Administration's Center
di M. Berni & C. s.a.s.
Organizzazione Informatica Aziendale
Progettazione e Sviluppo Software
Ricerca & Sviluppo di Tecnologie Innovative
dal 1980

Inventories with RFID technology

INVENTAS

Sede Legale e Amministrativa :
Località Castagneto, 29 - 50060 San Godenzo - Firenze - Tel. 055 621299
Codice Fiscale e Partita Iva IT 03100160484 - Cap.Soc. Euro 57.297,51 - Trib.Firenze N. 31415 - C.C.I.A.A. 301634
www.ac-software.it - masberni@ac-software.it - masberni.ac-software@pec.it

Introduction

Inventory management using Rfid technology involves the design and development of dedicated software and the use of electronic devices useful for the process of information retrieval irrespective of the reference product sector.

By organizing business processes, application software, and hardware, our company is able to offer targeted feasibility studies tailored to the specific needs of customers so that they have a single 360 ° inter-locator.

First of all, before considering an opportunity to introduce an RFID inventory system to the company, it is crucial to make a feasibility study that will enable you to understand and understand various management hypotheses.

We feel it is worth considering the decision to adapt the warehouse with advanced technology management, also because it is not said that this solution can be pursued.

Our experience can be an added value for the decision to take and the path to take.

General Description of Application Flows

In practice, the procedure is very simple: The Rfid (Smart Label) tag or label is applied to the article, product, component, archive folder, etc ..., each RFID Tag is characterized by memory chips containing a unique identifying code Already from the producer and no less on it can be recorded information, albeit of limited size.

The tag then integrates with the article, Rfid technology allows you to identify the item in seconds, and most of all it does not require contact like the classic barcode. The Rfid Reader identifies more products in a few seconds and speeds up all the loading and unloading activities, and the inventory is updated in real time, without waste of time, precisely by actually cancelling human error.

Another important aspect of the traceability of goods is certainly the wider discourse of goods handling between warehouses, between delivery points, distribution centres, retailers, practically monitoring throughout the supply chain.

The aim is to trace the products from the distribution center to the point of sale. Manual control as well as requiring considerable technical and personnel time dedicated only to this function multiplies the possibility of error.

Automating and Monitoring the Chain enables information to travel through a dedicated web portal, through the application of Rfid tags directly on the article, before deployment, is the most time-consuming solution and the costs you can not overlook.

Staff can check in real time directly from portal, localization, shipping date, lost merchandise, inventory update for different storage sites, and deduct delivery schedules.

With Rfid (Smart Label) tags applied to articles besides warehouse inventory management, you can also arrange procedural flows that allow you to track items locations even on a shelf (s), allowing you to check for any product placement outside Allowing monitoring of stocks also by location.

Management possibilities are infinite and free from any project idea that a company may require, but the benefits that investment is immediately cushioned without requiring significant costs with long and sometimes risky times of risk in its realization.

Warehouse inventory

Warehouse management, using RFID technology, does not only mean "inventory" but embraces all aspects of location and traceability of goods, even after leaving the warehouse for delivery to the point of sale.

The use of RFID smart labels is an operational and economic advantage for the company as its durability over time and its advantages over the use of barcodes are very evident.

In addition to reducing inventory time with targeted control of the location of goods, all loading and unloading activities will be extremely fast.

General Description of Application Flows

Inventory of inventory, is a systematic procedure through which the existence of goods is established, in a certain place and at a definite date. Warehouse management involves, at least for many businesses, key strategic-tactical choices. Managing the warehouse efficiently can mean undoubted positive reflections both on the technical-productive level and on the functional level, and above all on the economic-income side. Many companies have to manage classified warehouses according to the type of managed items and according to homogeneous categories of their belongings, which requires a centralized computer system so that any loading or unloading movement is part of Which is integral to the stock management process. Periodically and compulsorily, once a year, a company must detect inventory in order to draw up the financial statements.

Analyzing then Accounting Principle No. 13 (stock inventory in civil and fiscal legislation), it is noted that it is divided into three parts:

- the first deals with civil law;

- the second of the tax rules;

- the third of the accounting principles for the measurement, valuation and presentation of inventories in the balance sheet.

From the very outlined point of view, it is evident that technology can help not only in inventory data management but also in the various inventory phases that users have to make in order to certify the accuracy of the information. Help can arise through the use of technology that manages articles with smart labels (Rfid tags) distinguished by labels of heterogeneous measurements and nature, with a chip contaloging a unique identifying code. These labels will be applied on individual articles, on packs of more articles or on pallets, so as to determine their physical location as well.

