

**Italian Chambers of Commerce  
Societa' Consortile di Informatica delle Camere di  
Commercio Italiane per Azioni (Infocamere)  
Padova, Italy**

**European Excellence Award: Imaging, Gold**

Executive Summary

*Societa' Consortile di Informatica delle Camere di Commercio Italiane per Azioni* (Infocamere) is the Information Technology (IT) service company of the Italian Chambers of Commerce. Its role is to provide the 103 Italian Chambers of Commerce with IT solutions to help them manage their activities and their growing number of responsibilities.

Until 1994 this was, among others, the role of Cerved S.p.A. Since then Cerved decided to concentrate on selling business information collected from the Chambers of Commerce; Chambers created a new organization dedicated to providing IT services to them. This organization took the name of *Societa' Consortile di Informatica delle Camere di Commercio Italiane per Azioni* (short name, Infocamere). This company employs 700 people generating approximately \$110 million each year.

***Section 1. Describe the system application. What the system is used for, who are the users and what the job entails. How often or how many hours is the system in use on a daily basis.***

***1.A Company Background:***

Wang Laboratories Inc., (Wang) began its relationship with Cerved/Infocamere began during 1993, when the Italian law reshaped the role of Chambers of Commerce and emphasized their responsibilities for collecting and storing official business documents from the companies, such as balance sheets and other records. This led Cerved to consider imaging technology and to evaluate a number of vendors, including Wang, FileNet and Plexus. They then selected Wang's OPEN/image™ software to implement their new 'BOND' system, Cerved's first large scale imaging project. Based on the good feedback they had from this first project, the customer decided to include OPEN/image software into the platform for their mission-critical, highly visible *Registro delle Imprese* project, whose implementation has been Infocamere main activity for the last two years.

In all its operations with Infocamere, Wang acts as a supplier of the customer's prime contractor and platform provider, Hewlett-Packard. A description of 'BOND' and *Registro delle Imprese* projects follows.

***1.b 'BOND' project.***

*The application.*

BOND project was the first Cerved/Infocamere project based on a Wang's software platform. Along with OPEN/image software, Wang provided design and development of the UNIX-based imaging application. Designed, developed and installed during the first

half of 1994, the system went into production on October 1994. The system is based in Padova, near Venice, at the Infocamere main computing center.

The customer's goal was to store as image documents the balance sheets of nearly 550,000 Italian companies. According to the Italian law each company must file every year its balance sheet with its local Chamber of Commerce, which is responsible for archiving all company records and making them available for public access.

With BOND, Chambers send to Infocamere a digital copy of each balance sheet they receive. Through a country-wide wide area network, users can access remotely the system, working both from the their own premises or from a Chamber of Commerce. Requested documents can be delivered through a number of distribution channels, including fax, mail and file transfer. This dramatically reduces the time needed to get these documents, avoiding the need for long, paper-based procedures at the Chamber of Commerce of the city where the company is based.

Therefore the system addresses the needs of everyone who is interested in the activities and in the financial status of an Italian company.

*System technical description.* The system is based on a HP 9000 800 server. It is aimed to load and then distribute about 550,000 documents per year, each representing the balance sheet of an Italian joint stock or limited liability company. These balance sheets are compiled according to the new European Union regulations and provide in-depth information on the company activities and financial status. The average number of pages for each balance sheet is 22, but in some cases large corporations can submit balance sheets in excess of 1,000 pages. Each document is further subdivided in about 10 sections. Hence about 10,000,000 of pages are loaded on the system every year; Cerved/Infocamere plans to keep at least three years on line. Therefore by the end of this year the system will manage more than 30,000,000 pages.

Document capture is handled through five scanning centers, located throughout Italy, and equipped with an OPEN/image software application developed by the customer. These centers collect the balance sheets from the Chambers of Commerce, and scan them into 2GB UNIX DAT tapes. These tapes are then sent to Infocamere for loading; together with images they include, indexing data which allow the document to be cataloged in the system database.

The BOND system is currently able to load and index more than 7,000 pages/hour. This performance level is critical to the customer as most balance sheets are received during three months of the year and need to be processed without buffering, to have them on line immediately; therefore, input peaks as high as 100,000 pages/day must be handled in some cases. Loading and indexing is handled through a set of UNIX background processes which read the tapes, verify that their structure is correct, select random samples of documents which are then checked by operators against image quality and indexing data accuracy. If these checks are OK, image documents are moved on optical disks and indexed on Oracle, using OPEN/image Document Manager software services.

