servers frequently visited. An additional aid are the usage statistics programmes that will help intranet administrators to monitor internal use, as well as to fine tune certain parameters that may optimise the application's performance.

In summary, there are four main distinctive aspects of the intranets:

- (1) The internal use of the TCP/IP protocols in corporate LANs;
- (2) The Web as the common interface for all application services in internal networks with heterogeneous systems;
- (3) The communication of corporate LANs via the Internet (public ISP);
- (4) The management and access control procedures that have to be matched to the specific company's needs and activities.

4. Intranet applications

The use of Internet technology in private intranets, and in particular the WWW model, is profoundly affecting the corporate culture and changing the working habits presently in use. These changes take place in the different functional areas of a company, from sales and marketing departments to human resources and training units, all of them involved one way or another in the production and use of corporate information and many of them in group collaborative tasks as well. Some of the more relevant applications of this kind are (Ref 1):

- Corporate document publishing. Perhaps the most natural or immediate application in intranets as derived from the WWW publishing model. Examples of such documents are: internal newsletters, human resources guides, annual reports, price lists, product catalogues, job offers, etc. Other more restricted documents may be: meeting minutes, employee salaries, sales forecast, new product specifications and project overviews;
- Access to corporate directories and databases, for instance searching in telephone books, customer lists, bibliography, etc.;
- Workgroup applications such as project management, meeting scheduling, report writing, etc.;

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.