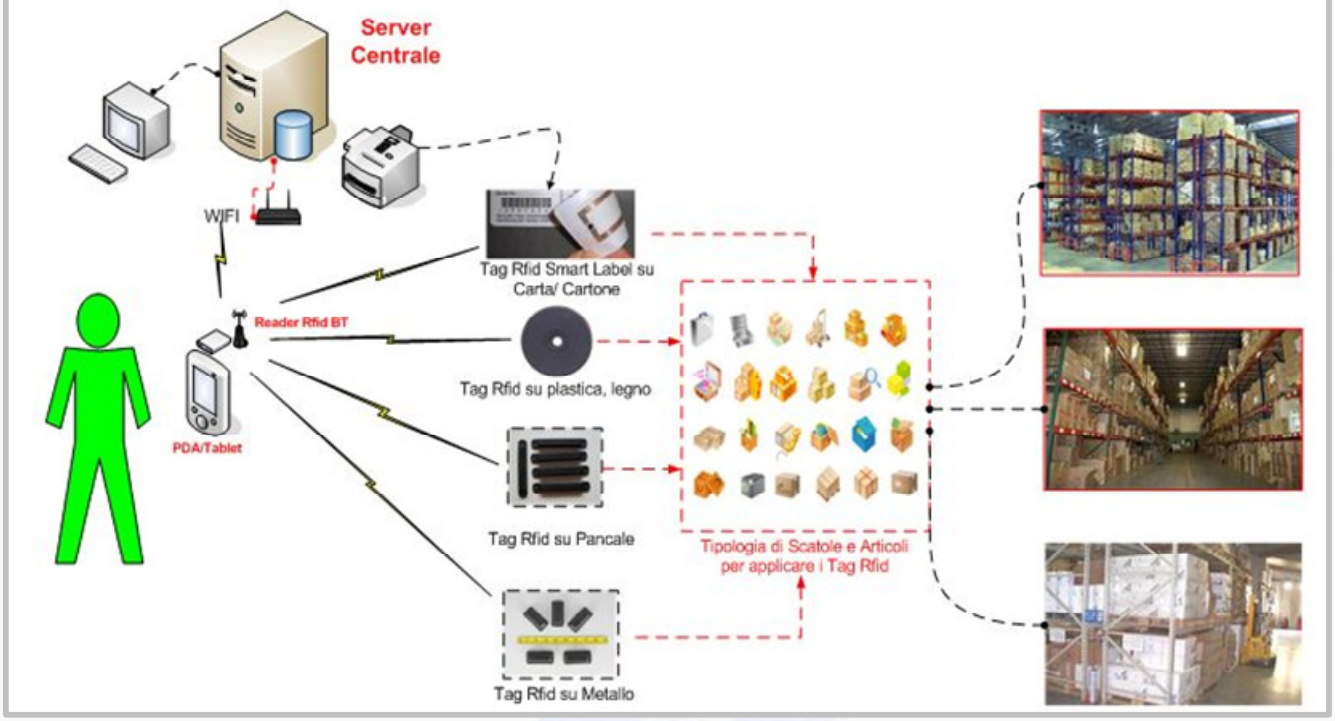
The inventory will then start reading with a tablet PC or handheld tag applied to each item, package, pallet etc ...;

Allowing warehouse physical inventory to be stored on the device itself and transmitting the detected information to the Central server via Wifi.

This is the initial phase, it may seem to be a slow process, but it is in the management of periodic inventories which has a major contribution both in terms of speed, since one can read more articles together, both For a proper inventory valuation.

Suffice to think that even today, in most companies, warehouse inventory is done with more dedicated people and especially with closed business for days, leading to a reduction in sales and any problems in programming for the distribution of articles to Own customers.

Warehouse Inventories with RFID Technology



Business Inventory Inventory

Every company has been concerned with the inventory and location of furniture, computers, software, equipment, as tangible and intangible assets that take the name of enterprise assets.

This project exploits RFID technology to enable assets inventory by applying labeled labels (smart labels) of different sizes depending on the size of the asset.

These labels are read with a specific reader that detects the presence of tags applied to the assets and performs the detection of the tags.

The term asset is used to indicate the goods purchased by the company to be used in the production process over several years. The Assets are therefore the instrumental assets of the enterprise: those goods that remain in it for long periods of time. Examples of assets are machinery, plant, automobile, computers, property, patents, software, etc. The companies are required to hold the 'Book Captive' pursuant to art. 2217 of the Italian Civil Code. According to the standard of reference it is in its classical form, the register is made up of as many cards as are the purchased assets. Each card is therefore denominated in a mortgage and contains all the moves that over time have affected that asset: from the purchase, to the amortization, to its alienation.

INVENTORY PROJECT

INVENTORY is a hardware and software solution that, using RFID technology, supports companies both at the initial stage of asset inventory and cataloguing, as well as in the subsequent and necessary steps to verify the presence of the assets, with constant monitoring of the assets Locations.