Since Infocamere corporate databases are currently kept on hosts, indexing data are also exchanged (as flat files) between the UNIX application and host to keep the two environments synchronized.

To post requests for balance sheets, users access remotely an IMS/DB2 host-based application which allows 'navigation' through Infocamere corporate databases. Data held on these databases which provide a rich set of information on all Italian companies, are

used as 'indexes' to select the balance sheets required. As a result of their query users are allowed to define a 'request' which may include any combination of documents or document sections; also one of the available document distribution method must be selected.

IMS then passes these requests to the UNIX server where they are queued for processing. On the server, a set of background tasks reads the requests queue and schedules their execution, based on the request priority and on the resources available on the server. As a result of the execution, documents are faxed or printed; billing data are also calculated and sent to the host for invoicing. Currently the system handles more than 1,000 user requests per day, delivering as many as 30,000 pages/day. Some of these requests are delivered by fax; others are printed and then mailed. Recently new services have been added which allow for file transfer to Chambers of Commerce over the high speed "C-LAN" network (see 1C for details), and for delivery through email.

In addition, Cerved/Infocamere has developed its own application to download selected groups of documents to CD-ROMs, which are then shipped to the Chambers of Commerce to allow access to local documents.

A set of application programs running on both UNIX and host, based on SNA LU6.2 communication services, takes care of handling communications between the two environments. On the UNIX side, this application is based on HP's SNAPplus software.

All the applications, the database and the image server software are executed on the same UNIX server. The BOND system works non-stop, 24 hours/day, seven days/week (except for about 18 hours/week that are devoted to system maintenance). Please refer to section 3A for the description of the hardware and software platform on which the system has been built.

### ***1.c Registro delle Imprese project.***

*The application.* With law number 580 issued on January 1993 the Italian Parliament decided to broaden the role of Chambers of Commerce, making them responsible for collecting and storing all the information that companies must provide to government and to the business community. All this information will form the so-called *Registro delle Imprese* (Company Register), which will become the official repository of data and documents on all organizations which are involved in business activities in Italy (an estimated amount of some 4.5 million business entities).

Implementing this project is currently Infocamere's main responsibility. It has been estimated that the overall cost of this three-years project will be about \$60 million.

The *Registro delle Imprese* is based on a network of systems, one for each Chamber of Commerce; each of these systems manages data and image documents about companies working in the Chamber of Commerce geographic area. A central system located at the Infocamere computing center in Padova will collect and merge data and images from all the Chambers, thus acting as a back-up site and providing access to countrywide information. Managing image documents is an important part of *Registro delle Imprese* applications. The estimated amount of paper to handle is about 30,000,000 pages/year, and the project's requirements are to keep these documents on-line for many years (the actual number of years depends on the kind of document).

To implement scanning, indexing, archival and retrieval functionality for image documents Infocamere has used Wang's Open/image software to develop a subsystem called EIDOS. Currently EIDOS is installed at 50 Chambers. The installation process is

still going on and will be completed by the end of the year, as law n. 580 requires the project to be running in production at all Chambers by January 1997. *Registro delle Imprese* project milestones are summarized in the following table:

December 1993	Law 580 is approved by the Italian Parliament.
January 1994	Chambers of Commerce begin to act as unique point of collection and storage of business documentation submitted by companies. Paper documents are handled manually at this stage.
December 1994	Wang Laboratories Inc., signs a contract with HP Italy to provide OPEN/image software for <i>Registro delle Imprese</i> project.
December 1995	Pilot Chambers begin scanning and indexing documents. According to the law, documents filed since January 1994 will have to be scanned into the new systems.
February, 1996	<i>Registro delle Imprese</i> project, without image support, is running at all the Chambers of Commerce.
January 1997	Full <i>Registro delle Imprese</i> project (including imaging support) will be running in production at all the 103 Italian Chambers.

*The technology.* All the systems are based on HP 9000/800 servers, running HP-UX operating system, Oracle RDBMS and Wang OPEN/image software; client/server applications are developed using TI's IEF CASE tool and Visual Basic. OPEN/image software includes Server for HP-UX, Optical Disk Management System 5.25" standalone and jukebox, Print Server for HP-UX, API and Windows workstation for HP-UX, Fax for Windows and ALCOM LFR server, Cabinet for Windows, Custom Controls for Visual Basic. The customer has an option to buy other imaging software, including new products which could be released in the future.

The Chambers of Commerce and the Infocamere computing center in Padova are linked by the high-speed C-LAN private network. This network is provided and operated by Telecom Italia, Italy's TC services provider; it is based on frame relay technology and features access links ranging from 128Kbps to 2Mbps, according to each Chamber's needs. Padova computing center is connected through 6x2Mbps links. The network will support services such as remote system management from the Infocamere main operation center, and access from a single Chamber to the *Registro delle Imprese* central machine. In the near future other organizations will be connected to the network, to support transactions among the Chambers and other governmental offices as required by *Registro delle Imprese* procedures.

Infocamere is currently considering Wang Laboratories Inc., Laboratories' OPEN/workflow to manage in a consistent and controlled way the large quantity of cases that companies are filing with the Chambers to comply with the Company Register regulations. Please refer to section 3B for a description of the system hardware and software platform.

*Standard compliance requirements.* An important feature of *Registro delle Imprese* is that image documents stored on the systems have the same legal value of the original paper documents; Chambers will have the option to destroy paper and to rely only on

digital imaging for all their activities. To guarantee that image documents cannot be altered and can be easily accessible for long time in the future, the Italian authority for governmental computing, A.I.P.A., has issued a set of rules to which imaging technology must comply. An important piece of these rules is adoption of ISO DIS13346 standard for the optical disk file system. Wang is working on this technology and plans to support it in future releases of OPEN/image software server.

*Business value for Wang Laboratories Inc., Laboratories Inc.* The following table summarizes the value of contracts Wang Laboratories Inc., Laboratories Inc., has signed with Infocamere for this project.

Wang Laboratories Inc. contracts value:
\$1,500,000 (OPEN/image software)
\$170,000 (Consultancy and software maintenance - 1st year)
\$250,000 (Consultancy and software maintenance - 2nd year)

*Future developments.* In the near future, Infocamere is planning to implement the central machine of the *Registro delle Imprese* network, managing the countrywide repository for data and images collected from all the Chambers.

This countrywide image document repository will be fed by EIDOS systems at the Chambers which will use the C-LAN network to load remotely imaged documents into the central server. To integrate the central system with the Chamber's systems from a user's perspective, Infocamere will develop a query software which will be able to look for the required information on the local or on the central server, transparently to the user. This will allow the central system to act as a backup site for all Chambers and also to provide cross-Chamber image document access.

Since balance sheets are a subset of documents managed under the *Registro delle Imprese*, the new system will also merge BOND into the *Registro delle Imprese*. This will allow Infocamere to provide external customers with an unique access point to all *Registro delle Imprese* image documents, extending the service BOND is providing today to a much wider document database.

## ***Section 2. What were the key motivations behind installing the system?***

The institution of the *Registro delle Imprese* (something that was first drawn up in 1943 but was eventually defined and implemented only 50 years later) broadened and strengthened dramatically the Chambers of Commerce's role, making them responsible for collecting, storing and making available upon request all company records. The Register was also conceived as a countrywide repository, able to provide access to every document from every Chamber.

This made imaging technology a fundamental part of the project's technical platform. Without the services provided by an enterprise-wide production imaging system, it would have been impossible to make available across all the country the huge quantity of documents that this system will manage.

**Section 3. Please Describe the current system configuration: number of workstations number and type of software servers, scanners, printers, storage devices, number of locations involved.**  
**3.A BOND PROJECT System Configuration (Background & Application Description in Section 1.B), and System Description:**

General system description:
Number of servers: 1
Number of workstations: about 20 directly linked to the system and used for faxing and system maintenance purposes. Customers can inquire the system from about 3500 workstations connected to Infocamere hosts.
Number of scanners: no scanners directly connected to the system. Scanning is handled through 5 systems that manage approximately two Bell&Howell scanners each; images are then transferred to BOND system via tape.
Number of printers: 2

Hardware platform:
HP 9000/800 I70 server
4x12" ATG jukeboxes, each with 4 10.2GB optical drives
5 HP Netserver PC as fax servers, equipped with INTEL Satisfaxtion & Gammalfax Gammalink fax boards (total of 16 fax lines)
2 HP Laserjet IV Mx Si printers