Wi-Fi communication between the central server and the RFID reader (which we have designed and patented) will enable interactive communication, with alert messages in case of non-detection of the device, as it is no longer present in the location or for Absence of the RFID tag on the object.

Asset management and amortization allow to manage the development of the company's assets, that is, the property (material and immaterial) owned by the company that is used to carry out the work of the company itself: each of these assets, which is named Provided, it must be encoded and registered internally to the company, also carrying out annual audit inventories. Through the Inventory phase, the system allows you to update the asset register with all reference information and Rfid's unique code ("uid") acquisition of the Rfid tag applied to the asset itself. So each asset will have its Label rfid label, which can be of different invoice depending on the structure (wood, metal, plastic, aluminium, etc.). Every material and immaterial asset must be scrupulously invented, as it will represent the set of assets the company has in its assets.

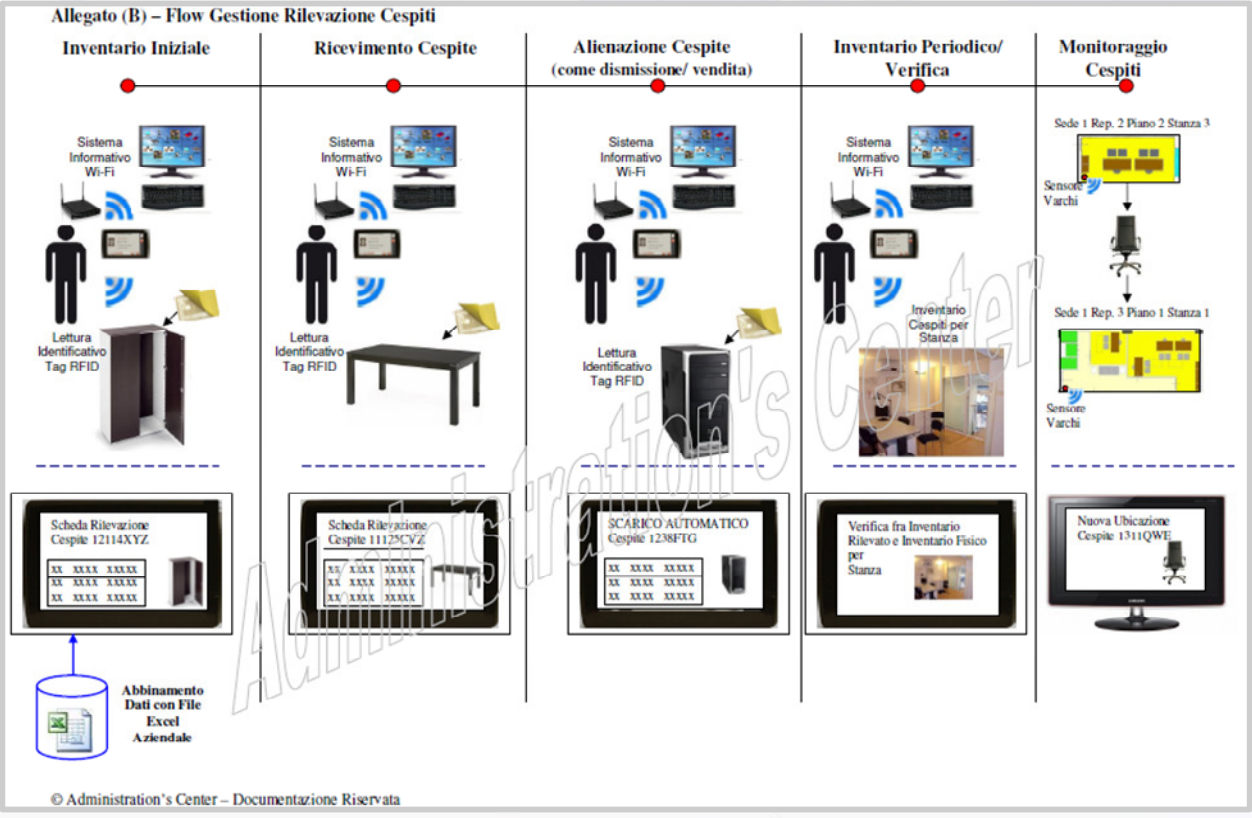
A first phase of activity is that of the first inventory for the application of Rfid labels, followed by the various management phases that will allow you to update the inventory when new updates are made for both new purchases (new assets in the registry) and for Sale (disposal, disposal of existing assets).

The asset cataloging process is very simple in terms of operating, more complex for recording the reference data of the asset that determines a sort of identity card, also by virtue of the classification of the tax categories and categories (according to DM 30.12. 1988).