Software platform:
HP-UX 9.04
Oracle RDBMS Server 7
HP SNAPplus 3.0
Wang OPEN/image software API for HP-UX 3.0
Wang OPEN/image software Windows workstation for UNIX 3.0, Wang OPEN/image software Fax for Windows 1.01
Wang OPEN/image software server for HP-UX 1.1.5 with 12" WORM Jukebox management software
Wang OPEN/image software print server for HP-UX 1.5
ALCOM LAN Fax Redirector 2.10 & 2.15

**3.B Registro delle Imprese PROJECT System Configuration (Background & Application Description in Section 1.C), and System Description:**

General system description:
Number of servers: 104 (104 different locations, one for each Chamber of Commerce plus one central server).
Number of imaging workstations: Overall the <i>Registro delle Imprese</i> systems include some 1,000 workstations. About 300 of them are initially enabled to access image documents (number of imaging workstations at each site ranges between 10 and 2).
Number of scanners: about 150 overall (number of scanners at each site ranges between 4 and 1).

Number of printers: 1 for every system.
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Hardware platform:
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HP 9000 800 "K" and "D" series servers
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5.25" HP "FX" (with 2.6GB drives) jukeboxes (each server with one jukebox initially)
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Fujitsu scanners with KOFAX scanner control cards.
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Software platform:
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HP-UX 10.01
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Oracle RDBMS Server 7
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Wang OPEN/image software server for HP-UX 1.3, with 5.25" WORM Jukebox management software
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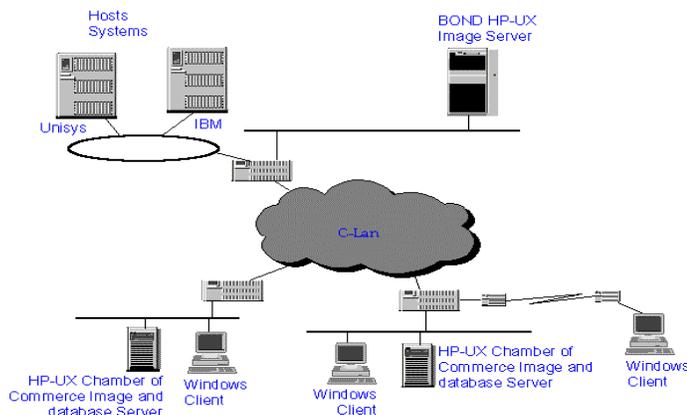
Wang OPEN/image software print server 2.0 for HP-UX
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Wang OPEN/image software Custom Controls for Visual Basic 2.0, Wang OPEN/image software Runtime for Windows 3.7.4 (client environment is currently Windows 3.11, will be migrated to Windows95 over time).
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Kofax KIPP software used to manage scanners.
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#### ***Section 4. How is this system integrated with the company's other information processing systems?***

Infocamere information processing system is quite complex and includes a central host-based platform (IBM/DB2 environment) and a distributed UNIX-based platform (HP/Oracle environment); a central UNISYS environment is also running but will be migrated by next year. The C-LAN network physically interconnects these three platforms; databases on the three platforms can cross-exchange data.



The imaging system is tightly integrated with this information processing system. All the image documents managed by both BOND and *Registro delle Imprese* are indexed through Oracle and then connected to the relevant data on corporate databases. This allows users of these databases to easily find and access image documents. An

example of this integration has been described in the previous sections, showing how external customers can request balance sheets to BOND through the IBM environment which acts as a front-end for the imaging system.

The following diagram shows the current situation of information processing system at Infocamere.

***Section 5. What stage of development is each part at; what has been installed? What is up and running? What is still in the planning stages?***

BOND central system has been in production since 1994. The systems at the Chambers running EIDOS imaging application are being installed currently (about 50 in production as of September 1996). All the 103 systems at each Chamber of Commerce will be in production by January 1997. The central EIDOS system holding the countrywide image document database is still in a planning stage.

***Section 6. Describe how the company has been impacted by this system. Be as specific as possible. A.) What costs savings or increased revenues have been realized since the system was first installed? B.) What productivity improvements have been realized? C.) How has the business problem been affected (compared to before the system implementation)?***

The BOND system allows Cerved/Infocamere to offer to the market a service that previously did not exist. This system received some 1,000,000-user queries during 1995.

As to *Registro delle Imprese* system, it is a completely new infrastructure that is meant to offer new services to the Italian business community. The key advantage which the system is expected to bring is an unprecedented level of 'transparency' to the Italian business community. The system will allow getting in a matter of minutes all the information about a company's business, its management and its owners. Performing the same researches without the system and the associated imaging technology would have required days or weeks in the past. Law n. 580 has brought a countrywide standardization with full implementation across the Italian Chambers of Commerce.

Information on Italian companies may now be obtained at an individual's local Chamber of Commerce as opposed to requesting from the Company's local Chamber saving time and travel.

***Section 7. Describe the implementation process and methodology, the project team and any change management and business process re-engineering issues addressed.***

*7.1 Project participants.* The project has been entirely developed by Infocamere through their internal resources. Infocamere subdivided the whole project in a number of smaller projects, each managed by a dedicated team. A high-level management committee coordinates these teams. HP and Wang provided consultancy to project teams on system and application design.

*7.2 Business process reengineering issues.* The systems will have a very high impact on the way Chambers of Commerce perform their activities. However each Chamber is an independent organization, with its own specific organization and processes; how and to what extent the current situation will be impacted by technology

is at the end a Chamber's decision. Infocamere will assist each Chamber in introducing this new technology into their organization, by providing consultancy and proper tools such as workflow technology.

### ***Organizational Overview***

<p>Italian Chambers of Commerce</p>	<ul style="list-style-type: none"> <li>• 103 independent organizations, each covering a part of the country and providing business support services.</li> <li>• Italian business entities supported by the Chambers of Commerce are approximately 4,5 million</li> <li>• Impacted in 1993 when Italian law number 580 reshaped the role of the Chambers of Commerce</li> <li>• Law mandated each of the Chambers of Commerce as responsible for collecting and storing ALL documents and information that companies provide to government and the business community.</li> <li>• The institution of the <i>Registro delle Imprese</i> - 'Company Register' is a result of law n 580.</li> <li>• Law 508 was a major change in defining Chamber's mission and role, and in promoting use of Information Technology in their activities.</li> <li>• This led Chambers to establish in 1994 a new company - Infocamere - dedicated to providing IT solutions to assist them with their mission.</li> </ul>
<p>Infocamere</p>	<ul style="list-style-type: none"> <li>• <i>Societa' Consortile di Informatica delle Camere di Commercio Italiane per Azioni</i> (Infocamere) is the Information Technology service company of the Italian Chambers of Commerce</li> <li>• Infocamere's role is to provide the 103 Italian Chambers of Commerce with IT solutions</li> <li>• 700 employees, generating \$US110M/year</li> <li>• Increased document requirements in Chamber's activity lead to imaging solution.</li> <li>• First large-scale imaging project in 1994, called BOND (Balance Sheets); Wang OPEN/image software selected between FileNet and Plexus.</li> <li>• Since 1994 Infocamere has assisted Chambers of Commerce with the implementation of the IT infrastructure for the Company Register program.</li> <li>• A key component of IT platform for the Company Register program is production, enterprise-wide imaging services provided by OPEN/image software through an application subsystem called EIDOS.</li> </ul>