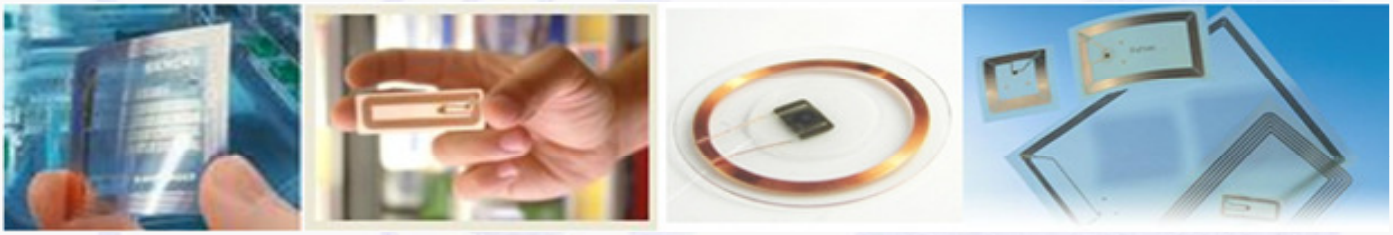
Regulatory references: the correct keeping of the register of depreciable assets is governed by Art. 16, D.P.R. 600/1973, which governs it: the estate and the manner of compilation; The time within which the register must be completed.

Hardware and Software Integrated with RFID Inventory

The hardware part consists of a passive RFID reader produced by our company that allows you to read the tag applied to the good, record (using the touch screen video) the master data of the handset itself and send it via WiFi or by downloading it to the host computer , So that you can integrate them with any company's ERP management system, a topic on which we can provide valuable support through our Software Development Center.



Our strong point is that the realization of management software is a topic where we are specialized and prepared for years.
This experience has created a cognitive knowledge of all matters and accounting and tax legislation and this gives the customer a rather rare value: knowledge of tax law and accounting management of the asset, combined with state-of-the-art technology to maximize the cost and timing of inventory management by the company.
This means that the customer with a single vendor will find not only having a turnkey project on the hardware and software side but also all the fiscal and administrative expertise needed to understand how and why to handle the assets.RFID technology makes it possible to inventory the assets by applying smart labels with different sizes depending on the size of the asset and applied technology.



Procedural Application Flows

Many companies have adopted the bar code system, however, which has considerable operational disadvantages, especially linked to the long term. Barcode labels over time may deteriorate making readers' reading of good reading difficult. RFID labels, on the other hand, are not affected by the wear of time as they are conceived in different types depending on the material on which they are to be applied: metal, wood, plastic etc. Additionally, the identifying code of the good comes from reading the RFID tags and this guarantees the distortions associated with the deterioration of the labels themselves.

Depending on the tagging feature (RFID tag), this can be used in different climatic situations, too hot, too cold, in dusty and / or dirty environments. The reader acts at about 50 cm away and therefore does not need the extreme proximity of bar code reading. It is important to point out that we have eliminated all collision problems with accurate tests.

The RFID tag detection software can communicate with the management software that the company uses for inventory inventory processing and corresponding depreciation calculations. Each asset must be equipped with a label and with trackers it will be possible to detect all shifts and possible outflows outside the company structures. The company can constantly monitor the location of the assets at the head office (s), department (s), plan (s). This location will be used as the nomenclature key in the asset identification code.
As far as location detection is concerned, we use UHF passive readers for this information that can be placed on the gates in the various steps that the company feels appropriate. These are connected via Wi-Fi to the central system for communicating the internal or external transfers of the assets. Within this project is a totally innovative concept that the portable device, the heart of the system, is extremely lightweight, with a touch screen and an extremely simple interface. The design of the portable device has enabled the latest technological innovations to achieve the purpose of a device that weighs less than a cell phone, which can be used without any effort, using a special lace for its transport.

Administration's Center
di M. Berni & C. s.a.s.
Organizzazione Informatica Aziendale
Progettazione e Sviluppo Software
Ricerca & Sviluppo di Tecnologie Innovative
dal 1980

Libraries Inventory / Libraries

The project we present offers the possibility to manage libraries by means of technologies that, in the past, seemed impossible to accomplish both in the technical and informatical aspects and in the high investment costs required.

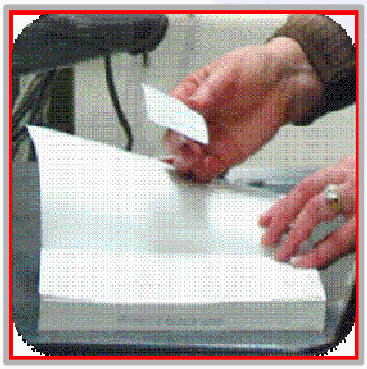
A simple and intuitive management system that automates the process of loan and return of books, RFID technology, and application of RFID tags on library texts that will be read by our readers Total production philosophy made in Italy.