Cerved S.p.A.	<ul style="list-style-type: none"> <li>• Until 1994 IT service provider to the Chambers was one role of Cerved</li> <li>• Since 1994 Cerved focused on selling business information collected from the Chambers of Commerce.</li> <li>• Chambers created Infocamere to replace services provided by Cerved.</li> </ul>
Wang & Hewlett-Packard	<ul style="list-style-type: none"> <li>• Wang Laboratories Inc., Italy acts as supplier of the customer's prime contractor &amp; platform provider, Hewlett Packard</li> <li>• All imaging systems installed are on HP 9000/800 servers</li> </ul>
Installation	<ul style="list-style-type: none"> <li>• Wang Laboratories Inc., provided design and development of the UNIX-based BOND imaging application</li> <li>• Infocamere provided systems integration, application design and development, system management for the whole Company Register project (including EIDOS imaging subsystem); HP and Wand provided consultancy to Infocamere.</li> <li>• BOND System placed in production 10/94. Company Register being installed in production during the second half of 1996; full production expected by January 1997.</li> </ul>
BOND System Project @ Infocamere in Padova, Italy	<ul style="list-style-type: none"> <li>• First Cerved/Infocamere large scale imaging project, based on a Wang software platform—OPEN/image Software</li> <li>• Cerved/Infocamere offered the market a service that previously did not exist—remote access to an image document database of balance sheets from Italian companies.</li> <li>• Wang provided design and development of the UNIX image application</li> <li>• Designed &amp; installed first half of 1994, placed in production 10/94</li> <li>• System installed at the Infocamere main computing center in Padova</li> <li>• System stores each year as image documents 550,000 balance sheets of Italian Companies.</li> <li>• BOND receives the digitized copy of each balance sheet from the Chambers of Commerce, through one of five scanning centers.</li> <li>• Host legacy integration provided to IMS/DB2 and Unisys host</li> <li>• BOND system balance sheet documents are a subset of the documents to be managed by <i>Registro delle Imprese</i> ('Company Register') Project. The two projects will be then merged in the future.</li> </ul>

<p>BOND System Document Management &amp; Volumes</p>	<ul style="list-style-type: none"> <li>• Chambers of Commerce manage the balance sheets of nearly 550,000 Italian Companies.</li> <li>• By law each company must file annually with its local Chamber of Commerce, who are responsible for archiving and providing public Access</li> <li>• Average number of pages is 22 per company, some in excess of 1,000 pages with each being subdivided by 10 sections on the average.</li> <li>• Approximately 10,000,000 pages are loaded on the system every year</li> <li>• Infocamere plans for maintaining 3 years on-line</li> <li>• Approximate 30,000,000 pages on-line end of this year 1996</li> <li>• A country-wide WAN (wide area network) allows users remote access via fax, mail and file transfer</li> <li>• System has eliminated the need to travel to the local Chamber of Commerce where a company is based to access their financial files</li> </ul>
<p>BOND System Remote Scanning Centers &amp; Document Loading</p>	<ul style="list-style-type: none"> <li>• 5 scanning centers located throughout Italy</li> <li>• Scanning centers collect the balance sheets from the Chambers of Commerce</li> <li>• Documents are scanned and indexed to the 10 subdivisions into 2GB UNIX DAT tapes</li> <li>• Tapes are then forwarded to Infocamere for loading</li> <li>• BOND System is able to load and index more than 7,000 pages/hour</li> <li>• During 3 month peak of receiving balance sheets the BOND system manages up to 100,000 pages/day</li> <li>• Infocamere corporate databases are host based (IMS/DB2 &amp; Unisys) and indexing data is exchanged (as flat files) between the UNIX application and host to keep two environments synchronized.</li> </ul>
<p>BOND System Q/A Process</p>	<ul style="list-style-type: none"> <li>• Loading and indexing are handled through a set of UNIX background processes which read the tapes, verify their structure is correct select random samples of documents which are then checked by operators for image quality and indexing accuracy</li> <li>• Once passed for Q/A the image documents are moved to optical disks and indexed on Oracle, using OPEN/image Document Manager Services Software</li> </ul>

<p>BOND System Access</p>	<ul style="list-style-type: none"> <li>• Customers make inquiries from approximately 3,500 workstations connected to Infocamere hosts</li> <li>• More than 1,000 user requests/day, delivering as many as 30,000 pages/day</li> <li>• Approximately 1,000,000 user queries ran against the system during 1995.</li> <li>• Users access an IMS/DB2 host-based application which allows "navigation" through Infocamere corporate databases</li> <li>• 'Request' may include any combination of documents and must identify preference for document distribution</li> <li>• Requests are queued to the UNIX server for processing based on schedules and request priority</li> <li>• Once executed documents are faxed or printed and billing data are calculated and passed to the host for invoicing</li> <li>• Recent system service enhancements allow for file transfer through high-speed C-LAN Network to Chambers of Commerce, and for delivery through email</li> <li>• Infocamere has also introduced CD ROM services, where they download selected groups of documents from BOND on to CD-R and ship to the Chambers of Commerce allowing for local access to documents</li> </ul>
<p>BOND System Availability</p>	<ul style="list-style-type: none"> <li>• nearly 10-10 1/2 hours/day, 7 days/week</li> <li>• Scheduled downtime for system maintenance</li> </ul>

## Registro delle Imprese (*'Company Register'*) Regulation

<p><i>Registro delle Imprese</i> &amp; EIDOS System Project</p>	<ul style="list-style-type: none"> <li>• Drawn up originally in 1943</li> <li>• Defined and implemented 50 years later by law 580/1993 issued by the Italian Parliament.</li> <li>• Identified a completely new infrastructure meant to offer new services to the Italian business community with an unprecedented level of transparency to this community</li> <li>• Broadened and strengthened the role of the Chambers of Commerce, making them responsible for the collecting, storing, and access upon request of all company records</li> <li>• Register originally conceived as a country-wide distributed repository, based on Information Technology tools, able to provide access to every data and every document from every Chamber</li> <li>• Estimated cost of 3 year project is \$US60 million</li> <li>• Imaging technology became a fundamental requirement to provide this level of services and manage the huge quantities of documents enterprise-wide to the Chambers of Commerce</li> <li>• Infocamere has implemented the EIDOS imaging system in each of the 103 Italian Chambers of Commerce to support the <i>Registro delle Imprese</i> Project through imaging.</li> </ul>
<p>Optical Legality/Italian Law</p>	<ul style="list-style-type: none"> <li>• <i>Registro delle Imprese</i> identifies image documents stored on system with the same legal value of the original paper document</li> <li>• Chambers have the option to destroy the paper</li> <li>• Italian authority for the Italian governmental computing—A.I.P.A.—has issued a set of rules on imaging compliance which includes the adoption of ISO DIS13346 standard for the optical disk file subsystem, to ensure documents cannot be altered and remain easily accessible for well into the future. Wang is working on ISO 13346 and plans to implement it in future releases of OPEN/image server software.</li> </ul>

<p>EIDOS System Project &amp; Geographic Distribution</p>	<ul style="list-style-type: none"> <li>• A subsystem for scanning, indexing, archival and retrieval functionality - EIDOS - is installed in all 103 Chambers of Commerce</li> <li>• EIDOS based on OPEN/image software running on HP 9000/800 servers; Oracle used as DBMS.</li> <li>• Systems managed centrally by Infocamere.</li> <li>• Law n. 580 requires ALL documents filed since January 1994 to be scanned into new system(s).</li> <li>• Estimated amount of paper of 30,000,000 pages/year with multi-years' worth of retention on-line to system (dependent on type of document &amp; legality).</li> <li>• 50 sites are now installed and running</li> <li>• Remainder to be installed by end of year</li> <li>• Law 580 requires the full project, including imaging, to be running in all 103 Chambers by January 1997</li> <li>• Link provided by high-speed C-LAN private network provided and operated by Telcom Italia</li> <li>• TC services is based on frame relay technology and features access links from 128kps to 2Mbps</li> <li>• Infocamere computing center connected by 6x2Mbps links</li> <li>• All EIDOS systems will be integrated with a centralized system at Infocamere centralized computing site in Padova, Italy that will act as back up to the data as well.</li> <li>• EIDOS Central System Repository will be fed by the EIDOS systems from each of the Chambers utilizing 'C-LAN' network to load image documents remotely into the central server</li> <li>• The centralized EIDOS system will eventually be integrated with the BOND System (Balance Sheets &amp; Financial Information).</li> </ul>
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<p>Future Direction</p>	<ul style="list-style-type: none"> <li>• Near term Infocamere will implement the central machine of the <i>Registro delle Imprese</i> network</li> <li>• This system will manage the countrywide repository for data and images collected from all Chambers</li> <li>• Repository will be fed by the EIDOS systems at each of the 103 Chambers utilizing 'C-LAN' network to load image documents remotely into the central server.</li> <li>• Query front end to be developed to locate documents on the central server or at the local Chamber transparently to the end user</li> <li>• As balance sheets are only a subset of documents managed under the <i>Registro delle Imprese</i>, Infocamere will be able to provide a unique access point to all <i>Registro delle Imprese</i> image documents, extending the service BOND provides today to a much wider document base</li> <li>• Additional organizations to be connected to the network, to support transactions among the Chambers and other governmental offices as required by <i>Registro delle Imprese</i></li> <li>• OPEN/workflow software being considered to manage and control large quantity of cases</li> </ul>
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