General description

The usual loan registration procedure involves a manual update of both the reader card and the book card, a demo-practicing practice for library staff, and is free of errors. Many libraries have overcome these problems with systems based mainly on the use of bar codes to identify both volumes and readers. These systems however require operator intervention to scan bar codes and do not facilitate the relocation of securities on shelves and inventory, with the disadvantages that result.

To this is added the inventory question, that is, that application phase that every library, library and warehouse in general, must periodically perform in order to detect the situation of attendance.

This operation, in a library with thousands of texts that undergo important moves on loans and returns, is of fundamental importance and is carried out with traditional systems, means time-consuming and resource-consuming costs. The project plans to use a Wi-Fi inventory scanning system, using a portable reader for word recognition and "out of date" reporting.



Management Steps

A) Initial library upload preparation phase with application of RFID tags on texts and their cataloging.

B) Consequence placing books on shelves according to the logic of location determined by the structure (by topic, author, publishing house, necklace etc.)

C) InfoPoint

D) Loan Activities

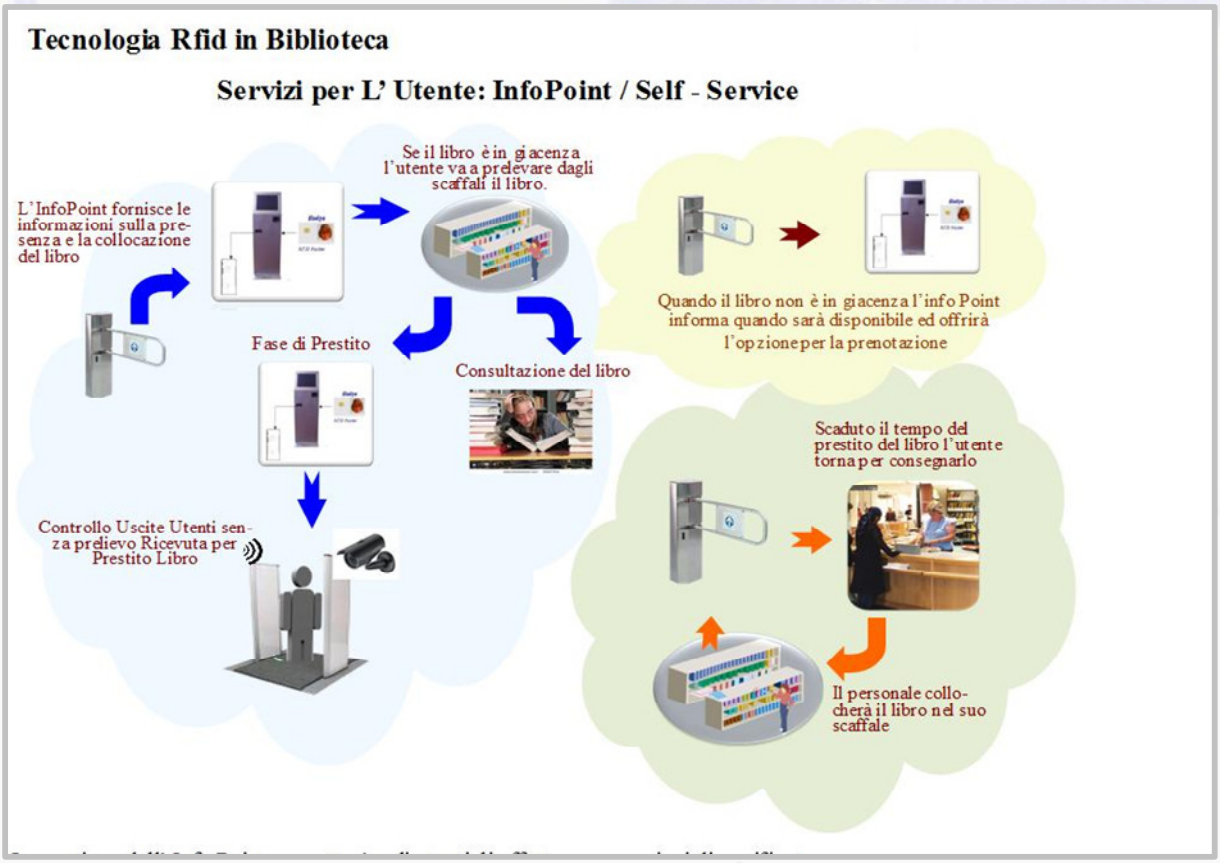
E) Monitoring

Sede Legale e Amministrativa :
Località Castagneto, 29 - 50060 San Godenzo - Firenze - Tel. 055 621299
Codice Fiscale e Partita Iva IT 03100160484 - Cap.Soc. Euro 57.297,51 - Trib.Firenze N. 31415 - C.C.I.A.A. 301634
www.ac-software.it - masberni@ac-software.it - masberni.ac-software@pec.it

Library Management with RFID

On each book, the library must affix a Rfid label where, on the front, the EAN code of the book may be printed with a specific device and possibly some descriptions.
While on the back side, a passive RFID tag that will allow a reader to match the EAN code to the RFID code by storing it on a central archive that refers to the library inventory.
The staff member puts the sticker (not removable) tag on the book cover.
One of the most important points of our study is to equip libraries with RFID tag reading devices, capable of reading remotely and connected via a wireless network to the central system, to record every movement of the labelled book With tags.
As soon as the books are placed on the shelves, the system will record their location by an automatic reading with transmission to the central system.

The ability to read through a device Rfid tag and detect its presence is extremely useful; On the basis of the numerous studies and projects carried out by the staff of our researchers and technicians, we can constantly monitor the location of the books and determine their physical inventory in real time. This is a big step forward for rfid technology that interfaces with integrated warehouse management procedures. Just think of the days that a structure has to devote to the manual inventory process. With this new methodology, times of "dormant blockade" will no longer be needed, leading to considerable economic benefits



Info Point Management allows users to perform diversified operations:

A) Find out if the manuals requested by users are in the library or when they can be available for retrieval. Info Point will also allow you to make a reservation for the immediate retrieval of a book by searching and selecting from a catalogue index, made available by the library. To retrieve the book, you will need to enter a library card in a special reader and confirm the selection.
With the receipt, you will be able to present yourself to the delivery points that have already been pre-scheduled by the integrated system for preparation of the book's delivery.

B) Info Point, with any technical features implemented on the device, may also be used to accept the request for a book back.
In fact, by inserting the library card into a reader, the user can view the list of books he had retired and select the specific book in return, the system will ask you to insert it into the Info Point by means of a front cover (mailbox type).
The procedure will be defined when the system has completed the engagement transaction, matching the RFID code of the book returned with the card code.

Alarm and Video Surveillance

Tag readers placed before the output barriers can be used as classical alarm sound but with an innovative character because, on the control video, the staff can see the books taken without the receipt and with the help of any cameras that are automatically activated , Resume the movie being the subject of the report.

Administration's Center
di M. Berni & C. s.a.s.
Organizzazione Informatica Aziendale
Progettazione e Sviluppo Software
Ricerca & Sviluppo di Tecnologie Innovative
dal 1980

INVENTAS

Traceability Documents and Practices with RFID

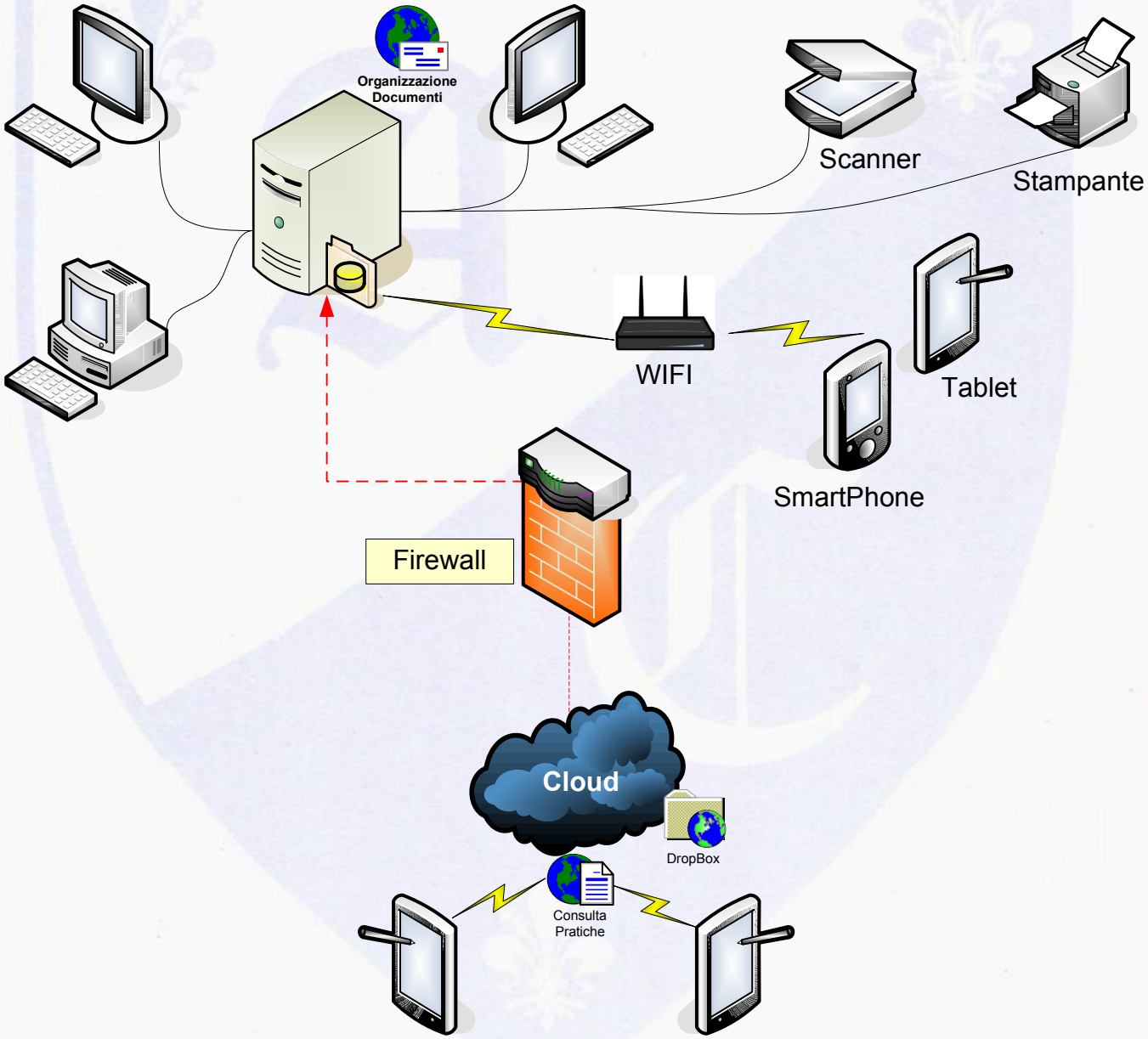
Identifying documents is undoubtedly a very important and sensitive subject for some professional sectors. Our company is able to provide targeted feasibility studies, from process organization, application software, to hardware, to customer specific needs, so that they have a single 360 ° interlocutor. Before considering applying traceability of documents and archives to RFID technology, it is crucial to make a feasibility study that will help you understand the various management hypotheses. The solution we are proposing is certainly very advantageous in organizational and operational terms but it is not said that such a solution can be pursued.

Our experience can be an added value to understand the decision to take and the path to take.

Sede Legale e Amministrativa :
Località Castagneto, 29 - 50060 San Godenzo - Firenze - Tel. 055 621299
Codice Fiscale e Partita Iva IT 03100160484 - Cap.Soc. Euro 57.297,51 - Trib.Firenze N. 31415 - C.C.I.A.A. 301634
www.ac-software.it - masberni@ac-software.it - masberni.ac-software@pec.it

INVENTAS

Flow Processes



INVENTAG

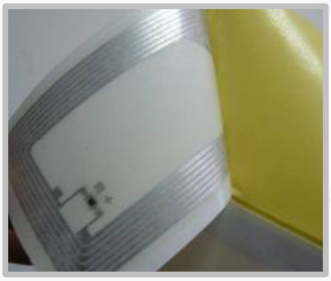
General Description

Document management for a professional studio, for a company, for a public body, is a very complex topic because it requires the management of original documents and historical documents that are however bound by the privacy laws in force.
This entails significant management costs not only for the maintenance of paper archives, but also for the related computer process.
However, when it comes to contracts, historical documents, topographic maps of significant size, and in any case all the documents where the "optical copy" only provides a consultation document, but not a document recognized as the original, here it is presented The need to use barcode technology or better yet RFID TAGs.

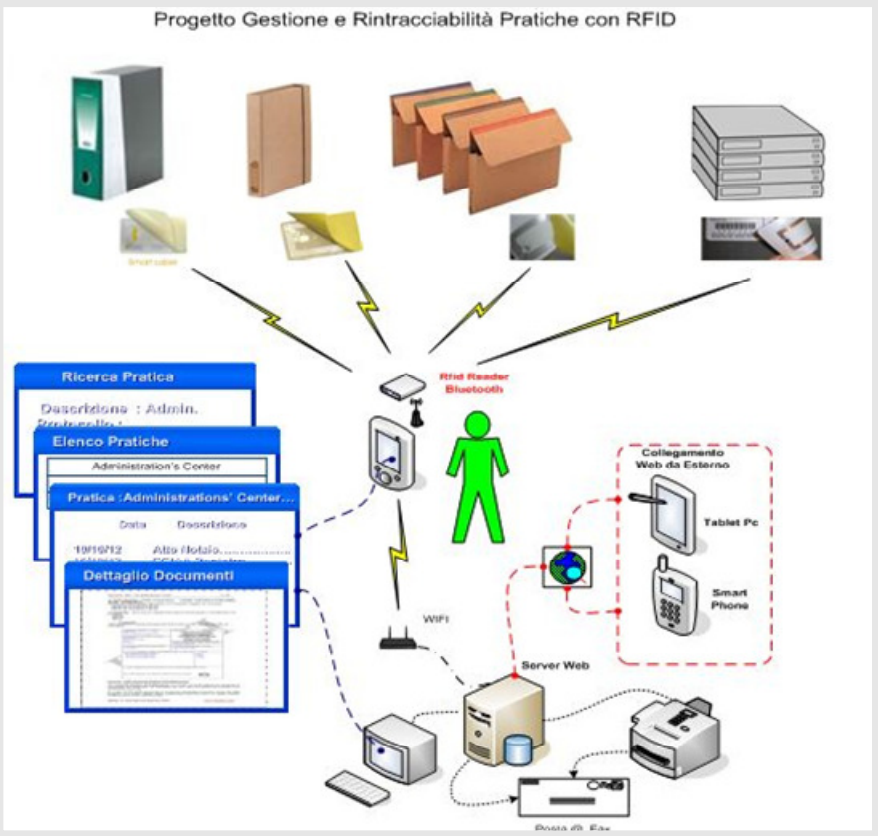
Legal, notaries and professional studies generally need to catalogue the practices and files, but they need to trace the moves inside their offices. Also, with this technology, you can search for a practice by scanning the shelf with the reader where they are stored.

This aspect represents an added value offered by our company in the context of the proposals in the market for this subject.
Another important aspect is that the adoption of this avant-garde methodology for document inventory and identification costs is low and requires no complex technical infrastructure or expensive investments.

Operational benefits, cost reduction, and time to search for documents and to properly catalogue your business are definitely important. The label (Bar Code or Tag Rfid) can be applied to a folder that contains the original document, it can be sticky and plasticized, the costs are extremely low and when applied, no substitution is required.
With regard to the Application Software we are able to offer you a simple application for Smart Phone or Tablet PC or for a centralized system with a Server or Cloud Technology with Hosting Servers, for sharing documents and consulting even from 'Outside of your study by.
Of course, given the possibilities presented by Software, the costs are variable depending on the needs of those who want to use this innovative technology for the subject matter.
But how can one trace a contract to a notary's archive with a library of 10,000 documents? Simply once you've set up your search on your Smart Phone, you'll be able to trace the contract and more importantly, the system will also record that the contract you've drawn is out of its normal location.



Administration's Center
di M. Berni & C. s.a.s.
Organizzazione Informatica Aziendale
Progettazione e Sviluppo Software
Ricerca & Sviluppo di Tecnologie Innovative
dal 1980



The management of original documents as well as historians and privacy rules often involve constraints, given the delicacy of content, which makes it difficult to process them from computer systems.
However, when it comes to contracts, historical documents, topographic maps of significant size, and in any case all the documents where the "optical copy" only provides a consultation document, but not a document recognized as the original, here it is presented The need to use RFID TAG technology.

Legal, notary and professional studies generally need to catalogue the practices and files, but they mostly need to trace the moves within the offices and the employees who manage them. Also, with this technology, you will be able to search for a practice by scanning the shelf with the reader. This aspect represents an added value offered by ours. Company in the context of the proposals on the market for this subject.

Another important aspect is that the company's adoption of this avant-garde methodology for inventory and document identification costs is low and requires no complex technical infrastructure or expensive investments. The operational benefits and cost-cutting and time-saving of searching documents and the proper cataloging of practices are certainly important.
The label can be applied to a folder that contains the original document, it can be sticky and plastified, the costs are extremely low and once the replacement is no longer required, it is cost-free.

The central system will be used to record document cataloging with the various search keys including the tag code that will be unique to each managed document.
In the central system with this management formula, you will not necessarily have to copy the original document and therefore the computerized system does not need large and expensive mass memories.
But how can one trace a contract to a notary's archive with a library of 10,000 documents?
Once the search key is set up on the RFID reader, you can track the contract and more importantly, the system will also record that the contract is out of its normal location.

Sede Legale e Amministrativa :
Località Castagneto, 29 - 50060 San Godenzo - Firenze - Tel. 055 621299
Codice Fiscale e Partita Iva IT 03100160484 - Cap.Soc. Euro 57.297,51 - Trib.Firenze N. 31415 - C.C.I.A.A. 301634
www.ac-software.it - masberni@ac-software.it - masberni.ac-software@pec.it